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CONFLICT-RELATED FAMINE IN AFRICA 1967-1992: THE POLITICAL ECONOMY OF FOOD AND WAR

VOLUME I

By

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ABSTRACT

CONFLICT-RELATED FAMINE IN AFRICA 1967-1992:
THE POLITICAL ECONOMY OF FOOD AND WAR

By

Marcus Cheatham

In Africa, the twenty years from 1967 to 1992 were distinguished by two features: The first was growing hunger across the continent attributable to falling per capita food production. The second was the presence of seemingly intractable civil wars.

Hunger, agricultural decline and insurgency must be understood together. First of all, in these wars, hunger was deliberately used as a weapon against civilian populations by intransigent governments or insurgent fighters attempting to topple the state. Secondly, the failure of African governments to establish credible agricultural policies has fueled factionalism and insurgency. Furthermore, other causes of poor agricultural performance like economic policy distortions may themselves be caused--at least in part--by the demands of military establishments threatened by or embroiled in war.

Knowledge of the processes of conflict-related famine is important to relief efforts. During internal wars governments and insurgents compete for political legitimacy and recognition by the international community. When combatants struggle to control rural populations they use hunger as a weapon to subjugate suspected disloyals. But they also may use food as an inducement to mobilize support. Opportunities for positive external interventions and famine relief arise when combatants seek to establish beneficial linkages with foreign governments and international organizations and to control food flows.

This dissertation centers around five case studies: Angola, Ethiopia, Mozambique, Nigeria, and Sudan. A detailed description of how the tactics of guerrilla and counter-insurgency war cause hunger among specific groups of people is developed from the cases. Furthermore, the cases are systematically analyzed to identify the ways in which combatants'

requirements for internal and external support impeded or facilitated famine relief. Finally, an innovative measure of food security is developed and a pooled time-series of food production data for 15 African countries for 1964-1985 fitted to a food production model to validate this description of military famine.

To my wife Debra, with love

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I am grateful to my comrades at Michigan State University who encouraged me to pursue this inquiry in spite of many frustrations. It was the Chair of my committee, Michael Bratton first suggested the topic of conflict-related famine to me, overcame my initial skepticism, and pushed me to think the project through. Barry Stein helped me understand international famine relief and find the documentation I required to complete my work. Nicholas Van De Walle read and criticized my work in spite of the severe demands on his own time. Brian Silver reminded me that, Comparativists are properly concerned with the problem of legitimate government. Many people have contributed more to my work than they may realize. Scott Gates patiently listened to me wrestle for hours on end with the nettling issues I faced. James Bingen directed my attention to the importance of combatants' relationship with the peasantry. Steven Burgess consistently encouraged me to trust my intuitions.

I must add that the Department of Political Science and the African Studies Center have been a good home to me for many years. The faculty, staff and students have not only gone out of their way to help me time after time, they have become dear friends.

My friends and mentors, some of the most knowledgeable and talented Africanists and Comparativists anywhere, deserve the credit for any of the virtues in this document. I accept the responsibility for its all of faults.

TABLE OF CONTENTS

VOLUME I

VOLUME II

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

ACDA	United States Arms Control and Disarmament Agency
ANC	African National Congress
CTC	Untied Nations Centre on Transnational Corporations
DUP	Democratic Unionist Party
ECOSOC	Economic and Social Council
EDU	Ethiopian Democratic Union
ELF	Eritrean Liberation Front
EPLF	Eritrean People's Liberation Front
EPRDM	Ethiopian People's Revolutionary Democratic Movement
EPRP	Ethiopian Peoples Revolutionary Party
ERA	Eritrean Relief Association
FAND	Foreign Affairs and National Defense Division
FAO	Food and Agriculture Organization
FNLA	National Front for the Liberation of Angola
Frelimo	Front for the Liberation of Mozambique
ICRC	International Committee of the Red Cross
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
JDP	Joint Distribution Program
JRP	Joint Relief Partnership
MPLA	Popular Movement for the Liberation of Angola
MSN	Mozambique Support Network
NIF	National Islamic Front
NPA	Norwegian People's Aid
OECD	Organization for Economic Cooperation and Development
OEOA	Office for Emergency Operations in Africa
OFDA	Organization for Foreign Disaster Assistance
OLF	Oromo Liberation Front
PVO	private voluntary organization
RCC	Revolutionary Command Council
Renamo	Mozambican National Resistence
REST	Relief Society of Tigray
RRC	Relief and Rehabilitation Commission (Ethiopia and Sudan)
SIDA	Swedish International Development Authority
SPLA	Sudan People's Liberation Army
SRRA	Sudan Relief and Rehabilitation Association
SWAPO	South West Africa People's Organization
TMC	Transitional Military Council
TPLF	Tigray People's Liberation Front
UNDP	United Nations Development Program
UNDRO	United Nations Disaster Relief Organization
UNITA	National Union for the Total Independence of Angola
USAID	United States Agency for International Development
USCR	United States Committee for Refugees
WFP	World Food Program
WSLF	Western Somali Liberation Front
ZANU	Zimbabwe African National Union

CONFLICT-RELATED FAMINE IN AFRICA 1967 - 1992: THE POLITICAL ECONOMY OF FOOD AND WAR

An army can be defeated from the kitchen, so military people naturally want to shut the kitchen door. Abu Ouf, Sudan Relief and Rehabilitation Commission (in Minear 1991, 73)

1. INTRODUCTION

In Africa, the period between the 1960s and 1990s were distinguished by two prominent features: The first was growing hunger all over the continent. Two key indicators of hunger--per capita consumption of calories and of protein--declined ten percent over the period (FAO 1991b, tables 106, 107). Per capita food production in Africa has declined by 20 percent since 1970, but most African countries cannot afford to make up the difference by buying food; their gross domestic products are stagnant (International Financial Statistics 1991, various tables). Although concessional food aid has nearly tripled over the period, imported food is a small proportion of the total (less than 20 percent) so that imports have not offset production declines (FAO 1991a, table 5). The human toll of hunger in Africa is palpable in child mortality rates approaching 30 percent before age five and in high rates of adult mortality from hunger-related diseases like measles and pneumonia which are usually not fatal unless the body is already suffering from malnourishment (Bread for the World 1991, tables 5, 7).

The second distinguishing feature was the presence of seemingly unresolvable internal wars, which, while often of low intensity, displaced a total of 30 million of people, sucked in 100 billion dollars worth of arms from the Soviet Union, South Africa and the United States, and dashed hopes for development (computed from ACDA 1991 table 2 and

USCR 1991, tables 1 and 3). The coincidence of war and hunger was not accidental. Twelve of Africa's wars exploded at least once into a serious famine.[1]

In all of these wars hunger was deliberately used as a weapon against the civilian population. In Somalia, for example, fighters backing competing warlords seized commercial and humanitarian foodstocks in 1992 to feed their clan supporters and to deny food to people from rival groups. During famines in 1984 and 1988 the government of Ethiopia withheld food assistance from areas controlled by Eritrean and Tigray rebels. It forcibly relocated civilians thought to be sympathetic to the insurgents, removing them from their farms and sending them to inferior areas without adequate provisions. Fighting between the Arab dominated government of Sudan and the Black African Sudan People's Liberation Army (SPLA) isolated or displaced half a million people in 1988. The Government of Sudan impounded United Nations food aid on its way to these people and the SPLA destroyed food convoys. In Mozambique, the Mozambique National Resistance (Renamo) fed itself by seizing household food supplies and forcing civilians to cultivate for it, while it pursued a campaign of terror against the Government.

This dissertation is an investigation of the relationship between war and hunger in Africa. I have three main goals. First, I want to see how important a cause of hunger war is relative to other causes. I do not propose to "prove" that war causes hunger. This is already

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1. Of 41 sub-Saharan African countries (I exclude the island nations of Cape Verde, Comoros, Sao Tomé and Principe, Mauritius, and Seychelles, but include South Africa), twelve: Angola, Chad, Ethiopia, Liberia, Mozambique, Nigeria, Rwanda, Somalia, Sudan, Uganda, Zaire and Zimbabwe, have had large-scale conflict-related famines. At least another seventeen: Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Djibouti, Equatorial Guinea, Gambia, Guinea, Guinea-Bissau, Kenya, Mali, Mauritania, Namibia, Niger, Senegal, and South Africa, have suffered short but serious bouts of internal political violence that displaced people and caused hunger locally. Others, especially those "on the front line" in southern Africa: Botswana, Lesotho, Malawi, Tanzania, Swaziland, and Zambia have been attacked by South Africa or host populations of refugees displaced from fighting elsewhere.

accepted by other researchers as fact. Discussing African famines, Paul Pyschas and Pentti Malaska wrote:

> The correlation between war and famine is quite plain to see. War diverts a nation's resources and distracts the attention of its leaders; fighting can disrupt planting and harvesting and drive people from their farms and into refugee camps; relief efforts can be delayed by the conflict or blocked altogether. War sows fear, confusion and hate, reaping harvests of hunger, homelessness and death. (1989, 114)

Empirical research has confirmed the association between war and hunger in Africa. For example, in their survey of Africa's food crisis during the 1980s, John Borton and Edward Clay concluded, "Civil war and externally financed insurgency were primarily responsible for propelling a food crisis into a famine in five out of the six worst affected countries." (1986, 258) John Staatz found that between 1970 and 1980 average calorie availability declined by four tenths of one percent per year in African countries affected by war whereas it increased by two tenths of a percent per year in African countries enjoying peace (1989, 3). What I want to do here is to weigh the importance of war as a cause of hunger when compared to other things that could cause hunger, such as unfavorable environmental conditions like drought, or adverse economic policies such as low producer prices for food crops or distorted foreign exchange rates (Eicher and Staatz 1990; Mellor, Delgado and Blackie 1987). I believe that, in Africa today, war is a more important cause of hunger than these other things.

Furthermore, I want to test two different ideas about how military activity causes hunger. Some scholars argue that the harmful economic effects of excessive military spending make it an important cause of hunger, irrespective of whether war actually breaks out (Ball 1976; Shindo 1985). They say that military spending diverts resources away from agriculture

and causes economic policy distortions. I want to determine if the evidence supports such a contention. To do these things, I fitted a pooled time-series of data on 15 African countries for the years 1964-1985 to a food production model to compare the estimated effect of a measure of violent political conflict with the effects of other variables. The results indicate that both political violence and excessive military spending depress food security. But moreover, the results also suggest that there exists a cycle of war and famine, in which war causes hunger, and hunger in turn generates new political instability.

My second goal is to examine in greater detail how war causes hunger. I choose to utilize the techniques of famine studies to do this. Famine studies is a well established field with broadly accepted methods (see for example Baluch 1987; Cutler 1986; De Waal 1989; Rahmato 1988). To find out how a calamity like a drought, an economic depression, or war causes hunger, researchers identify the most important ways in which people obtain food, which they call *exchange entitlements*, and distinguish the ones which are affected by the crisis. Here, in general terms, I attempt to identify the major sources of food of the African peasantry affected by war as well as the tactics employed by combatants and how these tactics affect access to food. Not surprisingly, I found that the most important way in which war causes hunger is through the displacement of farm families who flee in fear of violence from their land. If combatants hinder the movement of the displaced, or prevent relief food from reaching them, as frequently happens, they are likely to starve. More interestingly, I found that many combatants, isolated or without logistical support, become deeply involved in the production and distribution of food. In part, this is because they provision themselves by relying on local food production. In general, the more combatants relied on local food supplies, the worse conditions were for affected civilians. However, there were exceptions.

These exceptions lead me to my third goal, which is to understand why hunger is worse in some wars than in others. Here, my explicit purpose is to advance knowledge of what kind of interventions best help to promote the food security of civilians during conflict-related famine. In my work I systematically compare five cases of war in Africa--Angola, Ethiopia, Mozambique, Nigeria, and Sudan--asking: "In which conflict-related famines was there greater food security for those affected?"

When I began this task, I initially asked if it was possible to account for the greater propensity of some combatants to resort to the use of hunger as a weapon. Perhaps, I thought, if I could understood why combatants resort to the use of hunger as a weapon, I could also identify factors that disincline them from inflicting hunger. But after reading the case material I realized that there are far too many factors (e.g. leadership, ethnicity, ideology, economy, geography, organization, opposition, international pressure, etc.) determining the extent of a combatant's use of hunger as a weapon to permit anything other than a descriptive approach to the question. That is, in each case a combatant's behavior seemed to be determined by factors unique to its historical circumstances.

However, in the course of my reading, I discovered work by practically oriented scholars concerned with war and hunger in developing countries, in which systematic hypotheses about conflict-related famine had already been proposed. Whereas I had framed the question in terms of warlike behavior that causes hunger, the attention of these writers is drawn to the fact that combatants oftentimes attempt to promote the food security of civilians during wartime.

For example, students of guerrilla and counter-insurgency conflicts have tried to understand how combatants assert control over local food supplies during war (O'Neill, Heaton and Alberts 1980; Paget 1967). They believe that combatants who desire, for whatever reason,

to establish their political legitimacy among the people are likely to initiate or participate in development projects that could enhance the food security of their civilian supporters. And famine relief specialists have studied how a relief effort occurs during military conflict (Bonner 1989; Jansson, Harris and Penrose 1987; Minear 1991; Okpoko 1986). They recognize the important role played by local organizations, especially relief organizations organized by combatant groups to sustain their supporters on the land. But they emphasize that in the long run, local groups can only obtain and deliver quantities of relief food sufficient to prevent elevated mortality if the international community intervenes on their behalf. Acknowledging this themselves, combatants who wish to promote food relief sometimes try to get international organizations to support their relief efforts. They urge the press to sound alarms about famine in donor countries in the belief that when conflict-related famine becomes a domestic political issue for donor governments, the international system can be mobilized to deliver relief food to those in need.

To explore these observations more fully, I examined political conditions in three spheres--domestic political pressures on combatants, foreign military pressures, and pressure from foreign governments and international organizations--trying to account for the occurrence of *successful famine relief* operations in the five cases I studied. Proceeding inductively, I surmised that in the case studies, the success of a relief effort depended on several interrelated factors that influence how military leaders perceive the situation they face. Of crucial importance was whether or not a faction which opposed the use of hunger as a weapon and favored food relief was present among combatant leaders. As mentioned above, I could not account for the presence of these factions, but I found that if one was present, other situational factors affected the extent of its influence. At the domestic political level, one of these was the relationship between an insurgent group and local people. I found that when guerrilla

fighters were based among members of their own ethnic group, they seemed more likely to promote or participate in famine relief efforts. When they were not their behavior tended to be predatory.

However, combatants, even those who recognize that they can use food policy to win domestic political allies, cannot fight famine if the international climate will not permit them to obtain access to flows of relief food. In particular, in the cases I studied, it appeared that when foreign hegemons squared off using African combatants as proxies, relief efforts were bound to fail. This was because the United States, the most important hegemon, was also the largest food donor and could act unilaterally.

In fact, in the cases I considered, relief food was not delivered to those in need in the absence of *positive* political pressure from foreign governments and international organizations to permit famine relief. If the leaders of a government containing a pro-relief faction believed insurgents were gaining too much ground, they could be persuaded to capitulate to external demands to permit relief operations countries in order to win foreign backing and to obtain food to pacify rural people. Insurgents with such factions in influential positions were willing to cooperate with relief agencies and donors to establish international linkages and win allies. Foreign pressure and the presence of factions backing famine relief occurred together because they are mutually reinforcing. Combatant leaders who wanted to feed their supporters sought aid from the international community. They sometimes tried to attract attention to their plight by alarming the international media. And in turn the involvement of international actors tended to strengthen the positions of these factions. These five factors: 1) the presence of combatant leaders who want to promote famine relief, 2) the ethnic base of combatant groups, 3) foreign military intervention, 4) pressure on combatants to promote relief by foreign governments and international organizations, 5) the attention of international media, are the main variables I use to try explain the success of relief efforts.

The next chapter is a review of the social scientific literature relevant to conflict-related famine. Chapter three presents the quantitative analysis described above. In chapter four I explore how war causes hunger by describing how the tactics of guerrilla and counter-insurgency war affect the exchange entitlements of the African peasantry. The case studies are presented in chapters five and six. In the conclusion, chapter seven, the five factors just mentioned that could explain successful relief are formulated as hypotheses and tested against the cases. The results are summarized and presented in tabular form.

2. EXPLANATIONS FOR HUNGER IN AFRICA

In the past ten years there has been an outpouring of practitioner-oriented literature on conflict-related famine in Africa (Clay, Steingraber and Niggli 1988; Fraser 1988; Minear 1991; Okpoko 1987). These works typically consist of the observations of people who have spent time in the field combating famine during a war; they contain a wealth of information about the politics of hunger and famine relief. I will draw heavily from this literature in the chapters ahead, using it both as evidence and as a source of new hypotheses about how war causes hunger.

However, as a political scientist, my concerns go beyond the details of single famine or relief operation. I want to provide a systematic description of how and why conflict-related famines occur and fit war as a cause of hunger into its appropriate place among other causes of hunger. Now, ostensibly social scientific explanations for hunger, written at a certain level of abstraction, differ somewhat from those given by practitioners of famine relief. Since I aim to generalize about conflict-related famine while calling upon the practitioner-oriented literature for critical support, it is important to clarify exactly what social scientists have said about the causes of hunger.

2.1 Theories of Hunger Causation

Although people have always recognized that war causes hunger, war has not always been incorporated into scholarly explanations for hunger. Around the turn of the century the debate about the causes of hunger was sometimes characterized as a debate between Malthus and Marx. Malthus' position was said to be that hunger is inevitable, because population

inexorably outstrips the food supply, which is fixed by the environment. Marx' view was held to be that hunger is caused by the economic exploitation and deprivation of the poor by the owners of capital, and hence can be prevented if the laboring classes are empowered. Malthus and Marx never debated, of course. This formalization was a device employed by writers concerned with the spread of commercial agriculture to draw attention to the fact that technological improvements in agriculture were raising food production to unprecedented levels, and to warn of the social consequences of the impending agricultural revolution (Oser 1956, 10)

2.1.1 Post-Malthusianism

Explosive growth in food production in the United States, Australia, Europe, and Japan, enabled those who held that the causes of hunger are mostly environmental to modify their views and take a more optimistic position. The post-Malthusian judgment was no longer that hunger is inevitable, but rather that it occurs only if food production falls below the requirements of the population. According to post-Malthusian agricultural scientists, freedom from hunger is possible so long as the technological means for boosting production to higher levels exists (Borgstrom 1965; Paddock 1967).

Furthermore, agricultural scientists became interested in the relationship between social structure and technological change. Mindful of the consolidation of holdings that had occurred during the agricultural revolutions of the industrialized countries, they recognized that in developing countries, social and economic transformations would have to go hand-in-hand with technological improvements. Post-Malthusians therefore embraced the commercialization

of agriculture to create a capitalist yeomanry, and called for the development of improved agricultural extension systems to disseminate the new techniques.

The post-Malthusian agricultural scientists believed that the great advances in agricultural technology occurring in the middle of this century would make it possible for Third World countries to achieve food security (Hayami and Ruttan 1971). Their recommendation was to import high-yielding green revolution crop varieties and the chemicals developed to fertilize and protect them from pests. But moreover, production increases would make farming profitable for small and medium-sized producers. Once they discovered the benefits of modern methods, the peasantry would make full entry into the market.

2.1.2 Environmental Theories

In fact, during the 1970s and 1980s many Asian and Latin American countries achieved food security (FAO 1991, table 9). But Africa continued to experience severe hunger problems. recurrent drought and environmental decline. As a result, much of the literature on hunger from the this point on takes Africa as its starting point. Recurrent drought and environmental decline provided impetus for new theories focussing on the environment.

Scholars concerned with the African environment can be grouped into two camps: Malthusians who hold that Africa is naturally hostile to agriculture, and post-Malthusians who believe that Africa's environmental problems are the result of harmful agricultural and economic policies. For example, Michael Glantz (1987), who tends toward Malthusianism, emphasizes the extreme variability of rainfall in Africa and the effects of intermittent drought. In the last twenty years average rainfall has been lower than at any time since record-keeping

began. And at the same time that the carrying capacity of the land is declining it is under unprecedented pressure from growing human and animal populations.

Lloyd Timberlake (1985; also see Harrison 1987), on the other hand, sees Africa as fertile but fragile. He says that the food production systems which existed in Africa before the rush to "develop" the continent had evolved over generations, and were attuned to Africa's special circumstances.

Putative improvements introduced by so-called "experts," such as the damming of rivers and monocropping of cash crops, instead have caused soil erosion and have spread both human and plant diseases. Sometimes, formerly productive areas that became the site of agricultural development projects, such as parts of the inland delta of the Niger, have been rendered virtually barren (Bass 1991, 232).

> The African droughts and famines are not sudden natural disasters, nor are they simply caused by a lack of rainfall. They are the end results of a long deterioration in the ability of Africans to feed themselves, a decline caused largely by mistakes and mismanagement--both inside and outside the continent. (Timberlake 1985, 7)

Glantz and Timberlake agree that economic policies should be implemented which encourage the adoption of environmentally sound agricultural practices.

As awareness spread that unrestrained use of green revolution technologies is harmful to the environment, concern for the environmental impact of agricultural practices was incorporated into the post-Malthusian paradigm (Brown 1970; Eckholm 1976). After the 1970s, post-Malthusianism stressed that progressive technologies must be environmentally friendly. The zenith of post-Malthusianism came in 1982 with the publication by the Council on Environmental Quality and the Department of State of the *Global 2000 Report*, in which conservation of the soil, water and other resources was seen as keys to increased food

production. Indeed, India was successful in reaching food security in part by incorporating progressive methods, as advocated by the post-Malthusians.

2.1.3 Neo-Marxism

In contrast to the post-Malthusians, neo-Marxists have denied that limited food production is a serious problem. They have argued that hunger would occur under capitalism, whatever the level of food production, because of the transfer of surplus value from the poor to the rich. With publication of The *Geopolitics of Hunger* in 1952, Josué de Castro revealed how the expansion of commercial agriculture in the Third World has been accompanied by the concentration of peasant holdings and the growth of migratory labor systems. Famines and chronic deficiency diseases are rampant among the poor in these communities. A neo-Marxist minor classic which appeared in 1966, *False Start in Africa* by René Dumont similarly argued that the privileged position of capital-intensive export-oriented agriculture in Africa displaces peasant producers. This in turn encourages environmental degradation by driving the poor to intensify their use of whatever resources remain available to them.

In the 1960s and 1970s neo-Marxists concerned with hunger in Africa increasingly pointed to the structure of the global economy. Nicole Ball (1981, 1988), Malcolm Caldwell (1977), and Susan George (1976) wrote that Africans are hungry because their economies are dependent on the economies of the developed world; First World countries promote capitalist farming in the Third World in order to secure markets and ensure access to cheap raw materials. In this view, economic assistance and food aid are instruments of neo-mercantilism. They are offered by First World governments not to alleviate suffering or stimulate growth, but to further domestic economic interests.

For example, foreign aid packages may come "tied" to the purchase of technologies sold by firms in donor countries--even if these technologies are unsuited to African needs (Lappé and Collins 1979). And foreign aid programs may encourage farmers to abandon traditional food crops and switch to cash crops even though household incomes from cash cropping may be inadequate to cover family food requirements. Food aid can have the unintended effect of worsening hunger: Government subsidies and the economies of scale found in countries like the United States and Australia make their grain cheap to import; however, excessive imports drive down domestic production in third world countries and displace local producers (For a treatment of this topic within a neo-classical framework see Hopkins and Puchala 1980).

Other authors such as Louis Crouch and Alain de Janvry (1980), and Michael Watts (1983) documented how the commercialization of agriculture alters the class structure of African countries. They said that the flow of domestic and international capital into the modern sector of agriculture concentrates resources in the hands of wealthy landowners and their financial and political institutions, marginalizing the peasants, who lose their agricultural assets but have incomes too small to cover food purchases.

The neo-Marxists argued that technological change alone cannot guarantee the food security of peasants. Instead, peasants must retain control over their own resources. Some Neo-Marxist writers concluded that ensuring peasant control meant using state power to restrain encroachment from capitalist farmers (Caldwell 1977). They pointed to the achievement of food security by the People's Republic of China as support for their convictions about how agriculture should be organized.

2.1.4 Neo-Classical Economic Theory

The 1980s have seen the preponderance of other post-Malthusian theories about the causes of hunger in Africa. Prominent among these is neo-classical economic theory. The neo-classicists are post-Malthusians in that they "start with the premise that African food problems must and can be solved in large part by increased national food production." (Mellor, Delgado and Blackie 1987, 3; see also Christensen 1980; Commander 1989; Valdés 1981) They agree that African agriculture has stagnated because progressive technologies have not been taken up. But neo-classicists go beyond the agricultural scientists to stress that African farmers have not adopted modern methods because distorted agricultural policies have discouraged farmers from entering the market. In particular, they point to distortions in key agricultural prices, such as the cost of foreign exchange, credit, and producer prices. A price is said to be distorted when its officially established value differs substantially from what it would be under free market conditions. For example, excessively high foreign exchange rates make it cheaper to import food than to grow it at home; low, subsidized interest rates encourage capital flight; and low producer prices give farmers little incentive to deliver surpluses to market. Thus these policies block the social changes necessary for the transformation African agriculture.

But neo-classicists think that economic policy distortions cause hunger in other important ways, too. The weakness of the commercial sector not only means that many people do not grow or sell enough food crops to ensure adequate domestic consumption, it paralyzes the entire national economy (Helleiner 1985). In agricultural economies a large part of the capital for financing industrialization and for repaying international loans must be generated by agriculture. Thus poor performance by agriculture not only hurts agricultural

producers individually, it retards industrialization, ultimately holding down urban wages and contributing to joblessness across the country.

Neo-classicists argue that reform of agricultural policies and prices will attract farmers to commercial agriculture, raising output and stimulating the growth of the entire economy. Unlike some other theorists, however, neo-classicists have had the opportunity to test their ideas on a large scale. Working out of research centers based in the International Food Policy Research Institute (IFPRI), the International Monetary Fund (IMF), and the World Bank, influential neo-classicists convinced the IMF and the Bank to make the receipt of new loans by Third World countries contingent upon the implementation of packages of policy reform called *structural adjustment*. The campaign to reform African economies was signalled by the appearance of the World Bank's heavily-researched *Accelerated Development in Sub-Saharan Africa* in 1981. Three years later when the follow-on document *Toward Sustained Development in Sub-Saharan Africa* appeared, the Bank was able to claim, "The emerging consensus on policy issues dwarfs any remaining areas of dissent." (1984, 3)

Neo-classical theory is attractive because it tempts with the promise that a simple mechanism--macro-economic policy--exists for bringing about the changes in African countries needed to encourage food security. But reform has not produced the results which had been hoped for. At the behest of the World Bank an the International Monetary Fund (IMF), 31 sub-Saharan African countries implemented some level of economic reform between 1981 and 1986 (Gulhati 1989, 9). Twenty-one countries stuck with the programs. Disappointingly, none of these can report a significant increase in per capita food production (FAO 1991, table 9). As a group, the African countries that implemented reforms during the 1980s have indices of per capita food consumption three percent lower than they did in 1985, and six percent lower than in 1981, which is the same as for sub-Saharan Africa as a whole. In fact,

the 1980s has been Africa's hungriest decade, with 200 million people affected by hunger and 3 million dying in conflict-related famines (Bread for the World 1990, 57).[2]

Furthermore, structural adjustment has come under increasing criticism because it has aggravated problems of hunger among the poorest. Neo-Marxists identify structural adjustment with efforts by developed countries to maintain the international status quo. They contend that structural adjustment is simply meant to ensure that African countries repay their international loans and continue to supply agricultural commodities at low prices (Killick 1984; Payer 1974). To achieve this, structural adjustment encourages commercial agriculture, and hence, they hold, it brings the ills with it which they condemn, including the dislocation of poor peasants and the growth of urban poverty. Even advocates of structural adjustment increasingly concede that however laudable its long-run goals may be, it exacerbates existing hunger problems in the short run (Denny and Addison 1987; World Bank 1991). The World Bank admits that adjustment reduces the purchasing power of the poor. Reductions in government spending cut into food subsidies; increased producer prices quickly translate into higher food prices; higher foreign exchange rates depress food imports; and rising interest rates put loans out of reach of small farmers, cutting their yields.

Some neo-classicists hope that structural adjustment can work over time without causing excessive hunger if reform is accompanied by programs to protect the food security of the poor (Curtis, Hubbard, and Shepherd 1988). Such efforts typically begin with an assessment of the exchange entitlements of the affected poor. On this basis, a food security system can be established including projects such as nutrition programs, health facilities, housing projects, and income-generating or food-for-work schemes in both rural and urban

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2. To estimate total mortality I added Bread for the World's figures for Southern Africa (1990, 57) to the totals for the Horn of Africa displayed in table 1.

areas. Indeed, the World Bank requires development projects supporting the food security of the poor to be part of any structural adjustment program.[3]

On theoretical grounds, however, neo-classicists insist that structural adjustment must be undertaken, even if increased hunger results.

> It is necessary to monitor adjustment operations and keep the priorities balanced to ensure that adjustment does not increase the food insecurity and malnutrition of some groups, particularly but not exclusively in urban areas. Concern for the short-term food supplies of a relatively small part of the population should not, however, be a pretext to stall the whole adjustment process. To do that could hold down growth and endanger the food security of a much larger part of the population, possibly for generations to come. (World Bank 1988, 8)

2.2 Political Explanations for Hunger

In recent years new work by political scientists relevant to the study of hunger has emerged. To be fair, many of the political scientists I will cite here are not interested in hunger as such. They have much broader concerns--the collapse of apparently democratic forms of government, the explosion of civil conflict, and economic stagnation. The relevance of their work for hunger studies lies in the fact they locate the causes of these crises beyond

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3. The intractability of Africa's problems led some economists to question critical assumptions underlying neo-classical models: Are market incentives germane to the decisions of African farmers? Do farmers have the capability of raising their output in response to incentives? For example Carl Eicher and John Staatz (1990), and John Mellor and others (1987), remind us that macro-economic policy changes alone do not cause improved agricultural methods to diffuse to developing countries. There has been little investment in research to develop high-yielding crop varieties for Africa. And even where modern methods are available, African smallholders whose first priority remains feeding the family may be unable to bear the risk of investing in it without assistance. Increasingly, writers like these question whether the political will is present in donor countries or in African governments to make investments in technology and infrastructure necessary for structural adjustment to succeed.

the economy. Some purport to account for the policies that African governments have adopted that may worsen hunger, while others look at the causes and effects of conflict between state and society.

2.2.1 Public Choice Approaches

The work of political scientists who adopt public choice approaches to African politics is interesting because it aims to build cumulatively upon the findings of neo-classical economists. The public choice school accepts the finding that African economies are stagnating because of poor macro-economic policies. Their goal is to explain, within the post-Malthusian framework, why African political leaders adopt the policies they do.

One of the foremost examples of this work is *Markets and States in Tropical Africa* by Robert Bates (1981; also see Bates and Lofchie 1980; Bienen 1987; Lipton 1977). Bates says that many African countries are governed by a political coalition that has an urban bias. All members of the coalition--which is composed of bureaucrats, industrialists, and the urban poor--demand policies which lead to state intervention in the economy and artificially low agricultural prices.

Bureaucrats call for the regulation of agriculture because it creates opportunities for extracting rents from producers. Using their official influence over crop marketing, bureaucrats can set low producer prices, and gain control of the margin between this price and the final sale price. Industry supports the bureaucrats, because government marketing revenues can be transferred to industry in the form of low interest loans. Finally, the urban poor and their employers seek low food prices--the poor, because low food prices constitute an implicit income subsidy--and their employers, because such a subsidy permits them to pay lower

wages. Interestingly, in his *The Policy Factor: Agricultural Performance in Kenya and Tanzania* (1988), Michael Lofchie concluded that Kenya had agricultural policies, such as price subsidies, that encouraged agricultural production because the ruling elite were land owners and hence favored sound agricultural policies, rather than bureaucrats inclined to tax production, as in Tanzania.

But political approaches that attempt to explain hunger in Africa in terms of poor economic policy choices can only go so far in accounting for hunger. First of all, these theories have only been rarely tested and then have performed poorly. For example, Bates (1983) tested the hypothesis that African countries with larger urban constituencies were more likely to have food price controls, but was unable to show a statistically significant relationship. In 1986 Lofchie predicted that Kenya, with its land-owning elites supposedly favoring beneficial agricultural policies, was poised to take-off into rapid economic growth. Kenya has experienced stagnating agricultural and economic productivity since then (FAO 1991, table 9; *International Financial Statistics* 1991, table 24). Furthermore, the fact that there has been little improvement in food security in those African economies in which leaders have tried macro-economic reform strongly suggests that factors other than policy choice must be involved. The difficulty with post-Malthusian and neo-classical approaches is that they rest upon the assumption that macro-economic economic incentives are relevant to the food production decisions of a large proportion of the peasantry in African countries. Why should this not be the case?

The cause of hunger in Africa may lie not so much in the economic policy choices of government, but in the fact that the policy-making apparatus is itself violently contested. This would have two implications. First, political leaders may be less concerned with setting agricultural policies than with winning power struggles. Their policy choices may reflect a

primarily political rathan than an economic logic. Second, when political conflict breaks out in the form of war, food security is certain to suffer. As long as African governments are viewed as illegitimate by many important groups in society, violent conflict can be expected to reassert itself time and again; a public order which can sustain economic growth and food security will not take root.

2.2.2 Africanist Approaches in Political Science

Other political scientists concerned about Africa place political conflict rather than policy choice at the center of their analysis. They try to explain the failure of African economies to grow by focussing on the relationship between state and society. Two features of African society capture their attention: the first is that it is overwhelmingly agrarian--the majority of the population are self-provisioning peasants, and the second is the inefficacy of African governments. In this dissertation I will call political scientists who focus upon state-society relations in Africa *Africanists*.

2.2.2.1 The Peasantry

Goran Hyden directed attention to the importance of the peasantry in *No Shortcuts to Progress* (1983; see also Bayart 1986; Chazan 1988, 133). Hyden built on work by Fred Riggs (1964), who himself was applying the ideas of the nineteenth century scholar Ferdinand Tönnies. Scholars in this tradition distinguish between the supposed rational-legal norms of modern society and the communal solidarity of traditional cultures. According to Hyden, while governing institutions in Africa appear to be modern, they are wedded to agrarian social

systems. He says the rural majority in most African countries ascribe to an "economy of affection." People live in family homesteads or hamlets where the engage in farming for home consumption, small commodity production, petty trade, or serve as a rural labor reserve. In these communities ties of kinship and ethnicity predominate. Decisions about exchange are as apt to be influenced by the standards of propriety shared by group members as they are by economic rationality.

But the peasant mode is unproductive, Hyden says. Obtaining only meager surpluses and being dependent on rainfall, African peasants are always at risk of hunger. More importantly, the economy of affection blocks further economic development. First, it discourages peasants from full participation in the market. Whenever they find engagement with markets or public institutions unsatisfactory, peasants can retreat into the economy of affection. Thus the state has no roots in society and no capacity to compel people to obey it. Furthermore, the economy of affection subverts rational-legal norms in government. Government officials are constantly under pressure to divert resources to their kin in the countryside. Rather than being an agent of change, the resources of the state feed the economy of affection. As Michael Bratton said of relations between peasants and government, "Society has been more effective at penetrating the state than vice versa." (1989, 414)

Hyden is a post-Malthusian, holding that strengthening capitalism will help to create a social class which will participate in modern economic relations. But other writers think that Africa must follow a different path. Richard Sandbrook (1985) shares Hyden's view of the peasantry and mentions him approvingly. But Sandbrook is skeptical that markets can be used to transform peasants into a capitalists. "An independent national bourgeoisie in the classic Western mould is unlikely to appear soon in tropical Africa. Indeed, change is generally in the direction of highly factionalized neo-patrimonial systems." (1985, 155)

Hyden formed his conclusions by comparing development in Africa with the patterns of industrialization which occurred in Europe, whereas Sandbrook believes that the mode of industrialization observed in Japan, where state power was used to create new institutions and nurture new social classes, is more appropriate for Africa. He sees no actor in African society other than the state with the inclination or ability to lead, asking rhetorically, "who will sponsor industrialization if not the state?" (1985, 33)

2.2.2.2 The State

Other Africanist political scientists presently hold little hope that African states can manage the task. Where Hyden describes how the peasantry blocks development, they focus attention upon the dysfunctions of the state (Callaghy 1986; Chazan and others 1988; Kasfir 1984).

The term *patrimonial* is sometimes used to describe African states. Patrimonialism occurs when leaders--patrons--govern through direct control over state institutions such as the military and the bureaucracy with the goal of holding together a ruling coalition. Control is exercised through the manipulation of political networks linking patrons to their supporters--their clients. Groups of clients are organized along ethnic lines, and seek particularistic rewards from their patrons. Clients who support patrons are rewarded with a share of his spoils, while those who oppose him are subject to coercion (Callaghy 1987; Lemarchand 1987). I do not think that the concept of patrimonialism adequately describes all of the salient behavior of African states. And many authors who write about all of the phenomena associated with patrimonialism that I describe eschew the term. But I will use it here as a

convenient shorthand to signify the problems of political development encountered by African states.

Patrimonial regimes stifle economic development because the resources of the state are consumed by corruption:

> Unconstrained by the hollow formalities of laws and constitutions, these networks use the state to appropriate its wealth (and that of other social groups and organizations) for their own enrichment. State office is awarded primarily as an entitlement to accumulate personal wealth. (Diamond 1987, 581)

There are a variety of explanations given for patrimonialism. Some authors believe that patron-client networks form because of the primacy of ethnic identity in Africa and the weakness of norms supporting bureaucratic neutrality (Lemarchand 1987; Hyden 1983). They write that those in official positions find themselves under considerable pressure from their kin to favor the home area when resources for development are disbursed. Others contend that African politics degenerates into patrimonialism because of the poverty of African countries (Whitaker 1988). In poor countries, both the value and power of public offices are inflated relative to other positions in society. The matchless authority of public offices creates highly unequal relations between officials and other groups in society making it easy for officials to demand bribes and kickbacks. Yet others think that patrimonialism is due to the class background of African political elites who have interests concentrated in urban, industrial, and parastatal activities (Diamond 1987; Fatton 1988; Nafziger 1988). The elites are said to use the state to set up monopolies and monopsonies taking advantage of the difference between high international and low domestic crop prices to rake in huge profits with the consequence that production is held artificially low.

Whatever the origins of patrimonialism Africanists agree it retards political development as well. In order to hold their political networks together, patrons must make state resources available to their clients. They turn control of agricultural finance and marketing over to their closest allies, leading to the economic policies described by economists which undermine African agriculture. These policies erode the incentives for engagement in productive enterprise and draw more and more individuals with entrepreneurial ambitions into patron-client networks. Thus patrimonialism blocks the development of a capitalist yeomanry and the social changes necessary to foster the transformation of agriculture.

Contributing to this syndrome is the fact that African states are propped up by the international system. In their famous formulation, Robert Jackson and Carl Rosberg (1982; se also Herbst 1990) drew attention to the weakness of the African states by arguing that while few Africans recognize the legitimacy of the states under which they live, the international community continues to do so. However poor their performance, African states receive development assistance, loans, and military and food aid. In such polities, African elites compete for political power with few restraints, either domestic or international, upon them. The behavior of the state is the result of intra-elite competition rather than bargaining among interest groups over developmental goals (1984).

Most of the Africanist political scientists do not claim that their explanations constitute a true theory. They do not test hypotheses drawn from underlying assumptions about political behavior; they do not know what button to push to overcome the negative inertia of the state; they modestly state that their work is descriptive in nature. While there are significant differences between the Africanists' descriptions of the African state given here, their commonalties are more important. Political conflict is at the center of their descriptions. The Africanists, whether they believe the origins of patrimonialism lie in ethnicity, social class, or

state power, agree that African states are only weakly connected to society, fail to promote development, and resort to coercion in an effort to control the peasantry.

2.2.3 Internal War

The major purpose of this dissertation is to investigate the relationship between war and hunger in Africa, and only secondarily to discuss the origins of these wars. But an examination of origins is necessary, because I want to make it clear that the cause of conflict-related famine is not contained in something unique to Africa. The conditions which create conflict-related famine have taken root in Africa at the present time, but whenever these conditions exist--as they have everywhere in the past, and still do in some places, for example, in Southeast Asia--conflict-related famines will occur. In order to do this, it is necessary to propose an explanation for war and hunger which begins with general properties of human beings and their politics, and not with Africa or Africans alone.

2.2.3.1 The Causes of Internal Wars

Some of the explanations offered for wars in agrarian societies have been highly politicized extensions of the debates about the effects of markets on food security discussed above. In the 1960s and 1970s it was common to read that capitalism was the best explanation for such wars. In *Peasant Wars of the Twentieth Century*, Eric Wolf (1969) concluded that two main causal factors come together to incite modern peasant wars. The first is the economic dislocation caused by advancing capitalism. Capitalism commodified social relations, and . . .

> . . . cut through the integument of custom, severing people from their accustomed social matrix in order to transform them into economic actors, independent of prior social commitments to kin and neighbors. (1969, 279)

At the same time "the dance of commodities brought on an ecological crisis." (1969, 280) Peasants lost their means of sustaining themselves, and found themselves without suitable alternatives.

The second causal factor was the fusion of two social groups. With the advent of capitalism, Wolf said, the peasantry finds itself in a subsistence crisis, but alone is powerless. Peasant war can only break out if a leadership arises to provide organization. Here an important role is played by the "marginal man," who is dispossessed along with the peasantry, but also has benefited from education and urban experience. These "rootless intellectuals" articulate peasant demands and give coherence to the struggle (also see Paige 1975; Scott 1976).

In *Reluctant Rebels* (1984) John Walton criticized earlier work on peasant wars saying that it had restricted itself to "classical" revolutions like China and Cuba. He pointed out that a theory which purports to explain what makes peasants rebel must embrace all such uprisings including less well-known and inconclusive ones like Mau Mau in Kenya. He wanted to define the concept of peasant wars more broadly and coined the phrase national revolt which was meant to be more inclusive.

But many of his conclusions were similar to Wolf's. He said that national revolts are the result of uneven development.

> Uneven development is generated in the first instance by the penetration of global capitalism into precapitalist societies. . . This produces a massive transformation of the indigenous economy that entices or forces the population into new forms of wage

> labor and service to the international system or leaves it behind to starve as traditional forms of subsistence are eliminated or rendered unprofitable. (1984, 162).

Walton also held that social mobilization and the modernization of elites help to provide peasant movements with leadership and direction.

But history has raced ahead of scholars like Walton and Wolf. Walton's effort to broaden the concept of peasant war hardly went far enough. Peasant wars continue apace, but species have arisen and even become predominant which their work did not anticipate. In Africa during the 1980s many of the bitterest and most protracted peasant wars occurred not in societies undergoing transitions to capitalism, but in centralizing, ostensibly socialist regimes.

For regimes intent on practicing socialism, restraining capitalism meant that land and assets must be in the hands of the state, not privately held. Socialist governments like Angola, Ethiopia, Mozambique and Tanzania experimented with large-scale state enterprise and collective farming. Former colonial plantations were nationalized and administered by the state. Peasants were encouraged or forced to farm communal plots, market collectively and buy from state-owned retail shops.

The socialist state proved to be as inimical to the interests of peasant producers as the market had been. Angola, Ethiopia, and Mozambique collectivized in the late 1970s. Between 1975 and 1985 they experienced an average decrease in per capita food production of 20 percent compared to 10 percent for sub-Saharan Africa as a whole (FAO 1991, table 9). Food production dropped by a similar amount in Tanzania during its period of communal farming in the late 1960s.

State control devastated agriculture in part because it undermines production incentives (Tordoff 1984). But state control also facilitates patrimonialism. Whereas licensing and regulation are used to establish monopolies and monopsonies and divert profits to clients of

the state in capitalist settings, in nominally socialist countries the organs of the state--cooperatives, state enterprises, and the party--serve similar functions. A few scholars have argued that socialist policies go far in explaining modern peasant wars in Africa (Chabal 1986).

> The crisis . . . can be viewed as a struggle between state officials and peasants over the amount and disposition of marketable surpluses. In each of the countries, politicians and bureaucrats sought control over the marketing and pricing of agricultural products and over the importation of basic consumer goods more as a means of securing state revenues and personal gain than as an instrument for promoting rural development. Resistance to exploitative policies by food and export crop producers has been the main reason for the agricultural decline . . . This resistance manifested itself in various ways: diminished production, parallel markets, smuggling, emigration and support for anti-government forces. (Galli 1987, 19)

An excessively narrow, historicist approach such as that adopted in the literature on peasant wars is bound to mistake contextual factors like the advent of capitalism or socialism for causal factors. A complete explanation for wars in agrarian societies must take into account the real variety of threats to peasant interests (Magagna 1991). Other social scientists have proposed more general methods for understanding the causes of intra-national conflicts.

Harry Eckstein (1970) grouped all conflicts like insurrections, rebellions, revolutions and civil wars together and called them internal wars. Eckstein argued that in order to explain the causes of internal wars it is necessary to go beyond precipitating events such as economic decline or an ethnic clash, to examine how people develop grievances and how they turn them into violent action. He identified two necessary conditions for internal war. On the one hand, there must exist a widespread perception of injustice. Eckstein called this the "propelling force." On the other hand, the "blocking force" inhibiting the use violence by members of civil society must be removed. For example, if a government which was formerly able to

stifle dissidents with impunity suddenly loses this ability, internal war is more likely to break out.

By employing these terms, Eckstein helped to define a less clearly articulated concept--that of political legitimacy--commonly used by comparativists to describe relationship between state and society. In the jargon of political science, legitimacy refers not to whether a state is "truly" legitimate in some normative sense, but to how members of society perceive the state. A state is said to possess legitimacy when the prerogative of government to formulate official policy is acknowledged by the bulk of society (Jackman 1990, 20).

For the occupants of any government, the problem of entrenching their tenure centers around the question of the legitimacy of the state. To establish legitimacy a state must be able to perform two distinct types of functions. In the short run the state must retain the raw military capacity to suppress challenges to its authority when they arise. In order to strengthen its position over the long run, the state must do something more difficult. It must be able to meet key demands placed on it by other important sections of society. The ability to meet important demands wins accord from society that the government in power ought to rule. These two tasks of the state can be related to the forces propelling and blocking civil war. When a state is perceived to be illegitimate, popular discontent may propel society toward war. If the state is successful in meeting the demands of important groups in society, it can neutralize the forces propelling war. On the other hand as long as the state has sufficient capacity to coerce dissidents it can block movement toward internal war.

2.2.3.2 The Rise of Insurgency

Africanist political scientists have described some general social forces propelling internal war in Africa today. Recall that they believe African political institutions are weak whereas agrarian society is resilient. This leads to patrimonial political practices--the use of state resources to shore up political networks. But patrimonialism is bound to fail in the long run because it inhibits the social transformations necessary for the development of productive forces. The private consumption of public resources impoverishes patrimonial regimes; they cannot create or operate social and redistributive programs to meet the economic demands placed on them by civil society (Nyong'o 1987, 19-20; Sandbrook 1988). Inevitably, government appears illegitimate to those outside the circle of clients with access to patronage. Any claim to rule on behalf of the people is exposed as a fraud when development projects collapse and official corruption becomes commonplace. "The important thing to remember up to this point is that insurgency is essentially a political legitimacy crisis of some sort." (O'Neill, Heaton and Alberts 1980, 2)

In ethnically heterogeneous societies such as predominate in Africa, state incapacity is doubly injurious. As political dissatisfaction grows, cleavages are bound to open up wherever social cohesion is the weakest. The impossibility of economic and social justice virtually guarantees vigorous challenges to the legitimacy of the state from disaffected groups with separatist or irredentist sentiments (Forrest 1988; Nzongola-Ntalaja 1987). According to René Lemarchand, ethnically-based factions perform important social functions similar to patron-client networks and may evolve from them. During times of political turmoil such groups are organized to "provide protection" for their members when the state cannot do this.

Lemarchand said, "The declining capacity of state institutions must be regarded as the critical element behind the rise of factions." (1987, 156)

The incapacity of the state propels society toward war by creating factions with abiding grievances against the state while simultaneously crippling the regime so that it has no capacity to meet the demands placed upon it. When the state cannot contain factions by incorporating them into clientelist networks, it must resort to force to suppress them. The state's show of strength ultimately is the result of its weakness. "Authoritarian forms of rule result not from high levels of power and legitimacy, but from the tenuousness of authority." (Callaghy 1987, 88)

2.2.3.3 The Opportunity for Internal War

But the presence of grievances alone is not sufficient to explain the outbreak of war. Whether war occurs or not must depend on situational factors which permit the aggrieved to organize and arm themselves well enough to test the capacities of the state. In Eckstein's terms, the forces blocking internal war must be removed.

According to some Africanists, international politics has paved the way for many of Africa's modern insurgencies.

> Although African power to pursue conflicts is limited, additional power comes from outside. . . Instability is so endemic in Africa that arms supplies are an invitation to crisis and hence to further great power intervention (Zartman 1969, 16)

During the 1970s and 1980s when the Soviet Union and the United States pursued their Cold War nascent guerrilla movements found it relatively easy to turn grievances into

action. The governments of the Soviet Union, Cuba, the United States, South Africa, Israel and Libya all supported proxy wars against regimes they regarded as undesirable by providing military assistance to dissident movements (Chege 1987; Nzongola-Ntalaja 1987; Zartman 1989, 16).

Modern weapons were also available to guerrillas at lower prices than ever before as arms exporters in Brazil, France, Israel, Taiwan, and West Germany competed for shares of the Cold War arms market. During this period Lemarchand concluded that "the mere existence of warring factions is enough to generate offers external assistance." (1987, 160)

Many African governments found that they could not effectively control their own borders. Rebels were able to set up bases in neighboring countries, cross and strike at government targets and then retreat to safety. Thus the forces blocking internal war were removed. In some African countries, rival political leaderships exist today, one of which occupies the capital city, and the other the countryside, both claiming legitimacy.

> Why is Africa a 'crisis ridden continent' where perfectly normal situations of conflict do not remain in the realm of politics but so frequently turn to violence, proceed from violence to a search for allies, and from allies expand to a cold war battlefield? The single response is that current African conflict arises from the inchoate and developing nature of African states, both on the domestic and international levels. (Zartman 1989, 12)

The Africanist description of African political systems offers a more complete picture of the political forces that create hunger than one which focuses solely on the advent of commercial agriculture. The Africanist approach suggests that in patrimonial political systems the tension between the state and society is capable of propelling the country toward war whether society happens to operate a market or the state claims control of agriculture. It also

takes the influence of the international system into account explaining why so many internal wars broke out during the 1970s and 1980s in particular.

2.3 The World Systems Approach to Conflict-Related Famine

But only one school of thought has offered an explicit theory of hunger in Third World countries that places military causes at the center. This is the world systems variant of neo-Marxism (Ball 1976; Shindo 1985). While many of them have written at length about the causes of hunger, world systems theorists are more interested in imperialism and their primary dialogue is with people who study arms expenditures and the global arms trade not with Africanists or hunger scholars (Deger 1986; Jackman 1976; Nordlinger 1970; Wolpin 1986). The goal of the world systems theorists is to demonstrate that the military influence of arms exporting nations in the Third World is destructive. For them, hunger is but one of several harmful impacts traceable to imperialism.

The world systems theorists assert that hunger in Africa is due to the *militarization* of African countries. Militarization is a broad concept encompassing both a growing influence of the military over national life, and an increasing priority being given to the military's wants. World systems theorists see militarization as the result of rivalry between hegemonic nations such as the super-powers and South Africa for influence in Africa. In pursuit of their strategic aims during the 1970s and 1980s, the hegemons supplied weapons to proxy armies, encouraging them to destabilize governments backed by their rivals, thus creating or aggravating civil wars (Chege 1987; Nzongola-Ntalaja 1987). On the other hand, when one of their regional allies was threatened with internal war, the hegemons attempted to prop it up by

selling it weapons. These wars, and the growing quantities of weapons imported to fight them, have devastated the political and economic systems of several African countries.

The world systems theorists think militarization causes hunger in two quite distinct ways. First, war brings about hunger directly, because it displaces rural people who must flee from fighting. Uprooted from their land and concentrated in refugee camps, the displaced are at great risk of hunger.

> [The traditional view] implies that conflicts, either internal to a country or limited to a region, are the primary causes of forced displacement and refugee flows, and that refugees are the result of decisions taken by local and national actors for identifiable self-interests. But this does not explain the main refugee flows today. The thesis advanced here is that the refugee flows are closely related to the world's dominant political and economic systems and the polarization of the world along East-West lines. (Schultheis 1989, 6)

But of much greater concern to these writers is their belief that militarization causes hunger indirectly by increasing spending on arms imports and military operations (Ball 1976; Caldwell 1977). "The only early warning system you need of famine is lists of which governments are spending disproportionate amounts of their GNP on military activities; look at Ethiopia, Sudan, Chad, Angola, and Mozambique." (quoted in Pyschas and Malaska 1989, 114). They explicitly reject the possibility that the growth of the military has any beneficial spin-off effects such as stimulating production, technological change, or creating a better trained workforce (Benoit 1973).

The crux of the world systems theorists' argument is that ballooning military budgets displace social spending and siphon support from the agricultural sector, cutting into productive investment. As the economy slows the ranks of the poor and unemployed swell, reducing food consumption by the low-income people. Moreover, these authors believe that

militarized regimes are prone to having distorted economic policies. Ever in pursuit of fresh arms deliveries, militarized governments attempt to obtain more revenue from the agricultural sector. They tax agriculture by establishing low official producer prices and keeping the difference between the farmgate and consumer prices or use low food prices to subsidize the incomes of the military and urban people. Such regimes also try to keep the cost of arms imports low by overvaluing their currency.

The policies of militarized governments create a cycle of violence which tends to justify and reinforce itself. The exactions of the state depress the economy; growing hunger strips the government of its legitimacy and swells the ranks of dissidents. In turn, the government is compelled to crush the opposition by force and it requires still more weapons to accomplish this. As more arms flow into the country, the opportunities for violence only increase. And the use of violence against the populace progressively delegitimizes the state, turning more and more people against it. Thus militarization has distorted the development of some African countries, creating voracious security states--what Eiichi Shindo called "famine powers" (1985, 7).

The military domination of the developing world by foreign hegemons no doubt deserves condemnation. And four important points made by the world systems theorists presage the findings of the narrative accounts of conflict-related famine to be covered in the chapters ahead: 1) the internationalization of African conflicts makes it more difficult for relief agencies to cope with conflict-related famines when they occur; 2) proxy wars have caused hunger in many African countries by displacing people from their land, interrupting food production, and disrupting markets; 3) military spending has depressed food production and consumption by reducing spending on agriculture and distorting economic policies; and

finally, 4) the relationship between war and hunger may be a simultaneous, mutually reinforcing one.

But the possible correctness of these specific observations says nothing about the overall explanatory power of the world systems theorists' approach. In its most extreme form, world systems theory can be interpreted as stating that hunger in Africa is caused by foreign military intervention. This necessarily implies that if foreign military assistance is curtailed, hunger will abate. But, if it is conceded--and world systems theorists concede--that foreign influence is exerted by manipulating pre-existing political conflicts of the kind described by Africanists, then it must be asked if war would not occur in Africa without imperialism, and if so, if these wars could cause hunger. Historically this has certainly been the case in Asia and Europe.

2.4 Literature Summary

The social scientific literature of relevance to the study of hunger in Africa is large and diverse. However four predominant themes have emerged and persisted. The first theme is that hunger in Africa is best understood in terms of environmental factors, particularly the variability of rainfall in the face of growing human populations, that make food production difficult.

Second is the argument that African governments have adopted agricultural policies like low, fixed producer prices and distorted foreign exchange rates, that discourage food production. In this view the best way to combat hunger is to rationalize economic policies.

The third theme in the literature, more nuanced than the other two, grows from the description of African politics given by Africanist political scientists. Africanists hold that the

weakness of African states leads to patrimonial political practices by ruling elites seeking to shore up their regimes. But patrimonialism causes state resources to be squandered and retards growth and development. This in turn fuels rebellion, propelling internal war.

Whereas Africanists did not explicitly intend their description of African politics to be used as an explanation for hunger, World Systems theorists who have elaborated the fourth theme found in the literature, did so. They say that hunger is not only a direct consequence of fighting, but is also a result of the militarization of African states embroiled in internal wars by hegemons seeking proxies. Military spending for arms imports drains state coffers, accounting for distorted economic policies and falling food production. Both the Africanist and the World Systems perspectives imply a simultaneous relationship between political and food security. That is, hunger can cause rebellion, but war causes further hunger, leading to a cycle of war and famine.

None of these themes adequately accounts for hunger in Africa by itself. The dominant strain in the literature that holds that hunger persists because the market has yet to take hold, draws attention to what is not happening in Africa: peasants are not bringing their crops to market. But when it is recognized that political order is a prior condition for efficient markets this formulation seems less satisfactory.

The converse notion--that internal wars result from the penetration of agrarian systems by the market economy--fails to take into account the variety of political regimes in Africa and cannot account for most of the conflict-related famines which have occurred during the past two decades in Africa.

While the world systems approach advances the debate by explicitly addressing conflict, it remains preoccupied with locating the cause of conflict-related famine outside of

Africa. The proliferation of conflict-related famines in Africa remains a problem that requires attention even if it is not primarily the fault of imperialism.

Scholars working within the Africanist framework, which I prefer, recognize that conflict between state and society can lead to hunger-causing internal wars irrespective of external involvement or arms flows. While they recognize that ethnic conflict is often an ingredient in internal wars, they cannot say where or when wars will occur and have not described or analyzed conflict-related famine.

I am not in a position to offer a new theoretical formulation here myself. Nor can I offer a test of competing theories. The paucity of good data on Africa, and the limitations imposed by my methods mean I cannot measure concepts like the "economy of affection," "patrimonialism," or the penetration of capitalism. What I want to do in this dissertation is to determine how important a cause of hunger war is compared to environmental conditions and distorted economic policies, and to compare the direct effects of fighting with the effects of military spending.

However, I do hope to enrich the Africanist description by adding to it a detailed account of how conflict-related famines happen in Africa and by offering a systematic explanation for why some conflict-related famines are worse than others.

3. QUANTITATIVE METHODOLOGY

How much impact does political violence have on food security in Africa? Is war an important explanation for hunger even when other causes of hunger, like the economy and the environment, are taken into account? To what extent did the militarization of African regimes contribute to hunger above and beyond the direct effects of political violence?

It is important to ask these questions because the various factors that could cause hunger are often entangled. Consider the famine that occurred in Ethiopia in 1984-85. At that time battles between the government and ethno-nationalist rebels displaced or isolated hundreds of thousands of people. But a serious drought also occurred during 1983-84. And the Government forced hundreds of thousands of families into collectives and required all farmers to sell their produce at low fixed prices (Giorgis 1989, 157, 306). Simultaneously, Ethiopia began importing billions of dollars worth of military hardware from the Soviet Union that was paid for with the nation's agricultural bounty. Given the complex events occurring in Ethiopia, is it possible to say that fighting or some other factor was the most important cause of hunger?

One way of assessing the relative importance of variables is to include them in a convincingly specified quantitative model. Ideally, such an analysis would yield numbers indicating the estimated impact that an event like an armed attack or an increase in the foreign exchange rate would have on a measure of food security. For example, the analysis might indicate that a typical armed attack was associated with a 10 or a 100 or a 1,000 hectare decrease in the area of cereal crops.

Quantitative analysis is not without risks, however. If a quantitative model is mispecified--for example by omitting important independent variables, including intercorrelated

independent variables, or treating endogenous effects as exogenous--the estimation will be misleading or biased. For example, the relationship between war and hunger may be simultaneous. If this is true but the relationship is incorrectly specified in the model as unilinear, the estimated coefficients will be biased. To avoid this kind of bias a two-stage correction procedure must be employed. Furthermore, the method used to estimate the model must be appropriate to the properties of the data. In my work, the fact that many countries are used together in one sample requires correcting both for the differing country sizes and for the time trends in the data. This necessitates the use of a method called generalized least squares (GLS).

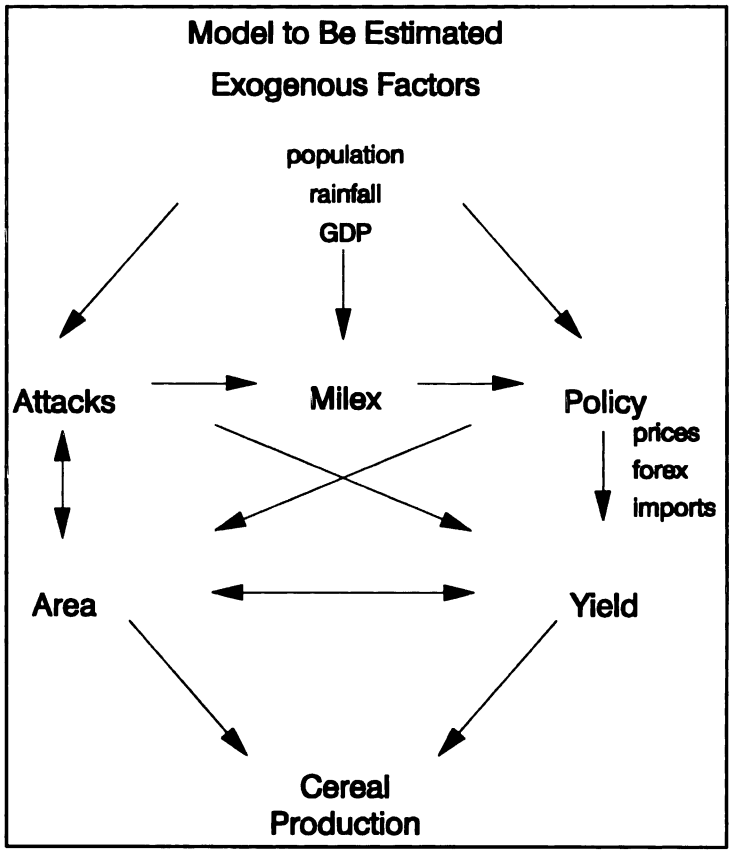
An even more fundamental problem with using quantitative data is the question of how to define and measure key concepts. For example, I was unable to measure the concept of hunger directly. Data on food consumption simply are not available for most years for most African countries. I was unwilling to substitute a measure of food production for the concept of hunger, since people can and do starve in the midst of plenty. Instead, I measured one of the African peasantry's most important sources of household food by looking at an indicator of the utilization of land for food production: the area of cereals harvested. Thus, the results do not show how much food consumption changes as a result of changes in the independent variables. However, I believe they accurately portray the extent of the effects of the independent variables upon a critical component of household food security.

Food production remains central to food security in Africa where falling food production has fallen so precipitously (Eicher and Staatz 1984, 3). However the area harvested is affected by war, we still want to know what the final impact on food production is. By employing area harvested in a more comprehensive two-stage cereal production model, I can estimate the impacts of the independent variables on cereal production. Consider a

model in which total cereal production is a function of area harvested and average yield. By tracing the paths from independent variables measuring military behavior and economic and environmental conditions, through area harvested and average yield to production, one can examine how these factors have their impact on total cereal output and what their total effects are. Similarly, this method can be extended to other variables, making it possible to investigate whether military spending is associated with economic policy distortions and whether reductions in cereal area harvested or cereal production are followed by increases in political violence, all within the framework of a single quantitative model.

The model to be estimated is diagrammed below:

Figure 1.



In this model it is assumed that the most important exogenous factors determining cereal production are the population, rainfall, and the GDP.[4] Roughly speaking, this model forms a cycle that begins in the upper left hand corner with a measure of violent political conflict: armed attacks, moves through military spending and economic policy to food production, and then back to armed attacks.

Most importantly, the model posits that the direct effects of armed attacks reduce cereal production by depressing the area harvested and average yields. Next, in response to political violence, governments are expected to increase military spending (milex). To do this, the model assumes, governments implement policies that transfer resources from agriculture by lowering producer prices (prices), overvaluing its exchange rate (forex) and increasing imports. The three policy variables then have their effects on the area harvested and yields. When the estimation is complete the total effect of the causal variables on cereal production can be estimated by tracing the paths from them through the area harvested and yields to cereal production.

Notice that the model allows the area harvested and average yields to affect each other. This is because the two variables are inversely related to one another both across countries and within countries over time. I found that in my data countries with larger areas harvested tend to be those with lower average yields. And within countries, holding other things constant, when the area harvested is lower, yields are often higher. I think this occurs because there is a relationship between the type of agricultural holding and yield. The cereal yields of peasant farms are generally lower than those on commercial farms. During a food

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4. GDP itself would have been endogenized, but, as explained below, it turns out to be impossible to obtain estimates in that case because of multicolinearity. The probable extent of bias resulting from such specification problems are discussed at the end of the chapter.

crisis such as a drought or war it is peasants who are most likely to be displaced. Thus yields may appear to behave perversely during war--remaining stable or rising if their negative relationship with the area harvested is not taken into account.

Finally, the model takes account of the possibility that the relationship between military activity and food security is simultaneous by allowing the area harvested to influence the number of armed attacks. I expect that as area harvested falls, indicating a loss of access to land for food production, political violence will increase. This closes the cycle that began with armed attacks and their influence upon food security and military spending.

3.1 Previous Quantitative Work

Several quantitative analyses relevant to understanding the causes of the African food crisis already have been undertaken. For the most part, these have been done by economists testing macroeconomic models (Anderson and Scandizzo 1984; Morrison 1984). They typically employ independent variables such as food prices, buffer stocks, food aid, measures of economic growth, and other indicators of macro-economic policy to predict indicators of food security. However, these models have little to say about the political causes of hunger.

Two problems characterize quantitative work on the causes of the African food crisis. First, while economists have noted that political process are important to economic outcomes, their efforts to incorporate political variables into their models have not been successful (Scholing and Timmermann 1988; Wheeler 1984). Political variables are often poorly conceptualized and are not theoretically integrated into a system of equations. Typically, a political indicator is a composite measure of general "political instability." This limits one to the trivial conclusion that economies experiencing political instability perform poorly. These

studies also ignore the possibility that political instability and food security affect each other simultaneously.

Another problem is that most of these studies are based on cross-national data alone. Cross-national designs necessarily rely on a small number of observations making it difficult to draw conclusions with any degree of confidence. Furthermore, by ignoring the dynamics of change over time, cross-national studies run the risk of making conclusions applicable only to a unique set of circumstances obtaining at a particular point in time. Cross-national research designs are always subject to the criticism that an observed relationships between variables is spurious and that some omitted factor actually explains variation in the dependent variable better. We have some confidence that factor X is related to outcome Y when we find that countries with X show Y. But we would have more confidence if it were also true that countries which did not have X did not show Y, and then later acquired X and showed Y.

The quantitative analysis which I performed improved upon previous efforts in two specific ways. First, the political variables incorporated into my model measure specific, observable kinds of political behavior. The hypothesized relationship between the political variables and indicators of hunger is underpinned by a causal interpretation developed from case studies. Thus I will not be restricted to concluding that political instability is bad for the economy, but will venture to say what it is about political instability that is injurious, and how the injury occurs. Second, I will not only use cross-national data but will pool observations on the sampled countries over time as well. Incorporating the element of time will increase the efficiency of estimation and raise confidence in the results. Finally, the model is estimated in two stages, allowing for the possibility of simultaneous causation between war and hunger.

3.2 Measurement of Variables

3.2.1 Hunger and Food Production

Hunger refers to insufficiency of food consumption. Thus it is best measured with an indicator such as annual average consumption of calories. Unfortunately, data on food consumption in Africa adequate for cross-national or time-series analyses are not available. They are completely missing for many African countries, and are only available for scattered years for those African countries that do collect them. The Food and Agriculture Organization of the United Nations (FAO) calculates data on average calorie availability, but these are mostly in irregular intervals and are missing for recent years.

But there are many sources of data on agricultural production. It is tempting to try to escape from the problem of data scarcity by substituting a measure of food production for a measure of consumption. At first glance, one might assume that changes in food production, such as could occur during a drought or a war, would be strongly enough correlated with food consumption to permit its use as a proxy. But as economist Amartya Sen (1981) showed, this operationalization of the concept of hunger is not valid. Using food production as a proxy for food consumption leads one into a levels-of-analysis error--that is, one cannot infer whether individuals have sufficient food by examining data aggregated at the national level.

If food production declines does that indicate that hunger is a problem? It may not, if production already exceeds consumption needs. In the event of a production shortfall some arrangement may be made to share food with those in need, or consumers may simply purchase imported food. On the other hand, even if food production is rising or in surplus, some people may go hungry because they cannot buy or otherwise obtain sufficient food.

Hunger occurs not only when food is actually in scarce supply, but also when people cannot obtain access to food, even if sufficient food to feed everyone is present.

> Starvation is the characteristic of some people not having enough food to eat. It is not the characteristic of there being not enough to eat. While the latter can be a cause of the former, it is but one of many possible causes. Whether and how starvation relates to food supply is a matter for factual investigation. (Sen 1981, 1)

Sen argued that this problem should be approached by explicating the relationship between food availability and food consumption. His insight is that different groups of people have different ways of obtaining food. He called these ways of obtaining food "exchange entitlements." Examples of exchange entitlements include home food production, working for cash wages to purchase food, or barter. Hunger occurs when a person can no longer "exchange" their entitlement for sufficient food to ward off clinically discernible symptoms of malnutrition given their body weight and level of activity. In the absence of data on food consumption, then, it makes sense to use data on exchange entitlements as a proxy.

Data on an exchange entitlement such as cash income or access to farm land would be a valid proxy for food consumption if it were true that the measured exchange entitlement were the only one used to obtain food, and that all of the entitlement were exchanged for food. Of course, these conditions will never hold in reality; instead it must be argued that the measured exchange entitlement is sufficiently correlated with hunger to allow one to claim that it is a serviceable proxy.

I resolve this problem by noting that one measure of food production has many of the properties of a measure of exchange entitlment. In the case of Africa, where the majority of the population are peasant smallholders, access to land is a critical exchange entitlement. And the area harvested is not affected as strongly by the problem of aggregation as are other

production measures. Thus I select cereal area harvested in hectares as a proxy for exchange entitlement.

3.2.1.1 Cereal Area Harvested

The area of cereal crops harvested should be a valid measure of exchange entitleement for most African countries for three reasons. First, cereals--including maize, millet, sorghum, and wheat--are by far the most important calorie sources in Africa. They constitute an fundamental component of human diet even in countries where other staples like cassava and yams are consumed.

Furthermore, most African farmers are largely self-provisioning. For example, the International Food Policy Research Institute (IFPRI) reports that Ethiopian peasants obtain 80 percent of their calories from domestic food production--that is from the land which they farm themselves (IFPRI 1989, 13). While it is true that many rural Africans supplement their diets with food purchased with cash from wage labor or crop sales, few buy all, or even the largest proportion of their food. Among peasants, the relationship between food production and food purchase is positive (rather than negative as we would wish for food security's sake). When agriculturalists experience a crop failure they have reduced incomes and so cannot afford to buy food precisely when they most need to do so.

Finally, the cereal area harvest is less affected by the problem of aggregation then other measures of food production. Agricultural land is a "lumpy" good. It is not held collectively at the national level. Each farming household is tied to its own parcels of land by legal or customary bonds. Therefore agricultural land is not frivolously brought into production, nor is it lightly abandoned, and the consequences of decisions about the area to be

produced are borne by the members of the household. Thus, there should be a degree of correspondence between the amount of land under production and the availability of food at the household level. That is, if the area harvested declines, it does not mean that everyone in the country has reduced their area under production by a tiny amount. We can confidently infer that some at least partially self-provisioning families who were once farming no longer are doing so and so have less food to eat.[5]

Let me use the example of the Ethiopian famine of 1972-1975 which took 100,000 lives to illustrate the differences between the variables cereal production and cereal area harvested.

Descriptions of the duration and intensity of the crisis differ among reporters depending on which aspects of it they choose to focus upon. According to Sen, the famine reached its peak in 1973 and abated in 1974. However other witnesses report hunger at its worst from 1974 to 1975 (Giorgis 1989, 17). Completely comprehended, the famine had two important phases: the first a drought-induced famine during 1972-1974, the second a conflict-related famine during 1974-1975. Unlike the cereal production statistics, data on the area harvested reflect hunger throughout the crisis.

The genesis of the famine was poor rains in the provinces of Arusi and Wollo in late 1972. However, there were few immediate reports of hunger, because the harvest earlier that year had been a good one and agriculturalists had surpluses in store. In Ethiopia crops watered by the winter rains are harvested the following spring, meaning that in some cases the impact of a drought is not recorded until the next year. According to the FAO (1991, table 15) in 1972, 4,489,000 tons of grain had been taken from 5,481,000 hectares of land. It

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5. Of course variations in yields and in population density mean that average parcel sizes are not the same from region to region. While not eliminating the levels-of-analysis problem, the use of cereal area harvested might make it less severe.

was the largest reported harvest in Ethiopian history up to that time. And the following year, when hunger began to become a serious problem, cereal production dropped only a half of a percent--well within its normal range of variation--to 4,466,000 tons, because the drought in Arusi and Wollo was offset by good weather elsewhere. The national area harvested actually increased slightly in 1973 to 5,550,000 hectares, because the drought was not yet severe enough to force farmers to quit their land. Neither aggregated data on cereal production nor area harvested did a good job of detecting the crisis during its first year. By the end of 1973 farm families had exhausted their alternative means of sustaining themselves. Families affected the year before began to migrate in search of relief. Reflecting these factors, both cereal production and area harvested plunged in 1974. Cereal production dropped 13 percent to 3,866,000 and the area harvested 16 percent to 4,611,000 hectares. The area harvested fell more than cereal production because yields were still high in well-watered parts of the country. Nationally, the yield actually increased from 805 kilos per hectare in 1973 to 838 kilos per hectare in 1974. This occurred because lower-yielding farms in marginal areas were disproportionately likely to be eliminated by the drought while in other areas bumper crops were harvested. Thus while both the area harvested and total production both detect the drought-induced famine during its second year, area harvested responded more strongly. The variability of the yield aggravates the levels-of-analysis problem when production data are aggregated.

The rains returned to normal throughout the country in late 1973, but hunger--now caused by political and military factors--lingered. In 1974 the Ethiopian military staged a coup-de-état against the regime of Heile Selassi supported by a populace aroused by the indifference of the government to the drought. Factional fighting accompanying the coup displaced peasants in the central provinces including Wollo. Furthermore, in 1974 and 1975

ethno-nationalist separatist movements in the north and south-east took advantage of the weakness of the state to launch attacks of their own. Here is where the two measures of hunger diverge significantly. Even though hunger was still widespread in 1975, recorded cereal production rebounded with the rain, setting a new national record of 4,796,000 tons because of high yields in areas unaffected by violence. The area harvested on the other hand, continued to decline because of the fighting, reaching 4,571,000 in 1975 and its modern low of 4,368,000 in 1976. Thus cereal area harvested measures hunger--specifically that caused by displacement or the loss of productive land such as might occur during war--which cereal production data do not.

3.2.1.2 The Validity of Cereal Area Harvested

One indication of the validity of using cereal area harvested as a measure of hunger in primarily agrarian societies is that it is correlated with the calories available per person. In fact, in my data cereal area harvested is a better predictor of calorie availability than cereal production.

The FAO's data on average annual calorie availability are calculated by estimating the total national food supply including domestic production and imports, and deducting the amount exported, fed to animals, spoiled, or put to industrial use (FAO 1991, xv). The remainder is converted to calories as a percentage of adult requirements.

The simple correlation between cereal area harvested and calorie availability is practically nil because the cereal area harvested varies with the size and population of the country, while calorie availability does not. However, one can demonstrate that the two

variables are, in fact, related to one another, by using pooled regression.[6] Using this technique, I regressed data on calorie availability as a percentage of adult requirements on cereal area harvested in 1,000s of hectares. For comparison, I also regressed calorie availability on cereal production in 1,000s of metric tons.[7]

The data available cover 13 African countries over nine irregularly spaced years between 1965 and 1981. Three controlling variables were used: First, the availability of calories depends on the amount of food imported, especially in Africa where almost all imported food is destined for human consumption. Second, since the number of calories which can be produced per hectare varies between countries, the annual average cereal yield in kilos per hectare was also included as a controlling variable. Finally, the calories available per person depends on the number of consumers, so population density was included.

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6. Pooled regression is explained in detail below. After correcting for serial correlation, cross-sectional correlation, and cross-sectional heteroskedasticity, the residuals were approximately normal in distribution. Hausman's test indicated that the independent variables could be correlated with the country cases, so all variables were transformed to mean deviates. Thus the results should not be interpreted as meaning that countries with larger areas harvested have more calories per capita, but as refering to changes within countries.

7. The area harvested and cereal production were also compared in a single equation. In this case only the area harvested was statistically significant. But because the two variables are extremely collinear, the estimated coefficients are unstable and results are not reported here.

Table 1
The Impact of Cereal Area Harvested on
Calorie Availability as a Percentage of Adult Requirements
Thirteen African Countries--Various Years
Buse R-square = .332

Variable Name	Estimated Coefficient	Standard Error	T-ratio 111 DF	Partial Corr.	Standardized Coefficient
Area	**.0016**	**.0004**	**3.863**[1]	**.3429**	**.2124**
Yield	.0013	.0009	1.504	.1407	.0798
Imports	.000004	.000001	4.692[1]	.4053	.3666
Density	-.0276	.0049	-5.631[1]	-.4697	-.4002

[1] $p < .001$

Table 2
The Impact of Cereal Production and Yield on
Calorie Availability as a Percentage of Adult Requirements
Thirteen African Countries--Various Years
Buse R-square = .250

Variable Name	Estimated Coefficient	Standard Error	T-ratio 111 DF	Partial Corr.	Standardized Coefficient
Production	.0005	.0004	1.203	.1129	.0801
Yield	.0002	.0001	.2303	.0218	.0136
Imports	.000005	.000001	5.213[1]	.4419	.3953
Density	-.0255	.0050	-5.063[1]	-.4316	-.3708

[1] $p < .001$

The results show that area harvested is strongly related to calorie availability. On the other hand, when other factors are controlled, cereal production does not appear to be related to calorie availability.

It is not easy to compare the two tables using the regression coefficients. The regression coefficient for area harvested, .0016, indicates that calories available as a percentage

of adult requirements go up a tiny fraction of a percent for each 1,000 hectares harvested; the same is true for the coefficient for cereal production, .0005.

It is easier to interpret the results using t-tests, partial correlations and standardized coefficients. The t-ratio of area harvested, 3.863, indicates that the observed relationship between area harvested and calorie availability is in all likelihood a real one. The probability of such a large t-ratio occurring randomly is less than one in one-thousand. The t-ratio for cereal production, 1.203, is so small that we must assume the observed relationship is simply due to chance.

The partial correlation coefficient is the correlation between an independent variable and the dependent variable when the other variables in the equation are held constant. The square of this number gives the proportion of the variation in the dependent variable uniquely explained by the independent variable. The standardized coefficient indicates how many standard deviations the dependent variable changes for a one standard deviation change in the independent variable. By both of these statistics, area harvested does a good job of predicting calorie availability.

The partial correlation between area harvested and calorie availability is .3428. Its square, .1174, indicates that almost 12 percent of the variation in calorie availability not explained by the other variables is accounted for by area harvested. The square of the partial correlation coefficient of cereal production is a tenth this size. The standardized coefficient for area harvested, .2124, means that calorie availability changes one fifth of a standard deviation for a one standard deviation change in area harvested. The standardized coefficient of cereal production is only .0801.

Why should data on calorie availability be correlated with the area harvested but not cereal production? If land that goes out of production in a crisis like a drought or war is land

producing food for human consumption, it reduces the calories available to people. This should be true even when the total food supply which includes food destined for export or uses other than human food, is constant or increasing. I believe that the decreases in area harvested observed in my data, such as in Ethiopia after 1973, are primarily the result of declines in production by self-provisioning peasant households. Assuming country estimates are accurate, the deficits on these farms would show up in falling calorie availability.

3.2.1.3 Average Yield and Total Cereal Production

I have argued that the cereal area harvested is the most valid and reliable measure of food security in the model I have specified. But other variables measuring aspects of food production appear in the model. In the model, total cereal production appears as a function of both the area harvested and average yield (see Figure 1 above). Furthermore, the area harvested and average yield are allowed to affect each other simultaneously.

This is critical to my purpose. Above, I noted that yields could behave perversely during famine, actually increasing if the famine left a small number of high yielding producers in its wake. Specifying the model as I have here enables me to make inferences about the effects of changes in yields on food security after all. By including the area harvested in the model when the yield is regressed on the independent variables, I hold the area harvested constant. The coefficients of variables included in this estimation can be interpreted as indicating what the effect of a change in a variable would be if the area harvested remained unchanged.

This specification of the model does not eliminate the aggregation problem--it is unlikely that when an increase in the national yield occurs all farmers enjoy identical

proportional bounties; nor are deficits likely to be shared by all. However, in this model it is valid to infer that higher yields are associated with increases in total production. At the very least we know that higher yields mean more food is available whatever its distribution. Without controlling for the area harvested we could draw no conclusion about the meaning of changes in the yield.

3.2.1.4 Data Sources

Data on cereal area harvested, cereal production and average yields comprehensive enough to be used for a cross-national time-series on Africa are available from two sources: the FAO and the United States Department of Agriculture (USDA). Both the FAO and USDA use data reported to them by governments.

But data on food production from Africa may be biased or unreliable (FAO 1982, 12). There are two possible sources of error: sampling error and measurement error. In most African countries, national estimates of agricultural production are compiled from samples collected by extension workers in the field. But these samples tend to overrepresent the most accessible areas of a country and areas producing high value export crops, and underrepresent areas producing non-market or low-value food crops. On the other hand, even if samples are correctly drawn, in most cases, extension officers lack sophisticated tools for measurement and calculation and therefore must resort to making estimates by eye. Furthermore, local officials have wide latitude to manipulate data gathered in their jurisdictions in order to protect themselves or to influence national policy.

There are some differences between the FAO and USDA data, particularly for African countries. One difference is the reporting period employed. The FAO reports data by the

calendar year while USDA uses the agricultural year July to June. The other variables in my data set were based on the calendar year. Another difference is that in the past the USDA was more likely to revise government estimates if it believed them to be in error (Paulino and Tseng 1980). However, the FAO has undertaken a complete reestimation of their country series. The latest FAO data incorporate new estimates of peasant production, particularly affecting early years when many governments did not count smallholder agriculture at all, resulting in substantial revisions.[8] For these reasons I selected the FAO data.

3.2.2 Armed Attacks

My study of cases of conflict-related famine in Africa convinced me that tactics of guerrilla and counter-insurgency warfare were responsible for much of the hunger which occurred. In its most specific form, this hypothesis does not lend itself to testing in cross-national time series, because quantitative data on some of the most important counter-insurgency tactics, such as the concentration of civilians in villages, the regulation of the movement of food, and the requisitioning and destruction of crops do not exist. However, data on other forms of political violence do exist. This makes it possible to explore the more general proposition that political violence is associated with hunger and decreases in food production.

The enumeration of political violence is fairly straightforward. It has observable features of frequency and intensity which make it amenable to quantification. The frequency of violence can be measured by the number of attacks, and its intensity by the number of

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8. It happens that when the new FAO data are used the estimated association between internal war and hunger is slightly weakened. However, I do believe the FAO data are superior overall and use them here.

casualties. It is reasonable to assume that the impact of political violence on agricultural producers increases with the number of attacks to which they are subject and with the number of deaths resulting.

The only cross-national, longitudinal data set on political violence of which I am aware is Charles Taylor's *World Handbook of Political and Social Indicators* (1985), available through the Inter-University Consortium for Political and Social Research (ICPSR). Data are drawn from press reports in The New York Times and Keesings Contemporary Archives on such events as armed attacks by insurgents and government forces, deaths from violence, protest demonstrations, riots, and the imposition of political sanctions. Where possible, the Handbook also identifies the location of each event, and the actors and issues involved.

Of these variables, the number of armed attacks comes the closest to measuring the kind of political violence I believe to be associated with hunger. The other variables, such as riots and protest demonstrations, mostly occur in urban areas. It would have been desirable to refine the number of armed attacks further by removing those which occurred in urban areas or involved groups not engaged in internal warfare. Unfortunately, much of the accompanying information on the armed attacks, like the location and the actors involved in each attack, were almost entirely missing. After inspecting the data and comparing it to the cases of internal war which I studied, I am satisfied that Taylor's coverage of armed attacks in Africa refers primarily to events arising from guerrilla warfare and counter-insurgency operations.

The final edition of the *World Handbook* contains data through 1982. Yet extremely important events occurred in Africa in the middle of the 1980s which comprise the bulk of the cases I studied and against which the quantitative model should be tested. These include continuing internal wars in Angola, Chad, Ethiopia, Mozambique, and Sudan and the renewal of drought in the Sahel and Southern Africa. For this reason I extended the data-set on armed

attacks from the World Handbook through 1985 by using the same press sources and data collection procedures as Taylor.

It is important to be aware that Taylor's data almost certainly understate the number of armed attacks occurring during internal wars in Africa. Press reports on armed conflict in Africa are irregular. Journalists favor countries and capital cities where they feel most comfortable--locations far removed from the scene of most fighting. The undercounting of armed attacks will lead to an overestimation of the impact of a single attack. Specifically, this means that the coefficient on a variable measuring armed attacks will be inflated--the estimated impact of a single armed attack on the area harvested or cereal production will be exaggerated.

But undercounting does not lead to an exaggeration of the importance of political violence in general. If undercounting occurs, the standard error of armed attacks will be inflated by an amount proportional to the degree of inflation in the regression coefficient. Thus tests of significance remain unchanged. Furthermore, as long as the undercounting is random within countries, regression coefficients, partial correlations and standardized coefficients are unbiased.

3.2.3 Military Spending

In the literature review, I showed that some writers concerned about hunger in Africa hold that excessive military spending causes hunger by distorting economic policies and diverting resources which would have gone into productive public investments, particularly agriculture. In order to come up with a variable measuring military spending two problems must be solved. First, a source of accurate estimates of military spending must be identified. Second, a reliable method for deflating these estimates to make them comparable to one

another must be found. As is common in practice, I resorted to combining accurate data from one source with a reliable deflator from another (Deger 1986).

It is very difficult to measure military spending in a way which permits meaningful comparison between countries. There is little concurrence among researchers about what should be included in military budgets. Moreover, governments may prefer not to make full disclosure of what they spend on the military. Even if reliable estimates are available, creating comparable data sets given changes in foreign exchange and inflation rates is onerous.

There are two sources of data on military spending with broad enough coverage for use in cross-national time-series. They come from the United States Arms Control and Disarmament Agency (ACDA) and the Stockholm International Peace Research Institute (SIPRI). ACDA data appear annually in *World Military Expenditures and Arms Transfers* while SIPRI publishes the *Yearbook of World Armaments and Disarmaments.*

ACDA and SIPRI use data from the International Monetary Fund (IMF) as the basis for their series. IMF member countries report military spending along with other national account information to the IMF, and the country reports are published annually in the Government Finance Statistics Yearbook.

The main difference between ACDA and SIPRI data is that SIPRI refines the IMF data only on the basis of other official and published information which comes to its attention. ACDA, on the other hand, is skeptical of published information, and makes its adjustments using unofficial estimates and confidential sources. This, however, raises questions about the reliability of ACDA estimates since they cannot be verified.

I elected to use the data provided by ACDA for two reasons. First, ACDA estimates the military spending of counties which do not report to the IMF. This permits the inclusion of cases crucial to the analysis of conflict-related famine such as Angola and Mozambique

which would otherwise be omitted. Secondly, in my opinion, it is a virtue that unofficial and confidential information is used to adjust ACDA data. It is unreasonable to be completely credulous about a subject as sensitive as military spending. Furthermore, ACDA series are frequently updated, implying that over time estimates are refined in the light of new information. This would tend to increase confidence in the data.

In order to compare data on military spending between countries, it is necessary to convert them to some common unit, such as US dollars. This is not easy to do. Even if they are allowed to float, exchange rates refer to the entire basket of goods traded between two countries, not just to military hard wear. Thus it is necessary to come up with some other method for deflating military spending. In this regard, ACDA data suffer from a serious flaw. They are published with inadequate information about the basis for calculating deflators.

In the absence of a deflator especially for the military sector, the best method for calculating deflators is to consider the opportunity cost of military spending (Deger 1986). What purchases are foregone by the use of government revenues for military purposes? Under this assumption, the appropriate deflator is the price index of the alternative category of national expenditure. It is commonly assumed that resources not used by the military would be released throughout the economy, so that indices of gross domestic product (GDP) are used to deflate military spending. Internationally comparable indices of GDP have been generated by the United Nations International Comparison Project (ICP) and appear in World Bank publications (1989).

For this reason, I decided to combine ACDA data with deflators from the ICP. To calculate military spending, I began with ACDA estimates of the military burden--military spending as a percentage of gross national product. I used this percentage of the ICP's

estimates of GDP to get current military spending, and then deflated to get constant (1980) military spending.

3.2.4 Economic Policy

During the past decade, efforts aimed at addressing the problem of hunger in Africa have focussed on improving economic policy performance by reducing price distortions. If the presence of internal war and high levels of military spending are better explanations for hunger than poor economic policies, variables measuring price distortions should be less strongly related to hunger than those measuring military activity in an appropriately specified quantitative model. Military variables should be included along with economic policy variables for another reason as well. World systems theorists argue that high levels of military spending cause hunger in part by exacerbating price distortions. If military spending is allowed to affect price distortions in a two-stage model, this proposition can be tested.

3.2.4.1 Price Distortions

Ramgopal Agarwala developed a method for measuring price distortions in Third World economies and testing their effects on economic growth (1983). He produced indices measuring price distortions in various sectors of the economy, and then converted them to ordinal variables for the purposes of cross-national comparison. Agarwala identified seven important types of price distortions: Distortions in foreign exchange rates, manufacturing prices, agricultural prices, infrastructure prices, overall prices, interest rates, and wages.

Of these distortions, two are relevant here. Distortion in the foreign exchange rate has been shown to have an overwhelming impact on overall economic performance (Jaeger 1987); and price distortions are critical in the sector of the economy to which they refer (Westlake 1987).

To estimate distortions in the foreign exchange rate, I followed the method used by Agarwala. Agarwala's method traces the evolution of the officially set value of a currency compared to its purchasing power parity--the purchasing power of currency relative to the purchasing power of other currencies. If the ratio of the official value of a currency compared to its purchasing power parity deviates sharply, the exchange rate is said to be distorted. Specifically, a currency is distorted if its official value is much higher than its purchasing power parity.

Agarwala's method was fairly easy to implement, because the necessary data are available from the International Comparison Project (ICP) and are published in World Tables (World Bank 1990). For example, I created an index of the official exchange rate of a currency by dividing a constant--the foreign exchange rate in 1980--by the average annual exchange rate and then multiplying by 100 to obtain an index set to 100 in 1980. This index rises and falls in inverse relation to the exchange rate. I estimated the purchasing power parity of the currencies of the countries in my sample by dividing the consumer price index of the industrialized countries by the consumer price indices of the sampled countries. If consumer prices in a sampled African country rise, this series would show declining purchasing-power parity.

Finally, I created an index of distortion in the exchange rate by dividing the exchange rate index of the currency by the index of purchasing power parity. If the purchasing-power of an African currency falls relative to the currencies of the industrialized countries while the

exchange rate remains constant, this index reveals growing distortion by rising above 100. If a devaluation occurs, the index moves back toward 100 indicating distortion has been reduced.

Comparing prices in the agricultural sector to other domestic prices was easier. The overall price index was simply divided by the agricultural price index and each series set to 100 in 1980. In other words, higher agricultural prices would cause the series to decline, indicating less distortion.[9]

3.2.4.2 Cereal Imports

Many of the arguments about economic policy distortions in Africa say excessive cereal imports are partly responsible for hunger. In principle, imports are not bad for food security. Just as it may be efficient for an industrialized country to produce manufactured goods and exchange them for food, it may be efficient for an agricultural society to exchange cash crops for food crops.

But the effects of cereal imports in Africa can be devastating to the food security of food growers. First World countries export their grain cheaply to satisfy domestic producers. At the same time African governments seek low-cost food to pacify urban workers and the military. They overvalue foreign exchange rates to keep the cost of imported grain low,

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9. A shortage of data made it difficult to estimate agricultural price and exchange rate distortions in Mozambique and Angola. To code distortions in Mozambique, I combined price indices from colonial records (Moçambique 1974) and from the International Labor Organization (ILO 1989). In the case of Angola, data on consumer and agricultural prices were available up to 1975, and again after 1986 (Angola 1974). On the basis of other evidence, I knew that consumer prices became highly distorted around 1982. Therefore I filled in the missing values by linear interpolation, except for 1982 where I allowed the agricultural price distortion index to increase twice as fast as otherwise. I verified that this estimation procedure did not bias the results by estimating the model with and without Angola included. There was virtually no change when Angola was dropped from the sample.

flooding domestic markets with foreign grain and displacing local producers. Data on cereal imports is readily available from the FAO (1990).

3.2.5 The Environment

Many aspects of the natural environment affect food production in Africa but the most important for the purposes of this analysis is precipitation. The National Oceanographic and Atmospheric Administration (NOAA) publishes precipitation data from thousands of reporting stations around the world in *Monthly Climatic Data for the World* (1989). Most of the African countries included in the quantitative analysis have three or more NOAA stations. I took average precipitation in millimeters from selected stations to obtain an indicator of annual rainfall.[10]

The relationship between the amount of rainfall and average cereal yields is curvilinear. More rain usually means higher yields, but too much rain can result in flooding or fungal disease, thereby depressing yields. For this reason, the square of annual precipitation is included to take into account this curvilinear relationship.

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10. I selected three (or four if available) stations in key agricultural areas. In the case of Angola where fighting had closed down all but the Luanda meteorological station, I added data from Mongu, Zambia, just outside Angola's eastern border.

Many reporting stations have missing observations. Whenever a missing observation was encountered, precipitation data from the station in question were regressed on observations from surrounding ones, and on monthly dummy (trend) variables. The predicted value for each truant datum were substituted for the missing value.

3.2.6 Controlling for Other Factors

The omission of important explanatory variables from a quantitative model leads to bias in least squares estimation if the omitted variables are correlated with other regressors (Green 1990). Many factors influencing cereal area harvested and yields have been discussed here, but the most important have been ignored so far: population and the population density. The larger the population, the larger the area harvested; the higher the population density, in general, the higher the yield.[11] Population and population density are likely to be correlated with the explanatory variables included in the model. All other things being equal, it is reasonable to expect more armed attacks in a country experiencing internal war which has a higher population. Military spending is higher in countries with larger populations. Also, rainier countries tend to have larger populations and higher population densities. The population data I used came from the World Bank (1990).

When testing for the effect of military spending and economic policies on food security, it is necessary to hold the gross domestic product (GDP) constant. The wealth of a country is the dominant source of the internal demand for food, both domestically produced and imported. Unless GDP is included during estimation some of the other variables could appear to behave perversely. For example, all other things being equal, countries with higher

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11. In my data population density and average cereal yield were positively related to one another. Table 13 at the end of this chapter shows that even when the area harvested and other economic and environmental variables are held constant the relationship between population density and yield is strong and significant (partial $r = .2930$, $p < .001$).

It has been proposed to me that the need to control for population and density could be eliminated by using the area harvested per person as the dependent variable. But in fact, the two variables--area harvested and area harvested per person--are quite different. For example, in a given country the area harvested might be rising while the area harvested per person is falling due to population growth. If possible, the question we ask should be as straightforward as possible. What I am asserting here is completely intuitive: an armed attack displaces farmers from their land.

national incomes will have more to spend on the military. Yet it is reasonable to assume that wealthier countries will also enjoy greater food security. Thus if GDP is not controlled, military spending might appear to boost food security when it is really GDP which deserves the credit. In fact, this was exactly what I found to be the case. For similar reasons, GDP must be held constant when estimating the effects of agricultural price distortions and cereal imports. Data on GDP and GDP deflators, which came from the ICP, were the same ones used to calculate price distortions and military spending.[12]

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12. Four of the independent variables discussed thus far were used lagged by one year. These variables were military spending, agricultural price distortions, foreign exchange rate distortions, and GDP.

The economic variables were all used lagged by one year because of the way farmers make decisions about the resources they will use in growing crops. Before planting time arrives each season, African farmers must commit themselves to a certain area under crops and determine their need for various inputs. They probably use their observations of conditions during the previous year when making these decisions. Following a similar logic, I also used the previous years' rainfall to predict the area harvested.

The choice of the lag order of the independent variables is not a minor question. If too few lags are included the equation suffers from misspecification due to omitted variables (Green 1989). Ordinary model specification tests such as testing the statistical significance of the adjusted R-square statistic of progressively higher orders of lags are a suitable guide. Green (1989) recommends minimizing the Akaike Information Criterion (AIC):

$$AIC = \frac{e'e}{t}\frac{2k}{T}$$

because one is not forced to make an arbitrary choice of an F-ratio to accept as "significant." I found that lagging the economic variables one year without adding any additional lags did minimize AIC.

In some of the equations--those for military spending, price and exchange rate distortions, and armed attacks--the lag of the dependent variable appears on the right-hand side. In these equations I assumed that the best predictor of a given year's level of the dependent variable is it's level the previous year. For example, considering military budgets, prices and exchange rates, I assume that there is some bureaucratic momentum. Considering armed attacks, I noticed that years of peace tended to be followed by more of the same while violence engendered further violence.

When lagged dependent variables are included in models suffering from serial correlation they bias the estimate of the serial correlation coefficient. I discuss serial correlation and methods of correcting for it below. I obtained consistent estimates of the serial correlation coefficient using Dhrymes maximum likelihood method.

3.3 Sampling

The sample I used was shaped by three things: the kinds of questions I am asking, the data requirements, and the scarcity of data on Africa. Here I want test whether war explains hunger in Africa, and I want to test rival explanations as well. In order to fairly assess the effects of war, and to give alternative explanations a fair trial, the sample must include cases of war as well as cases of peace in which other hunger-causing factors may be operating. In other terms, I seek a sample with sufficient variation in the independent variables.

Ideally, one would use a sample consisting of all African countries, but the ambitious data collection requirements of this project made this prohibitive. The fact that some of the data were missing for many African countries would have made it impossible anyway. Moreover, since I want to test hypotheses about conflict-related famine, cases of conflict-related famine are at a premium. But missing data are most often a problem in countries that have experienced war and famine. I wanted to avoid building a sample of cases for which it was relatively easy to obtain data--cases that may lack sufficient observations of war--and to concentrate on decisive ones. Thus the sample I constructed resembles a stratified sample. Selection of the country cases was guided by a desire to achieve variation among the factors which I have asserted are causes of hunger.

The 15 countries included in the data set are: Angola, Burkina Faso, Chad, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mali, Mozambique, Nigeria, Somalia, Sudan, Uganda, Zambia, and Zimbabwe. I wanted to include cases in which there was internal warfare (e.g. Angola, Ethiopia) and cases in which there was relative peace (e.g. Mali, Zambia); cases in which economic policies were clearly distorted (e.g. Ghana, Sudan) and cases which have been said to be less distorted (e.g. Kenya, Zimbabwe); and cases of recurrent drought (e.g.

Burkina Faso, Mozambique) alongside cases with less variation in rainfall (Côte d'Ivoire, Uganda). Eight of the 15 cases experienced serious internal wars during the sampled years but one of them, Nigeria experienced only three years of war. In addition, the sample balances representation from critical regions of the continent: There are two countries from the Horn, four from southern Africa, five from West Africa, and four Francophone countries. The years selected for the sample, 1964-1985, are intended to embrace the post-colonial period, up to the latest year for which all of the required data are obtainable. It is true that this sample includes part of the colonial period of some countries, especially in the case of the Portuguese colonies, and it includes years of White minority rule in Zimbabwe. However, from my point of view this is not a problem. The struggles against minority rule in these countries constitute valuable observations of the effects of war on food security.

3.4 Model Specification

In order for a system of equations to be meaningful, the specified paths must reflect reality at some level. If the paths are not theoretically plausible, coefficients resulting from estimating the equations with empirical data are nonsense. On the other hand, a quantitative model does not have to be as complex as reality itself. The model presented here does not purport to include all of the factors which might have an impact on the area harvested and cereal production. All that I want to do is achieve sufficient statistical control so that consistent estimates of the impact of the independent variables can be made.[13]

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13. I also tested other specifications of the model. The three most commonly urged on me were: 1) whether the effects of armed attacks is not noticeable in aggregated data until some critical level is reached--a step function; 2) whether the effects of additional armed attacks diminishes at after high levels of violence are reached--a log-linear model; 3) if military spending has a curvilinear relationship to food security, that is, whether military

3.4.1 Two-Stage Least Squares

In the model to be estimated, the relationships among the variables are complex. For example, I expect armed attacks to affect military spending. In turn, military spending is expected to distort economic policies. And both armed attacks and distorted economic policies are expected to depress indicators of food security. I also want to specify a model in which cereal production is a function of both the area harvested and the yield, and I want to let these two variables control each other. But if the model is estimated this way, indirect effects of armed attacks, economic policies, are included with it as causes of area harvested. And an effect of the area harvested, the yield, is included with it as a cause of cereal production. These are specification errors that can lead to biased regression estimates (Greene 1990). Variables like these--effects of independent variables which also appear together with them on the causal side of an equation--are called endogenous variables. Variables which are not effects of any other variables are called exogenous variables. It is possible to obtain unbiased estimates of the impact of the endogenous and exogenous variables on the dependent variables by using the method of two-stage least squares.[14]

Unfortunately, two-stage least squares introduces problems of its own. For example, countries with larger populations also have larger military budgets and more armed attacks, all

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spending might be stabilizing at low levels and destabilizing only at high levels--a parabolic model. The assumption that the relationship between measures of food security and the independent variables (except rainfall) were linear did as well as any of the others.

14. Estimation of an equation using two-stage least squares is straightforward. In the first stage, the endogenous variables included in the equation are regressed on the complete set of exogenous variables in the model and the predicted values are obtained. To estimate the regression coefficients in the second stage, the predicted values of the endogenous variables are regressed on the exogenous and endogenous variables held to affect them. The only complicating issue is that the error sum of squares must be computed using an equation in which the observed rather than predicted values of the endogenous variables are used.

other things being equal. That is, these variables are collinear; it is hard to separate out the independent effects of each. Two-stage least squares compounds problems of multicollinearity substantially. Therefore, not all of the paths indicated above could be estimated in the two-stage models. Specifically, GDP, military spending, population, population density, and cereal imports are collinear. Their estimated coefficients are suspect if they are included in the same regression.

As far as the need to include a demographic variable for the purposes of statistical control is concerned, the inclusion of any one of these variables boosts the R-square substantially (yet none of them dramatically alters the coefficients of the other independent variables). For the purposes of consistency, I used population density in initial two-stage estimations of the models for area harvested and average yields and omitted the others. A resolution to this problem is proposed below.

3.4.2 Limited Dependent Variables

In my model, armed attacks is not only the main independent variable, but also a dependent variable. I propose that as the area harvested declines, violence can be expected to increase. But armed attacks is different from the other variables in the model. It is a limited variable--that is it can never be less than zero. Its distribution is called censored normal. Least squares produces biased estimates of limited variables. Therefore, the equation for armed attacks must be estimated using a maximum likelihood estimator called tobit. Since tobit is a maximum likelihood estimator it is not necessary to use a two-stage method here (Green 1990).

3.4.3 Pooling Time Series

A unique feature of this analysis is that the data consist of a pooled time-series. The advantage of pooling time-series data is that it greatly increases the power of comparative analysis. Not only can we compare several countries to see if a relationship between variables exists at a given point in time, but we can observe these same countries over time to see if the outcomes we seek occur in each when the imputed causes are present. Thus pooled time-series is perhaps the most elegant of statistical tools a comparativist can draw upon. But it is also most easily prey to violations of the standard assumptions underpinning statistical methods. Pooled time-series data must be tested to see if the assumptions hold. If they do not, and corrective action is not taken, the results of pooled time-series analysis will be meaningless or sometimes biased (Sayrs 1989).[15]

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15. The ordinary least squares estimator is:

$$\boldsymbol{b}=[\boldsymbol{X}'\boldsymbol{X}]^{-1}[\boldsymbol{X}'\boldsymbol{y}]^{-1}$$

In ordinary least squares it is assumed that the errors arising from the regression predictions have zero mean; are homoskedastic--that is, that the variance in the errors is constant across the data; and that there is no serial correlation--that the errors are not correlated with themselves. In symbolic terms:

$$E[e_{it}]=0$$
$$VAR[e_{it}]=\sigma^2$$
$$COV[e_{it},e_{jt}]=0$$

In a pooled time-series the data consist of n cross-sectional units, i = 1,...,n, observed at each of T time periods, t = 1,...,T. There are a total of Nt observations. In my data set there were 15 countries (n = 15) and 22 years (1964-1985, T = 22). Because of the lagging of some variables during the analysis, the total number of observations was 15 times 21 or 315.

When data are pooled, it is unlikely that any of the assumptions above will hold. Heteroskedasticity, cross sectional correlation and serial correlation can cause bias and make

Three characteristic problems arise in pooled time series. First of all, pooled data are often effected by cross-sectional heteroskedasticity. Self evidently, variation in the regression errors will be different from country to country in data on agriculture in Africa. For example, because Nigeria is larger than Burkina Faso, the amount of error in predicting cereal area harvested in Nigeria will be greater than for Burkina Faso.

Secondly, pooled data generally suffer from cross-sectional correlation. Cross-sectional correlation arises from shocks or trends in a system that affect all the members of the system at the same points in time. For example, a drought affecting most African countries, such as happened in 1984, will depress yields in most of the sampled countries simultaneously. Thus the error terms would be correlated with one another across country cases. Finally, time-series data tend to be serially correlated. Serial correlation occurs when there is a trend over time in data. Such a trend exists in cereal production data for Africa where, over time, production is increasing. I tested for all three of these problems in my data and found them to be severe indeed. The magnitude of the problems was not unusual for data such as these, however, and techniques have been developed for coping with them.[16]

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estimation inefficient--they make it difficult to find a relationship between variables when one in fact exists. The generalized least squares estimator corrects for non-normal error variance by weighting by the matrix **P**.

$$\boldsymbol{b}=[\boldsymbol{X}'\boldsymbol{P}^{-1}\boldsymbol{X}]^{-1}[\boldsymbol{X}'\boldsymbol{P}^{-1}\boldsymbol{y}]^{-1}$$

where **P** is the variance-covariance matrix of the country cases adjusted by the estimated serial correlation coefficient, r.

16. The correct test for cross-sectional heteroskedasticity in this case is the likelihood ratio test (The Goldfeld-Quandt test is not appropriate for multiple groups, White's test is infeasible for models with many variables, and the Lagrange multiplier test for heteroskedasticity assumes normality in the residuals--a condition violated here.). The likelihood ratio test is computed using residuals from a maximum likelihood estimation (MLE) of the model. It yields a statistic distributed chi-squared with n-1 degrees of freedom:

Two general approaches exist for the correction of the residual variance in pooled time-series. The first is the fixed effects or least squares dummy variables method (LSDV) and the second is the random effects or generalized least squares method (GLS).

When the LSDV method is used, the researcher acknowledges her ignorance about some of the factors which account for differences in the dependent variable between country

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$$X^2 = nT \ln(s^2) - \sum T \ln(s_i^2)$$

The likelihood ratio test statistics for the two major equations in my model, identified by dependent variable, are--area harvested: 154.05 and yield: 169.83. With fourteen degrees of freedom both of these are highly significant indicating cross-sectional heteroskedasticity is probably present.

The Lagrange multiplier test for cross-sectional correlation, also based on MLE residuals is:

$$X^2 = T \sum_{i}^{m} \sum_{j}^{i-1} r_{ij}^2$$

This statistic is distributed chi-squared with n(n-1) degrees of freedom. Applied to my data with 105 degrees of freedom the results were: area harvested 762.60, and yield 535.47. In both cases statistically significant levels of cross-sectional correlation were found.

After eliminating heteroskedasticity and cross-sectional correlation it is appropriate to test for serial correlation. Inspecting a correlogram of the OLS residuals revealed positive serial correlation fading but remaining statistically significant for lags of up to five years in the case of the equation for area harvested and for three years in the case of yields. This pattern of serial correlation is well represented by the order one autoregressive process in which it is assumed:

$$e_t = re_{t-1} + u$$

where r is the coefficient of serial correlation. In a pooled time series the correction for serial correlation is carried out on each country individually. Almost all of the country cases had statistically significant coefficients of serial correlation with some being as large as .90. A Lagrange multiplier test for higher orders of serial correlation was insignificant.

cases. She allows herself to begin by knowing the mean of the dependent variable for each country, and attempts to explain deviations from the country means using the independent variables. (In practice, this is best achieved by transforming the variables into mean deviate form, rather than by using dummy variables, in order to avoid loosing degrees of freedom.) Thus the LSDV method incorporates information about each case into the estimation, although its meaning is unexplicated.

Advocates of the LSDV approach maintain that it is superior to GLS because GLS must be biased. They say that when data are pooled, the independent variables must be correlated with the country cases. For example, in my data the area harvested is particularly high in the case of Nigeria. Thus any independent variable which attains extreme values in that case will appear to be positively correlated with area harvested. By starting from the individual country means, the LSDV method eliminates the possibility that the independent variables could be correlated with the country cases. Another way of putting this argument is to state that any uncorrected pooled model suffers from the problem of omitted variables and must be biased (Green 1989).

Other methodologists warn that the LSDV model should be "used with caution" (Sayrs 1989). LSDV assumes that the major source of error is fixed in the country cases. By itself, it cannot cope with myriad other sources of error, including serial correlation and cross-sectional correlation. And since LSDV does not normalize the error variance, it is less efficient than GLS.

Adherents of the GLS method prefer it because it does not force one to assume that the sources of error in the model are fixed in the country cases. Instead, the researcher tests the nature of the error distribution and models it explicitly as arising from differences between countries, correlations across countries, and changes over time.

My approach is a practical and synthetic one: I test for the various sources of bias and inefficiency in my data and utilize the available techniques for making necessary corrections. Two tests can be used to help one decide whether the sources of error are fixed or random or both. The first is a variation of the Lagrange multiplier test. The Lagrange multiplier test suggests whether the differences between country cases are simply parameter shifts (which could be accounted for transforming the data into mean deviates or by including dummy variables) or whether the variance is best explained by random independent variables. The second is Hausman's test for correlation between the independent variables and the error term--a test for the presence of bias in the GLS model.

The Lagrange multiplier test is distributed chi-squared with one degree of freedom. The results for the two main equations in the model, identified by the dependent variable were--area harvested: 896.56 and cereal yield: 1,199.20. Both of these values are extremely significant with p values of less than .00001, presenting compelling evidence for the random effects model.

Hausman's statistic is also chi-square with k degrees of freedom.[17] The results of the

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17. The Lagrange multiplier test employs the OLS residuals and is:

$$X^2 = \frac{nT}{2(T-1)} \frac{\sum_{1}^{i}\left(\sum_{1}^{t} e_{it}\right)^2}{\sum_{1}^{i}\sum_{1}^{t} e_{it}^2}$$

Also using OLS residuals, Hausman's test is based on the fact that if the independent variables are correlated with the errors, LSDV is consistent but GLS is not.

$$H = [b_{LSDV} - b_{GLS}]' \Sigma^{-1} [b_{LSDV} - b_{GLS}]$$

Hausman's tests are statistically significant only for the equation in which area harvested is the dependent variable. For that equation Hausman's statistic was 104.49. But for the equation in which yield is the dependent variable it is only .091--completely insignificant.

The Lagrange multiplier test says that a large proportion of the error variance is random and should be modeled explicitly. But Hausman's test cautions that in the case of the equation for area harvested the regressors are correlated with the error variance and that GLS alone is likely to be biased. At least in this one equation, predictions must be made around the mean of each country case. The scatterplots in Appendix Two illustrated how the data were distributed and show that transforming the data into mean deviates and using the GLS procedure successfully normalizes the residuals.[18]

Finally, it is important to note that the results presented here are not highly sensitive to how the errors are specified. Whether OLS, LSDV, GLS, or a synthetic approach is used, the independent variables for the most part have similar regression coefficients. The virtue of the

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Where:

$$\Sigma=[VARb_{LSDV}-VARb_{GLS}]$$

18. After transforming the data into mean deviates both cross-sectional heteroskedasticity and cross-sectional correlation remained. The Lagrange multiplier tests (based on OLS residuals because MLE cannot be used on the transformed data) for heteroskedasticity were--area harvested: 366.10 and yield: 280.36. For cross sectional correlation the results were--area harvested: 262.62 and yield: 106.51. These statistics are all extremely significant suggesting GLS was still required.

Additional confirmation of the validity of the GLS method after LSDV came from repeating the Lagrange multiplier tests for cross-sectional heteroskedasticity and correlation after correcting the residuals using the GLS approach. In the case of the equation for cereal area harvested the test for cross-sectional heteroskedasticity yields a chi-square statistic of 2.96 and the test for cross-sectional correlation is 16.87. Both of these are completely insignificant. The statistics for the equation for yields are .991 and 5.54 respectively.

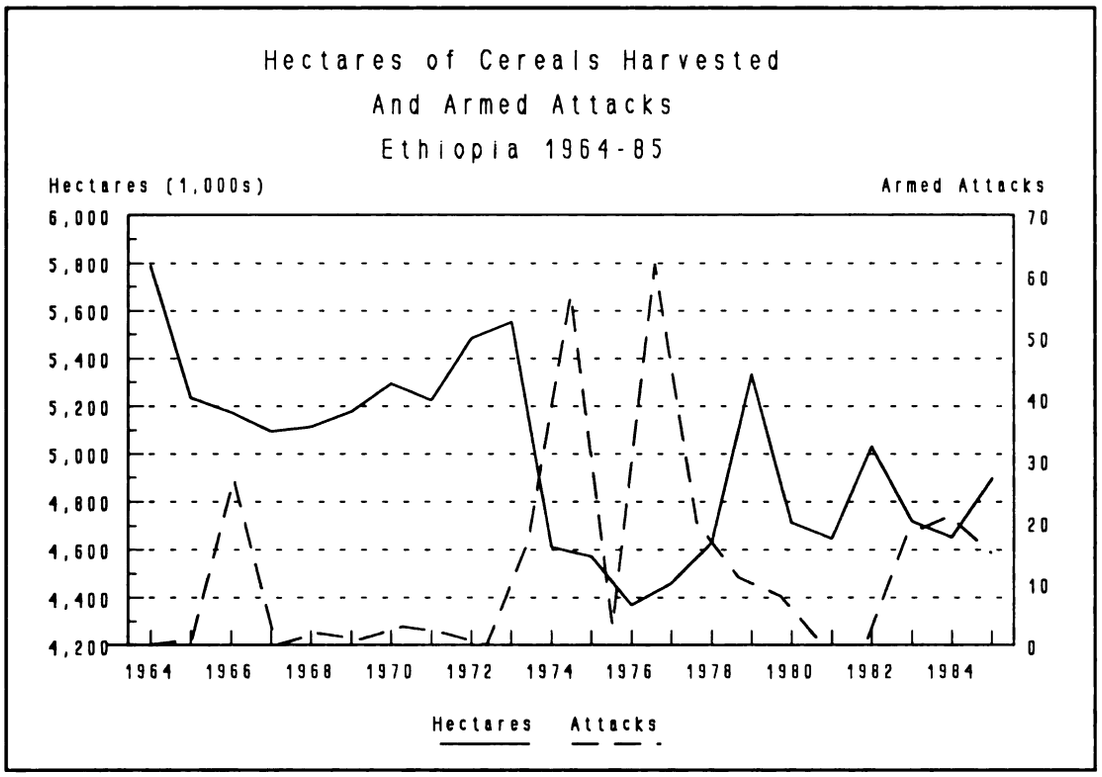
approach I have adopted is that it reduces problems of bias and inefficiency: by transforming the data into mean deviates the possibility of bias due to correlations between the independent variables and the fixed effects is eliminated; by correcting the residuals the standard errors are reduced.

3.5 The Example of Ethiopia

Before turning to a detailed assessment of the results of the quantitative analysis, it is helpful to simply look at the data in order to get a feel for how food security has evolved over time in relation to armed conflict in African countries. This exercise is important also because it will draw attention to the interaction between the area harvested, average yields, and total cereal production. Thus far I have asserted that the area harvested is a good proxy for hunger in societies comprised primarily of self-provisioning agricultural households. When looking at the plotted data, it is easy to see how total cereal production is affected by the average yield. But the yield is not a good measure of food security because it is inflated by the yields of commercial farmers and does not count the fields of those who stop producing. The area harvested is much more responsive to blows to the food security of small farm households.

Consider the case of Ethiopia. As is well known, Ethiopia experienced both extensive civil conflict and declining food production over the two decades from 1964-1984. In the figure below, data on cereal area harvested are plotted over time together with the number of armed attacks as gleaned from the international press by Taylor. (Be aware that the scale for area harvested on the left-hand does not start at zero. This is to draw attention to the changes over time.)

Figure 2.



When the data are plotted in this manner the general downward trend in the area harvested is apparent. The area harvested declined by 20 percent during the period. But moreover, a negative relationship between cereal area harvested and armed attacks suggests itself to the eye. There are four depressions in the area harvested: 1967-1968, 1973-1978, 1980-1981, and 1983-1984. Three of these are clearly mirrored by four spikes in violence occurring in 1967, 1975, 1977, and 1984. Only the dip in area harvested of 1980-1981 appears unmatched by a rise in violence.

The first depression in area harvested occurred around 1967 when the ELF began resisting incorporation into Ethiopia. The decline was small, however, as one would expect since most of Eritrea is not suitable for cereal production.

The enormous chasm opening between 1973 and 1978 stands out sharply. Between these years the total area harvested fell from about 5.5 million hectares to only 4.3 million. This deterioration corresponds to a dramatic increase in armed attacks. Violence began to increase in 1974 with the military coup against the regime of Haile Selassi and escalated through 1975 because of factional fighting between groups involved in the coup. After 1976 the attacks represent clashes between ethno-nationalist insurgents and the government discussed in the case study. A large proportion of the 61 attacks recorded in 1977 were fought between the government and the EPLF around the towns of Nacfa and Massawa and with the Western Somali Liberation Front (WSLF) in the southeast. These are not agricultural areas, hence the area harvested begins to recover.

The area harvested collapsed again after 1980, almost reaching previous low levels. But only eight attacks were recorded by Taylor in 1980 and none in 1981. This illustrates the problem of accurately measuring political violence and military actions that might affect food security. In 1980 and 1981 the government began forcing farmers in agriculturally important Gojjam and Arsi districts into collective villages. Rebellions against collectivization continued into 1981 but don't appear in Taylor's data.

The final depression in area harvested in these data, from 1983-1984, was accompanied by a resurgence of secessionist violence, especially in Tigray province where the TPLF had established liberated zones around Adua.

On the basis of this visual evidence alone one is likely to conclude that armed attacks are related to the area harvested--and to hunger itself. But is this picture real? The steep drops in cereal area harvested might be due to the searing droughts which occurred in Ethiopia during the years 1965-1966, 1972-1973 and 1983-1984. Perhaps poor weather is a better explanation for fluctuations in the area harvested.

Alternatively, it could be argued that the economic policies of the revolutionary regime undermined Ethiopian agriculture. In the 1980s economic policies were aimed at subsidizing the military and placating urban consumers. Military spending as a percentage of GDP had increased from two percent in 1970 to ten percent in 1984 (ACDA 1990, table 1). These policies included compelling both collectivized and independent farmers to sell grain to the state at artificially low prices and a highly overvalued foreign exchange rate.

To compare the impact of these factors on cereal area harvested, I regressed the total hectares harvested on the number of armed attacks, measures of distortion in the prices of agricultural products and foreign exchange rates, annual rainfall and its square. The population was included as a control. (Military spending, GDP, and other controls that will appear in the cross-national regressions described below could not be included here because they are collinear with each other and with the population.) Because the data are a time-series, I used pseudo generalized least squares to correct for serial correlation.[19] The table below indicates that the relationship that suggested itself to the eye may, in fact, be real.

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19. The serial correlation coefficient, estimated using the Prais-Winsten method, is equal to -.21, but it is not statistically significant. It would be surprising indeed if the cereal area harvested in Ethiopia was generated through a negative autoregressive process. Therefore the equation was also estimated by OLS and the coefficients were found to be almost identical to pseudo GLS. In the two other equations estimated for Ethiopia in which cereal production and average yields are the dependent variables the serial correlation coefficients are -.21 and -.35 respectively.

Table 3
Cereal Area Harvested
Ethiopia 1964-84
Buse R-square = .651

Variable Name	Estimated Coefficient	Standard Error	T-ratio 14 DF	Partial Corr.	Standardized Coefficient
Attacks	-15,634	4,259	-3.671[1]	-.7003	-.7816
Prices	-451.68	309.97	-1.457	-.3629	-.3410
FX rate	20.12	123.30	.1632	.0436	.03259
Rainfall	-9,494	5,692	-1.668	-.4071	-3.221
Rain square	5.052	3.076	1.642	.4019	3.144
Population	-.0330	.0129	-2.567	-.5657	-.4234
Constant	10,677,000	2,570,100	4.154	.7431	

[1] < .01

The model successfully predicts 65 percent of the variation in cereal area harvested. Among the variables of interest, however, only armed attacks is statistically significant.

Armed attacks are strongly, significantly, and negatively related to the cereal area harvested. The estimated regression coefficient of armed attacks, -15,634, means that in these data a single recorded armed attack appears to reduce the area harvested in Ethiopia by over 15,000 hectares. The t-ratio, -3.671, is statistically significant at the .01 level of confidence (two-tailed); there is less than a one in one-hundred chance that the observed relationship could have happened randomly--assuming that the data and model are valid and the estimation consistent. Given the fact that there are only 21 observations in the data set, this t-ratio is fairly high. Other statistics support the role of armed attacks. Consider the partial correlation coefficient. The partial correlation coefficient of armed attacks is -.7003; its square is .4904. This means that about 50 percent of the otherwise unexplained variation in the cereal area harvested is accounted for by armed attacks. Attacks are not only significantly related to the

area harvested, they are important because they uniquely explain variation not accounted for by other factors.

The standardized coefficient of armed attacks is -.7816. This means that the area harvested changes over three quarters of a standard deviation for a one standard deviation change in armed attacks. In this sample the standard deviation of the area harvested is 394,380; the standard deviation of armed attacks is 19.7. Indeed, if we multiply the regression coefficient of armed attacks by its standard deviation we find that the area harvested declines by about 307,990 hectares which is -.78 of its own standard deviation.

With only 14 degrees of freedom it is difficult to obtain estimates of the coefficients with sufficient confidence to reject the null in most cases. Nonetheless, some of the variables in the model have strong measures of association and merit further discussion. In these data the index of agricultural price distortions increased by 11 points from 90 in 1978 to 101 in 1983. Its regression coefficient says that a one point increase in the index of price distortion reduces the cereal area harvested by 452 hectares. Furthermore, the standardized coefficient of price distortions means that a one standard deviation change in the index causes the area harvested to decline by one third of a standard deviation. Given the severity of the regime's policies this finding is not surprising. The t-ratio indicates, however, that there is about a one in five chance that the observed relationship is random. Thus we must defer further discussion of the effects of economic policies until a larger sample is considered. The index of distortion in the foreign exchange rate is not related to the area harvested.

Interestingly, the sign of the coefficient for rainfall is negative while its square has a positive sign. This means the estimated relationship between rainfall and area harvested looks like a U-shaped curve--the area harvested is at its lowest when levels of rainfall are moderate. However, the appearance of this relationship is entirely due to the presence of a few outliers:

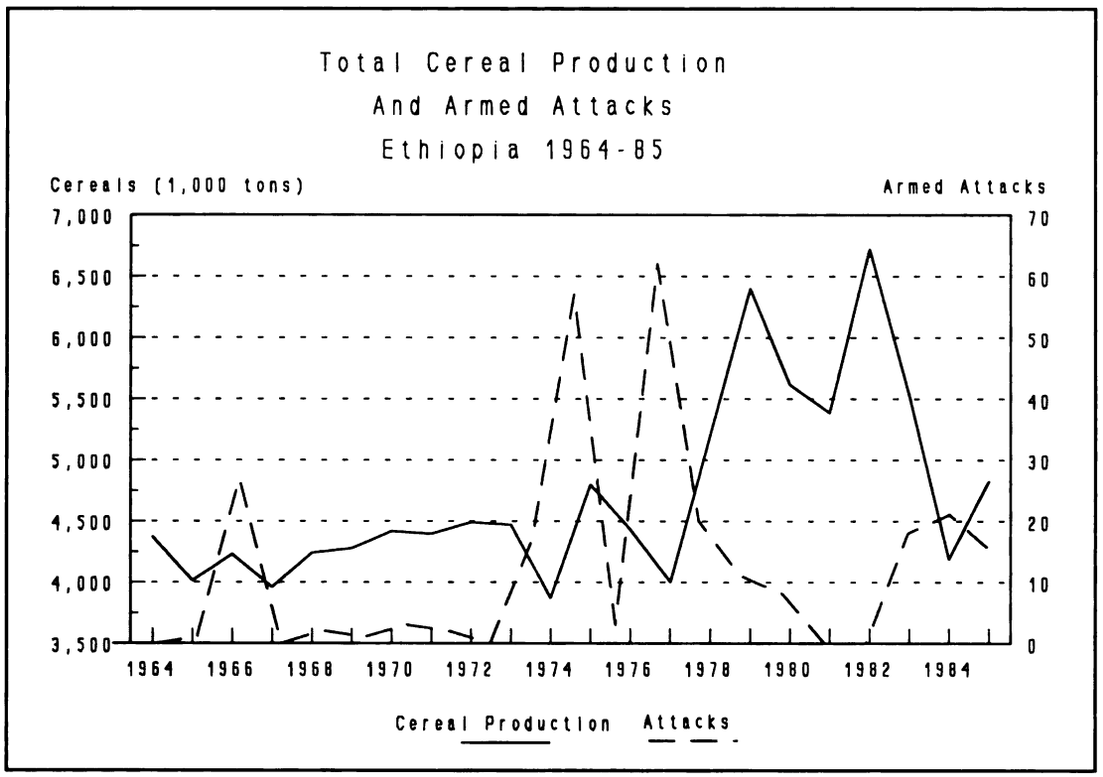
the driest year occurred in 1972 when the area harvested was very high, and the rainiest year was 1977 when the area harvest was very low. In fact the effects of rainfall on area harvested cannot be reliably discerned in these data.

Another variable in the model also seems to behave strangely: the population. Whereas it would seem that as the population increased so would the area harvested, the coefficient for the population has a negative sign. But as the plotted data reveal, during the period in question the area harvested was declining. The juxtaposition of this decline with the natural increase in the population that occurred during these years accounts for the observed negative relationship.

The results presented above say that the reduction in the area harvested was partly explained by political violence. But this fall also accompanied by changes in agricultural productivity; in the modern sector of the economy more food could be grown on less land. This echoes what I have said above about the measurement of hunger; viewing the impact of armed attacks and the other variables on total cereal production and on average cereal yields helps to illustrate why I adopt the cereal area harvested as a primary measure of food security.

Here, as with the data on area harvested, cereal production and yields are plotted against time together with the number of armed attacks. With this small sample it is not possible to construct a meaningful two-stage model. Therefore, the graphs are accompanied by the results of the direct regressions of cereal production in tons, and average cereal yields in kilos per hectare, on the independent variables.

Figure 3.



It is immediately apparent that whereas the area harvested decreased during the years in question, the total harvest, while varying considerably, increased.

Table 4
Cereal Production
Ethiopia 1964-84
Buse R-square = .658

Variable Name	Estimated Coefficient	Standard Error	T-ratio 14 DF	Partial Corr.	Standardized Coefficient
Attacks	-21,958	8,098	-2.711[1]	-.5868	-.5440
Prices	-440.47	576.58	-.76395	-.2000	-.1648
FX rate	-270.55	268.25	-1.009	-.2603	-.2171
Rainfall	2,495	11,444	.21807	.0582	.4274
Rain square	.2563	6.414	.03996	.0107	.0802
Population	.0990	.0231	4.2903[2]	.7537	.6287
Constant	-755,660	5,097,700	-.1482	-.0396	

[1] $p < .05$
[2] $p < .001$

In spite of the increase in the average size of the harvest, a negative relationship exists between cereal production and armed attacks similar to that found between area harvested and attacks. The depression in area harvested which occurred during the factional fighting after the Ethiopian revolution is still visible here. Furthermore, the relationship between armed attacks and cereal production is statistically significant as it was before. In these data, a single recorded attack appears to reduce cereal production by nearly 22,000 tons. Recall that an attack appeared to remove about 15,000 hectares from production. The similarity between these two coefficients, -22,000 and -15,000 is due to the fact that in Ethiopia, each hectare planted in cereals yields about one ton of grain. The total output is reduced by about one ton for each hectare of land taken out of production. The partial correlation of -.5868 and the standardized coefficient of -.5440 are smaller though, indicating a weaker relationship.

The only variable other than armed attacks that exerts a statistically discernible influence on cereal production is the population. Logically enough, as the population has grown so has the production of cereal for food. The population explains about half of the

variation in cereal production not explained by other things, and it has the largest standardized coefficient of all the variables in the model. Production increased because of the adoption of improved methods that boosted yields in the most fertile parts of the country and because farmers in densely populated areas took advantage of high rainfall to intensify their production whether or not they adopted improved methods. These changes boosted average yields, which are plotted below.

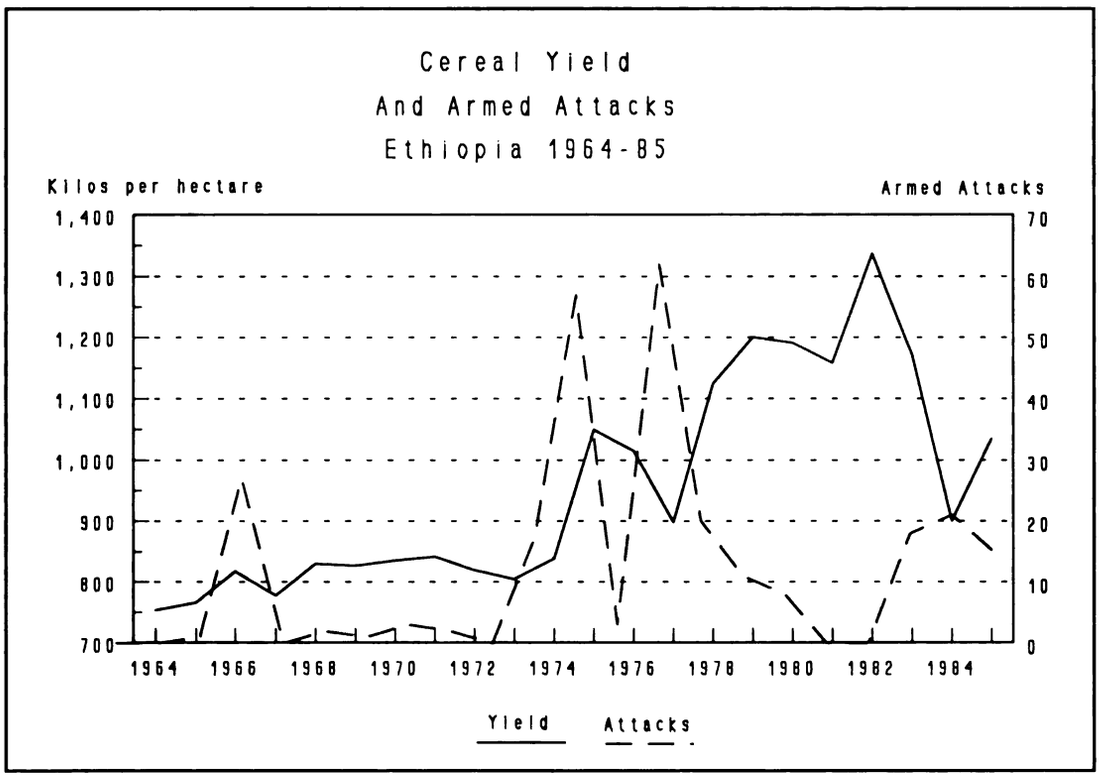
Agricultural price distortions, which displayed at least some substantive relationship to the area harvested no longer do so. The coefficient of price distortions, -440.47, is almost identical to what it was when area harvested was the dependent variable, but the standard error is now so large that it is not significant. For example, during the years 1976 and 1981 price distortions were high and the area harvested low. However during those years cereal production was higher than at some other times, inflating prediction errors.

On the other hand, a one unit increase in the index of foreign exchange rate distortion now is estimated to reduce cereal production 270 tons. Exchange rate distortions are not significant and their measures of association are not large. It is instructive to ask why exchange rate distortions should appear to have a bigger effect on production than on the area harvested. Again, the reason is because of the relationship between exchange rate distortions and yields.

The figure below illustrates how yields affect production data. Notice the years 1974-1976. Recall that the area harvested was declining during this time in response to political violence. But average yields were rising, and as a result, it was a time of growing cereal production. Only the area harvested detected the effects of political violence in these years. The drought year 1964-65 illustrates the problem of perversity in yields. That year yields apparently increased slightly because of the displacement of marginal producers by the

drought. In reality cereal production declined by 400,000 tons. A different estimate of yields would have included observations of the 600,000 hectares abandoned by drought victims.

Figure 4.



When average cereal yields are plotted together with armed attacks no obvious relationship remains to the eye and test statistics are not significant. Sometimes yields fall when violence increases (1967, 1977, 1984); sometimes yields improve despite escalating conflict (1974, 1978, 1983).

Table 5
Cereal Yield
Ethiopia 1964-84
Buse R-square = .764

Variable Name	Estimated Coefficient	Standard Error	T-ratio 14 DF	Partial Corr.	Standardized Coefficient
Attacks	-1.628	1.423	-1.144	-.2924	-.1803
Prices	-.0153	.1019	-.1505	-.0402	-.0257
FX rate	-.0630	.0496	-1.270	-.3215	-.2262
Rainfall	1.709	2.126	.8036	.2100	1.309
Rain square	-.0006	.001193	-.5116	-.1355	-.8544
Density	3.253	.4854	6.701[1]	.8731	.7561
Constant	-953.77	943.92	-1.010	-.2607	

[1] $p < .001$

The only variable to attain statistical significance is the population density. In response to growing pressure on land, farmers intensify their production.

However, several of the other variables should be discussed. Rainfall and its square are not statistically significant because they are collinear. But their standardized coefficients are very large, 1.309 and .8544, respectively, indicating that they have a large impact on yields. The years 1977 through 1981 were years of relatively high rainfall and this is the period of rapid growth in yields. Furthermore the fact that rainfall has a positive sign and its square a negative sign indicates that the relationship is an inverted parabola--more rain is good for crops but too much is harmful, too.

Another interesting variable is the distortion in the foreign exchange rate. Exchange rate distortions show a negative relationship with yields; but they are not significant and their measures of association are weak. Attempting to show that exchange rate distortions have a negative impact on yields in this data set illustrate many of the obstacles encountered in quantitative research such as this. Average yields rose throughout the 1970s and 1980s in the

face of perverse economic policies. While people experienced great hardship and many lost their farms, others who remained on the land adopted improved methods and intensified their production. The two-stage model estimated below takes the simultaneous relationship between the area harvested and yields into account in an effort to correct this problem.

Quantitative analysis of a single case such as Ethiopia is suggestive at best. There are not enough degrees of freedom in such as small sample to draw any conclusions with confidence. For example, when the entire sample of 15 countries is considered, military spending and economic policy variables are found to be strongly related to measures of food security. Furthermore, as will be seen when the case studies are treated, other countries have different historical experiences that would bring other variables to the fore.

I want to make two key points here: The first point is that statistical results confirm what one infers from visual inspection of the data--armed attacks have a negative impact on food security. To emphasize the point that the case of Ethiopia is not unique in this respect, graphs of data on cereal area harvested and armed attacks for each case of conflict-related famine in the complete data set are included in the appendices. In each of these cases--Angola, Chad, Mozambique, Nigeria, Sudan, and Uganda--the inverse relationship between cereal production and political violence can be discerned visually. The second point is that the area harvested is a reliable measure of the food security of self-provisioning farmers. Upon aggregation at the national level, the area harvested is not as distorted by the variability of yields as other measures of food production.

3.6 Cross-National Results

Let us consider the cross-national results by beginning in the upper left-hand corner of the model illustrated in figure 1 and moving clockwise around diagram. Here, we ask if the African countries in the sample raised military budgets in response to political instability by checking for a relationship between armed attacks and military spending. A simple lagged dependent variable model is used. Whenever a variable appears in lagged form it will be prefixed by the letter L. The model asserts that the best predictor of a given year's military budget is the previous year's budget, plus an increment for each armed attack that occurred.

Table 6
Military Spending
Fifteen African Countries 1964-84
Buse R-square = 0.692 F = 129.69

Variable Name	Estimated Coefficient	Standard Error	T-ratio 283 DF	Partial Corr.	Standardized Coefficient
Lagmilex	.7544	.0331	22.755[1]	.7646	.7901
Lagattacks	1,474,400	329,557	4.473[1]	.2271	.0590

[1] $p < .001$

The model performs very well. Sixty-nine percent of the variance in military spending is accounted for by these two variables. The regression coefficient for armed attacks, 1,474,400 says that in these data military spending increases nearly 1.5 million dollars for each reported attack the previous year. It is likely that the coefficient is inflated by the underreporting of the actual number of attacks. But the t-ratio, which cannot be inflated by underreporting, -4.473, indicates that the probability of observing such a relationship randomly is less than .001. The partial correlation coefficient of armed attacks is .2271. Its square, .0516, indicates that about five percent of the variance in military spending not accounted for

by the lagged dependent variable is accounted for by attacks. The standardized coefficient, .0590, means that a one standard deviation change in the number of attacks would cause roughly six percent of a standard deviation change in military spending. The standard deviation of armed attacks is 21 and the standard deviation of military spending is 500 million. Twenty-one times 1.5 million is about 30 million which is six percent of 500 million. The strength of these findings is not surprising, but it is reassuring in that the model is not yielding counter-intuitive or difficult to interpret results.

What then are the effects of military spending? Do countries with larger military budgets have more distorted economic policies? In these data that seems to be the case, as least in so far as measurement and estimation are possible. In the table below the dependent variables is the index of agricultural price distortion.

Table 7
Agricultural Price Distortion
Fifteen African Countries 1964-84
Buse R-square = 0.627 F = 249.78

Variable Name	Estimated Coefficient	Standard Error	T-ratio 283 DF	Partial Corr.	Standardized Coefficient
Lagprices	.6094	.0386	15.749[1]	.6746	.6383
Milex	.0021	.0002	7.983[1]	.4203	.0327

[1] $p < .001$

Again, a lagged dependent variable model is used. Price distortion is modeled as a function of last year's distortion plus the effect of military spending. Sixty-three percent of the variance is accounted for in this way. The regression coefficient for military expenditures is in millions, that is, for every additional one million dollars budgeted for the military the index of price distortion increases two thousandths. The relationship is highly significant. The square

of the partial correlation (.4203) coefficient, .1766, means military spending explains 17 percent of the unexplained variance in the index of price distortion. Moreover, a one standard deviation change in military spending (500 times .002) would push the index up one point.

Table 8
Foreign Exchange Rate Distortion
Fifteen African Countries 1964-84
Buse R-square = 0.642 F = 266.18

Variable Name	Estimated Coefficient	Standard Error	T-ratio 283 DF	Partial Corr.	Standardized Coefficient
Lagforex	.7373	.0319	23.045[1]	.8008	.7012
Milex	.0020	.0008	2.360[2]	.1355	.0131

[1] $p < .001$
[2] $p < .025$

Military spending also aggravates distortion of the foreign exchange rate. The dependent variable in the table above is the index of exchange rate distortion. The coefficient for the regression of this index on military spending is nearly the same as that for the index price distortions. A one standard deviation change in military spending would raise the index one point. The t-ratio, 2.36, is significant at the .025 level of confidence. However, the relationship is not strong. The partial correlation coefficient and standardized coefficients are small because the standard deviation of exchange rate distortion, 42, is large. These data would suggest that pricing policy is more closely related to military spending than exchange rate policy.

What are the effects of military activity and economic policy on food security? I have argued that the area harvested is the best available indicator of the state of the peasantry's exchange entitlements.

Table 9
Cereal Area Harvested
Fifteen African Countries 1964-84
Buse R-square = 0.459 F = 27.45

Variable Name	Estimated Coefficient	Standard Error	T-ratio 290 DF	Partial Corr.	Standardized Coefficient
Attacks	-5,185	1,585	-3.271[1]	-.3062	-.1270
Lagprices	610.92	598.97	1.019	.0600	.0129
Lagforex	-138.34	276.98	-.4994	-.0294	-.0075
Rainfall	10.453	95.296	.1096	.0065	.0040
Rainsqr	-.0117	.0640	-.1841	-.0108	-.0073
Density	3,098	232.08	13.349[1]	.6181	.4121
Yield	-175.77	115.07	-1.527	-.0896	-.1620

[1] $p < .001$

Only two variables in the model are statistically significant: armed attacks and the population density. The regression coefficient for armed attacks -5,185 can be interpreted as meaning that each recorded armed attack was associated with an average decrease in cereal area harvested of over 5,000 hectares. A typical peasant family in Africa works a plot of two or three hectares. If this estimate were true, a single attack would be devastating to an agricultural community. Underreporting of attacks may have inflated this coefficient. But the t-ratio, -3.27, indicates that the probability of observing such a relationship randomly is less than .005. Other statistics point toward the importance of armed attacks. The partial correlation of armed attacks, -.3062, is larger than any of the others except the population density. About nine percent of the variance not explained by other factors is accounted for by armed attacks. The area harvested changes by over one tenth of a standard deviation for a one standard deviation change in armed attacks. By this standard, only population density and the average yield have a larger effect.

It may seem surprising that rainfall does not have a greater impact on the area harvested. However the area harvested responds slowly to drought. A higher order lagged model beyond the scope of this paper might have some success utilizing rainfall to predict the area harvested. Other variables like population and GDP could also be included to boost the R-square substantially. But, as mentioned before, after making the two-stage least squares corrections, these variables would be highly collinear with many of the others. At the least, it is apparent that economic policies as measured here are not having a discernible effect on the area harvested. This negative result is quite robust. I believe that economic policies do not have much effect on the area harvested because most land under cultivation is worked by self-provisioning peasants and not by commercial farmers attuned to changes in the marketplace.

Armed attacks likewise have a strong effect on average yields. In the table below, average yields are given in kilograms of cereal per hectare. An attack appears to depress yields by nearly a kilo per hectare. Since the average area harvested is 2.3 million hectares the estimated effect of a recorded attack would be to reduce the total harvest nearly 2,000 metric tons.

Table 10
Cereal Yield
Fifteen African Countries 1964-84
Buse R-square = 0.557 F = 32.415

Variable Name	Estimated Coefficient	Standard Error	T-ratio 304 DF	Partial Corr.	Standardized Coefficient
Attacks	-.8995	.2439	-3.687[1]	-.2113	-.0442
Lagprices	-2.148	.4185	-5.132[1]	-.2881	-.1046
Lagforex	-.3660	.1634	-2.172[2]	-.1114	-.0459
Rainfall	.7291	.0720	10.115[1]	.5100	.6618
Rainsqr	-.0003	.00004	-8.247[1]	-.4353	-.5012
Density	.2432	.1743	1.395	.0815	.0743
Hectares	-.00004	.00003	-1.394	-.0815	-.0519

[1] $p < .001$
[2] $p < .05$

When average yields are considered, policy variables now have a strong negative effect. A one point increase in the index of price distortion lowers average yields two kilos per hectare. A one standard deviation increase would lower yields 30 kilos per hectare, or nationwide by 70,000 metric tons on average. The t-ratio indicates this variable is highly significant and it explains nearly eight percent of the unexplained variance in yields. Only the two variables for rainfall have larger standardized coefficients. Distortion in the foreign exchange rate has a somewhat weaker impact. It explains only one percent of the unexplained variance. But the relationship is significant at the .05 level of confidence.

Rainfall is overwhelmingly the most important influence on average yields. As predicted, the relationship between rainfall and yields is an inverted parabola. More rainfall tends to improve yields, but above 1,000 millimeters additional rainfall does not increase cereal production, and above 1,200 millimeters more rainfall actually depresses production.

It may be asked why these results should be reported if the point is to measure the impact of the independent variables on food security--and I have argued that the area harvested

measures food security while the yield and cereal production do not. Recall that this is a two-stage model in which the area harvested and yield control each other. Thus in this regression the area harvested has been held constant. That is, these results suggest that other things being equal, economic policies do affect the food available to farm families by reducing their output, not by removing land from cultivation. If we had not controlled for the area harvested we could not make any inference about the significance of changes in the yield.

We have almost toured the entire model. The full effects of an armed attack or changes in economic policy distortions on cereal production now can be estimated by tracing the paths from the independent variables through the area harvested and average yields to cereal production. The regression coefficients along these paths can be multiplied together to estimate the total effect:

Table 11
Cereal Production
Fifteen African Countries 1964-84
Buse R-square = 0.676 F = 310.107

Variable Name	Estimated Coefficient	Standard Error	T-ratio 312 DF	Partial Corr.	Standardized Coefficient
Hectares	1,036	64.177	16.186[1]	.6847	.4838
Yield	1,113,000	76,664	14.517[1]	.6443	.0949

[1] $p < .001$

Earlier on we estimated that a recorded armed attack takes 5,185 hectares out of production. From the table above we can see that the conditional mean cereal production is 1,036 kilos of grain. Taking -5,185 time 1,036 we can arrive at an effect along this path of -5,371,660 kilos. An attack also reduces the cereal yield by .8995 kilos while a one kilo change in yield alters average total output by 1,113,000 kilos. The effect of an attack via

yields is thus -1,001,143 kilos. The total impact is -5,371,660 plus -1,001,143 or -6,372,803 kilos.

It must also be noted that changes in the area harvested affect yields and vice-versa. Looking back at the previous tables we see a one kilo increase in yields reduces the area harvested 175.77 hectares and a one hectare increase in the area harvested depresses yields .00004 kilo. The path from armed attacks through the area harvested and the yield to total production is 230,836. The path from attacks to yield through the area havested to production is 163,797. These numbers are positive because of the inverse relationship between the area harvested and yields. However, they should not be included, because their t-ratios indicate that the coefficients could have occurred randomly and are not discernibly different from zero.

What about the other paths--from armed attacks through military spending and the policy variables to the agricultural variables? The path from attacks and military spending through price distortion and yield to production is -6,651. Via foreign exchange rate distortions we get -1,079. Adding these to the total we get -6,380,533. All paths through the area harvested should be ignored because there is no discernible relationship between the policy variables and the area harvested.

Thus in this model a single recorded armed attack seems to reduce cereal production by over 6,000 metric tons. That is enough food to feed 18,000 people for one year! Now consider the fact that the standard deviation of armed attacks is 21. A one standard deviation change in the number of recorded armed attacks would reduce cereal production 134,000 tons. A sharp increase in the number of recorded attacks, say 50, such as was observed during the Biafran war or in Ethiopia or Angola, would reduce cereal production by 320,000 tons. In fact, these production shortfalls correspond closely to the food deficits reported by international relief agencies for these crises. For example, in 1985 the war-torn country of

Angola was expected to have a cereal deficit of 120,000 tons, Ethiopia needed 900,000 tons of cereal, and Sudan required 700,000 tons (OFDA 1986, 15). Taking note that other factors also contributed to the cereal deficits, the model makes predictions consistent with what has been actually observed in the field, increasing confidence in the results.

What about the direct effects of changes in economic policy? Let's begin with price policy. Since the other paths are not statistically significant, the only ones we should consider are the direct effects of policy on yield and production. Then a one point increase in the index of price distortion is associated with a decrease of 2,391 metric tons in food production. The standard deviation of the index is over 14 points so that a one standard deviation increase would reduce cereal production by 33,500 tons. In the same way a one point increase in the index of foreign exchange rate distortion decreases cereal production 407 tons. The standard deviation of the foreign exchange rate index is 42 points so a one standard deviation change would also reduce production about 17,000 tons. Economic policies are vital to commercial food producers, and in so far as food security depends on food production, to food security as well.

Finally, according to many Africanist writers, the relationship between military activity and hunger should be treated as simultaneous. To complete the model we must close the circle. How does the number of armed attacks respond to changes in food security? As before, food security should be measured in terms of the area harvested.

Table 12
Armed Attacks
Fifteen African Countries 1964-84
Log-likelihood Function = -793.984
Mean-square Error = 179.178

Variable Name	Regression Coefficient	T-ratio 290 DF	Normalized Coefficient
Lagattacks	.2148	2.431[1]	.0102
Hectares	-.0215	-3.187[2]	-.0008
Lagmilex	-.0176	-2.885[1]	-.0008
LagGDP	-.0019	-3.240[2]	-.0001
Population	1.391	2.372[1]	.0658

Squared Correlation Observed and Expected Values = .488
Predicted Probability Y > Limit = 0.4503
Observed Frequency Y > Limit = 0.5267

[1] < .01
[2] < .001

Once again the lagged dependent variable model is used, however a tobit estimation procedure is employed because armed attacks are distributed censored normal, that is, there can never be fewer than zero attacks. The model performs well with a square correlation between observed and expected values of .488. The predicted and observed frequencies of armed attacks being greater than the limit of zero are similar.

In my sample the cereal area harvested has a strong effect on political violence. As the area harvested (measured for convenience here in thousand hectares) increases the number of attacks observed declines. For each thousand additional hectares under cultivation the number of attacks went down two hundredths. If the area harvested declined by a quarter of a standard deviation, 500,000 hectares, 11 additional attacks could be expected to occur.

Higher levels of military spending and higher GDPs (measured in millions) both depress the number of armed attacks. A half a standard deviation increase in military

spending of 250 million dollars is associated with a decline in the number of armed attacks of four and a half. Higher levels of military spending may in fact buy governments greater political security! The regression coefficient of the instrument for GDP is suspect, because it is collinear with population. However, its purpose is to control for military spending, which does not suffer from collinearity problems in this particular model. The finding that these two variables have the same sign is interesting and I will return to this point shortly.

Taken together, these results presented here support the idea that there is a simultaneous relationship between military activity and food security. Armed attacks and military spending both decrease food security. Armed attacks work mostly by displacing rural people from the land. Military spending distorts economic policies eroding the incentives for domestic food production. However, the process is self-reinforcing. As people become food insecure, political violence increases. There may exist a cycle of famine and violence in which some African countries have found themselves trapped. Hunger breeds rebellion which drives the state to further deplete society's resources in its struggle for control.

As noted above, military spending distorted agricultural policies, but the relationship was not very strong. As I explained, I decided to specify a model which forced military spending to have its effects through economic policy distortions. Because of the degree of multicollinearity between military spending and variables like GDP and population, I could not confidently estimate a two-stage model in which military spending had a direct on food security anyway. However, I do believe that there are additional negative effects of military spending on food security which I have not been able to measure.

Consider the GLS (not two-stage) regression of average yields on all of the variables in the original (unestimatable) model in figure 1. This model suffers from a defect: it does not take into account the fact that some of the included variables may be functions of each

other. However, it has a virtue: since there are no collinear second-stage instruments included, we can estimate the partial effect of military spending beyond that accounted for by policy distortions while acknowledging that some bias may be present.

Table 13
Cereal Yield--GLS Model
Fifteen African Countries 1964-84
Buse R-square = 0.501 F = 30.595

Variable Name	Estimated Coefficient	Standard Error	T-ratio 304 DF	Partial Corr.	Standardized Coefficient
Attacks	-.3632	.1845	-1.968	-.1122	-.0361
Lagmilex	-.0547	.0146	-3.737[1]	-.2096	-.0758
Lagprices	-.9279	.2642	-3.511[1]	-.1974	-.0681
Lagforex	-.4067	.1377	-2.952[2]	-.1669	-.0672
Imports	-.1670	.0234	-7.116[1]	-.3779	-.2095
LagGDP	.0058	.0015	3.697[1]	.2075	.1443
Rainfall	.5621	.0707	7.950[1]	.4149	.5092
Rainsqr	-.0002	.00001	-6.566[1]	-.3524	-.3889
Density	.6334	.1185	5.343[1]	.2930	.2019
Hectares	-.0327	.0092	-3.547[1]	-.1994	-.0767

[1] $p < .001$
[2] $p < .01$

This table reveals several things about what happens when these variables are treated as part of a simultaneous system. First of all, by the R-square criterion, the simultaneous model does a better job with fewer variables. The R-square for yields in the simultaneous model was .55 but three fewer variables were employed. Second, armed attacks have a greater effect in the simultaneous model. Armed attacks "absorb" variance from other variables.[20] The economic policy variables, on the other hand, do well in both models, with price

20. This is not true for area harvested (not shown here to shorten the discussion), where in both the two-stage and GLS models armed attacks remain the only important political variable with roughly equivalent impact.

distortions doing slightly better in the simultaneous model, and foreign exchange distortions improving in the GLS model.

The difficulty encountered by not being able to control for military spending, GDP and imports is revealed by the GLS model. These variables show strong results consistent with theory. Higher GDP is associated with higher yields, perhaps because high GDP countries have more demand for food and more efficient production methods. Higher cereal imports are associated with lower yields, either because times of low yields and low yielding countries require more imports, or because imports depress incentives for production, or both. The importance of controlling for these various factors is made clear by the variable military spending. Military spending has a substantial, significant negative impact on yields above and beyond what I was able to measure in policy distortions. Military spending explains four percent of the unexplained variance in yields--more than any of the political or economic variables except imports. And its standardized coefficient is larger than any of the other political or economic variables except imports and GDP. A one million dollar increase in military spending decreases cereal production one twentieth of a kilo per hectare. According to this model a one standard deviation (500,000,000) dollar increase in military spending would depress production 25 kilos per hectare or 57,500 tons in the average case. That is enough food to feed 17,000 people for one year.

Remember that the area harvested, GDP and military spending were all negatively related to armed attacks. That suggests that in wealthier African countries and during times of relative prosperity, particularly if the rural population enjoys food security, there are fewer attacks--greater political security. Conversely, low levels of food security are likely to lead to outbreaks of political violence. The results also suggest political security is enhanced by military preparedness. Unlike GDP, however, military spending decreases food security. That

is, one of the means of ensuring political security, military spending, undermines food security, with the consequence that hunger eventually leads to more violence anyway. This is the result predicted by many Africanist political scientists (Callaghy 1987; Lemarchand 1987) and scholars of internal war (Eckstein 1970; O'Neill, Heaton and Alberts 1980), and is a graphic demonstration of the conundrum of political legitimacy.

How much store should be placed in the GLS results? We know that if the correct model is structural, GLS alone without two-stage modelling is biased. But in practice the amount of bias can be quite small. In general, GLS is preferable to other estimators known to suffer other inefficiencies or biases (Green 1990).

4. HOW MILITARY FAMINES OCCUR

How does war cause hunger? This question may seem trivial: Of course food is destroyed during war; people are displaced; combatants besiege their rivals and blockade food shipments. But the question is not trivial. During wartime some people go hungry while others do not; some wars are accompanied by serious famines, while in others few people are affected by hunger. Understanding how war causes hunger can help explain why some people are more vulnerable than others and why some wars are associated with famines and others are not.

Hunger scholars say that the ability of small farm households to withstand food crises depends on how they feed themselves (Cutler 1986; Rahmato 1987; Sen 1982). They call the ways in which people feed themselves *exchange entitlements*. The exchange entitlements approach to the study of famine explains food crises by identifying the vital sources of food lost during a crisis and assessing the strength of the new sources of food that people try to develop. There is a considerable applied literature on the exchange entitlements of African peasants. Its purpose is to help improve the responses of relief agencies to food emergencies (Baluch 1987; Cutler 1986). Because of the difficulty of conducting research during war-time, most studies of famine with relevance to the effects of war have been conducted on the margins of zones of conflict (De Waal 1989; Rahmato 1987; Rahmato 1988). Other have relied upon interviews with refugees to make inferences about events occurring deeper in war zones (Clark 1988b; 1988c; Clay and Holcomb 1986).

Like droughts and other famine-causing catastrophes, war brings social and economic dislocations. These dislocations affect different households in different ways, depending on how the members of the household ordinarily obtain food:

> Indeed, it is by no means clear that there has ever occurred a famine in which all groups in a country have suffered from starvation, since different groups typically do have very different commanding powers over food, and an over-all shortage brings out the contrasting powers in stark clarity. (Sen 1982, 43).

This insight applies to war as well as to natural disasters. Different groups of people have differing capacities to cope with the effects of war. By focusing on the ways specific groups of people feed themselves, an exchange entitlements approach helps explain why the tactics of war are so likely to cause hunger in certain communities. Furthermore, different kinds of tactics are used in different war-time settings, with varying impacts on affected people. Understanding the exchange entitlements of those affected can show why some tactics are more likely to cause hunger than others.

But war does not cause hunger in the manner of a natural disaster like a drought or hurricane. One difference between war and natural disasters is that during war, dislocations are deliberately created in order to harm perceived enemies. Thus the extent to which people are affected depends on who they are. During war it is the politically, as well as the economically, vulnerable who are likely to go hungry. But here too, exchange entitlements are critical. The efforts of those in trouble are directed toward preserving and augmenting exchange entitlements, aiding in the prediction of and response to conflict-related famine. In this chapter, I will describe some of the important exchange entitlements of the African peasantry, and then describe the tactics of war I observed in case studies of African internal wars. By suggesting how tactics threaten exchange entitlements, I hope to identify those people most at risk of hunger during conflict-related famine.

4.1 The Exchange Entitlements of the African Peasantry

African families obtain food in numerous ways. To begin with, I will describe only the three most important and how they are related to war: 1) household production, 2) generation of income from the sale of commercial crops, and 3) non-farm employment. Others not mentioned here, such as trading, selling services, petty manufacturing, or gathering wild food, contribute only a small proportion of a household's entitlement, or are utilized by a small proportion of the population. The three ways of obtaining food discussed here are by far the most widespread and are very important even to households that also rely on other ways. In Africa, it is generally an attack on one of these three entitlements which initiates a food crisis.

The differences between farming systems affect the vulnerability of peasant producers to war. For example, the kind of crop a family produces is important. It is more difficult for combatants to destroy root crops than surface crops. People who raise or use livestock have more options than those who do not. To some extent, pastoralists can flee with their animals, bringing their means of sustenance with them. And livestock represent an asset that can be traded for food or cash. Producers such as cash croppers who are highly dependent on inputs and services provided by the market or state are vulnerable to attacks on markets and transportation systems even at a distance. But they also have more disposable assets than mainly self-provisioning farmers. Farming systems with a high demand for labor can founder if family members or employed laborers are displaced by warfare.

4.1.1 Household Production

As has already been discussed, the most critical food source for many African families consists of crops or livestock which they raise to eat themselves. Families without the ability to purchase or make exchanges for food have to produce their own or they will go hungry. In order to raise crops and animals, farm households engage in a complex production process. They have to have access to land, they must invest labor, and they make use of assets like seeds, tools, buildings, fences, manure and other inputs which must be available at the correct times and in sufficient quantities. But self-provisioning peasants are often very vulnerable to the effects of war because these assets can be so easily destroyed by combatants.

4.1.1.1 Household Labor

To feed themselves, self-provisioning peasants must be able to make effective use of their own household assets. The main productive asset is labor. All of the agricultural work done by peasants, preparing the soil, planting, cultivating, harvesting, and storing produce, is labor-intensive. The loss of the labor of a single individual can depress the productivity of a household. Lionel Cliffe studied agriculture in Eritrea during the late 1980s. He concluded that loss of labor power had a severe impact on food production. He identified death, displacement and conscription as the three most important ways in which people were lost to their families (Cliffe 1989, 377).

Death and injury do reduce the labor power available for the production of food during war. In the cases I studied the brutality directed against civilian non-combatants was chilling. Consider 1987. That year 1,000 Dinka refugees were killed by government-backed militia

men at Ad-Daein, Sudan in a single day. Half were said to have died after being locked in the police post and in railway cars which were set alight. In Wau, Dinka civilians were herded into sealed rooms and gassed (*The Washington Post* November 29, 1988). Meanwhile, in Mozambique Renamo guerrillas massacred 450 people at Homoïne and 278 people in a vehicle convoy (Keesings 35685-86).

As serious as such incidents are, however, killing is probably not the most important way in which conflict-related famine causes loss of labor power. The proportion of deaths attributable to direct violence during conflict-related famine is in most cases quite small. Let us consider Mozambique, where deaths from violence are an unusually high proportion of total conflict-related famine deaths compared to other cases I studied. Robert Gersony estimated the number of civilian casualties of Renamo violence between 1985 and 1989 at 100,000 (1988, 41). The total number of deaths from violence and hunger during that period is about one million. Thus deaths from violence are only 10 percent of the total. The other 90 percent were victims of hunger-related disease.

I believe that the greatest loss of labor-power occurs because of fear, shock and demoralization. People interviewed in the case studies I read often complained that the fear they felt after being attacked prevented them from working. Eritreans in EPLF territory told Cliffe of their fear of working in their fields where they could be subject to aerial bombardment, and of the risk of traveling to markets (1989, 377). Those in Government held areas said that women could not leave their homes to work or go to market because of the possibility of being raped by soldiers (Cliffe 1989, 392). Mozambicans living in parts of the country designated for "destruction" by Renamo said they had to hide in the forest to avoid attacks, and could not easily reach their homes or gardens (Finnegan 1989, 70). Fear may cause people to flee into situations in which many more starve than would have died by

violence. Raymond Bonner noted that the famine in southern Sudan was started by the movement of 200,000 persons fleeing the killing in Wau in which only 250 people died (Bonner 1989, 90).

Besides killing, another way in which labor power can be lost is when people, especially young men join, or are forced to join, rebel or government troops. While this was only mentioned as a serious problem in two of the cases, it was acute in both. In Ethiopia, the Government dragooned a significant number of young men in parts of Tigray and Eritrea under its control. Cliffe estimated 13,000 men were taken from Government held Eritrea between 1986 and 1988 and forced to join the army (1989, 377). In Mozambique there were numerous reports of persons of all ages being forced to act as porters for Renamo guerrillas (Minter 1989, 3). Sometimes these people are said to have been kept to work under slave-like conditions in Renamo camps, where they have been raped, tortured, and killed. These reports are consistent and repeated by refugees and former Renamo fighters. Many ex-Renamo fighters claim to have been dragooned in this manner.[21] In Ethiopia, it was reported that Government forces frequently kidnapped family members in areas occupied by the army and held them in jail on trumped-up charges for petty ransoms (Clay and Holcomb 1986, 61-67).

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21. Finnegan agrees that civilians have been dragooned in this manner, but disputes the importance of dragooning as a means of recruiting by Renamo. Pointing out that Renamo has been more successful than the Government of Mozambique in controlling the countryside, he believes many young men join up voluntarily (1989, 70). Whether they are dragooned or volunteer, their absence is a loss to their homestead if those left behind do not benefit in some other way from their service with Renamo.

4.1.1.2 Access to Land

Another vital productive asset is land, either for agriculture or animal husbandry. There is an enormous diversity of land tenure systems across Africa. But for a farm household attempting to feed itself, access to land is much more than simply legal or customary recognition of usage rights. For sufficient food to be produced, access has to be continuous and timely. Before the rains come the land ought to be prepared, planting must occur at the beginning of the rains, crops have to be protected as they grow, and the harvest must be brought in before it is spoiled. Fighting can undo a years' food production, even if it only occurs briefly, by displacing a household from its land at any one of these key points.

But access to land is one of the first casualties of war. In order to avoid being caught up in fighting or killed, families take what they can carry and flee, often times leaving crops in the field. The number of people displaced during a conflict-related famine can be staggering. A total of 1,700,000 people were displaced in the Ethiopian famine of 1984-1985 and 1,800,000 people were uprooted in Mozambique during 1987-1988 (USCR 1985; 1988 tables 1, 3). Three million five hundred thousand people were displaced in Biafra during 1968-1969 (Samuels 1969, 7).

Sometimes loss of access to land is simply a matter of people running for their lives, but it is not strictly necessary for people to be displaced for them to lose access to land. In Angola, UNITA forces ordered farmers in the *planalto* not to plant or harvest their fields (*New York Times* December 28, 1984; December 31, 1985). People feared working in their fields because of the possibility of striking a land mine. Over 40,000 Angolans had lost limbs to landmines (Morrison 1991, 1). Twenty-five percent of the villages in Eritrea surveyed by

Cliffe in the late 1980s reported significant amounts of land out of production due to fear of aerial bombing, mines, or attacks by guerrillas or government troops (Cliffe 1989, 377).

During war the concentration of persons in areas free from conflict increases the pressure on resources there. People who still have access to land may have to let others use it or they may have to divide what food they produce among more people. Ibo refugees who poured into Biafra at the outset of the Nigerian civil war were often absorbed into relatives' homes. While familial support is credited with saving many displaced, households with more refugees are said to have suffered higher incidents of malnutrition (De St. Jorre 1972, 224). The ICRC found that in Angola "safe" fields were over-cultivated and quickly exhausted and that people displaced from zones of fighting poured into "safe" areas, straining the resources of the residents (ICRC 1986b, 6).

4.1.1.3 Destruction of Food Crops

Self-provisioning peasants can starve even if they remain on the land if their food crops have been ruined by the conflict. Reports of the deliberate destruction of food crops were widespread in the cases I studied. Crops were most often destroyed by burning. Cliffe counted 36,000 hectares of crops wiped out by burning and aerial bombing in Eritrea (1989, 377). Tigray was subject to annual incursions during the harvest by soldiers on search and destroy missions. Hundreds of reports of burned crops were made to relief workers by civilians there (Clay and Holcomb 1986, 61-67; Kaplan 1988, 85-99). The Angolan famine of 1985-1986 was started when UNITA fighters began a campaign by burning maize fields throughout Huambo province in 1984 (*New York Times* December 31, 1984).

Tree crops such as cashews, bananas, oil palms, mangoes and other perennial crops like cassava are vital agricultural assets which take time to grow but can be destroyed in an instant. In Eritrea during the 1970s the orchards of farmers suspected of supporting the rebel EPLF were destroyed to demonstrate to others the consequences of disloyalty (Giorgis 1989, 89-97). In 1979 the chairman of the regional branch of the ruling party concluded that such tactics had devastated the economy of Eritrea and caused widespread hunger.

4.1.1.4 Livestock

Another asset essential to many self-provisioning peasants is livestock. The loss of the herd ruins a pastoral family as thoroughly as the loss of land does cultivators. Livestock is also important to some agriculturalists, providing traction, manure, milk, and supplementary income.

In principle, families dependent upon livestock rather than crops would appear to have a better time of it during war because the animals can be moved to safe areas or sold at peaceful markets. However this is not the case. Most African pastoralists use extensive grazing systems which are prone to disruption by war. Pastoralists often do not keep their herd at their family residence, sending them instead to seasonal grazing areas. And fighting can interrupt the grazing patterns of nomadic pastoralists. For these reasons a displaced pastoral family will normally be short of animals. For example, many animals in Eritrea starved to death when the line of combat cut people in EPLF-held territory off from their traditional dry season grazing area along the Gash river causing them to overgraze the wet season areas (Cliffe 1989, 392).

Animals are vulnerable for a number of other reasons. Soldiers can easily kill an animal for a quick meal and often do so. Livestock can be rustled or stolen for resale. Animals also are easy targets for fighters who want to terrorize or punish civilians. In some places internal wars have destroyed most of the livestock. In their campaign of terror against suspected government collaborators UNITA fighters had killed almost all of the cattle in Huambo Province by 1985 (*New York Times* December 31, 1984). Renamo eliminated over half of Mozambique's national cattle herd (Root 1989, 1). The destruction of animals affects other agricultural production, too, because many Africans rely on animals for tillage. Forty percent of the agricultural land in Eritrea was out of production in 1987 in part because of a loss of drought-power due to the deaths of animals (Cliffe 1989, 377). War may inflame or distort traditional patterns of livestock raiding by introducing modern weapons. In southern Sudan where many people depend primarily on the products of their animals for food, bands of Government and insurgent fighters engage in rustling against traditional ethnic rivals on a large scale. In 1984 new SPLA recruits used newly acquired weapons to raid neighboring peoples' cattle displacing tens of thousands of individuals (Africa Confidential 26: 11, 27: 10). Militias armed by the Sudanese Government got so caught up in rustling they stole the cattle of their own Bahar al Ghazal Governor Brigadier-General Albino Akol Akol.

4.1.1.5 Household Assets

Also important to household food production are other physical assets. Agriculturalists require wells, yokes and plows, machetes and hoes, granaries and outbuildings, work clothes and shoes, and other equipment. Pastoralists need fences, water sources and troughs, dips, and the like.

During war, peasants' ability to make use of their material assets is reduced. Of course these assets are lost whenever households are displaced. But they can also be lost or destroyed by attackers whether or not a family ultimately flees. Governments and guerrillas often inflict communal punishments on villages thought to support their enemies that involve the destruction of public or private property. Ethiopian refugees reported that Government troops deliberately set fire to their buildings and farm implements and poisoned their water sources, leaving them unable to farm properly (Clay and Holcomb 1986, 61-67). In Zimbabwe (then Rhodesia) during the liberation struggle of the late 1970s, soldiers of the Smith regime destroyed wells, dip tanks, and other development infrastructure it had built in the villages of Africans believed to be backing the guerrillas. In the early 1980s the government of now independent Zimbabwe similarly wrecked its own development projects to punish dissident ethnic minorities (Cilliers 1985; Lawyers Committee 1986). These attacks resulted in a food crisis requiring the importation of relief food from outside.

Theft is also an important way in which assets are lost. Soldiers isolated in remote rural areas pillage the property of rural people and trade it or sell it for cash. William Finnegan reported that Renamo guerrillas in Mozambique live essentially by plundering "whatever can be carried away" from the villages in areas under their control (1989, 52). He believed pillaging was the only important form of economic activity in the war zone. Renamo had developed networks for disposing of stolen property that reached into neighboring countries where higher prices could be obtained. Finnegan also found Government troops to be guilty of plundering (1989, 91).

4.1.2 Sale of Cash Crops and Livestock

Another important way in which rural people obtain food is through the sale of crops, livestock, or animal products for cash, which is then used to purchase food. A overriding goal of economic development in Africa is to commercialize peasant agricultural production. When peasants enter the market their liability is extended from their own labor, land and assets to include assets and services necessary to make economic transactions. These assets and services are provided either by the state or private firms. Thus commercial farmers become dependent on the state and on private firms and can suffer a reduced ability to feed themselves if these institutions fail.

Farmers involved in commercial agriculture use assets which they must obtain from outside sources. For example, commercial farmers are increasingly likely to buy inputs such as seeds or sets from improved varieties, fertilizers, pesticides, herbicides, sprayers, and labor-saving devices like motorized tillage. Commercial farmers require services at every stage of production from obtaining initial inputs through marketing. They may work with the advice and support of agricultural extension agents. In order to use improved technologies, commercial farmers must be able to obtain transportation to move inputs to their fields and to move crops and livestock to the point of sale. Similarly pastoralists selling grade animals or animal products similarly employ improved husbandry practices like dipping and veterinary services. Furthermore, modern inputs are expensive and are usually financed with loans, meaning that farmers are dependent upon banks or other sources of credit. Finally, there must exist some venue--a public market, private firm, or state agent--through which farmers and herders can sell their produce.

Regarding food security, the distinction between direct consumption of food crops and farming for cash is important, particularly if a cash crop is not a nutritious food crop. Farmers dependent on cash cropping can loose much of their ability to obtain food even in a year in which they harvest successfully, if they are unable to market their produce or if their earnings cannot be used to purchase sufficient food. Even if they can transact business, wartime inflation may depress the purchasing power of commercial farmers' earnings or remove food from the shelves of stores. In Ethiopia prices of sorghum and teff quadrupled just before the famine of 1984-85 (Giorgis 1989, 124). In Darfur, Sudan prices for grain in the countryside increased four to five hundred percent in during the famine of 1984-1985 (Africa Confidential 26, 13).

Not only are farmers who grow cash crops dependent on the rest of society, but society depends on commercial farmers. Commercial farmers create jobs by employing laborers, hiring transport, and patronizing shops. When they spend their earnings, commercial farmers create markets for consumer goods. Commercial farmers contribute to capital formation by purchasing credit and depositing investible savings. Their surpluses feed people in the urban areas and animals in the countryside. And African governments are dependent on the taxes they collect from commercial farmers. In most African countries, the vicissitudes of the commercial growers are those of society as a whole.

The inability of peasants to market cash crops or make purchases with their earnings were particularly important causes of hunger in Angola and Mozambique during the 1980s. Renamo attacks in Mozambique broke down rural trading networks preventing food crops from reaching urban areas and inputs from flowing to the countryside (Finnegan 1989, 66). According to Joseph Hanlon the collapse of demand for food and the dissolution of trading networks was the most important cause of hunger in Mozambique (1984, 205.). Rosemary

Galli concluded that among the causes of famine in Angola "the most damaging of all was the disruption of the market." (1987, 31) The rural economy had reverted virtually to barter during the height of the civil war in the mid-1980s. All of the food eaten in the capitol, Luanda, had to be imported.

In other cases soldiers do not destroy markets. Instead, they take control of the markets using their ability to compel to establish monopoly or monopsony power for themselves. When this happens private producers and traders are displaced or are forced to accept the conditions imposed by the fighters. In southern Sudan, Government troops and a handful of traders who cooperate with them buy grain from civilian militias. These militias in turn extort the grain they sell from people the countryside. The soldiers and traders resell the grain at prices elevated by scarcity, or use it in tea shops or beer halls they run (Africa Confidential 27, 23).

Incredibly, markets sometimes do continue to function during wartime on a reduced scale. During 1983-1984 Tigray peasants held markets at night to avoid soldiers and bombardment by Government Migs (Clay and Holcomb 1986, 60). Rebel movements attempting to establish their legitimacy in the eyes of local people may protect markets or attempt to facilitate their operation. The TPLF helped protect night markets in Tigray and purchased and resold grain there to stimulate trade. Nine percent of the grain in Eritrea was marketed through the EPLF's relief arm, ERA (Cliffe 1989, 385). Grain reappeared in markets in southern Sudan once the SPLA had established effective control over its liberated zone (Minear 1991, 69).

4.1.3 Non-Farm Employment

Yet another way of obtaining food is from non-farm employment. The forms of employment used to obtain food can be arranged along a scale according to the extent to which it is monetized. Most monetized is wage labor. In some parts of Africa income from wage labor is a crucial source of food for many rural people. In Angola and Mozambique, earnings from wage labor in mines, on large farms, or in towns provided a vital supplement to many household food budgets. Wage earners' households can depend on them for food even if they work far from home, because they can send remittances back to their families.

Less monetized forms of labor exchange can be vital to the food security of poor peasants. Members of households that do not posses enough land to grow sufficient food may resort to working on a day-to-day or seasonal basis on other farms. In return they may be paid in-kind or eat with their employers.

Warfare strikes at the food security of people who rely on employment to obtain food in several ways. Fighting reduces or eliminates employment by shutting down businesses and farms and making travel to and from work risky. Casual laborers on smaller farms are often laid off as soon as a food crisis threatens. Even if work continues, people may suffer hunger. Workers in secure locations may find they cannot send remittances back home, either because there is no post, or because their families have been displaced by the conflict. Inflation brought on by war stretches cash food budgets, but even if cash is on hand, fighting may mean stores have no food to sell.

Part of the reason hunger was such a serious problem in Biafra during the Nigerian civil war of 1967-1970, is that the region had never been food self-sufficient (De St. Jorre 1974, 224). Many Biafran households were land-poor or landless and relied on purchases of

imported food. Cash was obtained either through wage labor, trading or through remittances sent back from family members working or trading in other parts of Nigeria. The civil war impoverished these families because it cut off food imports, cut off remittances and drove food prices up 1,200 percent. In the 1980s many peasant families in northern Ethiopia had members working on plantations in Gondar province and across the border in Sudan (Clark 1988a, 5). Fighting between the Government and the TPLF made it dangerous for people to travel to the border area to work and cut off this source of income. During the famine of 1983-1984 land poor families that had been dependent on purchased food ran out of food faster than others.

But even when households have sufficient cash from whatever source, it is likely to be stolen or extorted during wartime (Clay and Holcomb 1986, 61-67). Ethiopian refugees in Sudan complained bitterly about arbitrary "taxes" which Government soldiers levied at will. Kidnapping was also frequently practiced. Soldiers were said to "arrest" family members and hold them in captivity until a bribe was paid for their release.

4.2 Famine Coping Strategies

The three main exchange entitlements of African households, domestic food production, cash crop and livestock sales, and employment, are bound to be affected by war. However, when these entitlements fail, people utilize a variety of alternative strategies to supplement their diets (Cutler 1986; Rahmato 1988). Coping strategies are important to people living in food insecure environments like Africa. African households anticipate food emergencies and plan coping strategies in advance in order to ward off hunger. If coping strategies are adequate famine can be forestalled.

> It is not [war] alone which precipitates famine, but a failure of alternative income generating activities among the affected peasantry, including the sale of livestock, labouring, petty commodity production and petty trading. Ultimately, famine represents a failure of the State to ensure the survival of its population. (Cutler 1985)

There are eight main coping strategies commonly mentioned in the literature (Baluch 1987; Cutler 1986): 1) consumption of stored food, 2) disposal of livestock, 3) labor migration, 4) petty commodity production, 5) reliance upon assistance, 6) consumption of famine foods, 7) sale of assets, and 8) migration.

Coping strategies can be ranked according to the point in an evolving food crisis at which they are implemented. Some strategies are employed fairly early on when the amount of stress on exchange entitlements is low. Others are used only when people are desperate. Relief workers use observations of coping strategies as a barometer to gauge the extent of distress in a community.

4.2.1 Least Distress

The coping strategy most commonly employed and which is indicative of the least stress on exchange entitlements is consumption of stored food. Stored food includes cereal and pulses held in a granary, and various root crops put up or kept alive in the ground. In fact, reliance upon stored food is an annual practice in most parts of Africa, where every year sees a lean season around planting time and before the harvest. For this very reason, however, food stockpiled by independent households is vital to African food security. The premature loss or exhaustion of stored food will cause hunger even if the annual agricultural cycle is otherwise normal. During times of war, stored food is at great risk.

Stored food is sought by soldiers in the field for their own consumption or for pillage. Guerrillas who may have only the most tenuous of logistical ties to their rear bases often must live off the land. They frequently resort to preying on peasant producers. Such predation can become highly organized. In Angola in the mid 1980s UNITA fighters on the planalto are reported to have scouted villages with large areas under food crops (*New York Times* December 28, 1984; December 31, 1985). When the crops were ripe they would return, dragoon villagers to harvest for them, and march off into the bush with the entire crop. Some Renamo insurgents in Mozambique are even more organized than this (Gersony 1989, 17-28). They designate certain areas near their encampments "tax areas." Households in these zones are required to provide them with fixed amounts of raw or cooked food on a periodic basis. Large Renamo bases have plantations attached to them said to be worked by slave labor.

Government soldiers steal food too. Many African governments are simply too poor to send soldiers into the field adequately provisioned. In the 1960s the regime of Haile Selassi deliberately sent Ethiopian troops against the Eritrean Liberation Front with only three days supplies (Giorgis 1989, 82). This resulted in many cases of food theft and contributed to the radicalization of the Eritreans.

The record of conflict-related famines is filled with many examples of the deliberate destruction of food stores. In every case studied here the food stores of peasant households were destroyed. Food stores were most often destroyed by burning during raids. Both governments and insurgents destroy food. Refugees from Ethiopia reported that they had to flee after their food was deliberately destroyed and they began to starve (Clay and Holcomb 1986, 61-67). The inability to maintain secure food stores can profoundly alter the viability of a community, plunging self-provisioning peasants into famine. As a consequence of the civil war during the 1980s, people on the *planalto* in Angola experienced hunger on an annual

basis. The main harvest there is in June, but during the war many families and villages could not produce sufficient food or protect it from raiders and ran out of stored food by October. Near the end of every year food relief had to be delivered to the planalto to prevent famine (ICRC 1986b).

4.2.2 Moderate Distress

When their food stores run out, peasants must find some way of trading for or purchasing food. "We see the peasant desperately trying to break out of the subsistence system and plunge into the cash economy and exchange," said Dessalgen Rahmato of Ethiopians trying to cope with famine (1987, 167).

Disposal of livestock is a famine coping strategy indicative of moderate levels of distress. Among many African people it is considered preferable to retain livestock for use in notable transactions such as marriage (Rahmato 1988, 334; Reardon, Matlon and Delgado 1988, 1067). But animals are also seen as insurance against hard times. The cash which can be obtained for an animal buys many times the animal's food value in grain or tubers. Therefore, it is economical to sell or exchange an animal alive rather than slaughter it.

However, it may be difficult or impossible to sell livestock during war. As mentioned earlier, livestock are likely to be stolen for food by soldiers or killed to punish their owners. Even if the animals are not lost, it may not be possible to sell them. In a crisis, everyone attempts to sell their animals at the same time. As a result the market may be glutted and the price very low. In Tigray stock prices fell 80 percent during the crisis of 1983-1984 (Clay and Holcomb 1986, 60). The decline was similar in Darfur province, Sudan during the same period (Africa Confidential 26, 13). If they are able, pastoralists drive their animals to distant

markets where the price is higher, but during war it can be too risky to do this. The civil war in Sudan completely eliminated the market for southern livestock by the 1990s. Irrespective of market conditions, regulations imposed by the military aimed at controlling flows of food may make such transactions illegal.

Also evincing moderate distress are changes in the composition of the work force and patterns of labor migration (Clark 1988a, 1-5; Rahmato 1987, 169). Low household food and cash reserves can send persons who do not normally work in search of jobs, or working people father afield. The movement of large numbers of employable males to plantations, mines, or towns where they normally do not work is one sign of an impending food crisis. Moderate stress may cause women and children who would normally not work to seek casual employment in agriculture, sweeping shops, or in beer halls. As with livestock sales, food crises tend to flood the market with job seekers, driving down wages and making competition more frantic. In the Sudanese famine of 1984-1985 wages for casual labor in Darfur fell to as low as 15 cents per day (Africa Confidential 26: 13).

The availability of work helps people cope with food crises but, as mentioned before, during war they may not be able to resort to this stratagem. The risk of violence or official travel restrictions can cut people off from the jobs that are available. Warfare may have eliminated jobs or made wages valueless. In their survey of Ethiopian refugees in Sudan, Clay and Holcomb found that many reported having tried to find wage labor before deciding to flee (1986, 60).

Another strategy used under moderate stress is the adoption of irregular forms of petty commodity production or trading. Whereas activities such as bunching grass for sale as roofing material, weaving mats, or making and selling brooms may be unremunerative in good times, peasant households will engage in such enterprises when hunger threatens. The types of

activity people engage in depends on the natural environment and local economy. For example nomads in the Sahel use the fronds of the doum palm to make roofing and woven materials; in more urbanized environments people make sandals from tires, and pots and pans from scrap metal (Cutler 1986, 186). In Ethiopia women moved to towns and brewed beer or tea to earn extra cash (Firebrace and Smith 1982, 40). Trading petty commodities is not an unimportant coping mechanism. People make elaborate plans and exert great effort to obtain raw materials and deliver commodities to markets. Like the other strategies mentioned above, this one suffers from the riskiness of travel, official regulation, the fact that food prices will rise while commodity prices will fall, and the eventuality that even if all else goes well, food may not be on hand to buy.

4.2.2.1 Food Relief

When they are unable to find alternative sources of income, peasant families rely upon locally available sources of assistance. African communities that have experienced famine in the past often have developed socially sanctioned means of redistributing food to those who cannot obtain it themselves. Three important sources of assistance are: family members, mutual aid groups, and locally available credit or food assistance. However, during conflict-related famine, the extent to which aid is locally available is constrained by the social divisions underlying the conflict.

One thing that people do in a food crisis is turn to their relatives for assistance. Dan Jacobs, who worked with the United Nations in Nigeria during its civil war, felt that aid extended to family members displaced from the north was critical in reducing the mortality level in Biafra (Jacobs 1987, 29).

Organized means of providing food aid extend beyond families. Peasant communities activate mutual aid groups, if these are part of their tradition, to cope with food crises. In 1985 in some villages in Wollo Province, Ethiopia, peasants designated small groups of oxen to be carried through until the next rains to provide traction for plowing (Rahmato 1987, 257). The rest were killed and shared with the community.

Formal mechanisms for promoting assistance also exist in many communities. People appeal to political authorities and community leaders for help during food crises, and these appeals may be reinforced by religious or other social norms. In Darfur, Sudan wealthy traders were expected to extend credit on easy terms to those in distress during lean times so that they could buy food and seeds (De Waal 1989, 196-202). Religious traditions emphasizing help for the poor and the prominent social roles and responsibilities of religious leaders mean mosques and churches may become relief centers during conflict-related famine. Whether political leaders, religious figures, and other elites make assistance available depends in part on their social position. Consider relief activities by Moslem leaders in Sudan, for example. During the drought in predominantly Islamic Darfur province of Sudan, mosques distributed alms and helped to disburse food aid made available by local government. However, in southern Sudan, where Islam was identified with northern and Arab interests, Moslem leaders were less active in relief work during the conflict-related famine there. Instead Christian church people, who identified with southerners--often being members of southern ethnic groups themselves--took the lead in famine relief work. Whereas in the south Christian churches conducted needs assessments and raised funds for food shipments, Minear excoriated southern Moslems for sitting on their hands during the crisis (1991, 121).

In addition, local leaders have a critical role to play because they may link the community to international relief efforts. In Ethiopia, the Joint Distribution Program and Joint

Relief Partnership brought Ethiopian, Tigray and Eritrean church leaders together with Catholic Relief Services and other international relief organizations to move food into areas affected by fighting. The leaders of communities that have been the focus of international relief efforts in the past are quickest to seek outside aid. Alexander De Waal who studied Darfur, Sudan in 1985 noticed that most of the relief food went to the town of Saiyah (1989, 203). When he investigated he discovered that the Mellit Area Council headquartered in Saiyah had applied to the Government for aid straight away. Saiyah had long been "disaster tourist" destination and its political leaders were experienced in dealing with donor groups.

However, their very identification with those who are the primary victims of conflict-related famine may make local anti-famine activists lightening rods for the wrath of combatants who are employing hunger as a weapon. In southern Sudan grain shipments organized by Christian churches were impounded by Government troops and church leaders were harassed. Ethiopian Church leaders who advocated relief for the north were similarly harassed by their government. During the Nigerian civil war church leaders on the Federal and Biafran sides of the conflict cooperated with one another to get food into famine-affected areas in defiance of their government's injunctions against cooperating with the enemy. Harassment of church people occurred on both sides of the conflict but was especially serious in Federal Nigeria.

4.2.3 High Distress

People who have exhausted their own means of coping with famine can survive so long as there remain resources in their communities to support them and so long as mechanisms for redistributing these resources continue to function. Coping behaviors

indicative of high levels of distress are adopted either when there is an absolute food deficit, or when social and political institutions fail to ensure that the hungry receive income or food supplements.

> Peasant survival strategy is best understood as a collective endeavor. What may appear to the casual observer as a disordered and isolated series of movements by individual peasants during the on-set of famine is actually an ordered and group centered effort to minimize the impact of the crisis and to stay alive. To be sure, if the famine continues beyond a certain point in time, and a certain level of intensity, peasant survival strategy will collapse, and with it all the individual's group-based plans and arrangements. This point, which is part of what we shall call the phase of death and dispersal, coincides with the complete exhaustion of all the resources of the community, including its alternative sources of food. (Rahmato 1987, 28).

Conflict-related famine is one of the most intense tragedies that can befall a community. Famines that progress to the point of causing high stress do not simply bring death, they cause the emotional and spiritual demoralization of everyone who experiences them. During famine, people must do things that they find to be grotesque and unlawful, all while bearing a burden of tremendous grief. During famine, families are torn apart, homes are lost, people become sick, and survivors are forced to endure such indignities as eating repulsive food, leaving their dead unburied, and wandering among potentially hostile strangers. Behaviors indicative of high stress levels are those that are undertaken only when people have become desperate.

When distress levels become high, people begin to sell their household possessions (Rahmato 1988, 1067). In some areas, precious objects such as jewelry are retained for disposal in a food crisis as insurance against hunger. But ordinarily the sale of personal possessions is an indication that the homestead is literally breaking up. Non-essential items are sold first, but people try to hang onto essential and personally meaningful objects as long

as possible. As famine progresses more and more possessions, ultimately including the implements needed to operate farms, and even the material of which houses are constructed, will be sold. Markets in Darfur, Sudan were filled with jewelry and ornaments "at knock-down prices" in 1984-1985 (Africa Confidential 26, 13). By the time famine reaches this stage it has accumulated a momentum of its own. Even if the causes of hunger are removed, households without farm implements and other material assets cannot return quickly to cultivation. Families that have sold possessions essential for production remain destitute indefinitely.

The selling of possessions can only help a household cope with a famine if markets continue to function. If traders cannot come into an area affected by a food crisis to remove possessions sold, as is likely to be the case during war, this stratagem will fail. Furthermore, if markets operate efficiently the selling price of items like jewelry will remain higher, and people will be able to exchange their possessions for more food and will be less likely to have to resort to selling farm implements.

People facing hunger economize by eating less valuable food items, and some Africans routinely supplement their diets with wild foods. But an indication that distress levels have become high is when they begin to consume famine foods. Famine foods are foods which people normally will not eat. Thus eating famine foods indicates a level of desperation so high that people are resigned to doing something normally felt to be unsafe or repugnant.

An example of a famine food is the fruit of the doum palm, which is unpalatable, and not very nutritious, but filling. Relief workers in Darfur noticed people eating *mukheit*, a poisonous berry which must be cooked for days to be safe, and umbas made from groundnut shells (Africa Confidential 26, 13). They also broke into termite mounds for the seeds stored there and picked undigested grain from animal dung. Ethiopian and Mozambican refugees

reported living on "leaves and sticks" before or during their escape from war zones (Clay and Holcomb 1986, 118-119; Gersony 1988, 27).

People usually cannot sustain themselves indefinitely on famine foods, in part because famine foods often are not nutritious, and because gathering may deplete the local supply. However, for short periods of time, the use of famine foods can help families cope. But during war combatants often try to restrict the movements of civilians, especially if they are suspected of being sympathetic to the enemy. People may only be allowed to move about between the hours of a curfew, or they may be prevented from leaving villages or going into the bush. These kind of regulations can prevent them from obtaining famine foods.

4.2.3.1 Migration

A final famine coping strategy which needs to be discussed in detail is migration. As has been made clear, some people may migrate early in a food crisis when only moderate distress is felt, to search for work, raw materials for petty commodity production, or locally-supplied assistance. And migration is an annual practice among pastoral peoples discussed in this paper like the Dinka and some Eritreans. Early migrations such as these take place when coping strategies adopted to ward off lower levels of distress are still functioning. Here I want to discuss migration in search of food aid undertaken because other means of coping with a famine have failed.

The image of hunger in Africa which most of us have in our minds is of horrifying refugee camps--the terminus of famine or war-induced migration. Migration is wrenching because family members may be permanently separated; their homestead may be lost forever. With migration, the momentum of famine is at its utmost. Weakened by hunger and

exhaustion, migrants may have no unaided means of obtaining sufficient food. Agriculturalists who have lost their land are no longer food producers, they have become pure food consumers. Displaced people are among those most at risk of suffering hunger-related illness or dying. One of the most important duties of relief camp managers is to find ways to get famine victims back on the land by the beginning of the new agricultural season. If this does not occur the famine will continue no matter how good other objective conditions are.

Males are likely to migrate before females; and people mature enough, but not too old, to sell their labor are also likely to go earlier. Among settled agriculturalists, women, children and the elderly will remain at their homesteads to maintain their dwellings and gardens while males seek work or food. Women, children and the elderly will not migrate in large numbers until they are forced to do so by hunger. Their departure following the males marks the dissolution of the homestead and is a clear indication of high stress. Another reason the migration of dependents indicates high stress is that these people have few employment options. They are not moving with the realistic hope of finding a means of sustaining themselves elsewhere, but out of desperation. James Firebrace and Gayle Smith reported that during the war Tigray women in refugee camps resorted to prostitution to obtain food and cash (1982, 40). Prostitution is a fact of life in most refugee camps.

Understanding migration is crucial to understanding famine, because it occurs at the climax of the chain of events creating conflict-related famine. Lance Clark (1988b) analyzed the causes of migrations for the Center for Policy Analysis and Research on Refugee Issues. He recognized that migration is a coping strategy undertaken because people think they will have a better chance of obtaining food at some distant location. He theorized that attention to whether people are successfully or unsuccessfully utilizing coping strategies to obtain food where they are would help in the prediction of migration. Clark identified what he termed

"push," "intervening," and "pull" factors. Push factors are events such as wars and droughts that affect peoples' exchange entitlements. Pull factors are opportunities to supplement entitlements, such as job opportunities or the presence of supplies of relief food. Intervening factors trigger or block the movement of people from push factors toward pull factors. For example, fighting in the area between a hungry community and a relief camp may prevent people from moving. When the fighting abates a rush of displaced people toward the camps is likely to occur.

Applying Clark's framework to the material that has been presented in this chapter thus far, we can summarize what has been said: War creates factors that ultimately push people to migrate by undermining their exchange entitlements. Specifically, war disrupts people's ability to work, destroys their farm assets, and prevents people from supplementing their incomes by selling crops, animals, or their labor. Furthermore, during war intervening factors like battle lines and wartime regulations are present that make it more difficult for people to move to find ways of coping with a conflict-related famine.

A feature of conflict-related famine that distinguishes it from famines caused by natural disasters is that war creates a push factor, fear of violence, not found in the others, and one that is not the result of hunger. Rather, fear of violence can displace people, separating them from their land, assets, jobs, and communities, creating a food crisis when none had existed previously.

But war also creates "pull factors" that occur in conflict-related famine, but only to a lesser extent in other types of famine. Modern wars are always accompanied by international relief efforts and affected people gravitate toward feeding centers. Some pull factors are unexpected. For example, secure liberated zones, especially those in which people can sell

crops to guerrilla fighters or obtain food distributed by them as part of an effort to win "hearts and minds," draw people into them.

4.3 Guerrilla and Counter-Insurgency Warfare

The application of Sen's concept of exchange entitlements to African peasant communities suggests that certain African farm households are more vulnerable to hunger during war-time. But knowing that by itself does not enable us to foretell who will suffer hunger and who will be spared during conflict-related famine. For war is purposive behavior; hunger is deliberately selected as a weapon and directed against people perceived to be inimical by one or both of the combatants. Combatants select the hunger weapon because they believe it will harm their enemies; to harm their enemies they utilize tactics which they believe will cause hunger.

Combatants are quite explicit about why and how they use hunger as a weapon. When United States Defense attaché Michael Kenney asked General Muhammed Zein el Abdeen why the Government of Sudan would not permit famine relief operations in the south of the country in 1988, he was told that all the "innocent" people had already fled the south. Those who remained were ether members of the rebel SPLA or "will become SPLA." Later, Sudanese President Sadiq al Mahdi confronted UNICEF director Cole Dodge about food shipments in the south which Dodge had believed to be approved and legal, saying, "We know all about your clandestine operation in the south; it is a breach of our sovereignty; your food is killing our soldiers." (Bonner 1989, 90, 100) Ethiopian military leaders were more circumspect than the Sudanese when discussing their policies during the famine of 1984-85.

Nonetheless it was alleged that hunger was part of the Ethiopian Government's tactics against rebels in the North. According to a former director of the RRC:

> The allegations had the ring of truth because there were those in the government, primarily those under [Politburo Secretary] Legesse [Asfaw]'s influence, who wanted to starve entire populations into submission. Their argument was that by giving food to people not directly under the control of the government, we might be feeding the rebels. . . So he . . . instructed administrators in Tigray and Eritrea to discourage food delivery to suspect populations. (Giorgis 1989, 311)

Students of guerrilla and counter-insurgency warfare have investigated the behavior of combatants in wars such as those that have caused Africa's conflict-related famines (Atkinson 1981; Chaliand 1982; O'Neill, Heaton and Alberts 1980; Tinker, Molnar and LeNoir 1969). In general, authors writing about guerrilla and counter-insurgency warfare note two characteristic features which echo the Africanist literature and literature on internal war.

The first is that guerrilla war is motivated by a perception on the part of a significant portion of the population that government is unjust. The key point is not that insurgent fighters feel aggrieved, but that part of the general population does (O'Neill, Heaton and Alberts 1980, 2). Very often the aggrieved will be an ethnic or religious minority. Motivated by their sympathy for the insurgents' cause, people in the dissident group are willing to provide fighters with food, shelter, and transportation and to take risks to provide them with intelligence. And popular support enables an inferior insurgent force to make strikes against government positions and to melt away before retaliation can occur.

The second feature which distinguishes guerrilla war is that it occurs in primarily agrarian societies. The agrarian setting is vital to the sustainability of guerrilla war. Of course the cover afforded by the rural environment and the difficulty which conventional forces have operating in it give an advantage to guerrillas. But most important is the fact that peasants can

provide food to the fighters (Rice 1988, 56). Since peasant households are engaged in independent agriculture and petty commodity production, they are each individually capable of sharing some of their surplus with fighters.

The characteristics of popular support and of agrarian setting affect combatants' policies toward food. And, since it is people who produce, store, move and exchange food, they also effect the combatants' behavior toward the people caught up in the conflict. In order to survive, guerrillas try to obtain food from rural people. Certainly, coercion is an expedient means for doing so over the short run. However, to enable their movement to grow and to ensure that support will be forthcoming over the long run, guerrillas must develop closer relationships with food producers. They may try to stabilize a sufficiently large population of food producers in a liberated zone relatively free from government influence. The use of food by guerrillas as a means of sustaining both themselves and their supporters in the rural areas is crucial to combatant behavior during conflict-related famine.

If insurgents can blunt the state's use of hunger as a weapon and sustain themselves upon a rural base, they can persevere and gradually erode the regime's foundations. Thus governments try to restrict civilians to zones under their control. Within the zones they can oversee the production and distribution of food to prevent any "leakage" to insurgents, and they can try to reduce guerrilla influence and identify and punish rebel supporters. Since at least some of the rural population are presumed to be supplying insurgents with food, the only way to reduce the leakage is to limit individual access to food. Counter-insurgency operations routinely involve some food control tactic such as the restriction of people to camps or the regulation of the movement of food which is intended to reduce the access of rural people to food. Furthermore, governments can use hunger as a weapon against guerrillas. If they can destroy food supplies inside zones controlled by insurgents and can prevent other supplies

getting in, they can starve the rebels and their supporters. These are the tactics of *food control* (Paget 1967).

> When wars were fought between nations, the control of a population was the end rather than the means of warfare. In many situations today, however, control of a population is the means of fighting the enemy. (Schultheis 1989, 9)

Guerrillas, for their part, find that in the rural areas which they control, they can turn hunger against the state. As they gain the initiative, guerrillas besiege government soldiers in garrison towns and cut off their food supplies. Guerrillas adopt a different tactic in areas remaining under the control of the state. The agricultural surpluses of the peasantry are perhaps even more critical to the state than to guerrillas. Therefore, insurgents strike at agricultural production to wreak the state's economy. By inflicting hunger on society they show people that the state cannot protect them. This is the linkage between war and hunger--the tactics which combatants are bound to adopt from a purely strategic point of view inevitably reduce the ability of self-provisioning peasants to feed themselves.

4.3.1 Historical Guerrilla and Counter-Insurgency Wars

Throughout history, hunger has been used as a weapon in guerrilla and counter-insurgency wars. During the first Philippean rebellion of 1899-1902, the United States collected the people of the island of Samar in guarded camps in Batangas province. United States forces turned the rest of the island into a "howling wilderness," destroying crops, homesteads, and killing livestock, in order starve out the guerrillas who remained behind. Malnutrition was widespread among the people held in the inadequately provisioned camps.

The few refugee bands that escaped the camps turned to banditry with such a vengeance that social order was not restored there for years.

In the Cuban revolution of 1895-1989, General Martínez de Campos was dispatched from Spain to report on its causes and the prospects for colonial victory. He said that the rebels enjoyed broad popular support. In order to stop the uprising it would be necessary to isolate the rebels by concentrating the rural population in villages under Spanish control. De Campos concluded that the suffering which this would entail was not justifiable and asked to be recalled. He was replaced by General Valeriano Wyler y Nicolau who promptly put 400,000 people in camps and burned their farms. Thousands of those removed died of starvation and disease and the rebellion was crushed. The horrors caused by Wyler y Nicolau's methods was one of the factors which prompted U.S. intervention and precipitated the Spanish American war. *Reconcentration* (and the related word concentration), a word which is used today to describe the central tactic of counter-insurgency warfare is derived from the Spanish word reconcentrar coined by Wyler y Nicolau (Paget 1967).

The tactic of reconcentration has been used with numbing regularity wherever wars have been fought amongst agrarian populations. Reconcentration was employed by Napoleon in Spain, by the Russians in the Caucasus, by the British in Malaya, by Japan against the Chinese in Manchuria, and by the United States in the Mekong Delta. It has a well established history in Africa having been utilized by the Germans in Tanzania during Maji Maji, by the Portuguese in Angola, Guinea-Bissau, and Mozambique, by the British against the Boers and Mau Mau, and by the Ethiopian government against Eritreans.

4.3.2 The Tactics of Food Control

The tactics of food control cause hunger in six main ways: 1) both sides punish groups whom they perceive to be disloyal by destroying their crops, animals and homesteads or brutalizing them, 2) guerrillas--but also governments--try to weaken their rivals by destroying institutions and infrastructure which are vital to agricultural production and distribution, 3) to sustain themselves, guerrillas--but also government forces--consume the food supplies of peasants, 4) to limit individual access to food, insurgents and government regulate the production and distribution of food, 5) to gain control of the rural areas, combatants restrict villagers to militarily secure zones under their control and interdict the flow of food within these areas, 6) combatants try to maintain control of food policy by halting food relief from the outside and directing it selectively to groups they find acceptable.

4.3.2.1 Punitive Measures

Julian Paget emphasized that when food control is practiced by a government it has among its purposes that of demonstrating the capacity of government to bring greater force to bear on rural people than the insurgents can. These tactics may be brutal in their execution because not only are they intended to physically stop the flow of food, but they are intended to intimidate through example (1967).

Individuals and groups who are suspected of supporting insurgents are subject to punishment by governments. Many of the most effective forms of punishment involve food. Where civilians are under close supervision, those suspected of disloyalty may simply be denied food to eat. In the Sudanese garrison town of Wau political prisoners were reportedly

tortured by being denied food and many starved to death (*New York Times* October 3, 1990). People detained for resettlement in Ethiopia said that when they disobeyed their Government captors their rations were withheld (Clay and Holcomb 1989, 62, 80). Relief workers in one Ethiopian village reported seeing food withheld from women and children whose male relatives had run away. But most often, the crops, stored food or farms of suspected disloyals are destroyed, leaving them without food or assets with which to provision themselves. There are numerous documented cases of Tigray people having their houses and crops burned merely on suspicion of disloyalty.

Punitive measures typically fall disproportionately upon the weak: women and children and poor peasants. But in some cases well-to-do and politically influential members of rival groups are attacked. Yet even in these cases the poor suffer. The Ethiopian Government tried to discourage Eritrean elites from supporting the ELF and EPLF insurgencies by destroying their orchards and confiscating goods from their shops (Giorgis 1989, 97). These measures had a wider impact, reducing food availability, raising food prices, causing a general downturn in economic activity and aggravating unemployment in the province.

In the cases I studied, it appeared that violence often focussed on a single ethnic group, or a group of related peoples. Insurgencies typically have some kind of an ethnic basis. For this reason government forces tend to concentrate their wrath on people who are drawn from these ethnic groups. Extant patterns of discrimination and xenophobia can exacerbate such violence by legitimating it and permitting authorities to ignore abuses. Consider the examples of non-combatant Dinka in Sudan, Tigray and Eritreans in Ethiopia, and Ibos in Nigeria who were subject to brutality for no other reason than that the shared the ethnicity of other political dissidents.

On the other hand, guerrillas also tend to focus their attacks on members of specific ethnic groups. UNITA targeted development projects in the planalto run by the Methodist Church, which it associated with the dominant Kimbundu group (*New York Times* December 31, 1984). Ironically, in many cases, it is also the members of the ethnic group that forms the base of an insurgent group who get the worst treatment from guerrillas. This seems to occur for two reasons. First, having a regional base, guerrillas conduct their operations mostly on their home turf. Second, insurgencies seek to punish collaborators who are perceived to have weakened the movement by cooperating with the government. The Ovimbundu on the planalto in Angola have suffered worse than any other group at the hands of their kin in UNITA. Renamo has hit Tete province in Mozambique, where most of the Ndau people who dominate the movement live, hardest of all. Unable to break out of the south, the SPLA has in Sudan often turned inward on the Dinka.

4.3.2.2 Institutions and Infrastructures

Public institutions vital to the food security of many people are at risk during guerrilla and counter-insurgency warfare. The goal of the guerrillas is to make the government appear illegitimate so that people will withdraw their support from it. To do this, rebels try to make the rural areas ungovernable, to cause a social breakdown which would force the government to withdraw from the countryside so that rural people will not be under its authority. In the vacuum created by the departure of the state, guerrillas hope to set up rival institutions of their own. For this reason, they attack vulnerable symbols of government authority. Finnegan tried to explain Renamo attacks on schools and clinics:

> What is so hateful about schools and clinics from Renamo's point of view is that they are identified with Frelimo. They are, in fact, among the main sources of the government's popularity. That is why they must be destroyed. The destruction of machinery is less symbolic, but the intent is the same: to make the Frelimo-run society less desirable. (1989, 72)

When guerrillas attack government targets, the agricultural economy suffers immediately. The official institutions supporting agriculture are disrupted. Peasants can no longer obtain the subsidized services they need to produce and market crops and animals. In fact in agricultural societies, most rural institutions related to food production and agriculture are also connected to the government. Among the more conspicuous are agricultural development authorities and extension services; crop purchasing and marketing boards are typically government owned and operated and so subject to attack; national banks specialize in farm loans; and governments often have official monopolies on the transportation of food. In Mozambique Renamo tactics explicitly targeted cooperatives and state farms in order to put these out of production. In one week in 1987 Renamo systematically sacked seven tea estates around Gurué in an effort to drive people out of this area (Keesings 35685). In 1984 UNITA inaugurated a round of fresh attacks on Government facilities by bombing the Institute for Agronomical Research in Huambo, Angola's only agricultural research station and one of the handful in Africa (*New York Times* December 31, 1984).

To drive home the point that government cannot contain them and that civilians should not oppose them, guerrillas may resort to more general acts of terrorism that affect agriculture. Public markets, transportation and traffic on roads can be targeted. Such attacks make conducting business or going to work too dangerous. For example, UNITA forces killed 140 people in a single attack on Longojo in 1984 (*New York Times* December 31, 1984). The fear

this and other attacks caused drove people into Huambo and other urban centers and precipitated the collapse of Angolan food production.

Governments also use agricultural institutions and infrastructure to inflict communal punishments on groups thought to be disloyal by withholding services from them. If the government believes certain peasants are providing insurgents with food or intelligence, it may halt extension services, the delivery of agricultural inputs, or suspend purchases of cash crops or livestock. Sometimes government forces destroy communal assets such as wells or dip tanks--even if these assets were created by the government. Ethiopian civilians in Eritrea and Tigray reported that markets were deliberately burned by soldiers or bombed by government airplanes (Clay and Holcomb 1986, 61-67). In the early 1980s publicly held assets like dip tanks and wells were destroyed by the Government of Zimbabwe to punish the people of ethnically Ndebele areas thought to be harboring dissidents. The Government closed markets and withheld credit from farmers there, too (Lawyers Committee 1986).

4.3.2.3 Consumption of Household Food

In order to sustain their struggle, guerrillas try to obtain supplies of food from local people. If at least part of the population supports the guerrillas' cause they may willingly donate food to the fighters. However, if guerrillas have no other source of provisions, access to local food supplies must be maintained even if it is not forthcoming voluntarily.

One way that guerrillas try to ensure themselves an adequate food supply is by attracting or confining people in their liberated zones. The concentration of people capable of farming is intended to forestall the decline of production inside the zone. In Mozambique, it is reported that Renamo soldiers beat and sometimes killed people trying to flee its "tax areas."

It is said people are killed as an example to discourage others from considering flight (Gersony 1989, 24).

Often the line between "voluntary" contributions and extortion for "protection" is difficult to define. Jemera Rone investigated the relationship between UNITA and Angolan civilians for Oxfam International (1989). Hundreds of thousands of Ovimbundu peasants moved, or were forced to move to UNITA's liberated zone in southeastern Angola. Many of these people reported to Rone that they were required to pay food taxes. While some said that they did not mind paying, or even stated they wanted to help UNITA, others complained about the burden it imposed (Rone 1989, 87). Incredibly, in spite of their overall record, William Minter was able to document cases of civilians willing giving food to Renamo guerrillas in Mozambique (Minter 1989, 8).

In some liberated zones guerrilla armies operate well organized food taxation systems. In areas of Mozambique designated as "tax zones" by Renamo it has appointed civilians to oversee their food extraction systems. These people, backed by gangs of thugs, shake down local peasants. People who do not support the rebels are subject to food raiding and to punitive measures whose purpose is to intimidate non-contributors into giving. Robert Gersony reported, "The relationship between Renamo and the civilian population, according to refugee accounts, revolves almost exclusively around a harsh extraction of labor and food." (1988, 42) Finnegan believed that seemingly inexplicable Renamo attacks on villages might be due to the fact that people there had been holding out (Finnegan 1989, 68-70).

Whether peasants support the insurgents' cause or not, any food which they give to the fighters reduces their ability to feed themselves. The burden is greatest in places with concentrations of insurgent fighters such as liberated zones or heavily infiltrated areas like the planalto. It has been suggested that guerrillas who levy food taxes on peasants are likely to

raise their tolls if they suffer setbacks. Gersony surmised that when droughts occurred, Renamo guerrillas increased their levies on households in the "tax areas" because the crops on their own plantations had failed (1988, 16).

But government forces also consume peasant food supplies. The difficulty they have maintaining logistics can cause African governments to send troops into the field underprovisioned with instructions to live off the land. This leads to the requisitioning of food or raiding by government forces, depleting peasant food stores at the same time that fighting and guerrilla levies may have made it hard for them to supplement their diets in any other way. In Angola and Sudan government forces in isolated garrison towns set up food taxation systems in order to survive periods of siege (Africa Confidential 27, 23; Morrison 1991, 6). In Mozambique Frelimo forces, also isolated by the war, resorted to pillaging. There are numerous documented cases of apparently gratuitous food raiding, especially the slaughtering and eating of livestock by Ethiopian government forces (Giorgis 1989, 82).

Government forces and insurgents also engage in profiteering. When food control is in force, officers are empowered to seize control of private food stocks and divert food aid. This enables them to obtain stocks which they can then sell. In general, profiteering is harmful. It is the result of theft which impoverishes the victims; and the diversion of food aid to the market deprives people who cannot afford to buy food of essential assistance.

Military control of markets selectively benefits allies of the state. In Sudanese garrison towns the army controlled grain stolen from households in the countryside and diverted food assistance, disposing of it through Arab merchants who resold it at high prices (Africa Confidential 27, 23). In Tete, Mozambique, it seemed that profiteering by Renamo may have helped to revive the market for food in areas in which the rebels had some support

(Africa Confidential 25, 19). Renamo fighters were said to have bought food from local growers for resale in Zambia and Malawi.

4.3.2.4 Regulation of Food Distribution

Even if people are not reconcentrated or confined to liberated zones, food distribution is still likely to be tightly controlled during internal war. For governments, this usually involves measures designed to prevent individuals from obtaining large amounts of grain at one time which could be transferred to rebels. For example, in Ethiopia, the Government required people to obtain permits before transporting or purchasing more than a few kilos of grain (Giorgis 1989, 83). In towns in southern Sudan, even commercial stocks of privately owned grain are held by the army and only released at its discretion (Bonner 1989, 101).

Food is controlled by limiting individual access to it. Members of groups perceived as inimical may be denied food made available to others. In Tigray during 1988, people had to show identity documents to receive relief food. Most of those who had been living in rebel held territory were not able to produce the documents and could not get aid. People in Government held Eritrea complained that it was too hard to travel to markets because of the passes and permits required and their fear of harassment (Cliffe 1989, 392).

Guerrillas often depend on the production of people living inside liberated zones for their food supplies. They may try to control food distribution by attracting people to or confining them in liberated zones. This is to forestall the decline of production inside the zone. In Mozambique, it is reported that Renamo soldiers beat and sometimes killed people trying to flee its "tax areas." It is said people are killed as an example to discourage others from considering flight (Gersony 1989, 24).

It bears emphasizing that the tactics of food control do not weigh equally on all people. Restrictions on commerce or the movement of food cause hunger by creating local food shortages, but the shortages generally have their greatest effect on the poorest and those without significant cash incomes or assets. When restrictions induce a food shortage the price of food rises, making it too expensive for the poor or those who have lost their assets to buy.

4.3.2.5 Food Relief

Gaining full control over food means interdicting flows from outside as well. In modern conflict-related famines it is usual for a large relief effort to be mounted by international organizations and foreign governments. Given the centrality of food, failure to regulate the movement of relief food is to give up the initiative to the enemy. Both governments and rebels insist on retaining the power to halt or direct humanitarian food shipments in the areas they claim to rule. Governments suspect that relief supplies which reach the peasantry will be funneled to guerrillas. Insurgents assert that relief convoys are really a cover for the movement and resupply of government forces.

Relief workers and aid officials have vilified African governments and insurgencies for interdicting relief food and capturing, expelling and sometimes killing relief workers. When they blocked relief food, Colonel Mengistu of Ethiopia and Sadiq al Mahdi of Sudan were each accused of "starving his own people," while Renamo and UNITA were said to be "strangling the countryside."

But relief food really does play a vital strategic role in these internal wars. During a conflict-related famine the international community may bring in 500,000 tons of grain or more in a single year, altering the internal political situation in favor of those credited with

feeding the people. Part of the reason the EPRDM was able to overthrow the Ethiopian government was because of its successful participation in relief efforts. On the other hand governments have sometimes starved their opponents into submission. Biafra fell in part because the Federal Nigerian forces cut off its food supply. And insurgencies that have succeeded in decimating agricultural economies and besieging garrison towns have forced governments to the bargaining table, for example in Angola and Mozambique. The interdiction of relief operations and relief food may have cruel consequences, but there are times when combatants must establish control over food, or cease to exist.

Usually, flows of food aid are controlled by physically preventing lorries, ships or planes from moving into proscribed areas or by holding relief food in storage. The governments of Ethiopia and Sudan simply refused to issue permits to relief agencies that wanted to take food into areas where guerrillas were active (Bonner 1989, 88-89; Kaplan 1988, 90). Similarly, if rebels have firm control over liberated zones, relief agencies must obtain permission from rebel organizations to work there. The SPLA withheld permission for the ICRC to conduct surveys in its territory in 1988 because this also prevented it from going ahead with work in government-held towns, critically delaying the delivery of food.

Outside their own territory, combatants must use military means to interdict food shipments. In 1982 UNITA warned international aid agencies to stop delivering food to Angola and told them to leave the country (ICRC 1986b). Shortly thereafter an ICRC food convoy was attacked and a nurse abducted. An ICRC vehicle hit a mine and four employees were wounded. As a result the ICRC had to cancel its operations and emergency food stocks dwindled. In 1984 the ICRC began airlifting food into the interior again. UNITA responded by mining runways and destroying a plane at Chitembo in 1985 and torching the warehouses at Mungo. The TPLF in Ethiopia, Renamo in Mozambique and the SPLA in Sudan have all

prevented relief food from entering parts of their countries by attacking food convoys and aircraft.

Combatants kill relief workers to prevent them from doing their work. In 1985 UNITA attacked an ICRC employee's home and killed his two children. The same year they shot ICRC radio operator Marc Blaser at Lobito. The TPLF attacked the relief center at Korem in 1983 and kidnapped two British Save the Children volunteers, and killed two employees of World Vision in Alamata in 1986. Lorry drivers are killed in order to make it impossible for relief agencies to hire workers. In 1987 SPLA guerrillas tied Kenyan relief drivers to the steering wheels of their trucks and tossed hand grenades inside.

But food convoys and relief stations often really are legitimate military targets. For example, in the mid 1980s the Sudanese Government only permitted food in the south be distributed in its garrison towns. Food for soldiers and civilians was carried together and all food convoys were required to have a military escort. Thus the SPLA could assume that any official food convoy moving in the south was carrying both military rations and arms. When SPLA commander Kual Manyang was challenged by a reporter regarding the destruction of a food convoy he pointed out that it included armored vehicles, was guarded by 1,000 soldiers, and was headed for a Government garrison (Africa News November 8, 1988). Seemingly inexplicable acts, such as guerrilla raids on relief camps make more sense when viewed from the point of view of food control. In 1983 a TPLF attack on a Save the Children relief center at Korem, Ethiopia, generated world wide condemnation of the rebel movement. But Save the Children was cooperating closely with the Ethiopian Government's Relief and Rehabilitation Commission. Although individual foreign aid workers probably ignored its regulations, the RRC was cooperating with the Government whose official policy was to deny food to people from TPLF held territory.

4.3.2.6 Reconcentration

Reconcentration is the forced removal of people to secure camps or so-called "protected" villages under military supervision in which freedom of movement and the production and distribution of food are regulated. It is the most complete food control tactic and incorporates many of others mentioned here, as well as their ill effects.

> This, then, is the first and most important purpose of a protected village: to starve the guerrillas. The hardships which this imposes on the people are of very secondary importance to the administration. (Weinrich 1977, 221)

Reconcentration severely reduces people's ability to feed themselves and prevents them from exercising strategies to cope with food crises. Reconcentrated people cannot obtain any food except that which military authorities permit them. They loose access to their land, animals and the assets on their farms. People confined to villages or camps may be unable to seek employment, go to market, or gather famine foods or raw materials for petty commodities.

Another problem with reconcentration is that it causes mortality to rise for reasons not directly related to the food supply. Reconcentrated people are prey to epidemic diseases. Conditions are typically unsanitary in protected villages and there is often a dearth of health services. The combination of reduced resistance to disease caused by hunger and increased exposure causes mortality, particularly among children, to soar. Having learned from past mistakes, today relief workers try to deliver food to peasants suffering from hunger while they are still in their home villages to reduce the risk of epidemics. But during conflict-related famine combatants may prefer to gather people together so that they can be controlled. They

argue spuriously that it is more efficient to deliver aid to camps when in fact mortality is higher if people are brought together.

Reconcentration was practiced by each of the regimes I studied that had a socialist government in the 1980s. In these countries the purposes served by reconcentration as a tactic of food control became confounded with the socialist goal of economic collectivization. Thus in the Mozambican *aldeamentos* the transportation and distribution of food was entirely in the hands of the Government, and only those who had requisite passes or identity documents could purchase or move large quantities of food (Finnegan 1989, 68; Galli 1987; Rone 1989, 42). But all kinds of governments practiced some form of reconcentration. The movement of civilians and their goods was tightly controlled by Federal forces as they recaptured territory from Biafra during the civil war (De St. Jorre 1972, 265).

Reconcentration was used on a massive scale against the liberation movements in the late 1970s by the Smith regime in Zimbabwe (then Rhodesia) which resettled half a million people (Weinrich 1977, 207-10). In fact, the ease with which Angola and Mozambique embraced reconcentration was as much due to their colonial histories as any socialist doctrine on the peasantry. The military leaders of these countries had fought in the anti-colonial wars in which the Portuguese moved peasants into aldeamentos, and learned of their effectiveness first-hand. The new governments of former Portuguese colonies have often located their own aldeamentos in the same locations their former oppressors did.

Ethiopia undertook the what must be most massive effort at reconcentration attempted in Africa. More than seven million people were moved into collective farms or sent to resettlement camps in distant parts of the country (Clay and Holcomb 1986, 16-26, 169-180). One motivation for the exercise was to stifle rebellion by Tigray and Oromo people by relocating hundreds of thousands of potential insurgent supporters away from contested areas.

But an Ethiopian innovation was to settle potentially more loyal Amhara people among the disaffected Oromo.

In addition to the obvious ways in which resettlement caused hunger among those relocated: the alienation of land, loss of stored food, and loss of assets, case studies also have drawn attention to the seriousness of the social consequences. For example, relocated people reported great distress over the breakup of their families and many left settlement sites to seek their relatives. But those living where the new camps and villages were built suffered, too. They said that resettlement exacerbated ethnic, conflict resulting in many violent incidents including rapes and lynchings. Amhara and loyal Oromo settlers were often armed by the Government and sometimes resorted to vigilantism. Even the Amhara settlers came to grief. In some areas 50 percent of them became gravely ill due to the hardships of settlement life and exposure to new diseases. An unknown number died (Woldemeskel 1989, 360-365).

4.3.2.7 Liberated Zones

Insurgents for their part try to create secure liberated zones within which they can operate with impunity. Liberated zones serve several unique purposes. Civilians in liberated zones are cut off from the influence of the state. They cannot be as easily coerced by it nor are they so influenced by its propaganda. Depending on the nature of their relationship with the insurgents, people within the liberated zone are more likely to regard them as legitimate representatives of popular interests, and the state as illegitimate (O'Neill, Heaton and Alberts 1980; Paget 1967). Thus insurgents can more easily mobilize the population of the liberated zones they control to engage in activities in support of the rebellion. Among the more important of these activities is the provisioning of fighters.

So important to an insurgency is a population base that insurgents sometimes go to great lengths to maintain people on the land and have even tried to raise the populations of territories they controlled. UNITA persuaded or forced 600,000 Ovimbundu people to move from Government-controlled territory in Angola's highlands into its liberated zone in southeastern Angola (Africa Watch 1991, 1). After Tigray people fled the famine in Ethiopia for refugee camps in Sudan in 1984, the TPLF led groups back to their farms when the rains came (Clark 1988a). Eventually 50,000 were returned this way.

Several good studies of liberated zones in conflict-related famines have been made (Christian Science Monitor November 1, 1989; January 26-29, 1990; Clay and Holcomb 1986; Cliffe 1989; De St. Jorre 1972; Firebrace and Smith 1982; Gersony 1988; Marando 1987; Rone 1989). These show that people living in liberated zones are chronically threatened by food insecurity. First of all, governments try to destroy food inside the zones and try to prevent goods from entering it to deny food to rebels. Secondly, civilians in liberated zones are subject to food control policies established by guerrillas, including food taxes if they exist. Unless they can cross the frontiers of liberated zones, civilians can be cut off from markets, work opportunities and services. The liberated zones I read about shared two characteristics: in all of them the life of civilians was disrupted by political violence emanating from one side or the other, and food was tightly controlled by the insurgents.

No liberated zones were free from violence. In Ethiopia and Sudan civilians were frequently subject to bombing by Migs, and had to hide from government soldiers on search and destroy missions. Those in the northern parts of SPLA territory were victims of raids by civilian militias organized by the Sudanese government; during periods of indiscipline civilians throughout southern Sudan feared cattle raiding by rebel fighters. The government of Nigeria was criticized for permitting the aerial bombing and shelling of civilian targets in Biafra.

Angolans interviewed by Rone reported moving further and further into dryer, less fertile UNITA territory to escape fighting and Government attacks (1989).

The ways that insurgents control food inside liberated zones: food taxation systems, the regulation of food distribution, and interdiction of relief supplies, have already been explained in this chapter. I will not repeat what has already been said. Instead, I now want to emphasize the point that there is tremendous variation in the way different insurgent movements apply these tactics. In some cases guerrillas sustain themselves by pillaging the people under their control. In others, insurgents adopt a different sort of strategy. They try to use food strategy to cultivate the loyalty of people living in the areas under their control.

4.3.2.8 Hearts and Minds Tactics in Liberated Zones

I was confronted in each of the case studies with evidence that combatants sometimes made conscientious efforts to feed the people under their control. While no government or insurgency was able to shield people under its control from the effects of hunger, people in some situations were clearly better off than those in others. Furthermore, efforts to feed civilians occasionally turned the tide of combat in favor of one combatant or another by winning the "hearts and minds" of civilians.

Why do combatants employ hearts and minds tactics? One reason is to avoid a popular backlash. The use of hunger as a weapon fuels peasant resentment against those who employ it. This antipathy delegitimizes a combatant in people's eyes, reducing popular support for it. And such sentiments can be used by a group's rivals to organize peasants against them.

For example, hunger resulting from indiscriminate search and destroy operations and forced resettlement accelerated the delegitimization of the Government of Ethiopia during the

conflict-related famine of 1984-85. Tigray and Oromo peasants stated that they were afraid of Government officers, and were even afraid to seek relief food in government-run shelters (Clay and Holcomb 1986, 69-70). The use of hunger as a weapon can backfire on guerrillas also. Southern Sudanese victimized by the SPLA in 1984-1985 were organized into ethnic militias by the Government of Sudan and began raiding the villages of the Dinka, the main backers of the SPLA (Africa Confidential 26, 11). These attacks inflamed the famine of 1988, creating a crisis for the SPLA when non-Dinka officers complaining about food policy challenged the Dinka leadership.

> If military victories are achieved at the expense of the local population--in terms of casualties and property losses--they may prove to be counter-productive in that the alienation engendered may increase the ranks of the disaffected. (O'Neill, Heaton and Alberts 1980, 25)

Another reason combatants try to win hearts and minds is to strengthen themselves over the long run. For combatants during conflict-related famine, the tension between the use of hunger as a weapon and the use of food to win hearts and minds is directly related to the conundrum of political legitimacy (O'Neill, Heaton and Alberts 1980, 2). On the one hand, to fight a counter-insurgency war a government must use tactics that enable it to separate the insurgents from the people. On the other, a government needs to show that it can build a food-secure society if it is to endure. To separate people from guerrillas, governments try to limit individual access to food; but to raise food security, policies must be adopted which increase individual access to food. Insurgents face many of the same problems of establishing claims to legitimacy that governments do. To provision themselves they may seek food from local people. But to retain the support of peasants already loyal to their cause and broaden their base of support if possible, they should reduce their exactions. In the long run, the effort

to demonstrate a capacity to establish favorable food policies may compel them to try to feed their supporters or other groups they wish to influence.

By in large, governments in the cases I studied did not campaign for hearts and minds, or they did so belatedly or in a way which did not actually address peasants' needs. For some governments, preoccupied with urban politics, the peasantry was remote, the internal war a political symbol around which allies could be rallied. The Government of Sudan has made no important concessions whatsoever to the south. In other cases, The Government of Ethiopia did not begin a credible hearts and minds program until 1989 when peasants were irredeemably disaffected. And often governments cannot control their own agents in the field. The government of Mozambique desperately wanted to reform peasant agriculture, but simply lacked the resources to exert any influence outside a few cities. Its own army, isolated and without logistical support, turned to pillaging. Instead, in the latter half of the 1980s, it was insurgencies that tended to pay closer attention to hearts and minds. Insurgent leaders found that they could capitalize on the disaffection of the peasantry to critically weaken the governments they fought.

Insurgents who decide to engage in hearts and minds tactics have set themselves a formidable task. While continuing to supply themselves and maintaining control of food distribution, they must be visibly active in food policy and succeed in identifying themselves with any favorable changes in food security that occur. This leads to a drive to dominate the food policy arena. It may require them to mount complex and large-scale relief operations. Or it may propel them to try to foster the development of markets for food and its attendant inputs including agricultural assets and labor and mount relief efforts.

When guerrillas try to win hearts and minds, the tactics of food control--the stabilization of peasants on the land, food taxes, and control of international flows of food--are

recast in the light of problems of food security--support of exchange entitlements through the maintenance of markets and services, income subsidies, and effective famine relief. Thus the drive to dominate food policy transforms guerrilla organizations. Insurgent movements attempting to win hearts and minds sprout relief arms. But the relief arms usually do much more than relief work. They often serve to integrate all aspects of insurgent food policy. Biafra's Directorate for Food Production, ERA, REST, and SRRA not only engaged in humanitarian and development work, they were responsible for feeding insurgent fighters.

In order to produce any benefits tangible to rural dwellers, hearts and minds tactics must bolster their exchange entitlements. Sometimes the best way for combatants to achieve this is simply to avoid the use of hunger as a weapon. For example, a food control tactic which causes hunger is the restriction of civilians to militarily secured zones, thus preventing them from working or trading. But some insurgents permitted and even encouraged civilians to cross the frontiers of liberated zones to provision themselves. Informants in Eritrea told Cliffe they were grateful that the EPLF permitted people to go into government held territory to sell crops or animals--although they also complained that it was dangerous to try to cross the contested terrain (1989, 386). Biafrans were encouraged to trade with "Nigerians" across the Niger river throughout the civil war. Contrast this with the behavior of Renamo fighters who were said to beat or kill people who attempted to flee their camps or "tax areas."

Insurgents concerned about hearts and minds also try to keep the burden they impose upon the peasantry low. Besides trying to obtain food aid, one way they do this is by operating their own plantations. UNITA grew food at Jamba, the TPLF had plantations in Gondar province and the EPLF grew food at Rora Dahab. Such plantations had other notable benefits such as creating jobs and releasing cash into the economy, stimulating the demand for food (Firebrace and Smith 1982, 80).

When insurgents must acquire food from rural producers the way they go about it is critical. Rather than requisitioning or stealing food insurgents can use their movement's food acquisition system to stimulate the market for food. The EPLF and TPLF purchased grain from smallholders in their liberated zones rather than confiscating it. Besides avoiding violent clashes with local people, grain purchases placed cash in peasant hands helping to drive additional economic activity inside the liberated zone. Tigray refugees interviewed by Clay and Holcomb reported going to market to buy and sell or trade even during the height of the war (1986, 58, 60).

If they obtain sufficient quantities of food, insurgents can move increasingly in the direction of policies that promote the food security of people at risk. The TPLF made ensuring the food security of the poor central to its program in Tigray. It ran its own networks of small shops reselling food to consumers at low prices to augment the exchange entitlements of land-poor and low-income people (Firebrace and Smith 1982, 37). Such activities not only increase the legitimacy of insurgencies in the eyes of the people, they present the insurgents with additional opportunities for organizing the peasantry. Grain purchases, the employment of farm workers, and food sales and distributions brings them into contact with farmers and consumers in a non-military capacity and is an opportunity to demonstrate organizational effectiveness. Thus through their relief arms these insurgencies took over the only really important function which the state performs for self-provisioning peasants in most of Africa and used it turn peasants against the state.

There is some evidence that hearts and minds policies really do boost the legitimacy of combatants. Clay and Holcomb reported that by 1985 Tigray and Oromo refugees in the Sudan spoke approvingly of the TPLF and OLF (1986, 76, 152). Some people said they would be willing to feed fighters while others said they wanted to join the movements. At the

same time, Tigray farmers indicated that they expected to receive assistance from the TPLF in the form of inputs for their farms when they returned to live in the liberated zone.

Furthermore, the relief arms of liberation movements in the Horn of Africa were not ineffective; their work helped ensure the food security of many people in the liberated zones. During the drought of 1984-1985 REST, with a staff of 850, is estimated to have delivered food to a quarter to half a million people. Before it assumed control of relief operations throughout northern Ethiopia, ERA's relief effort had operated over six years and provided half of the food consumed in Eritrea annually (Clark 1988, 5; Cliffe 1989, 386; Firebrace and Smith 1982, 62).

4.4 Summary Table

The description of war and hunger elucidated here links food control tactics to specific exchange entitlements affected during conflict-related famine. From this vantage point it is possible to identify four groups of people who are at particularly high risk of hunger during a conflict-related famine because they are likely to find it difficult to engage in coping strategies.

The first group of people at risk are isolated people. Isolated people may not be attacked directly, but they live in areas in which markets and services have deteriorated or broken down due to war. War can shut down markets because of the presence of violence, or because regulations make it impossible to transact business. Isolated people may loose their ability to sell crops, to trade, or to find work. The isolated can be cut off from the outside by fighting, or they may be those trapped in zones subject to stringent military controls, especially liberated zones. Isolated people will not necessarily be pushed migrate because they may be

able to fall back on coping strategies. However, if they are attacked and fear violence, or if they are impoverished and loose there ability to cope, they may migrate if they can do so safely.

Another group of people at risk are those who have been impoverished by attacks. People impoverished by attacks may be targeted because they are believed to support the opposite side in a conflict or because of their ethnicity. People impoverished may have their food or food stores destroyed; they may lose their assets and possessions to war and have a reduced ability to farm or exchange goods for cash or in-kind. The impoverished may also be injured or bereaved. They may be demoralized and unable to cope with the demands their situation places upon them. Impoverished people will be forced to rely upon famine coping strategies to feed themselves and will migrate if they believe they can safely move to places where they can get jobs or relief food. But if they are also isolated, impoverished people may not be able to migrate. People who are both impoverished and isolated are the primary clients of cross-border feeding operations.

Displaced people are people who have been driven from their land or homes by war. The displaced may be able to subsist by utilizing coping strategies, but most often are dependent on food relief. The displaced are drawn to perceived sources of aid if such can be safely reached. In relief camps, they will be placed on subsistence diets and exposed to communicable diseases while in a state of low resistance. The displaced often suffer extremely high rates of mortality as a result.

The fourth group at risk are reconcentrated persons. The reconcentrated are people held under military guard in so called "protected villages" or held by force in liberated zones. These people suffer many of the same entitlement losses as the isolated and displaced. Depending on the kind of regulations they face, they also may be unable engage in coping

strategies such as seeking famine foods, selling their possessions or labor, or engaging in petty trade. They may also be subject to extreme levels of physical abuse. Migration to sources of relief is impossible for reconcentrated persons. However, when they become accessible they require immediate assistance.

What has been said in this chapter is summarized in the table below. The table links the tactics of guerrilla and counter-insurgency war with consequences for groups whose exchange entitlements are affected.

Table 14.
Food Control Tactics of Guerrilla and Counter-Insurgency Warfare and Their Effects on Exchange Entitlements

TACTIC	AFFECTED GROUP
A. Attacks on Production. Intimidation of persons thought to support rivals.	
1. Attacks on producers. Violence against persons.	**Displacement.** Loss of land. Demoralization.
2. Attacks on assets. Destruction of food, equipment, homesteads, livestock, etc.	**Impoverishment.** Victims rely on coping strategies.
B. Attacks on Distribution. Attempts to sever linkages between civilians and rivals.	
1. Attacks on markets and services. To show rivals cannot govern.	**Isolation.** Inability to transact business or obtain work.
2. Requisitioning or pillaging food.	**Impoverishment.** Also displacement.
3. Regulation of markets and services. To prevent food reaching rivals.	**Isolation.**
4. Vetoing food assistance. To deny food to rivals.	**Impoverishment.** Also displacement. Failure of migration as a coping strategy.
5. Restriction of civilians to liberated zones or protected villages.	**Reconcentration.** Inability to implement coping strategies.

5. THE AFRICAN FAMINES--SOCIALIST CASES

Let me briefly recapitulate. My quantitative analysis supports the intuition that war causes hunger, and further suggests that there may exist a cycle of war and famine in which the distorted economic policies of militarized states exacerbate hunger, fueling rebellion and hence fresh outbreaks of fighting and famine. An examination of the exchange entitlements of African farms families draws attention to their particular vulnerabilities in household food production and in markets. Recognizing that the surpluses of the African peasantry help to sustain both the state and insurgent fighters, combatants each in their turn attempt to gain control over peasant populations. They strike at food production among their rivals, and try to divert food distribution from groups they perceive to be inimical, using hunger as a weapon of war.

Yet conflict-related famines differ among themselves. In some, combatants are pitiless in their use of hunger as a weapon; their relationship with rural people may be entirely predatory. In many others, combatants, particularly guerrillas, attempt to promote the food security of civilian populations under their control. Now I want to ask, "Why is hunger worse in some conflict-related famines than in others?" To answer this question, I delved into five case studies of conflict-related famine in African internal wars.

I found that combatants in African internal wars have salient reasons for behaving the way that they do. While some of the hunger accompanying internal war must be put down to gratuitous behavior, in general, strategy and tactics are goal-orientated. Combatants expect certain consequences to flow from their actions and they select their tactics accordingly. The food policies of combatants are influenced by strategic considerations in two political spheres: domestic and international. Domestic political considerations such as the need to consolidate

control over a portion of the rural population, were introduced in the last chapter. After conducting the case studies, I came to appreciate more deeply the international political factors that influence food policies. For given the centrality of food to African internal wars, control of international flows of food is a critical component of combatant strategy.

In this chapter I begin by discussing the literature on conflict-related famine. This literature was not included in the literature review. Much of it is rhetorical rather than scholarly. However, as primary source material it is invaluable and its authors have insights into conflict-related famine that are not contained in the scholarly work. I then discuss the methodology of the case studies. Of particular importance is the method used to determine whether there was more or less hunger in a particular case, for I cannot come to any conclusions unless I can distinguish the cases. A table summarizing some of the most salient features of the cases and whether or not food aid reached many of those isolated by fighting is included. Finally, in this chapter I describe and compare the cases of conflict-related famine that occurred in countries with ostensibly socialist governments. I had initially set up the case studies in alphabetical order and then discovered that this ordering happened to group the socialist cases and that they shared certain features. In chapter six I treat the other two non-socialist cases. In the conclusion, chapter seven, I summarize and elaborate on the findings of the case studies.

5.1 The Literature on Conflict-Related Famine in Africa

The case studies were conducted by reading primary accounts of African internal wars and conflict-related famine and the reports of international organizations and relief agencies concerned with disaster relief. I found there to be a noticeable disjuncture when moving from

theories about the causes of hunger such as were discussed in Chapter Two to evidence about conflict-related famine. First-hand observers of conflict-related famine are less concerned than political theorists with advances in agricultural methods or global political rivalries than with the immediate problem of food supply, especially the supply of emergency food relief. They rarely mention capitalism, the effects of the market, or other concepts important to post-Malthusians. Even arms imports and military budgets, while they appear in accounts of conflict-related famine, are not central to them. Thus the material I read also served as a source of new inferences about the relationship between military activity and hunger.

The most documented case of conflict-related famine in Africa is Ethiopia. Journalist Robert Kaplan's *Surrender or Starve: The Wars Behind the Famines* (1988) is a moving narrative description of the consequences of the war waged against ethnonationalist movements by Ethiopia's revolutionary government.[22] Kaplan argued that flows of international food aid permitted the Ethiopian government to consolidate its control over the country during the famine of 1983-84. In contrast, Cultural Survival's *Politics and the Ethiopian Famine, 1984-1985* (Clay and Holcomb 1986, see also Clay, Steingraber and Niggli 1988) is a demographic study supported by statistical evidence. Cultural Survival researchers interviewed hundreds of Ethiopian refugees in camps in the Sudan about their experiences and reasons for fleeing, collecting extensive documentation of the association between fighting, forced relocation, displacement, and hunger. There are many other important books on Ethiopia by individuals associated with the relief efforts there including James Firebrace's *Never Kneel Down* (1984), Peter Gill's *A Year in the Death of Africa: Politics, Bureaucracy and the Famine* (1986), Dawit Giorgis' *Red Tears: War, Famine and Revolution in Ethiopia* (1989), Kurt Jansson's *The*

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22. Kaplan died while reporting on conflict-related famine. He was killed in Bosnia in August 1992.

Ethiopian Famine, written with Michael Harris and Angela Penrose (1987), and Jack Shephard's *The Politics of Starvation* (1974). In addition, numerous academic articles (Bulcha 1988; Turton 1984; Woldemeskel 1989) and reports (Subcommittee on Rights 1988; Rahmato 1987) have been written about Ethiopia.

The Nigerian civil war has generated as many words as Ethiopia because of the number of retrospective works that have come out. Frederick Forsyth's *The Biafra Story* (1969), William Collins' *Nigeria in Conflict* (1970), John de St. Jorre's *The Brother's War: Biafra and Nigeria* (1972), Dan Jacobs' *The Brutality of Nations* (1987), John Okpoko's *The Biafran Nightmare: The Controversial Role of International Relief Agencies in a War of Genocide* (1986), and Peter Schwab's *Biafra* (1971), are but a few of the books on the subject by journalists, scholars and first-hand observers. Key documents, biographies and personal recollections of many of the important figures in the conflict with Biafra are now available, for example Obafemi Awolowo's *Awo on the Nigerian Civil War* (1981) and Olesegun Obasanjo's *My Command* (1980). Zdenek Cervenka has compiled crucial texts in *The Nigerian War 1967-1970: A History of the War: Selected Bibliography and Documents* (1971).

Careful study of other less celebrated cases of conflict-related famine in Africa is possible because many briefer narrative and analytical accounts have been written about all of them including: Angola (Africa Watch 1991; Subcommittee on Africa 1989a; Minter 1990; Morrison 1991; Rone 1989; Rothchild and Hartzell 1990; UNDRO 1981), Mozambique (Finnegan 1989; Gersony 1988; Hall 1990; Minter 1989, Oxfam 1987; UNDP 1988), and Sudan (Bonner 1989; De Waal 1989; Minear 1991; Select Committee on Hunger 1989; Oxfam 1986; ECOSOC 1986). Relief organizations publish regular reports on their work in the field with details of their operations and the difficulties they encounter (ICRC annual; Oxfam various; USCR annual; WFP various). In recent years there has been an outpouring of official

reports by governments and private research institutions on the military causes of famines (Bread for the World 1990, 1991; FAND 1990; Gersony 1989; OEOA 1986; Refugee Policy Group 1986; Subcommittee on Africa 1986; 1989b; Subcommittee on Foreign Operations 1989). A new phenomenon is the use of survey research among displaced populations to study the consequences of conflict-related famine (Clay and Holcomb 1986; Clay, Steingraber and Niggli 1988; Gersony 1988, 1989; Minter 1990; Rone 1989).

In spite of the presence of this literature there have been few comparative studies of conflict-related famine, and none that attempted to make cross-national generalizations. This is partly because some of the work may be poorly documented or may be biased. For example, an author's purpose may to whitewash a government or an insurgency, or to portray one or another combatant as a gratuitous human rights violator. Compare Firebrace (1988), Gill (1986), and Kaplan (1988) on Ethiopia, or Finnegan (1989), Hall (1990) and Minter (1989) on Mozambique. Or, having witnessed a tragedy, a writer may be moved to describe the consequences of the policies of a donor government or international organization to urge a greater humanitarian response (Bonner 1989; Minear 1990). Nonetheless, the very diversity of this literature is its greatest virtue. Some authors are obviously at pains to be impartial and accurate (De St. Jorre 1972, Gersony 1988, Refugee Policy Group 1986). By reading widely and by carefully comparing sources I hope I have been able to avoid too many glib generalizations.

Using the material above to explore the causes of combatant behavior, I approached the cases inductively. As I read, I began to recognize crucial themes in combatant behavior that reappear time and again: the application of food control tactics, the practice of hearts and minds strategies, and the drive to forge linkages with foreign governments and international organizations.

First, I noticed that primary observers focus on the direct effects of war and violence on rural people (Clay and Holcomb 1986, 60-67; Gersony 1988, 41; Rone 1989, 82). While they do describe the destabilizing effects of foreign military intervention, their main concern is the plight of those impoverished by war and displaced persons who require relief food to survive. The consequences of violence and the pernicious effects of regulations imposed by military authorities are frequently seen as the greatest threat to food production. In addition, observers document the difficulty that people living under military control in "protected" villages, liberated zones or zones of conflict have feeding themselves. From this material I developed the systematic description linking the seven tactics of food control to specific consequences suffered by affected groups discussed in detail in the last chapter.

Second, first-hand observers of conflict-related famine often distinguish between combatants (Alberts 1980, 252; Firebrace and Smith 1982, 32, 62). They recognize that some government forces practice more humane food policies than others. Some insurgent groups try to win peasant loyalty by promoting their food security, while others operate as bandits, pillaging as they go. These differences can have profound implications for civilian food security. As I mentioned in chapter one, there are far too many factors affecting the attitude of combatants toward relief for me to explain the differences between them. However, first-hand observers often state that relief efforts have no chance for success unless combatants cooperate (Minear 1990, 83).

Finally, many of those who have documented conflict-related famines believe that the relationship between the combatants and the international community is critical. First-hand observers describe a complex process of conflict and negotiation between actors in the international system and combatants in African internal wars. Of course many observers were in-country as international relief workers and could be expected to attach importance to their

roles or exaggerate their influence. But observers add two interesting counter-intuitive insights which elude academic theoreticians: First, they think that guerrillas and governments try to obtain access to relief supplies as part of their efforts to bolster their political legitimacy through food policy (Alberts 1980, 255; Minear 1991, 68-9). Attempts to convince donors to turn over supplies of relief food for use in domestic political struggles is said to be central to strategy during a conflict-related famine. In fact, some observers baldly stated that successful famine relief efforts made it possible for regimes guilty of gross human rights abuses to survive longer than they would have otherwise (Clay, Steingraber and Niggli 1988, 3; Giorgis 1989, 227; Kaplan 1988, 140-147). Second, observers of relief efforts say that combatants who want access to relief food attempt to arouse the press and international organizations and to link with domestic pressure groups inside donor countries to raise alarms about food crises. International public opinion is crucial to the outcome of these wars, they think, and combatants use sophisticated strategies to influence it (Gill 1986, 91-2; Subcommittee on Rights 1989, 32). On the other hand, when the self-interest of donor countries precludes famine relief, which might occur when a donor was itself backing one of the combatant groups, no serious relief effort will occur.

5.2 Case Methodology

The cases I studied were Angola, Ethiopia, Mozambique, Nigeria, and Sudan. They were selected for no better reason than that they were arguably the scenes of the most prominent of African conflict-related famines occurring between 1967 and 1991. This sample has certain advantages, however. By restricting the study to sub-Saharan Africa, a quasi-experimental "most similar systems" research design is achieved. The cases share many

features that are held to be part of the syndrome of food insecurity in Africa: a large self-provisioning peasant class, a weak and narrowly based government, low levels of economic development, external political and economic dependence, and the presence of internal war in the countryside. Thus extraneous factors that could make arriving at conclusions impossible are held constant. For example, I do not face the issue of whether industrialized societies are more or less able to cope with conflict-related famine than agrarian societies. I do not have to worry whether democratic governments are more responsive to warnings about impending famine.

The cases differ in many other important respects that could account for combatant behavior: the nature of the governing regime, the nature of the insurgents fighting the government, and the attitudes of foreign hegemons. These constitute the independent variables in the case studies.

In certain respects the socialist cases, Angola, Ethiopia, and Mozambique, can be grouped together. In each of these cases the state adopted policies including collectivization and state control of marketing that depressed food production, and these policies seem to have aggravated the slide toward internal war by inflaming peasant greivances. And changes in relations between the United States and the Soviet Union affected the evolution of these cases also. However, the non-socialist cases, Nigeria and Sudan, cannot be grouped together. Nigeria had a titular state with a presence in the countryside while in Sudan state was concerned only with urban and western regional politics. And each of these is similar to one or another of the socialist cases. Mozambique and Sudan both had governments that failed to penetrate the countryside. And Nigeria and Ethiopia both experienced famines that unfolded on television screens around the world. Furthermore, the socialist cases also differ among themselves. While Angola and Ethiopia had internal wars in which ethno-nationalist

movements fought governments with powerful militaries, in Mozambique a primarily opportunistic guerrilla group pecked away at a regime with no capacity to resist it.

Each of the cases was treated as a whole. I examined the causes of internal war, the way the war was prosecuted, the famines themselves, and the resolution of the crisis if such has occurred. However, I selected certain years for more in-depth analysis. These were the years recognized in the primary literature as being periods of particularly intense conflict-related famine. I paid closer attention to Angola during 1985-86 and again in 1990-91; Ethiopia during 1984-85, 1988, and 1990; Mozambique in 1987-88; Nigeria in 1968-69; and Sudan during 1985, 1987-88, and 1989. Each of these periods is treated as a unique case. It is important to do this because many of the salient features of the cases change across time. For example, the political leadership of Governments and insurgent movements changes over time (Bashir succeeded Sadiq in Sudan), the international political situation changes (The Soviet Union and Cuba sustained the Government of Angola with weapons and troops before 1989 but not afterward), and policies change (the Government of Ethiopia recruited international relief agencies in 1985 but expelled them in 1988; the SPLA in Sudan was a primarily predatory movement in 1985 but in 1987 it adopted populist policies). By treating the cases across time I can see if changes in critical variables affect food security. By distinguishing conflict-related famines within each country I boosted the number of cases from five to ten.

To distinguish the cases, I had to confront the question of how to determine the severity of a conflict-related famine and how to assess combatant behavior. In the case studies I rely upon the qualitative material included in the primary literature cited above for making such judgments. However, I also want to present the reader with tabular summaries of my findings and provide a concise justification for my conclusions. For this reason I have

collected descriptive data on the number of people affected, excess mortality, and food aid delivered for each case. These appear in table 15.

First I had to determine if a conflict-related famine had occured. It is difficult to accurately measure the aggregate food security of self-provisioning peasants during a conflict-related famine, but such measurements are constantly being attempted by international relief agencies fighting famine or watching for signs of its appearance (for example see ICRC 1986b, 6). Relief officials consider several crude indicators. First of all they try to determine the number of people *affected* by a food crisis. This is the number of people who have had to change the way they obtain food because of the crisis. For example, if someone who used to grow their own food seeks shelter in a town during a war and begins to work for wages to get food, they are said to have been affected whether or not they are hungry.

It is sometimes possible to identify people with particularly serious food problems within the affected population. For example, consider those said to be *at risk*. This group consists of people who are said to have exhausted their options for coping with the famine. It is expected that they will become sick or die unless they receive food aid. *Displaced people* and *refugees* likewise have few if any means for sustaining themselves and require assistance (Refugees are simply displaced people who have crossed international borders.) In practice displaced people and refugees are sometimes counted among those affected, sometimes among those at risk, and sometimes are counted separately. In Table 15, below, I list displaced people and refugees separately, but they are also included in the column detailing the number affected and at risk.

Alexander De Waal (1989, 10-11) has pointed out that episodes in which groups in society find themselves unable to obtain sufficient food to ward off hunger are not unusual in many countries. However, "famines that kill"--a phrase he uses to distinguish lethal and non-

lethal famines--are rare and virulent forms of famine in which people's traditional mechanisms for coping with lesser famines fail. Thus an indicator of the final impact of conflict-related famine is the number of deaths--*total mortality*--from hunger-related causes such as kwashiokor, marasmus, and diseases like measles, typhoid and dysentery.

Having identified a conflict-related famine, I next wanted to distinguish between them. Thus I want to know whether combatants participated in or at minimum tolerated famine relief efforts and *whether these efforts were successful.*

In order to evaluate the success of a relief operation, the amount of food (usually grain and pulses) delivered is considered. In general it is assumed that one quarter of a metric ton of food will to sustain a person in a relief shelter for a year. Thus, if 500,000 people are to be fed for one year, they require a minimum of 125,000 tons of food. It must be taken into account that about 20 percent of food shipped is spoiled or lost in storage or in transit. Thus 150,000 tons of food must be shipped to sustain 500,000 people for a year.

Of course the success of a relief effort cannot be determined only by looking at the total amount of grain entering a country. It must be determined whether or not the grain actually reached civilians caught up in the conflict. The reports of relief agencies often address this question in some detail and this will be discussed in the case studies.

There are good reasons for being concerned about the quality of data that purport to describe conflict-related famine. Ideally, estimates of the number of people affected, at risk, displaced, or dead are made by carefully surveying a large representative sample of people in an area of concern and extrapolating from their responses to the population in areas of concern. These estimates are then used to compute food aid requirements. In practice under emergency conditions, the samples drawn--indeed if sampling is used at all--are not representative, and the basis for generalizing to larger populations is tenuous. Furthermore, the data

are manipulated for political reasons; those who wish aid to flow for whatever reasons cite higher numbers.

Thus separate estimates made by various observers can vary by at least a factor of two and sometimes more. In 1972 estimates of the finally mortality during the Nigerian Civil War ranged from 700,000 to 2,000,000 (De St. Jorre 1972, 8-12). In 1983 estimates of Ethiopian food aid requirements ranged from 650,000 to 950,000 tons and estimates of the number of people affected by famine were from two to five million (Giorgis 1989, 142-53). In my work, I tended to prefer more conservative estimates unless there was a clear consensus for a higher figure. Before plunging into the cases I would like to say a word about how I made use of numerical descriptions of the cases available to me in the primary accounts. Numerical descriptions often come from the testimonies of journalists or relief workers who witnessed tragic or violent events in remote locations. In many cases only a single uncorroborated figure exists to describe some detail of a conflict-related famine such as the size of a food shipment or mortality at a particular location. For example, Human Rights Watch reports without attribution that in Mozambique in 1989 Government troops confined civilian non-combatants in Mugulama to "camps" without food for two months to prevent them from aiding Renamo rebels (1990, 67-70). The captives are said to have died of hunger-related illness in the camps at the rate of 20-30 per day until food aid was finally delivered to them by foreign relief workers. How many were originally confined? It makes a difference if it was 500 or 50,000. If the number is less than 1,500 there would be no need to deliver food aid at all because they all would have died during the two months according to the Human Rights Watch figures.

Given the unreliability of numerical information about the cases I chose not to use it to compare cases in an absolute sense. Rather, wherever I can, I critically discuss the numeri-

cal descriptions asking what they reveal about political and military practices. For example, in the Human Rights Watch example above, what is most significant is the indication that the Government troops practiced classical counter-insurgency food control tactics. I do not quibble with the casualty figures because I know from experience that the confinement of civilians in isolated, inadequately supplied camps invariably results in excess deaths, particularly among infants and the elderly, though usually not at a rate consistent with the Human Rights Watch report.

The table below provides summary data on the conflict-related famines included in the case studies. In the right-hand column it also anticipates the results of the case studies, indicating whether food aid was delivered to persons at risk.

Table 15.
Comparison of Mortality, Displacement, Risk
And Food Aid Delivered in African Military Famines

Country and Population	Excess Deaths	Displaced and Refugees	Affected and At Risk	Isolated	Tons of Food Aid. Reached Isolated?
ANGOLA 1985-86 8,800,000	NA	500,000 displaced[16] 375,000 refugees[15]	500,000 affected[6] 200,000 at risk 2,000,000 urban	200,000[6]	45,000[16] No
ANGOLA 1990-91 10,000,000	NA	1,200,000 displaced[16] 370,000 refugees[15]	1,900,000 affected[16] 500,000 at risk 2,300,000 urban	1,000,000[8]	100,000[17] Yes
ETHIOPIA 1984-85 41,000,000	1,000,000[11]	1,000,000 displaced[16] 786,000 refugees[15]	7,900,000 affected[11] 3,000,000 at risk	3,800,000[11]	1,300,000[11] Yes
ETHIOPIA 1988 45,000,000	NA	1,000,000 displaced[16] 1,200,000 refugees[15]	5,200,000 affected[9] 3,500,000 at risk	3,800,000[9]	824,500[4] No
ETHIOPIA 1990 46,000,000	NA	1,000,000 displaced[16] 1,200,000 refugees[15]	7,000,000 affected[4] 3,500,000 at risk	3,800,000[4]	500,000[4] Yes?
MOZAMBIQUE 1987-88 15,000,000	500,000[13]	1,100,000 displaced[13] 700,000 refugees	5,500,000 affected[14] 2,200,000 at risk 2,650,000 urban	2,200,000[14]	550,000[3] No
NIGERIA-BIAFRA 1968-69 57,000,000	1,000,000[1,10]	1,500,000 to Biafra[1] 2,000,000 in Biafra	11,000,000 affected[1] 3,000,000 at risk[17]	2,500,000[12]	86,000[10] Yes
SUDAN 1985 21,000,000	86,000[2]	350,000 displaced[2] 330,000 refugees	7,000,000 affected[13] 680,000 at risk	2,000,000[13]	450,000[3] Yes
SUDAN 1987-88 23,00,000	400,000[5]	500,000 displaced[5] 300,000 refugees[16] 1,500,000 Khartoum	7,000,000 affected[5] 500,000 at risk	3,000,000[5]	860,000[3] No
SUDAN 1989 25,000,000	NA	500,000 displaced[5] 300,000 refugees[16] 1,500,000 Khartoum	3,500,000 affected[5] 500,000 at risk	200,000[5]	900,000[7] Yes

Data sources:
1. De St. Jorre (1972)
2. De Waal (1989)
3. Food and Agriculture Organization
4. House of Representatives
5. Human Rights Watch
6. International Committee of the Red Cross
7. Minear (1991)
8. National Union for the Total Independence of Angola
9. Office for Emergency Operations in Africa
10. Okpoko (1986)
11. Relief and Rehabilitation Commission
12. Samuels (1969)
13. United Nations Disaster Relief Program
14. United Nations Development Program
15. United Nations High Commission for Refugees
16. United States Committee for Refugees
17. World Food Program

Notice that in general the numbers of people displaced and affected are higher in countries like Ethiopia and Nigeria with larger populations. The largest number of people affected was in Nigeria with 11,000,000. Ethiopia was next with 7,900,000. Incredibly, in all of these countries, including those with relatively small populations, over 1,000,000 people were displaced in at least one instance. And for each country a minimum of 1,000,000 people were isolated by war at least once. The largest death toll was Ethiopia where 1,000,000 died during the famine of 1984-85.

Notice the case of Sudan during 1985. Here the death toll was only 86,000. The lower death toll is due to the fact that at that time hunger was concentrated in the western provinces away from the zone of conflict and more food reached those at risk.

The reader may question how I can declare in the right-hand column that food reached people isolated by conflict in the case of Ethiopia in 1984-85 when so many died. My concern in this study must be remain explaining the politics of conflict-related famine. As will be evident when the case study is read, during the crisis the quantity and distribution of relief changed, belatedly permitting over 1,000,000 tons of food to move into most parts of the country.

5.3 Angola

Since the splintering of the coalition government put together at independence from Portugal in 1975, Angola has suffered near continuous internal war (Rothchild and Hartzell 1990, 1-7). Three major forces struggled for power as the Portuguese abandoned the colony following the overthrow of the Caetano regime in Lisbon: The Popular Movement for the Liberation of Angola (MPLA) representing both urban and ethnic Kimbundu interests, the

National Union for the Total Independence of Angola (UNITA) with a base in the agricultural Ovimbundu people, and the National Front for the Liberation of Angola (FNLA). At independence the MPLA took control of the Government with Cuban support, and its main rival, UNITA, withdrew into the countryside and turned to South Africa for assistance. The importance of the FNLA, which had little influence among the peasantry, dwindled. In May 1991, after 16 years of war, the Government and UNITA finally signed a peace accord. While this agreement has since been broken, the conflict may be winding down for the time being.

In some ways, Angola is exemplary of the cases I studied that had ostensibly socialist governments. The internal war in Angola had its roots in the alienation of the peasantry from the state. Overall, the Government attached very little importance to the development of peasant agriculture (Galli 1987, 29-31). In the 1970s pre-cooperative organizations called *Estaçoes de Desenvolvimentos Agrarios* were set up in many villages with the goal of eventual nationwide collectivization. But these failed to deliver inputs or consumer goods to the countryside, while most of whatever resources were available to agriculture went to state farms. Furthermore, the Government's macro-economic policies discouraged producers. Until undertaking economic reforms in the late 1980s, Angola paid low fixed prices to growers. In 1986 the Angolan Kwacha was overvalued by a factor of 40 (New York Times January 31, 1986).

UNITA waged a classic guerrilla struggle, living "with and through the people it controls" while attempting to make Angola ungovernable in areas it did not control (Alberts 1980, 252). UNITA tried to drive people out of Government-held areas and contain them in its liberated zone (Morrison 1991, 1-6). In response, the Government used search and destroy tactics to try to rout UNITA from the countryside and imposed strict regulations to isolate people from its influence. Thus the central feature of the war became the struggle to control

the peasantry. During the course of the conflict 20 percent of Angola's population was displaced and a quarter of a million people died. Half a million people were forced to flee to other countries.

5.3.1 The Cold War in Angola

One thing which made the conflict-related famine in Angola unique was the extent to which the combatants were dependent on foreign hegemons. Among the case studies Angola comes closest to the situation described by the world systems theorists in which African countries are best understood as cold war battlefields. The Government of Angola was supported by the Soviet Union and Cuba, while UNITA was backed by South Africa and, after the 1985 repeal of the Clark Amendment that barred it from involvement in the conflict, by the United States (Rothchild and Hartzell 1990, 1-7). In this study I treated both the famine of 1985-86, when foreign powers were pouring military hardware into Angola, and the famine of 1990-91 which occurred when the dominant powers were cooperating with one another and pressuring the combatants to reach a mediated settlement. The famine of 1990-91 is further considered at two different points in time: before and after the United States agreed to halt lethal military assistance to UNITA. As will become clear, the changed attitude of the foreign hegemons made delivery of some food relief possible in 1990-91. The case of Angola would tend to suggest that superpower struggle for dominance in explains conflict-related famine in Africa.

However, the international situation was not the only variable which changed over time. Although the leaderships of the MPLA and UNITA were substantially comprised of the

same individuals during 1985-1986 and 1990-1991, as will be seen, they were not the same in character. Years of futile war had convinced them that compromise was necessary.

The Government of Angola placed primary emphasis on defeating UNITA and devoted most of its resources to this task (ACDA 1989, table 1; Marcum 1988, 3-13). Oil revenues enabled Angola to undertake the largest military build-up among the cases considered here. From 1984 to 1988 Angola earned between one and two billion dollars annually from oil. With these revenues it imported an estimated six billion dollars in arms from the Soviet Union and other East Bloc countries during the period. And the cost of supporting tens of thousands of Cuban troops on its soil was nearly half a billion dollars per year. With these arms and foreign support, the Government launched massive conventional assaults on UNITA territory In 1985, 1987, 1988 and 1990 albeit with few and short-lived successes.

South African and American military assistance helped make it possible for UNITA to maintain a secure liberated zone in the southeastern portion of the country centered around Jamba (Alberts 1980, 251). South Africa began supporting UNITA immediately after its rift with the MPLA. But the relationship became militarily significant when South Africa entered Angola in Operation Protea in 1981 to dislodge the South West African People's Organization (SWAPO) fighting for independence for neighboring Namibia. In December 1983 South Africa struck at SWAPO again in Operation Askari. And South African ground and air forces repelled MPLA advances on Jamba in 1985 and 1987. In return, UNITA helped South Africa fight SWAPO. After 1986, TOW and stinger missiles from the United States made it dangerous for Angolan Migs to attack UNITA positions, protecting Jamba after South Africa had withdrawn from the conflict (Africa Confidential 27, 15).

Fighting occurred in virtually every part of the country. For example, Operation Protea displaced over 100,000 civilians (UNDRO 1981, 5). But the effects of conflict were

most noticeable in the strategically important *planalto* or high plane of Huambo and Bié provinces. The planalto is the most fertile and agriculturally productive part of Angola. Before the war the planalto made Angola a major coffee exporter. In addition, the people of the planalto are ethnic Ovimbundu, like most of the UNITA cadre. This made it easy for UNITA to penetrate the area and difficult for the Government to control it.

On the planalto, the strategy of the Government included the application of classic food control tactics. People in areas infiltrated by UNITA were resettled close to towns (Rone 1989, 42). This enabled Government troops to protect food producers, but also entailed costs to them. To prevent UNITA receiving assistance from villagers, people were not allowed to move outside without obtaining passes, which dampened trade and made it difficult for people to gather wild foods, firewood or thatch. Reports of physical abuse of non-combatant civilians caught in the bush without passes were common. Furthermore, Government forces in remote posts levied food taxes to sustain themselves.

Their ethnicity did not protect the people of the planalto from UNITA, however. UNITA fighters in the field often resorted a form of terrorism they called "strangulation" in their battle against those thought to be MPLA collaborators regardless of their background (New York Times December 31, 1984). These attacks became particularly severe after 1981 when South African military assistance permitted UNITA to expand its operations significantly. It attacked government buildings and development projects associated with the state or the dominant Kimbundu group. It also deliberately created hunger by burning crops, killing animals, and mining fields and foot paths. UNITA attacks severed communications in the highlands, bringing the economy to a standstill. The Angolan Ministry of Planning says UNITA has destroyed 1,000 bridges and 5,000 kilometers of roads (ANB 4, 4). In a particularly pernicious tactic, UNITA fighters would warn farmers not to harvest their crops

under penalty of death, returning later to take the food for themselves (New York Times December 28, 1985). The expressed goal of this tactic was to cause peasants to move to UNITA-controlled areas and to deprive Government forces of food (Rone 1989, 87). Production of coffee and other cash crops in the highlands all but disappeared as marketing became impossible.

UNITA attempted to make its liberated zone militarily secure and agriculturally productive by populating it with Ovimbundu people. Over the years an estimated 600,000 people moved down from the highlands to the arid plains around Jamba (Africa Watch 1991, 1). Many went voluntarily or to escape the Government forces. Some of the Angolans interviewed by Jemera Rone for Africa Watch reported living with UNITA fighters, enjoying their protection, and receiving food aid from them (Rone 1989, 87). UNITA supplied food aid to refugees in its territory by using contacts with relief organizations like the World Food Program (WFP) and the World Council of Churches that it had developed during the anti-colonial struggle (Alberts 1980, 252, 255). In the liberated zone UNITA forces were subdivided into military regions each with its own headquarters. Villagers were settled near the various headquarters which ostensibly provided them with services like schools and health facilities. However, there is no doubt some people were forced to march to the UNITA zone, and some report being held against their will or being forced to work on UNITA farms. Whether people went voluntarily or under duress, once they reached UNITA territory they had to provide its forces with a portion of food they grew.

5.3.2 Famine Relief Politicized

During the war, food production fell well below historic levels. Nationwide cereal production fell from 447,000 tons in 1980 to only about 332,000 tons in 1985 (FAO 1990 table 15). Half a million people were affected by hunger in 1985-86 (OEOA 1986, 30). These aggregate figures do not reveal the extent to which hunger varied with time and location. Because of the difficulty of obtaining inputs and the dangers to producers, by 1981 many planalto households no longer grew enough food to last the entire year and the highlands were gripped by a seasonal hunger cycle (ICRC 1986b 4-6). Typically food would run out during the fall months and the shortage would last until the first harvest in January.

The International Committee of the Red Cross (ICRC) was the main source of international aid in the early 1980s. The ICRC tries to work by obtaining agreements between combatants which permit its operations to proceed unimpeded on both sides of battle lines, rather than unilaterally providing aid to victims on one side.[23] Where this policy works, it makes it among the most influential of PVOs. Until 1984 the ICRC was partially successful in ameliorating the seasonal hunger cycle in Angola. But wherever fighting broke out localized famine would occur. For example, an ICRC report described three *bairros*--neighborhoods--of Huambo, a major planalto city, in which its workers found "severe pockets of malnutrition:"

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23. I came across several examples of ICRC abandoning this policy in practice. The ICRC defied the Government of Nigeria and flew food into Biafra during the Nigerian Civil War until a Federal Mig downed a relief flight (Okpoko 1986, 59). In Mozambique the ICRC initiated operations by unilaterally aiding the Government (Africa Confidential 25, 19). This made its workers and facilities targets for Renamo attacks and it was driven from the country. In Ethiopia in 1985 the ICRC for a time accepted the Government's position that all aid in the north should be controlled by it (Clay, Steingraber and Niggli 1988, 253). Similarly, in Sudan in 1989 the ICRC capitulated to Government pressure to discontinue relief efforts in rebel-controlled territory (Minear 1991).

> A village that shows nothing but good signs may suddenly face a disastrous situation because of an attack or pillage. Or simply because the fields are exhausted: 'safe' fields tend to be cultivated over and over again without fertilizer, and subdivided more and more as new *deslocados* [dislocated people] arrive. (ICRC 1986b, 6)

One of the three bairros had been attacked and burned and its residents had lost most of their food stores and property. Another bairro experienced an influx of people dislocated from the burned-out neighborhood which taxed the resources of its residents. In a third bairro the fields were so infested with land mines that residents left their crops unharvested.

Drought exacerbated Angola's food problems. Rainfall was below normal in 1983 and 1984. But I doubt that drought explains the food crisis. For example, in the rainy but conflict-marred years of 1986 and 1987 only 356,000 and 382,000 tons of cereals respectively were grown (FAO 1990 table 15). By 1985 the UNITA offensive in the planalto was at its peak. At first the government responded with search and destroy tactics (Rone 1989, 82). It was evident that the Angolan Government chose to expel ICRC teams from areas where it was conducting counter-insurgency operations against UNITA in order to prevent observation of its actions. Africa Watch reported that counter-insurgency operations frequently resulted in indiscriminate violence against Ovimbundu peasants hiding in the bush.

Next the Government tried taking Jamba--an effort which failed when South African air strikes easily severed its lines of supply. The combination of fighting in the highlands and the southern offensive displaced half a million people and sent an additional 376,000 refugees into Zaire and Zambia (USCR 1986, 41). UNITA decided to capitalize on the disarray of the Government forces by isolating the planalto from the rest of the country. As part of this effort it attempted to interdict all relief food moving into the highlands.

UNITA leader Jonas Savimbi warned all relief workers to leave the country and stated that he would not be responsible for their fates (ICRC 1985, 13-16). In spite of its special

status, the ICRC was targeted. Two ICRC workers were killed by guerrillas, and a relief plane was destroyed when it hit a mine planted on a runway (1986a, 16-19). Feeding centers were attacked several times and food warehouses were burned. Because of these and other attacks the Government was forced to halt ICRC relief work on numerous occasions, sometimes for months, because of the insecurity.

The violence caused famine conditions to persist through most of 1986 in spite of a return to normal rain. From January to March, and again from June to September large sections of Huambo province were inaccessible to relief workers (Africa Confidential 27: 15). The war also caused malnutrition in urban areas as deliveries of food to markets came to a virtual halt and Angola became almost totally dependent on what food it could import. Only 25 percent of the food aid scheduled for delivery, 44,000 tons, reached its destination in 1985-86 (OEOA 1986, 30-31).

The ICRC coped with the problem by pressing UNITA representatives in Europe for a new dialogue (ICRC 1986a, 16-19). This eventually led to renewed guarantees for the security of ICRC personnel, the seconding of an ICRC medical team to an UNITA hospital at Luangundu and new commitments of food aid to UNITA territory. While ICRC personnel were no longer deliberately targeted by UNITA, fighting continued to be an impediment to relief work. Famine conditions receded somewhat but Angola remained dependent on imported food, and hunger continued to be an annual problem on the planalto.

Recognizing that foreign support would enable the MPLA to hold onto power indefinitely, even in the face of economic ruin, UNITA began to modify its tactics to broaden its base of support (Africa Confidential 26, 4). It expanded maize and rice growing schemes in areas under its control, and began political work in Bakongo and Kimbundu ethnic areas in the north and east by stressing peasant grievances against collective agriculture and years of

official neglect. While criticizing UNITA's tactics, *Africa Watch* acknowledged that a change in strategy occurred:

> From the testimonies we were able to gather it is obvious . . . that UNITA has a political program designed to win over the population, and that they devote resources and trained personnel to this task. (Rone 1989, 95)

These efforts paid off, enabling UNITA to establish bases farther north and strike at Luanda and the oil-producing enclave of Cabinda. The initiatives had another motive, though. UNITA wanted to press its case against the MPLA in international circles. In particular, UNITA took advantage of the election of Ronald Reagan to seek military assistance from the United States (Minter 1988, 210). In 1985 UNITA hosted a summit of the World Anti-Communist League at Jamba to strengthen its credentials with conservatives in the Reagan administration. In approaching the American congress, Savimbi felt he had to be able to argue that peasants in areas UNITA controlled were better off than those living under the MPLA. UNITA organized tours of its food growing schemes for the press and for American legislators. Because of the importance of its liberated zone, humanitarian assistance was also an important part of its request. While this aid helped improve the food security of some people living under UNITA, unfortunately, it did not lead to less destructive tactics on the planalto (Worthington 1988).

5.3.3 The Waning of the Cold War

After the mid-1980s, changes in the international climate made movement toward resolution of the conflict possible for the first time. First of all, militarism had waned in

South Africa and the Soviet Union, and both of these countries began to cut back on military assistance to the Angolan combatants and to seek diplomatic ways of disengaging from the conflict (Rothchild and Hartzell 1990, 9). Angola and South Africa had agreed upon a framework for negotiations called the Lusaka Accords as early as 1984, but the agreement did not include UNITA and had proved unworkable. Simultaneously the Soviet Union under Michael Gorbachev abandoned the Brezhnev Doctrine, began to disengage from foreign military entanglements and sought to cooperate with the United States. This freed the Americans from the foreign-policy constraints imposed by rigid anti-communism.

Second, the Assistant Secretary of State for Africa, Chester Crocker, was "determined to achieve a Namibian settlement prior to leaving office." (Rothchild and Hartzell 1990, 18) Crocker had opposed legislation imposing economic sanctions upon South Africa under his doctrine of Constructive Engagement. Now, seeing an opportunity to use press for a settlement, he used the threat of sanctions to goad South Africa.

Changes at the top in Angola also made progress more likely. Members of the so-called Catete faction of the Angolan Government who had been promoted during the MPLA's Second Party Congress in December 1985 began to consolidate their influence (African Confidential 27, 4). Pragmatic and nationalistic, they sought to end the military stalemate and improve Angola's international relations. The Catetes included President José Eduardo dos Santos, and Ministers Fernando José de França Van-Dúnem, Colonel-General Pedro Maria Tonha "Pedale," and Pedro de Castro Van-Dúnem "Loy". Under the Catetes, Angola accepted the 1988 Tripartite Agreement brokered by the United States, which called for independence for Namibia, the cessation of South African support for UNITA, and the departure of the Cuban troops from Angola. The Catetes also showed some willingness to reform the economy. In 1989 Angola signed a structural adjustment agreement in order to gain credit

from the IMF and the World Bank. And they opened up direct negotiation with UNITA (Keesings 36388). However, the Government did not make meaningful reforms in agriculture nor give up hope of defeating UNITA in the field. In fact, 1988 saw the worst year of fighting yet, including a sweep by the Cubans down to the Namibian border.

The most important part of the Tripartite Agreement was implemented in 1989: Namibia became independent in 1990. Other parts were not: South Africa continued supplying small amounts of covert aid to UNITA in violation of the Agreement.

And the pullout of Cuban troops was delayed by the Government several times, apparently in response to UNITA attacks (IISS 1989, 196-98). Soviet military assistance to the Government continued--although it had declined to about 300 million dollars per year. And the United States, determined to ensure that UNITA would be represented in future Angolan governments, increased aid to UNITA to 60 million dollars per year. Thus, when negotiations between UNITA and the MPLA mediated by African Heads-of-State broke down in 1989 the combatants were still in a position to resort to arms (Keesings 36886). It was now clear, however, that it was only a matter of time until a settlement was reached. The combatants began to fight for control of territory and people for leverage in anticipated negotiations and elections.

That year the normally precarious food situation was again exacerbated by an increase in guerrilla strikes in northern and eastern Angola and around Luanda (Africa Confidential, 31, 13; Keesings 36453). UNITA succeeded in cutting off all overland communications to most of the major towns in the highlands, isolating the garrisons there. Although two years of drought are often cited as a major reason for the return of famine, most of the hunger was probably due to fighting. As the crisis began to develop a number of PVOs conducted surveys to determine what food aid needs would be (Morrison 1991, 16). These paint a coherent if

spotty picture similar to 1985-1986: A survey of Huila Province in southern Angola conducted by a consortium of relief agencies in 1990 found low rates of malnutrition outside zones of conflict but high rates inside; ICRC health monitoring in the planalto provinces of Huambo and Bié revealed serious malnutrition among people in the garrison towns; conversely a World Vision study indicated that most people in UNITA's liberated zone were not facing imminent famine.

Hardliners in the MPLA convinced Dos Santos to try to rout UNITA yet again (Rothchild and Hartzell 1990, 26). The Government expelled all relief workers from the area and began its counter-attack. MPLA forces drove into UNITA territory and captured the town of Mavinga, holding it until May 1990. All of this fighting meant that by the end of the year two million people were affected by hunger, with over half a million at risk of death, of which about 10 percent were located in UNITA held territory.

The United Nations and the ICRC appealed to the Government to permit the establishment of corridors of peace. To bring UNITA on board so that vehicles in the corridors would be safe from attack, the corridors would reach into UNITA territory (Angola News Briefs 4, 4; 4, 5). The Government initially refused, arguing that all relief should be under its control lest UNITA use convoys as cover for the importation of arms. However, in September under pressure from the Soviet Union, which was close to eliminating military assistance completely, it approved five corridors. The Government hoped that the United States Congress would reward it for its cooperation by reducing support for UNITA. In order to avoid the appearance of bad faith, UNITA agreed to permit convoys to go to Government garrison towns.

Large-scale relief operations began in October with the United Nations Special Relief Program for Angola (SRPA) distributing WFP food and supplies using PVOs like Catholic

Relief Services, German Agro Action, and Médecins Sans Frontières (Morrison 1991, 10-16). Food relief then became a key element in the struggle for advantage during the negotiations. The Government and UNITA campaigned vigorously to influence the distribution of food. Each wanted to stabilize the populations in areas it controlled.

UNITA argued that people in its territories were the worst affected, and it pressed the ICRC to deliver food to areas in the planalto it had seized from the Government during the previous year. Using its influence with the United States, UNITA demanded cross-border operations into the southeast from Namibia. These operations would have been beyond the control of the Government, which strongly objected. On the other hand when the SRPA asked UNITA to stop attacking crews working to rehabilitate Angola's rail and road system so that food could move across the country quickly, it refused--ostensibly because the arteries could be used to move Government troops. Its fighters also burned a key bridge in one of the Government corridors, and burned it again after it was rebuilt (Keesings 37946).

The United States clearly favored UNITA in its food allocations (Morrison 1991, 10-14). Even though only 10 percent of the people affected by hunger were in UNITA-controlled areas, the United States, the largest food donor, earmarked nearly half of its food to them. The United States complained to the SRPA when the Government prevented food convoys from moving into the southeast, but ignored UNITA attacks on convoys in Government territory, even when the targets were American PVOs. It also encouraged PVOs like World Vision and International Medical Corps to make illegal overland and air deliveries of food to UNITA territory from Zambia and Zaire. Given these problems and the fact that President George Bush vetoed a bill partially capping United States military assistance to UNITA in November, the Angolan Government blocked the corridors in December 1990 (Keesings 37946). At the same time UNITA threatened to step up attacks on relief convoys

moving in Government areas. The SRPA only succeeded in delivering seven percent of its target of 100,000 tons of food during 1990. In fact only 700 tons of SRPA and ICRC food and seeds had reached UNITA territory.

The following year, however, the United States, as the largest food donor and only remaining important external source of war material, was able to appeal to the self interest of the combatants to ensure that food would get through to UNITA territory. After further pressure from the Soviet Union and Portugal, the Government and UNITA agreed to open the corridors again in March 1991 (Keesings 37842; Angola News Briefs 4, 6).

> They did so out of sensitivity to their respective international images, not out of any change of heart. . . [and] without departing in any substantive way from their mutual preoccupation to close both the war and the Portuguese-led negotiations in an optimal position. (Morrison 1991, 15)

The United States was satisfied that UNITA was in the strongest position it could hope to obtain. Fighting came to an end when the United States, the Soviet Union, and Portugal agreed halt lethal assistance to both sides in the conflict. To assuage the fears of the combatants they committed themselves to participate in a Joint Politico-Military Commission to supervise a truce monitored by the United Nations Angola Verification Mission. With these guarantees in place, the MPLA and UNITA signed a peace accord in May 1992. The Government and UNITA held elections in October (Keesings 38088). Even as the elections approached the United States continued to mount a 40 million dollar covert food relief program in the southeast. "It is reasonable to assume that the overriding priority in U.S. policy during the transition will be to strengthen and sustain UNITA organizationally and to maximize its electoral potential." (Morrison 1991, 21)

5.3.4 Summary

The conflict-related famine in Angola began in the mid-1980s when UNITA attacked the ability of planalto peasants to feed themselves in order to destabilize the Government. Angolan forces exacerbated hunger by responding to UNITA incursions with classic counter-insurgency tactics that prevented affected people from coping with the crisis. At the same time, however, UNITA attempted to ensure a measure of food security for peasants in its liberated zone in order to develop its popular base. UNITA actively exploited international sources of aid to pacify its liberated zone. This allowed it to absorb the blows of Government and Cuban forces.

Both the Government and UNITA received extensive foreign support. The 1985-1986 relief effort was unsuccessful because the leadership of both Government and guerrillas expected high levels of international military assistance and became intransigent. Continuing internal war made relief operations impossible. In 1990-1991 a radically altered international context made relief a possibility. The United States had emerged as a dominant actor able to compel other countries to halt their destabilizing behavior while unilaterally strengthening UNITA. For the combatants, continued support from the international community now depended in part on making credible efforts to promote famine relief. It is reasonable to hypothesize that when foreign hegemons use African combatants as proxies during internal war relief efforts will fail.

Ironically, the end of the Cold War, which made the United States and the Soviet Union interested in ending the war in Angola, may also have reduced their ability to bring credible pressure to bear on the combatants. Fighting broke out again after the elections when Jonas Savimbi refused to accept results returning the MPLA to power. Perhaps Savimbi

recognized that Angola is no longer salient to the United States and that he cannot expect significant support from the West whatever he does. Thus, he has nothing to lose by refusing to cooperate with the MPLA.

5.4 Ethiopia

The Ethiopian case has some similarity to Angola. The Government of Ethiopia was nominally socialist and underwent a large military build-up with support from the Soviet Union and other East Block countries. And, like UNITA, the rebel movements fighting the Government worked to promote food security within their liberated zones. By distributing relief food supplied by international organizations, the rebels were able to boost their legitimacy among their own people, as well as in the eyes of the rest of the world. Control of relief food played a decisive role in the defeat of the regime of Colonel Mengistu Heile Mariam in April 1991.

But the Ethiopian case has both international and domestic political features which distinguish it sharply from Angola. First, the United States did not consider the major Ethiopian rebel movements to be potential allies and did not provide them with military assistance (Africa Confidential 31, 9). The United States did not try to prolong the war.

Second, Government relief operations in Ethiopia were coordinated by the Government's Relief and Rehabilitation Commission (RRC). During 1984-85 the RRC was led by individuals who opposed the use of hunger as a weapon. By attracting the attention of the press and relief agencies, they were able to develop enough independence from Ethiopia's military leaders to pursue policies which greatly enhanced famine relief. In Ethiopia,

combatants on both sides deliberately stimulated and competed for control of flows of relief assistance.

In the Ethiopian case I treat three distinct famines. As in Angola, the first, 1984-85, occurred when Ethiopia was a client of the Soviet Union. The second and third, in 1988 and 1990, occurred after the Soviet Union had all but ceased to support Ethiopia.

Several insurgencies were active in Ethiopia. After the Government occupied what had been the autonomous region of Eritrea in 1962, the Eritrean Liberation Front (ELF) and later the Eritrean People's Liberation Front (EPLF) fought it and each other for control of the province. The famine of 1973 critically weakened support for Emperor Heile Selassi enabling a group of young officers and Marxist intellectuals to seize control of the country in 1974.[24] Colonel Mengistu did not alter the Government's policies toward Eritrea, however. And the next year a rival Marxist faction, the Tigray People's Liberation Front (TPLF) began to fight for autonomy for Tigray province as well. The Western Somali Liberation Front (WSLF) briefly held ethnic Somali areas of the south, and the Oromo Liberation Front (OLF) now is active in parts of the country severely disrupted by the Government's resettlement schemes. The EPLF is now in complete control of Eritrea, and as of this writing the TPLF is the most

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24. Western-trained Marxist intellectuals played very important roles in Ethiopian politics in the 1970s (Giorgis 1989, 10-25). In the early 1970s numbers of university graduates returned to the country to fight the semi-feudal regime of Heile Selassi. In part, the organizations they joined depended upon their ethnicity. Eritreans were generally attracted to the EPLF rather than the ELF because the latter was Islamic, while Amharas went into the Ethiopian People's Revolutionary Party (EPRP) or the All Ethiopian Socialist Movement (MEISON) both of which participated in the coup. Afterwards, however, the militants differed in their attitudes toward the new regime and schisms opened up. A violent conflict called the Menka occurred within the EPLF, and the EPRP and MEISON dueled for influence over the military government in Addis Ababa. MEISON prevailed and the EPRP was driven into the countryside where it began to collaborate with the TPLF. The leaders of MEISON helped provide the ideological justification for the military's policies, while their former comrades-in-arms organized peasants against them in the countryside.

powerful faction of the Ethiopian People's Revolutionary Democratic Movement (EPRDM), which controls Addis Ababa.

The cost of Ethiopia's internal wars and the Soviet arms imported to fight them was tremendous (ACDA 1990, table 1; Brzoska 1987, 342). In the decade after the revolution Ethiopia imported over four billion dollars in arms from the Soviet Union and other East Block countries. The arms imports far exceeded Ethiopia's export earnings which come mostly from coffee. The build-up was partly in response to Somalia's claims on Ethiopian territory. Somalia briefly occupied southeastern Ethiopia in 1977 before being expelled with Cuban and Soviet aid. However much of the build-up was completely unconnected to interstate conflict. After rebel advances in 1986 another surge in military spending occurred and an additional two billion was spent on imports. In 1989 Ethiopia had over 300,000 men under arms, over 100 Mig fighters and over 1,000 battle tanks (IISS 1989, 66). The only African country in my study to devote a larger proportion of its resources to war was Angola. Ethiopia's military government, called the *Dergue*, adopted drastic policies toward the peasantry (Clay and Holcomb 1986, 23-34; Clay, Steingraber and Niggli 1988, 16-17, 224-25). These policies eroded the ability of peasants to feed themselves and created tremendous social instability. Six million people were organized into collective villages governed by state-controlled Peasant Associations. Force, including aerial bombardment, was used to drive people into villages. In these villages all land was owned by the Peasant Associations which also allocated the inputs farmers used. The Government also created hundreds of resettlement schemes and moved three quarters of a million people onto them (Giorgis 1988, 157, 270). There were two major types of schemes. Most of them took members of the ethnically dominant Amhara or related groups and settled them on Oromo and other people's land in the south. A smaller number of schemes moved Tigray or other people from their traditional northern homelands to the south.

Although there are no reliable estimates, it is clear that many, possibly most people were taken for resettlement by force (Clay and Holcomb 1986, 85-95). Peasants associations were assigned quotas of "volunteers" for resettlement which had to be filled. By disrupting the agricultural cycle, collectivization and resettlement placed hundreds of thousands of people at risk of starvation (Clay, Steingraber, and Niggli 1988, 46). A study by Getachew Woldemeskel showed that both settlers and those displaced to make way for them suffered high rates of hunger and disease (1989, 360-65).

The Ethiopian Government used macroeconomic policy to acquire peasant surpluses. Farmers were required to sell their cash crop output at low fixed prices to the Agricultural Marketing Corporation (AMC) (Giorgis 1989, 157, 306). For example, the world price for coffee--and the farmgate price in most African countries--doubled between 1975 and 1985, whereas in Ethiopia the Government controlled price fell 20 percent (UNDP 1989, table 5-1). After the revolution the Government actually drove the already overvalued Birr up a little bit, making imports cheaper but pushing export prices even lower (IMF 1989, 321). Farmers also had to sell half their food crop output to the AMC, which in turn distributed grain to the military and Urban Dwellers Associations (Kaplan 1988, 19). The AMC had planned to stockpile 180,000 tons of grain against the country's frequent droughts. But when rains failed in 1983 it was discovered that the warehouses were nearly empty--the grain having gone to feed soldiers (Giorgis 1989, 157-58).

The Dergue started the drive to reorganize agriculture in the early 1980s. Officially collectivization and resettlement were said to be for the purpose of fighting Ethiopia's historical famines (Gill 1986, 144). In fact, a few international observers supported these programs in principle. Conversely, writers like Christian Catrina have argued that the radicalization of social and economic policy occurred because Ethiopia's debts to the Soviet

Union gave Soviet advisers who favored Stalinist policies increased influence (1988, 92, 222). Dawit Giorgis, the former Commissioner of the RRC refutes this (1989, 269, 275). He wrote that the Soviets actually advised Ethiopia to moderate its policies. But the clique that controlled the Government, especially Worker's Party official Legesse Asfaw, believed that collectivization would strengthen security in rebellious areas.

Furthermore, the resettlement of Amharas duplicated an historical pattern of encroachment by this group into Oromo territory (Clay and Holcomb 1986, 16-26). Resettlement was driven by and redoubled internal political conflict between ethnic groups. Refugees interviewed by Clay and Holcomb often did not distinguish between Government forces or settlers and the Amhara people. When describing the actions of soldiers or settlers they sometimes simply called them "the Amhara."

By the early 1980s two insurgent movements, the TPLF and EPLF had emerged as dominant. In order to endure, they had to counter the effects of the Government's social and agricultural policies and sustain their supporters on the land. In Tigray, the TPLF fought a classic guerrilla war (Firebrace and Smith 1982,30 ,75; Kaplan 1988, 95-98). Its fighters were organized into small, mobile cells sheltered by villagers in Ethiopia's highlands with rear bases in neighboring Sudan. Its liberated zone, south and west of Adua was only irregularly penetrated by the Government. Two-thirds of the peasants living there managed to escape paying any taxes to the state (Clay and Holcomb 1986, 58-66).

In contrast, the EPLF had carved out a liberated zone in the desert behind trenches and mine fields (Marando 1987, 10-20). Countless Eritreans lived in bomb shelters underground for years on end to escape the Ethiopian Migs which controlled their skies. The EPLF ran a centralized and technologically sophisticated enclave with numerous factories producing everything from ball bearings to sanitary pads for female guerrillas. Because of relentless

bombing and fluctuating battle lines, Eritrea faced chronic food deficits (Cliffe 1989, 386). Therefore, its relief arm, the Eritrean Relief Association (ERA) ran a continuous relief operation which met 50 percent of the enclave's food needs and grew much of its own grain at the Rora Habab Development Project. Robert Kaplan called ERA "the most effective locally based famine relief agency in Africa." (1989, 57, 73-74)

On the other hand, the TPLF and EPLF were notorious for using hunger as a weapon (Human Rights Watch 1990, 22-25). They sought to cut off flows of relief food to the Government controlled towns, regularly destroying relief convoys. During an attack on Korem in 1983, TPLF fighters kidnapped volunteers of the Save the Children Federation. In 1986 the TPLF killed two volunteers from World Vision. And they attacked feeding centers at Bati, Mille, and Lalibela. The EPLF intercepted and destroyed food caravans, sank ships carrying food aid, and choked off the food supply to government controlled towns (Africa Confidential 26: 1).

In its war of terror and hunger, the Ethiopian Government outdid the rebels. Government soldiers pursuing rebels conducted search and destroy missions in Tigray, often killing people merely on suspicion of being sympathetic to the rebels (Minority Rights Group 1983, 6-12). The Government deliberately used hunger to punish rural people. There were numerous reports of Government forces torching standing crops or villages (Clay and Holcomb 1986, 60-70). Military leaders refused to permit relief organizations to bring food into areas that were not firmly under their control. And in a policy directed at people living in rebel-held areas, the Government refused to give relief food to people arriving at feeding stations unless they had official identity documents (Kaplan 1988, 90). Ethiopian Migs bombed markets and farms during daylight, making work and travel dangerous (Clay and Holcomb 1986, 58-66). One air attack killed 1,800 people at the market in Hausein.

5.4.1 The TPLF

Unlike UNITA, the EPLF and TPLF lacked powerful foreign patrons. They not only used famine relief operations to obtain food to stabilize people in areas they controlled, but also to cultivate linkages with the international community (Clay and Holcomb 1986, 195). The EPLF's Eritrean Relief Association (ERA) transported grain supplied by and shipped to Port Sudan by the WFP with vehicles donated by European PVOs. The TPLF's Relief Society of Tigray (REST) ran similar convoys from relief camps in Sudan. Both ERA and REST were able to have their relief personnel trained by the ICRC, War on Want and other PVOs (ICRC 1986, 22-24; Gill 1986, 129-37).

Excellent studies of refugees from the TPLF liberated zone by Jason Clay and Bonnie Holcomb (1986) and Lance Clark (1988a) illustrate how the war and famine affected the Tigray and how the TPLF was able to position itself as ostensible guarantor of Tigray food security. Clay and Holcomb interviewed two different groups of refugees. Some of their interviewees left the liberated zone before the onset of famine in 1984 and settled at Tawawa, Sudan. Those who fled after 1984 were directed to Wad Kauli, Sudan. By interviewing both groups Clay and Holcomb were able to trace the evolution of Tigray opinion about what was transpiring in their homeland. Clark investigated the TPLF's successful efforts to repatriate the refugees.

Consistent with its Marxist philosophy, the TPLF regarded social stratification as the main problem in the countryside (Firebrace and Smith 1982, 32). As soon as it consolidated control of its liberated zone at the end of the 1970s, it began redistributing land. This policy was a disaster. Redistribution created intense social conflict. Tigray people who had become

successful cash croppers fought with the royalist Ethiopian Democratic Union against both the Ethiopian Government and the TPLF to hang on to their farms.

To drive the Government out of Tigray, the TPLF would have to reposition itself as a protector of peasant interests. The TPLF took several steps to try to accomplish this (Firebrace and Smith 1982, 66). First, it established its relief arm REST, whose activities were described above. Second, it developed plantations and demonstration plots around Humera in Gondar province and grew its own grain. Some of the grain was distributed inside the liberated zone and the plantations also provided employment for displaced people. Third, the TPLF began to purchase grain from farmers, stimulating the economy inside the liberated zone. And fourth, it set up a string of rudimentary shops that sold grain below market prices. The shops were clearly an attack on the market which the TPLF regarded as exploitative. The effect of these sales on cash croppers remained a contentious issue. However, by keeping consumer prices low the TPLF at least made it easier for the poor to obtain food. Clearly these policies were part of a broader effort by the organization to establish its legitimacy. Firebrace and Smith estimated that the TPLF set up 450 small clinics diagnosing common ailments, dispensing basic medicines, and evacuating the seriously ill or wounded. And the TPLF engaged in such populist moves as breaking open Government granaries it seized.

These policies by themselves were not sufficient to cause the Tigray to regard the TPLF as more legitimate than the Ethiopian Government, however. When Clay and Holcomb interviewed people who had left TPLF territory before the conflict-related famine of 1984-85 they found that "most stated that they saw no more reason to trust the TPLF than the Dergue." (Clay and Holcomb 1986, 55)

Below average precipitation in 1983-84 caused the Tigray to resort to strategies for coping with food crises (Clark 1988a, 1-5). After exhausting their stored grain and cash,

Tigray households began to dispose of livestock and people began to move to roadside towns seeking casual employment or to sell their possessions or petty commodities. Unusual numbers of Tigray job seekers appeared at plantations in Gondar province along the border between Ethiopia and Sudan. The scope of the crisis diminished the effectiveness of such efforts, however. Livestock prices had fallen 80 percent and there were few people with money to spend on services or commodities in the liberated zone.

According to Clay, indescriminant violence directed against the Tigray by the Government isolated them from the rest of the country after 1983, reducing their ability to cope (Clark 1988a, 1-5). People interviewed by Clay and Holcomb reported that the TPLF encouraged them to leave the liberated zone at that time to get relief food, but said they were afraid to go to Government held towns to trade or seek food (1986, 60-70, 118). Not only were they afraid of being taken for TPLF supporters, but they feared being dragooned for resettlement. Instead, the Tigray tried to sustain themselves by operating an underground economy. Markets were held at night in some villages to avoid detection by Migs or Government patrols. Some people reported that they posted lookouts in their villages. When they spotted soldiers or officials approaching people would flee with their animals and whatever food or possessions they could carry. Such strategies may have been helpful for awhile, but ultimately their isolation prevented Tigray in the liberated zone from finding sufficient alternative means of supporting themselves.

By the end of 1984 many people had become desperate enough to move to United Nations refugee camps in the Sudan, but the threat of air attacks made travel too dangerous. Late in 1984 the TPLF intervened on behalf of the Tigray (Clark 1988a, 1-5). REST set up camouflaged way stations along the route to Sudan and provided guides to lead groups of refugees travelling at night. REST warned the United Nations that many people would be

coming to the camps in Sudan. In fact more than a hundred thousand people took advantage of the opportunity and came across the boarder in a period of three months. Unfortunately the United Nations had ignored REST's warnings and the relief camps were understaffed and undersupplied. In the camps the migrants were still without assets and far from markets. Ten thousand of those who arrived able to walk later died of disease before the camps were supplied with sufficient grain by the WFP.

REST worked with the United Nations and other aid agencies to encourage the refugees to engage in income-generating activities like sewing and weaving in the camps, but the TPLF concentrated its efforts on preparing heads of households to return to Tigray in time to sow at the beginning of the next rains. A reverse march was organized late in April 1985, supported in part by the United Nations which provided agricultural equipment and seeds to 40,000 returnees. Later, when the harvest was ready many dependents also returned to their farms with the encouragement of relief officials.

As a result of the TPLF's behavior during 1983-84 the attitude of some Tigray people changed. Refugees who were guided to Sudan by REST or who had received relief food from REST inside the liberated zone told Clay and Holcomb they supported the TPLF. Many also said that they expected the TPLF to provide them with food or agricultural inputs when they returned to their farms. "Virtually all of those interviewed [in Wad Kauli] claimed that as a result of the past year's events, they were now much more willing to assist the TPLF in whatever way they could." (1986, 66, 85). Such politicization occurred among groups other than the Tigray. Oromos who had been aided by the Oromo Relief Association (ORA) expressed a desire to join or support the OLF (1986, 151-52).

REST's activities were central to the strategy of the TPLF, but REST in turn influenced the TPLF (Africa Confidential 26, 10; 27, 10). Because of its connections with the

United Nations and the PVOs, REST was highly sensitive to international public opinion. For example the United States, which provided the PVOs with grain and trucks that were subsequently transferred to control of the rebels, protested attacks on Government relief convoys and feeding stations in 1985 and threatened to stop supporting cross-border operations. Recognizing what the cutoff of aid would mean to them, REST urged the TPLF to curtail such attacks in 1986. That year the TPLF also agreed to the establishment of corridors of peace into its liberated zone through Government territory, although the Government later rejected the idea because it would have forced it to recognize the TPLF. The ICRC was able to get the combatants to agree to a procedure called a "landbridge" in which food trucks move to neutral sites at prearranged times (ICRC 1987, 21-23). The cooperation display by the TPLF led groups like Médecins Sans Frontières to argue that the international community should cut off aid to the Government and rely entirely on cross-border operations.

5.4.2 The RRC, 1984-85

While it used hunger as a weapon against insurgents, the Ethiopian Government nonetheless showed ostensible concern for the food security of quiescent groups. The RRC was established by the Dergue after the ouster of Haile Selassi to warn it of impending food crises and to coordinate relief efforts so it would not meet the same fate he did. The RRC developed a sophisticated famine warning system that detected the quadrupling of grain prices in 1983 and correctly predicted a substantial domestic production shortfall. It called meetings of donor countries to request half a million tons of food aid in September (Giorgis 1989, 124). While the RRC worked as intended, governments, including its own, and most international organizations failed to heed its warnings. The Ethiopian government did not accept the RRC's

estimates of the seriousness of the situation and refused to increase the RRC's budget (Gill 1986, 31, 51; Jansson, Harris and Penrose 1987, 3-23). And the Reagan administration in the United States planned to cut off aid to the Marxist regime entirely, while United Nations officials suspected the RRC of exaggerating its needs on behalf of its government to obtain an international subsidy.

The lack of response meant that the aid request had to be doubled in 1984. Ultimately, 7,900,000 people were affected by hunger. One million were displaced and an additional three-quarters of a million fled across international borders (USCR 1987, 47). Nearly four million people were isolated in liberated zones or areas of intense fighting. The famine may have claimed as many as one million lives (Gill 1986, 129; Giorgis 1989, 147-53).

Yet a huge relief effort did occur, if belatedly. By the end of 1984, the RRC had raised millions of dollars and attracted dozens of relief organizations to the country (Giorgis 1989, 228-230). Forty-eight voluntary organizations working in Ethiopia, operating 45 shelters for displaced persons, 100 food distribution centers, and 150 emergency feeding stations. Over one million tons of grain entered Ethiopia and the RRC permitted some of it to enter TPLF controlled areas.

The meaning of this flood of aid is hotly disputed in the relief community. Many writers have argued that flows of relief food directed at Government-controlled areas gave the Ethiopian state the ability to carry out its villagization programs by giving the appearance of supporting peasants during resettlement--a policy which itself uprooted farmers and sparked violence, creating famine (Kaplan 1988, 30). Clay, Steingraber and Niggli wrote that famine relief . . .

> [enabled] the government to consolidate its power . . . Assistance from the West helped the government to intensify its resettlement and villagization programs, programs with specific political and military agendas which had, until that date, been implemented on only a small scale in relatively isolated areas (1988, 3).

But former Commissioner of the RRC, Dawit Giorgis' description of the behavior of his organization suggests that he and his staff acted independently to play the Government and international relief agencies against each other in order to obtain and distribute relief food--actions which they saw as fighting the famine (1989, 126-46). Dawit and his co-workers tried to mobilize western governments to provide food after they failed to respond to appeals sent through regular international channels.

> We knew that the key was the western media. . . We had to be very careful because Western reporters were not at all liked by the regime. Any hint of provocation, or even a single news report attacking the politics of the government, would result in all newsmen being instantly thrown out of the country. (1989, 145)

Fortuitously, Charles Stewart, a British filmmaker who had heard about the famine, came to Ethiopia to make a documentary to be called *Seeds of Hope* about how peasants coped with drought. Instead the film became *Seeds of Despair*, and its first airing July 1984 on British ITV sent journalists flocking to Ethiopia. The Ethiopian story was quickly picked up by the media in other countries as well. Churches, community groups, and activist organizations spontaneously began to raise money to buy food for Ethiopia.

To avoid antagonizing his own Government, Dawit encouraged reporters to view the famine as the result of drought (Giorgis 1989, 190). But to stimulate a world reaction, he made sure that they were brought to the famine relief camps where they could obtain the best footage of starving people.

Public interest made the issue attractive to politicians around the world. For example, the story of the famine broke just before the 1984 elections in the United States (Giorgis 1989, 196). With the famine on American televisions nearly every night, leaders of the Democratic Party realized that they could use it to accuse the Reagan administration of putting politics above human life, while Republicans sought to fend off criticism. The Democrat-controlled Select Committee on Hunger of the House of Representatives, Senator Edward Kennedy, Jesse Jackson, and other leaders immediately requested permission to come to Ethiopia. But Dawit sought more powerful allies for the RRC. The Director of AID, Peter McPherson called the Ethiopian Ambassador in Washington, D.C. and asked him to withhold visas from the Democrats. Dawit advised the Ambassador to agree to do so until he had met with McPherson and had secured agreements for grain shipments and transportation. The Reagan Administration tripled United States food assistance to Ethiopia in 1984.

After Ethiopia was flooded with relief workers and reporters, the Government became powerless to sanction the RRC. In turn, the RRC sought to maintain good relationships with the United Nations and PVOs that buffered it from the Government (Giorgis 1989, 324-337). The RRC ignored cross-border feeding operations by PVOs and other violations of Ethiopian military policy. Against the wishes of military hardliners, the RRC also compromised with donors who protested the regimes' use of hunger as a weapon. For example, the United States threatened to cut off food aid to the Government and to begin providing the rebels with direct assistance unless it was assured that a portion would be delivered to the north. In response, the RRC diverted a number of trucks to the contested areas in order to avoid a rift (Africa Confidential 26, 10).

> We turned a blind eye to agencies conducting relief activities in the restricted areas. The RRC knew that there were voluntary agencies in Ethiopia involved in what we

> considered illegal cross-border operations. However as long as we didn't officially know about it and as long as their activities didn't go beyond the limits of humanitarian aid, we didn't report it. (Giorgis 1989, 324).

The RRC's toleration of cross-border feeding, it willingness to let some aid into the north, and the large relief effort in Government controlled areas make this a case of "successful" relief.

However, it would be overstating the case to suggest that the RRC forced a relief operation on the Ethiopian government that it did not want. The Ethiopian Government established the RRC to bolster its legitimacy and fully intended to use it to ensure tranquility in the as yet undisturbed parts of the country. In fact, the RRC contributed to these goals. When the United States was convinced aid was reaching the Tigray, it scrapped plans for direct aid to rebels. Organizations like the United Nations, the ICRC, and World Vision tempered their stances toward the Government (Clay, Steingraber and Niggli 1988, 254). The ICRC temporarily suspended aid to the TPLF and World Vision began providing direct support to resettlement efforts in Wollo. In Kaplan's opinion . . .

> Mengistu had to consolidate his battlefield victory, and the Tigre part of the northern initiative that USAID was then pushing on him, a complement to the cross-border program from Sudan, would help him do just that. Having gotten the Soviets to bankroll the military side of the offensive in Tigre, the Ethiopian leader now got the United States and World Vision to pacify the populations of the newly won ares with grain handouts. (Kaplan 1988, 88)

By raising the international pressure on Mengistu, the Government faction headed by Dawit persuaded him to accept a wider effort than he would have wanted. But there would have been no relief operation at all if it were not for the Government's overriding interest in maintaining political control of the countryside. In fact, in the short run, Mengistu got what

he wanted. First, the combination of famine and collectivization moved many Eritreans, Tigray and Oromos into villages under the control of the state. Second, the Government made significant gains in the north. RRC relief vehicles laden with grain moved into Tigray in the wake of military convoys, drawing in destitute people who were then likely to be sent to collectivized villages or resettled in the south (Clay, Steingraber and Niggli 1988, 254).

Ultimately neither the Ethiopian government nor relief organizations were happy with the RRC. Mengistu understood that the RRC had manipulated the situation, while donors blamed the RRC for the Governments' food policies (Giorgis 1989, 190). Dawit quoted Fassika Sidelel, head of the Ethiopian Workers' Party Economic Committee as complaining:

> Relief Activity has been out of control, conducted in a manner none of us would have liked. . . I have been unable to monitor the projects of the RRC and of the 48 voluntary agencies. Some of these projects are religious in orientation, some are tribal, some are area-specific; but all negatively influence the central planning and direction of our economic policy. The RRC and the voluntary agencies set their own priorities, usurping the government's function. The assistance has served the voluntary agencies' purposes and interests, which are infiltrating our country, promoting economic destabilization, and establishing virtual colonies within our nation. (1989, 336-337).

After normal rains returned in 1985 and the world's attention shifted elsewhere, Dawit was forced to flee the country to escape arrest as a "counter-revolutionary." In 1986 Mengistu moved to reassert control. He banned workers from international PVOs from entering resettlement camps, and then placed all ICRC operations under the control of the Ethiopian Red Cross (ICRC 1987, 25-29).

5.4.3 1988-1990

By the end of 1987 the threat of renewed famine loomed in Ethiopia (Keesings 35367). Three million people were affected by hunger and a food deficit of two million tons was anticipated. While rainfall was below normal in some parts of the country, most observers reject the idea that this food crisis was caused by drought (Clay, Steingraber and Niggli 1988, 3). They point to the resettlement of hundreds of thousands of people from areas conquered by the Government in 1985-86 and to the effects of intensified collectivization and consequences of the AMC's exactions in Government-controlled areas like Wollo (Rahmato 1987, 36). Others note that in 1987 the rebel movements stepped up attacks and began to reclaim areas they had lost as the cumulative effects of the Government's policies accelerated its delegitimization.

> The famine of 1987-1988 came as no surprise to those who had taken the time to examine the causes of the earlier famine . . . it was predicted in various articles and books . . . . rain gauges are not needed to predict famine. (Clay, Steingraber and Niggli 1988, 3)

At first it appeared that famine could be avoided in 1988. This is because the Ethiopian Government initially cooperated with the international community. Mengistu wanted to continue to use food to attract the peasants away from the liberated zones. He permitted civilian leaders and Ethiopian churches to organize the Joint Distribution Program (JDP), which, together with the Ethiopian Red Cross, established corridors of peace allowing food to flow into rebel held areas. Organizations like the ICRC, FAO and WFP, were suspicious of the Government, but were also sensitized by their failure to respond quickly in 1983-84. The JDP convinced them to provide 100 thousand tons of grain to the Government. JDP grain was

distributed to villages rather than relief camps, enabling people to remain on their farms (Christian Science Monitor February 21, 1990).

However, by this time "famine fatigue" has set in and the press paid little attention to Ethiopia. As a result, when things went badly for it, the Government was in a position to severely curtail food distribution.

In March the EPLF took Afabet and in April Adigrat fell to the TPLF (Keesings 36262). The Ethiopian government immediately ordered foreign relief workers to cease operations in Eritrea and Tigray and most were expelled from the country. To keep the press from dramatizing the situation they were kept out of the north also. Ethiopian Churches, through the Ethiopian Red Cross and the JDP, worked with the RRC to provide limited amounts of relief to Government-controlled areas (Subcommittee on Rights 1988, 13-14). Only four feeding centers remained open in Tigray. Overall grain deliveries into the north declined from 50 thousand tons per month to only 10 thousand by April.

All of the combatants returned to the use of hunger as a weapon (Keesings 36263). Ethiopia bombed ERA and REST convoys and the TPLF and EPLF returned the compliments by destroying 23 United Nations food lorries that had been donated by Band Aid. Relief experts estimated that Ethiopian and rebel relief organizations could reach perhaps 1.7 million of the 3.5 million people in the north. The rest were trapped in combat zones. Thus after 1988 Ethiopia is an "unsuccessful" case of famine relief.

As before, however, the presence of hunger in the countryside and the international famine relief effort affected the balance between combatants. Because of the contacts they had established with the international community during 1983-84, the rebel movements were able to turn the Government's recalcitrance to their advantage and make donors into allies (Africa Confidential 27, 10; 31, 9; Subcommittee on Rights 1989, 22). While the Reagan administra-

tion could not bring itself to aid the EPLF and the TPLF directly because of their Marxist pasts, it did direct aid through PVOs like the Mercy Corps, the International Rescue Committee, Save the Children, and Lutheran World Service that conducted cross-border operations and even gave cash to rebel relief agencies. As the insurgents moved south, food flowed in behind them to stabilize their liberated zones. At the same time, these linkages meant that donors had influence over the rebels. The Reagan administration was able to prod the insurgents into curtailing their attacks on Government food convoys by threatening to reduce food consignments to PVOs (Africa Confidential 31, 9).

The Government's own dependence on international assistance, especially American shipments through PVOs and the WFP, ultimately made it vulnerable to international pressure also. With most of its trucks tied up by the war, Ethiopia needed WFP logistical support to move food inland from its ports. When WFP balked, the Government agreed to permit a few convoys to enter the north in 1989.

By the end of 1988 the old regime's military situation had become completely untenable (Keesings 37113). The EPLF seized all of Eritrea except Asmara and Massawa and the TPLF began to advance toward Addis Ababa through Gondar and Wollo provinces. The Soviet Union, which had not renewed agreements to provide Ethiopia with military assistance in 1988, pressed Mengistu for reforms. Reportedly, the Soviets warned that "world public opinion will hold him to blame if television reports showed Ethiopian children starving to death." (Africa Confidential 31, 10) The Government dramatically shifted tactics. It held elections, allowed a civilian parliament to be formed and implemented market-oriented economic reforms. The World Bank and the IMF granted Ethiopia loans contingent upon structural adjustments in its economy. And the administration was shifted to a federal system with regional autonomy. Earnest negotiations with the rebels were pursued.

When fighting and drought created renewed famine in 1990 some things were the same: seven million people were affected by hunger and over a million tons of grain were urgently needed to feed them (Keesings 37113, 37945). Upwards of three million people were cut off by the war. Other things were very different: A contest of popularity ensued among the combatants as a weakened Government attempted to retain some measure of legitimacy and sovereignty (Keesings 37173). The Government tried to return to the situation that had prevailed in 1988 before it expelled the relief agencies by arguing that the JDP and the Ethiopian Red Cross were neutral bodies and should receive and distribute food relief. Meanwhile ERA and REST emphasized their ability to feed people in the liberated zones. The competition for legitimacy led the rivals to reach out to civic leaders. The Archbishop of Canterbury, the Most Reverend Robert Runcie, moderated meetings between Government and rebel church leaders that resulted in an agreement for a successor to the JDP, the Joint Relief Partnership (JRP) with representation from Ethiopian, Tigray and Eritrean churches. The JRP established corridors of peace in March 1990.

Government and insurgent roles were now reversed. The Government was forced to permit ERA and REST to become the main conduits for food into the north using the overland routes they had pioneered from Port Sudan and Khartoum (Harbeson 1991, 222-223; Keesings 37807; 37946). They in turn agreed to allow food to enter Asmara and Massawa where government garrisons were besieged. The EPLF wooed the inhabitants of Asmara by allowing two planeloads of grain to be landed per day and 6,000 tons of grain were scheduled to dock at Massawa. None of this meant that hunger was not used as a weapon when it would serve some purpose. During a relapse in February 1991, the EPLF sank five freighters carrying relief food to Massawa to deny it to the soldiers there. After Massawa fell to the EPLF,

Ethiopian Migs napalmed 50,000 tons of grain in the port. But with internationally supported church intervention, relief food was able to flow to civilians in the liberated zones.

5.4.4 Summary

The Ethiopian internal war is an "ideal typical" example of the use of hunger as a weapon by a centralizing state in an agrarian country. Resettlement, villagization and the interdiction of food supplies were employed on a massive scale as the state attempted to subjugate disparate peasantries. But these policies were driven as much by historical patterns of ethnic conflict as they were by socialist dogma or the tactics of counter-insurgency warfare. The fact that conflict-related famines have occurred in Ethiopia for centuries evidences the universality of the phenomenon. It is the international famine relief effort which is modern.

The Ethiopian case demonstrates the critical role played by combatant leaders who desire famine relief to succeed. What successes there were in humanitarian relief in Ethiopia and Eritrea are primarily attributable to the efforts of the staff of the RRC, REST, ERA and the Ethiopian and Eritrean churches. But the ability of domestic advocates for relief to do their jobs depended on international support. With international attention focussed on Ethiopia in 1984-85, the RRC was able to act independently and stimulate a massive relief operation which exceeded the wishes of the Government. At the same time, the insurgent movements, recognizing that they needed to consolidate their domestic political bases and establish their sovereignty in the eyes of the international community, used the relief effort to accomplish these goals.

In turn, the famines and aid efforts affected the outcome of the war. In 1988 with the countryside pacified and with international attention diverted, the Government moved quickly

to maintain its grip on the countryside by preventing a new relief operation from spinning out of its control. But Ethiopia's dependence on foreign food supplies meant it could not bar aid indefinitely. And the rebels were able to provision themselves and win the allegiance of growing numbers of rural people by relying on their foreign pipelines. In 1990-91, the situation came to a head with the imminent collapse of the state in the face of popular rebellion. The end of the regime was foreshadowed when the Government had to turn food policy over to the rebels just to keep its northern garrisons alive.

It is important to point out that as far as many Ethiopians are concerned, the situation in 1988 was in fact preferable to that in 1984-85 even though ten times more food was delivered in the latter case. The 1984-85 operation, as large as it was, came late. People had already moved to camps by the time the food arrived. Thus they were exposed to epidemic diseases while in a weakened state and many died despite receiving help. In 1988 Ethiopian church-based and cooperating foreign relief organizations moved quickly. A hundred thousand tons of grain were delivered to remote villages before foreign workers were reined in by the Government. While many, many people went hungry, fewer of them moved to camps; consequently they were not exposed to diseases, and may have survived as a result.

5.5 Mozambique

Like the governments of Angola and Ethiopia, the new government of Mozambique made ambitious attempts to reorganize agricultural production in the late 1970s and early 1980s (Hanlon 1984, 80-100; Isaacman 1983, 2). And like the other two countries, Mozambique suffered an explosion of recurrent conflict-related famine. Mozambique's hungriest years were 1984, 1987-88, and 1990-91. Many of the by now familiar patterns of

behavior associated with conflict-related famine occurred in the 1980s and early 1990s: the use of hunger as a weapon by Government and guerrillas, the extraction of food from the peasantry, the reconcentration of rural people, and attempts to interdict relief food supplies. Yet the dynamic struggle for legitimacy between combatants employing food to sustain rural supporters that developed in Angola and Ethiopia has not occurred in Mozambique. Why is Mozambique different?

Mozambique is distinguished from the other cases by the extraordinary weakness of the state it inherited from the Portuguese (Vailand and White 1980, 16). Rather than promoting development, colonial regulations restricted African land ownership and cropping patterns, extracted high taxes, and imposed forced labor, all of which undermined agriculture and alienated the peasantry from the state (First 1983, 17). Furthermore, the Mozambican state was highly dependent on South Africa for duties on exports passing through the port of Maputo (then Lourenço Marques) and for taxes on the wages of Mozambican Africans working in South Africa. After the overthrow of the Caetano regime in Lisbon in 1974, the Front for the Liberation of Mozambique (Frelimo), a Marxist party and the only African political party with a national structure, took control of the country. But because of the meager achievements of colonialism, Frelimo found itself without the ability to project its authority into the countryside in even the limited way that the MPLA or the Workers' Party of Ethiopia could.

And as if to reflect the impotence of the state, Mozambican insurgents--who until recently were virtual mercenaries for White minority regimes--have been without autonomous political goals or a coherent organization (Gersony 1988, 17). As will be shown below, rebels in Mozambique are still burdened by methods derived from their foreign founders. These have prevented them from sustaining an interest in mounting relief operations to cultivate rural

support and have prevented the establishment of linkages with international aid organizations. Thus the state has lacked the ability, and rebels the inclination, to use food policy to draw the peasantry to itself.

5.5.1 Frelimo Policies

Initially, the policies adopted by Frelimo were heavily influenced by the ideological orientation of its leadership. These policies prevented the peasantry from fully recovering from the effects of the liberation war (Galli 1987, 34-40; Hall 1990, 60). Under the new Government, plantations abandoned by the Portuguese at independence were turned into huge state farms operated with technical assistance from Bulgaria and East Germany (Hanlon 1984, 110, 210). These gobbled the lion's share of the agricultural budget but produced less and less each year. Smallholders, on the other hand, were organized into collective villages. Sometimes peasants who did not want to abandon their old homesteads were forced into the collectives. Marketing of crops and of consumer goods was entirely controlled by the state. Peasants could only exchange their surpluses for cash, consumption goods, or inputs at state-run stores called *lojas do povo*, which were often all but empty. The distribution system was so inefficient that bad harvests were blamed on a shortage of hand-held hoes. And the Government sent about 100,000 unemployed and urban poor people to collective farms in a resettlement program called *Operation Production*.

Macroeconomic policies also discouraged peasant production and led to the growth of an unregulated parallel economy. By 1981 the metical was overvalued by a factor of 50 (Africa Confidential 26, 3). To keep the prices of its chief export crops, cashews and cotton, reasonable in the face of such a distorted exchange rate, the Government held producer prices

down (UNDP 1989, table 5-1). As a result farmers turned to the black market where they found they could get two to three times the official price.

Mozambique did not spend as much on the military as Angola and Ethiopia (ACDA 1989, table 1). Precise estimates of its military spending are difficult to come by since Mozambique obtained weapons and training by bartering with the Soviet Union and East Block countries. The Arms Control and Disarmament Agency concluded that Mozambique imported about 100 million dollars in arms per year, and spent about 70 million on the recurrent costs of the military in the mid-1980s. But the main reason Mozambique spent less was that it had less to spend. Its only exports were low value commodities like cashews, cotton, and tea. And Frelimo policies caused the economy to decline precipitously. By 1982, Mozambique's real GDP was 33 percent of what it was in 1976 and per capita food production was 75 percent of 1976 levels (UNDP 1990, table 5-1). After 1985 annual central government expenditure was only around 200 million dollars.

5.5.2 Renamo

Upon assuming power, Frelimo pursued a foreign policy that, however laudable its motives, gave the more powerful neighboring White minority ruled countries of southern Africa reasons to try to destabilize Mozambique (Hanlon 1989, 40, 230). Frelimo turned its guerrilla bases in Manica and Tete provinces over to the Zimbabwe African National Union (ZANU) fighting the regime of Ian Smith in Rhodesia (now Zimbabwe). ZANU cadre operating out of Mozambique were able to mobilize numbers of the Shona peasantry against Rhodesian authorities. In response, in 1976 the Rhodesian Central Intelligence Organization organized a group of African and Portuguese ex-colonial commandos that was dubbed the

Mozambican National Resistance (Renamo) to conduct counter-insurgency operations against ZANU and Frelimo inside Mozambique.[25] After Black majority rule came to Zimbabwe in 1980, control of Renamo was turned over to South African Military Intelligence, which used it to punish Mozambique for supporting the African National Congress (ANC) fighting apartheid in South Africa (Johnson and Martin 1986). South Africa also attacked Mozambique directly, launching air strikes and a commando raid on alleged ANC facilities in Maputo in the 1980s.

By 1982 South African Military Intelligence had increased the number of Renamo fighters to over ten thousand and had established covert air and sea supply routes (Africa Confidential 25, 24; 26, 3). Renamo built several large bases in central Mozambique from which it struck at collective villages and at rail lines and roads. It attacked the oil pipeline from Zimbabwe to the port of Beira and the electric power lines from the Cahora Basa dam to South Africa. But Renamo cells also began to expand spontaneously. Renamo's sphere of operations was extended across the Zambezi river into northern Mozambique in 1982 when an independent guerrilla group led by Gimu Phiri called *Africa Livre* joined up (Hall 1990, 40). By 1984 Renamo had spread throughout the country and was making attacks as far north as Cabo Delgado. By the end of the 1980s the war had consumed 2,423 or 45 percent of Mozambique's primary schools and 1,800 health clinics (Mozambique 1984, 33; MSN 2, 3; UNDP 1988, 1-8). The total cost of war is estimated to have been over 15 billion dollars. As many as 100,000 people may have been killed by Renamo (Gersony 1988, 41).

The people who live along the border between Mozambique and Zimbabwe are mostly ethnically Shona. Because Renamo was first established in Zimbabwe for the purpose of

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25. The Mozambican National Resistance, *Resistencia National Moçambicana* in Portuguese, is known by several acronyms. It was called the MNR when founded in Zimbabwe. It is also known as RNM and RENAMO (all capitals). Since 1983 it has called itself Renamo, following the Portuguese practice of interjecting vowels between consonants and capitalizing only the first letter.

destabilizing the border region, many of the first Africans in the organization were Shona. Ethnicity affected the behavior of the organization in several ways. Renamo had its greatest success in the Shona majority provinces of Manica and Sofala. But Shona preponderance also led to internal schisms in Renamo. After five years, Phiri split with Renamo, re-establishing the defunct Mozambican National Union to protest Shona domination (Hall 1990, 47).

Journalists and social scientists have found investigating Renamo to be difficult because it appears to be wantonly violent (Gersony 1988, 41, Minter 1989, 5-6). William Finnegan spoke of an "unexamined assumption that Renamo came from Hell" in the discourse on Mozambique (1989, 57-58; see also Darch 1989, Hall 1990). Indeed, Renamo did adopt a strategy of civilian terror. In one attack on Homoïne in 1987 over 400 civilian non-combatants were massacred and their corpses tossed into wells to pollute them so that survivors could not live there again. That same year Renamo guerrillas killed 278 civilians in a vehicle convoy, 63 people at Mualane, and 72 at Manjacaze (Keesings 35685-86). And Renamo fighters have systematically mutilated captives--cutting off noses, ears, lips and digits so that survivors' wounds would warn others of the consequences of resistance. The United States studied backing Renamo during the Reagan administration (Wright 1989, 160). CIA Director William Casey, Senator Jesse Helms, and White House Communications Director Patrick Buchanan all lobbied the White House on behalf of Renamo arguing that it was an anti-Communist movement and should be supported like UNITA. But Renamo was so unsavory that this proved to be politically impossible (Finnegan 1989, 63).

Renamo's methods of controlling food production and distribution account for its catastrophic impact on food security. Renamo is grouped into battalions operating out of provincial base camps (Minter 1989, 8). Battalions have their own plantations and control nearby villages from which they extract food. There is abundant evidence that some Renamo

plantations--in contrast, for example, to those run by the TPLF and the EPLF--are worked by slave labor and that peasants who refuse to provide Renamo with food are beaten or killed. Furthermore, Robert Gersony found that Renamo has designated certain parts of the countryside "tax areas." Renamo fighters levy food taxes on peasants living in these areas, and also steal property like radios and clothes from them. Gersony surmised that when droughts occurred, Renamo guerrillas increased their levies on households in the "tax areas" because the crops on their own plantations had failed (1988, 16). There are numerous reports of Renamo fighters kidnaping and raping women in the villages they control and in tax areas. Areas not used for taxation are liable to be designated "destruction areas." According to Gersony, Renamo aims at driving the state completely out of the destruction areas. Villages and farms in the destruction areas, even if undefended, are likely to be subject to full-scale attack including the assassination of government officials, the destruction of government facilities such as schools and clinics, and civilian massacres (1988, 30).

Because the insurgents are dependent on local food supplies, Frelimo's strategy has been to stop people from providing Renamo with food by employing classic counter-insurgency and food control tactics (Finnegan 1989, 68). These have contributed to the erosion of rural food security. In parts of central Mozambique peasants suspected of aiding Renamo have been herded into camps at gun point and kept under guard (Human Rights Watch 1990, 67-70). In the camps they are totally dependent on food from the outside. When such tactics are applied, relief agencies become unwilling partners in food control. After rounding up villagers the army informs relief agencies of their situation. The captives go unfed until food aid arrives. Human Rights Watch reported Government troops confined such refugees to a camp in Mugulama without food for two months. The captives are said to have died of hunger-related illness in the camps at the rate of 20-30 per day until food aid was

finally delivered. In Zambezia the Government has used aerial bombardment to drive villagers who had been living in Renamo "tax areas" into camps (Africa Confidential 31, 21). Furthermore, collective villages, originally intended as centers of state economic activity, have often been used to reconcentrate rural residents to isolate them from the influence of insurgents. As will be discussed in greater detail below, collectivization probably alienated people from the state and created openings for Renamo.

But the fighting and famine have also critically undermined the performance of the Mozambican army (Finnegan 1989, 93-94). Mozambique's debts and the difficulty of communication often prevented it from adequately provisioning its troops in the field. After 1987 some jaded units turned to pillage at a notorious pace. This exacerbated the crisis both because of the direct cost to Mozambique of its own army's vandalism, and also because it tended to strip the Government of what legitimacy it retained. Some Government soldiers even raided food convoys making the delivery of relief yet more precarious.

5.5.3 Mozambique Succumbs

By employing Renamo, South Africa succeeded in forcing Frelimo to expel the ANC from Mozambique and to change its political orientation (Africa Confidential 25, 19; 25, 24). Except for a small clique of hard line generals, most Frelimo leaders came to agree that the Government could not cope with its situation without changing its policies in two key areas. First, President Samora Machel attempted to improve Mozambique's international relations. He wanted to bring pressure to bear on South Africa to curtail support for Renamo. And he sought foreign economic assistance to arrest the country's economic decline. Second, Machel wanted to liberalize the economy.

To their credit the Frelimo leadership recognized a connection between their policies and rural instability earlier than their peers in the other Soviet-backed African states. Planning Minister Mario Machungo, who had been an advocate of state farms, began experimenting with economic liberalization as Governor of Zambezia in 1983 while trying to deflect penetration by Renamo (Africa Confidential 25, 19; 27, 23). By the following year most Frelimo leaders had become convinced that further economic liberalization was necessary. The change in attitudes opened an extended period of diplomacy and negotiation during which Mozambique attempted to accommodate South Africa and the United States.

Under President Ronald Reagan, the United States eliminated almost all aid to Mozambique. In the early 1980s Assistant Secretary of State Chester Crocker became alarmed that Mozambique might ask Cuba for military assistance if South African attacks continued. When Mozambique approached the United States asking it to condemn South African aggression, Crocker responded that agreements with South Africa would clear the way for western aid (Gelbard 1984, 2). And he also began to pressure South Africa to sit down with Mozambique (Cheatham 1985, 70). In 1984 Mozambique and South Africa signed the Accords of Nkomati in which Mozambique agreed to stop harboring the ANC and South Africa promised to stop supporting Renamo. After signing the Accord, Mozambique opened its economy to foreign investment and joined the IMF and World Bank. The metical was devalued and Government subsidies were slashed as part of a structural adjustment program in 1987.

Although South Africa and the United States negotiated with the Frelimo Government, Mozambique's diplomatic initiatives did not lead to the respite it desired. South Africa continued to funnel covert aid to Renamo (Africa Confidential 25, 24; MSN 2, 3). Even as Nkomati was being signed, 1,500 newly trained fighters crossed into Mozambique from South

Africa along with "tons" of supplies. The covert pipelines remained open until at least 1988. Once it was clear that Nkomati was a dead letter, Mozambican forces made several sweeps through the country in 1985-86 with the support of troops from Zimbabwe (Keesings 35685). Renamo fell back after losing its Gorongosa headquarters, but returned in 1986 seemingly reinvigorated. During this fighting over one million people were internally displaced and 700,000 fled the country. Renamo claimed it destroyed over six hundred cooperative villages (MSN 2, 3). As the destruction spread, agriculture in Mozambique began to collapse and the country slid toward famine. The urban areas received almost no food from the countryside because of the danger of travel.

Mozambique now depended on imported food for 90 percent of its needs. In 1987 the United Nations estimated that six million people were affected by hunger and that two million were at risk of dying without assistance (Oxfam 1987; UNDP 1988, 1-8).

However, political and strategic considerations would make relief a failure (Africa Confidential 25, 19). Food relief had became politicized during the liberation struggle and remained so in the internal war. For example, Frelimo still held lingering hostility toward the ICRC because it believed the ICRC had been biased in favor of the Portuguese during the anti-colonial war. Because of this, President Samora Machel rebuffed ICRC offers of assistance in 1983 and 1984. Instead, Mozambique received relief assistance from a variety of small PVOs with acceptable political credentials that distributed WFP grain. As far as the PVOs were concerned this assistance was not neutral; it was given with the intention of helping Frelimo govern Mozambique.

Renamo tried to use hunger to force Mozambique to recognize it. It insisted that only a neutral source like the ICRC should provide food aid and that relief in Renamo-held areas must be under Renamo control. To drive the point home, it tried to prevent PVOs from

delivering food aid, and made relief workers priority targets. In one incident in 1983 Renamo shot up a German relief convoy, captured the relief workers and held them hostage.

By 1985 Machel had become desperate enough to agree to allow the ICRC to work in the country (ICRC 1986a, 1988). However, the ICRC made the mistake of accepting Frelimo's view of Renamo as an illegitimate, purely external phenomenon. Rather than following its usual policy of negotiating an agreement with all combatants and providing aid on all sides, the ICRC moved straight into Government-held provincial capitals. Renamo attacked an ICRC aircraft and disrupted feeding operations forcing the ICRC out of the country. The ICRC returned the next year only to be ejected again in 1987. Approached by the ICRC and the United Nations, Renamo refused to discuss security for the food relief effort unless Frelimo recognized it first, and Frelimo would not do that.

The WFP transported over half a million tons of grain to Mozambique to fight the famine in 1987-88 (WFP 1989a 1-4). The food was distributed by the Government, a Mozambican PVO called the Mozambican Nucleus for Assistance to Refugees, the ICRC, and Médecins Sans Frontières, and forty other PVOs (UNDP 1988, 1-8). But in spite of the scope of the effort the food did not reach most of those at risk. Travel inside Mozambique was too risky. Instead relief supplies were sent to coastal cities like Inhambane where, it was hoped, the displaced would come to be fed. But over two million people in the interior were beyond the reach of help--much of Cabo Delgado, Manica, Nampula, Sofala and Tete provinces were inaccessible to the Government or relief workers. It is estimated that over 500,000 Mozambicans died of starvation and disease during 1988. Mozambique still receives nearly half a million tons of food aid annually (UNDP 1990, table 5-1). Altogether 2 million people have died in Mozambique's internal war and conflicted-related famine (MSN 2, 3).

As in the two other socialist cases, the Government of Mozambique adopted a by now familiar set policies that displaced peasant producers and ruptured markets. Militant resistance to state policies, including the presence of rebels backed by South Africa, was superficially similar to the case of Angola. But in Angola, as well as Ethiopia, insurgents developed rural bases in part by cooperating with international relief agencies. Renamo remained primarily predatory, rejecting the opportunity to participate in relief programs. Just what was Renamo's relationship to rural people and why did it fail to adopt a popular stance?

5.5.4 Accounting for Renamo

The debate about what has happened in Mozambique is highly politicized. Since Mozambique's decline is associated with Renamo's sustained and extremely violent attacks, an adequate account of it must address both Renamo's anomie and its durability (Finnegan 1989, 48; Hall 1990, 39). But an account that asserts that Frelimo policies have created openings for Renamo places a burden on the once popular Party that some progressive Africanists find politically unacceptable. Thus as recently as 1989 writers sympathetic to Frelimo denied that Renamo's existence or behavior were in any way attributable to Frelimo policies, and argued that Renamo should be regarded primarily as a South African tool (Minter 1989, 4). For example Colin Darch wrote that, "The warlords of Mozambique, if the truth be known, have been sitting in SADF headquarters in Pretoria all along." (1989, 48) Darch concluded that South Africa was continuing to use Renamo to destabilize Mozambique long after Mozambique had ceased to be a regional threat in order to prevent Maputo from

capturing a significant share of southern African trade (1989, 45).[26] Those who place primary blame on South Africa concede that Renamo has received some local support, but say that this support comes from reactionary groups like *regulos*--Africans who formerly served the colonial government--or *feiticeiros*--which can be rendered as "magicians"--who they say formerly used superstition to coerce the peasantry (Darch 1989, 35; Hall 1990, 49).[27]

Writers like Darch want to quash three new and inter-related strands in the commentary on Mozambique that analyze Renamo in relation to internal Mozambican politics and society rather than South African foreign policy (for example see Geffray 1990). The dominant new strand, occupying a position similar to the one I have taken in this dissertation, includes works that maintain that insurgency in Mozambique is a popular response to Frelimo policies that have undermined peasant agriculture (Galli 1987, 34-40). Advocates of this perspective argue that forced villagization has been an important catalyst for rebellion. Another strand is anthropological. Anthropologists studying Mozambique speculate that Renamo has proved to be durable because early Frelimo policies undermined the authority of dominant clans and traditional social institutions, alienating their leaders and members. They note that heads of clans and traditional religious leaders play important roles in some Renamo

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26. Darch also denies the serious intent of those investigating connections between Mozambican politics and Renamo. He said, "As William Minter has pointed out, scholars can make or enhance their reputations by being in the vanguard of a 'paradigm shift.' The entirely sufficient explanation of the role of the MNR as a proxy army acting for South African regional policy is no longer of interest." (1989, 44) While it is true that Minter places primary emphasis on the role of South Africa, Darch should be aware that Minter also has made detailed and nuanced investigations of the local mechanisms of Renamo's spread (1989).

27. The extent to which politics is influencing the evaluations of social scientists studying Mozambique is illustrated by the dispute over what to call traditional religious leaders who support Renamo. Those who believe that Frelimo policies alienated the peasantry by undermining the authority of traditional institutions use the positive term *curandeiro*--"healer"--to designate traditional religious leaders who support Renamo. Those who see rural supporters of Renamo as reactionaries use the supposedly derogatory *feiticeiro*--"magician".

bands (Hall 1990, 47-49). Still other writers think that Renamo activity should be understood as a form of social banditry or warlordism. For example, Finnegan wrote that the destruction of the Mozambican economy had given rise to an "economy of pillage" in which both Renamo and Government forces have been implicated (1989, 70). It is important to understand the internal dynamics of Renamo's spread because these account for aspects of its behavior that external origins alone leave unexplained.

It is often asserted that the hypothesis that Frelimo policies account for Renamo's spread can be tested by seeing whether there is a correlation between the presence of collective villages and Renamo activity (Hall 1990, 57). "If the war in Mozambique is a struggle against an undemocratic Frelimo government and against forced villagization, we should expect locally-based fighters trying to get their land back." (Darch 1989, 46) Darch points out, quite correctly, that villagization and Renamo activity are not correlated. The proportion of the population living in collective villages was lowest in Manica and Sofala provinces, the very provinces that experienced the most intense Renamo activity. And the most heavily villagized province, Cabo Delgado, was not penetrated by Renamo until 1983 (Africa Confidential 25, 19). Darch's mistakes are in reducing all important grievances against Frelimo to the single issue of villagization, and in assuming that no third variables condition the connection between villagization and Renamo activity.

In fact, accounts of Renamo activity suggest that its spread was facilitated by Frelimo policies that undermined the food security of Mozambicans. These policies, including forced villagization, were in implementation if not intent, similar to classic food control tactics even in areas not infiltrated by Renamo.

For example, Margaret Hall provides a detailed description of Renamo penetration of Meloco District in Cabo Delgado Province. Her source was a series of investigative articles by Albano Naroromele appearing in the Mozambican press in 1985 (1990, 56-57).

The people of Meloco were collectivized in the early 1980s. Collectivization depressed the economy of the area so badly "that for want of cloth, people went around naked--this even though Meloco was the administrative headquarters for the locality." (Hall 1990, 57) At the same time the collapse of the national economy meant there was little traffic between Meloco and the rest of the country. Supplies arrived as infrequently as once a year.

According to the articles, it was former Chief Muikho Mwene who first made contact with Renamo and provided them with intelligence on Meloco District. Mwene had lost his homestead to collectivization; the new village of Khatawpa was built on the site it had occupied. He and his followers wanted to destroy Matiquiti, the village to which they had been sent, and return to their traditional homesteads. When Renamo moved in, Mwene and other former regulos were recruited. Mwene ordered the destruction of the collective villages and the killing of Government personnel. Renamo promised the people of Meloco that "the whites for whom they worked" would return to govern Mozambique and bring them food, clothes and consumer goods. In the meantime people provided the Renamo fighters in their base camp with food and helped construct defensive fortifications. The senior Renamo official is also reported to have organized traditional religious ceremonies appealing for success in battle against Frelimo. As things did not improve and Renamo exactions grew, some people tried to escape but were killed. The killing worked against Renamo as the Mozambique army was later able to reoccupy Meloco fairly easily.

Anthropologists Christian Geffray and Mogens Pedersen reported on Renamo penetration of Érati District in Niassa Province in 1984 (Geffray 1990). According to them,

forced villagization created relative extremes of wealth and poverty. Differences in wealth were coincident with ethnic differences because collectivization had placed people brought in from outlying areas under the control of the leaders of the clans upon whose land the new villages were located. Some of those who lost their land and were locked out of village government turned to Renamo to obtain weapons, attacking collective villages and killing leaders and other members of the newly dominant clans.

Examination of these cases of Renamo penetration suggests that it was also facilitated by things which were not direct consequences of food policies. These include general economic decline, the retreat of the state, the dispossession of the peasantry, and the displacement of traditional leaders. Of course these factors are not entirely independent of food policy nor of one another. Frelimo policies, whether full collectivization occurred or not, accelerated economic decline by disrupting peasant production. Decline, in concert with the political turmoil and ethnic conflict created by villagization, fueled grievances against Frelimo. These also exacerbated the incapacity of the state, in part because lower levels of economic activity meant reductions in state revenues, and because the spread of insurgency overwhelmed Frelimo. The withdrawal of the state made life in the villages even more unbearable and made the entry of Renamo all but inevitable.

If Frelimo policies rather South African destabilization provided Renamo with its impetus, other groups--groups without South African connections--could be expected to have appeared during this period also. In fact, peasants thrust forward a variety of groups and movements while attempting to deal with the crisis (Hall 1989, 57). In northern Mozambique, where Frelimo once had its liberated zone, resistance has echoed forms developed during the liberation struggle. The locally based guerrilla group Africa Livre has already been mentioned. In Ngapa, Cabo Delgado, with its historical ties to Tanzanian cooperatives dating

from the liberation war, peasants abandoned government villages and established rudimentary cooperatives unconnected to the state. In central and southern Mozambique, especially in Shona areas, traditional religious leaders, or *curandeiros*, historically have had political clout (Finnegan 1989, 94). Early on, Frelimo tried to squash traditional religious and political practices but had to retreat when Renamo made "freedom of religion" one of its organizing slogans. As the Government abandoned the countryside, curandeiros enjoyed a resurgence of influence. Some of them, like a woman known as Nwamadjosi in Manhiça District, have cooperated with Renamo, urging local people to work with it and giving it some legitimacy. But others, like Manuel Anton in Zambezia Province, have organized rival military organizations and defeated Renamo bands, gaining control of the countryside in the process (Africa Confidential 31, 21). Anton's organization, known as Naprama, fields fighters armed with clubs and spears. Yet they are said to have rescued hundreds of thousands of people from Renamo plantations and "tax areas," in Central Mozambique, something Frelimo had not been able to do. Anton's Naprama has reminded observers of the *achikunda* armies led by the warlords of the Zambezi valley in centuries past.

And if grievances against Frelimo caused people to turn to Renamo, then there should be some evidence of popular support for it. Both Finnegan and Hall concluded that Renamo was most violent in the south where historical animosities alienated the Shona leadership from local groups, but that in central Mozambique with its Shona majority, Renamo may at times have had close ties to local people (Finnegan 1989, 71; Hall 1990, 53). Minter documented testimony from refugees that they had willingly supplied Renamo with food before fleeing the war (Minter 1989, 8). From Gorongosa in the Shona heartland, where Renamo headquarters were located, came scattered reports of peasants receiving food or medical assistance from Renamo. And Renamo has found that it can profit by cooperating with civilians in ways that

could conceivably have improved their food security (Africa Confidential 25, 19). Renamo organized an efficient black market in Tete Province with the cooperation of local people, moving crop surpluses, as well as items pillaged from villages elsewhere in Mozambique, into Zambia and Malawi.

> People are too disillusioned with Frelimo, especially in the north, where the new generation of subsistence farmers, neglected by official development policy, deprived of food, agricultural inputs and incentives to market their crops, have turned to arms in much the same way their fathers became Frelimo fighters against colonial rule. . . A [Renamo] group in the fertile district of Angonia, in the north of Tete province, certainly receives widespread popular support. . . The province is practically void of all government services. Forced villagization, as elsewhere in the country, has been a disaster. (Africa Confidential 25: 19)

Yet these tentative beginnings never grew into an official strategy of using food policy to seize the initiative from the state. Why did this not occur?

Frelimo policies rather than foreign origins account for the spread of Renamo; but foreign origins explain its antipathy. Renamo's structure and operating procedures were established by people outside Mozambique and these have prevented it from adopting policies favorable to the peasantry. When Renamo was created, its handlers wanted to prevent it from securing an autonomous base of support. As a standard operating procedure soldiers were rotated to serve in theaters other than their area of ethnic origin (Minter 1989, 3). Thus Renamo soldiers were often unwelcome aliens in the area where they were fighting. Furthermore, the first Renamo recruits are said to have adopted the "macho" world views of their Rhodesian and South African trainers (Hall 1990, 54; see for example Reid 1982). After Renamo began to spread inside Mozambique, many fighters were recruited from among the slaves in Renamo base camps or began their careers as captives dragooned to serve as porters.

Hall wrote that the experience of instrumental terror in Renamo camps may have conditioned them to violence.

Tactics and procedures laid down at the time of its founding prevented Renamo from evolving into an insurgency inclined to legitimize itself by promoting famine relief. Yet Renamo officers in Pretoria and Lisbon are subject to influences not felt in the base camps. After being abandoned by South Africa, Renamo leaders increasingly adopted the rhetoric of other liberation movements. In 1987 Renamo underwent an "Africanization." African Renamo officers ousted Portuguese officers and Africans regarded as tainted by association with White minority regimes.

As Renamo leaders acquired greater independent experience in international affairs, they became more concerned about the movement's image. For example, in 1989 Renamo president Afonso Dhlakama ordered an end to the use of torture out of concern for the movements' international reputation. (Keesings 35686, 37951).[28] With coaching from American conservatives, Renamo leaders began to argue in world fora that they were not South African proxies but advocates of multiparty democracy. However, it is unlikely that Dhlakama has sufficient control over Renamo bands in the field to make any fundamental reforms. In Interviews local commanders told observers that they ignored Dhlakama's directive to end torture (Hall 1990, 54).

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28. Portuguese fascists and South African and American ultra-rightists clandestinely ship arms to Renamo through South Africa, but there is no evidence that such activity is known to the government in Pretoria (MSN 2, 3).

5.5.5 Summary

The spread of Renamo can be accounted for by Frelimo policies that caused a decline in the food security of Mozambicans. These policies, which were similar to the deliberate food control tactics seen under collectivization in Ethiopia, disrupted traditional agricultural practices and interfered with markets, alienating the peasantry from the state. Dissidents not only turned to Renamo, but to other groups and movements as well.

The case of Mozambique suggests to me that the tendency of combatants to use food to achieve their goals is a universal one; it is even dimly perceptible in so invidious a group as Renamo. Still, in most areas, Renamo did not develop policies favorable to the food security of people under its control even when repeatedly presented with the opportunity to join in relief efforts. Comparison of Mozambique with Angola suggests why.

First, South African intervention in Mozambique does not account for Renamo's behavior. South Africa backed UNITA, yet UNITA tried to use relief food to strengthen its base in the southeast. The main difference between Mozambique and the other cases is in the ethnic relationship between rebel fighters and local people.

UNITA leaders were mostly Ovimbundu people fighting for political self-determination for their kinsmen. Similarly the TPLF and EPLF fought for autonomy for their ethnic groups. Renamo was unlike these movements in that its standard organizational practices prevented leaders from forming ties with local people. The few reports of Renamo aiding civilians come from the Shona heartland where ethnic Shona Renamo leaders were among members of their own group. Elsewhere Renamo did not travel far along the path taken by the other insurgencies studied here.

In 1989 Frelimo and Renamo began negotiations after the President of Zimbabwe, Robert Mugabe, and the President of Kenya, Daniel Arap Moi, arranged for meetings between the parties. In 1990 Frelimo unveiled a new constitution embracing multiparty democracy, guaranteeing private property, and protecting basic freedoms (although it did so without Renamo participation). New presidential elections are scheduled for 1993 and several new parties plan to contest them. Liberalization by Frelimo, though, has led to increasing western support for the Government of Mozambique, rather then the entry of Renamo into legitimate politics. South Africa, Portugal, the United States and Zimbabwe are all supplying the country with economic, and in some cases, military assistance. Since 1991 a cease fire along Mozambique's major transportation arteries has been supervised by a joint commission with representation from eleven nations including the United States as well as Renamo.

Observing these developments, some Western officials conclude that Renamo has been a necessary evil for Mozambique. One American diplomat in Maputo is reported to have said, "The MNR accomplished its objectives--multiparty democracy and capitalism." (Knight 1991, 217-19) Such a notions represent a fundamental misreading of what Renamo is. Whether or not some of their leaders now desire to come in from the cold, ordinary Renamo fighters still roam the countryside. Renamo bands are still primarily autonomous and predatory, without the inclination to seek popular support seen in the other cases. Renamo has not developed policies at the local level that would enable it to participate in government. The prospects for improvements in food security in the rural areas of Mozambique must be considered grim.

CONFLICT-RELATED FAMINE IN AFRICA 1967-1992: THE POLITICAL ECONOMY OF FOOD AND WAR

VOLUME II

By

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6. THE AFRICAN FAMINES--NON-SOCIALIST CASES

6.1 Nigeria

The Nigerian civil war began in June 1967 and lasted until January 1970 (Cervenka 1971, 153-68; De St. Jorre 1972, 235-52). It occurred when the government of Eastern Region seceded from Nigeria and declared itself the Republic of Biafra. The war resulted in a famine that peaked during 1968 and affected 11 million people as Biafra was sealed off from the outside world by the Federal Nigerian forces. Up to a million people may have died, most of these from diseases contracted while they were suffering from kwashiokor--severe protein deficiency (De St. Jorre 1971, 412). During the war the first modern famine relief operation in Africa was conducted from August 1968 until June 1969 after which time the Nigerian Government decisively brought it to an end.

As you will see, the Nigerian civil war and famine were different from the others discussed so far in many ways. First, Nigeria is one of the two cases treated in this text that had a government that was not ostensibly socialist.

However reprobate its agricultural policies may have been, the Government did not attempt an agrarian revolution: there was no forced villagization, no seizure of rural markets, no state farms. The grievances of peasants dispossessed by the state were only secondarily connected to the dynamics of the war.

Second, Nigeria was different because the war was not exploited by foreign powers. While England, France, the Soviet Union and other countries did supply limited amounts of weapons to the combatants, combatants were not proxies for external interests. Federal

Nigerians and Biafrans had adequate political motives for fighting each other and did so despite international efforts to mediate the conflict.[29]

Third, the combatant group that opposed the state was not an army of agrarian rebels or guerrilla fighters. A product of secession, Biafra was born with most of the attributes of a state: a large contiguous area over which it was sovereign, a loyal population, an active economy, and institutions like an executive branch, a legislature, courts system, civil service, and a military. Positioning itself as the savior of the Ibo people, Biafra had a tremendous store of political legitimacy that enabled it to galvanize its citizenry.

Fourth, the Nigerian state was not composed of an ideologically motivated clique, nor did it rely upon an narrow ethnic base. Soldiers and civil servants from a wide variety of backgrounds, including a few prominent Ibo leaders, called upon a reluctant executive to use force preserve Nigeria's federal structure in the face of secessionism. To win the war, the state had to attract military and food assistance from the international community, while simultaneously banishing the Ibo fear that they would suffer genocide if they were defeated. Rather than dragging on for years while the foundations of state legitimacy eroded, the war ended with a decisive victory for the Federal forces.

These four points are important because they help to confirm that conflict-related famine is not just a phenomenon of socialist agriculture or foreign hegemony. It can occur whenever combatants resort to the use of hunger as a weapon. These points are important for another reason as well. As different as Nigeria and Biafra were from Angola in 1990 and

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29. Nigeria and Biafra were not heavily militarized, either. In 1966 Nigeria, with a population of 56 million people, had an army of only 10 thousand (Cervenka 1971, 138, 318). Total annual military spending was 1.5 percent of the gross domestic product, less than 50 million dollars. Average annual arms imports in the four years before the war were less than half a million dollars. Nigeria imported less than 10 million dollars on armaments the first year of the war, and total military spending the last year of the war was 9.7 percent of the gross domestic product, under half a billion dollars (ACDA 1972, table 1).

Ethiopia in 1985, these three cases share an important feature: combatants permitted and even encouraged relief operations during the war. By including the case of Nigeria in the analysis, a broader set of circumstances under which combatants were inclined to use food to promote their causes can be observed. The case of Nigeria ensures that we do not spuriously conclude that relief only flows when governments that are proxies for foreign powers are on the ropes.

The roots of the Nigerian Civil War lay in escalating conflict between different societies that were confined within one political system as a legacy of colonialism (De St. Jorre 1972, 27-47; Luckham 1971, ch 1.). Nigeria's North is Moslem and the East Christian. The West combines faiths, but was dominated by powerful Yoruba clans. Whereas Northern Hausa and Fulani are numerically and thus politically dominant, the Ibo from the East were then economically ascendant. The West was often the prize in the struggles between the other two regions. However, because this triangular balance of power was so very unstable, it was not foreordained that the East should fight the North and the West. Both the West and the North threatened to secede before the East finally did it.

The events that led up to war began in the mid-1960s amidst incipient rebellion in the West (Bienen 1978, 204). Western farmers, who had seen cocoa prices and productivity decline and were chafing under a "feudal" land tenure system, lashed out at the Federal Government, dominated by the Northern People's Congress party. The hub of the opposition in the West was a party called the Action Group led (from prison) by the popular Chief Obafemi Awolowo. Widespread violence erupted after Chief Samuel Akintola, whose party was allied with the Northern People's Congress, defeated the Action Group's candidate for Prime Minister of the Western Region in blatantly rigged elections.

Among the most vocal critics of the Nigerian regime were a group of intellectual young Ibo, including a number of junior military officers (De St. Jorre 1972, 45). Their

rhetoric was very influential. They argued that as long as Africans lived under states that had been created by colonialism they were not yet free. They pointed to corruption in the Government and the manipulation of the political process as evidence of the incongruity of the state. In response to Akintola's fraud and mounting political disorder, some of the junior officers launched a coup in January 1966. The attempt was foiled by Major-General Johnson Aguiyi-Ironsi, also an Ibo, but not before the Northern Premier Sir Ahmadu Bello and a number of other prominent Federal officials, including Akintola, were killed. Northerners interpreted the coup attempt as an Ibo grab for power.

In order to bring the situation under control, Aguiyi-Ironsi announced his intention to move Nigeria from a federal to a unitary political system (Tordoff 1984, 164-67). Although Aguiyi-Ironsi actually had no such intentions, this was widely seen as another effort by the Ibo to extend their economic domination over the entire country by usurping the prerogatives of local government. In May 1966, demonstrations against centralization degenerated into rioting in which hundreds of Ibo were killed. In July Aguiyi-Ironsi was murdered during a coup by Northern troops. The coup not completely successful, however. General Emeka Odumegwu Ojukwu, Ironsi's military Governor, retained power in the East, which was thus politically separated from the rest of Nigeria.

Northern troops took the coup as a cue to settle scores with the Ibo once and for all and pogroms against Ibo civilians broke out (Schwab 1971, 4). This time thirty thousand people died. One and a half million Ibo fled from the North and West to the East. Ibo soldiers and civil servants, expecting civil war, left their posts and joined the exodus and non-Ibo similarly abandoned Ibo areas.

At first the July coup leaders called for the break-up Nigeria (De St. Jorre 1972, 71-72). However, civil servants and some members of the military, especially those who were

not members of the three dominant ethnic groups, sought to preserve federalism. These people formed the core constituents of the Nigerian state. The leading exponent of federalism within the military, Lieutenant-Colonel Yakubu Gowon, a Northerner from a minority group, gradually rose to power in the days immediately after the coup because of his skill as a mediator.[30] In order to keep Nigeria together, Gowon persuaded Westerners that they should remain in a union with the North. He released Awolowo from prison and agreed to the creation of new states to dilute the power of the North. The West was skeptical of continuing Northern domination nonetheless. Awolowo warned that if the East were permitted to leave Nigeria, the West would go, too. In 1967 Gowon succeeded in mollifying Western leaders by

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30. The senior officers who went on to become Heads-of-State, Aguiyi-Ironsi, Gowon, and Ojukwu all remained loyal to the Federal Government during both the January and July coups (De St. Jorre 1972, 32, 37-38, 68-69, 74). In January Gowon came to Aguiyi-Ironsi's side as the latter rallied his troops in Lagos; and in July Gowon tried to negotiate with the mutineers at the behest of Western Brigadier Ogundipe, Aguiyi-Ironsi's second-in-command, but was detained by them. Ojukwu, commander of the garrison at Kano in January, ordered his forces on alert as soon as he heard of the coup attempt. In July, now military Governor of Eastern Region, Ojukwu backed Ogundipe.

The senior officers of all ethnic groups generally had world-views that were different from the juniors who mounted coups (Luckham 1971, 1). Some of the senior officers, like Aguiyi-Ironsi, had risen through the ranks of the colonial army. Others, like Gowon and Ojukwu, had been trained in Britain. These men owed their successful positions to Nigeria's Federal system and accepted the implicit ethnic bargains that held it together.

In contrast, the junior officers who led the January coup rejected the legitimacy of the Nigerian state. They were disillusioned with corruption and the abuse of power and wanted to clean house. They blamed reactionary elements in the North for Nigeria's crisis, but generalized their criticisms to the entire political leadership including the senior officers. In fact two Ibo January coup leaders, Major Chukwuma Nzeogwu and Major Emmanuel Ifeajuna, openly opposed Biafran secession, and Ifeajuna was executed in Biafra in 1967 for plotting against Ojukwu.

The July coup, led by Northern junior officers and NCOs, had explicit ethnic motivations. Northern troops believed that Ibos under Aguiyi-Ironsi had taken over the military. In order to restore order in the military and prevent civil war, Gowon struggled to suppress the pogroms that followed the July coup and fought off pressure from hard-line Northerners under Lieutenant-Colonel Murtala Mohamed to launch a preemptive attack on the East.

appointing Awolowo Vice-Chairman of the Executive Council, making him the top civilian in the Government.

In January of that year Gowon and Ojukwu held talks aimed at reuniting the East with the other Nigerian regions at Aburi, Ghana (Cervenka 1971, 38-42). Although Gowon and Ojukwu came to terms at Aburi, the talks collapsed when Gowon could not get members of his Government to agree to generous guarantees for Eastern autonomy. Ojukwu was similarly under pressure from "hawks" demanding secession and he publicly differed with Gowon over what had been agreed at Aburi. In March the Eastern Government took control of taxation in the East, and in April it seized Federal services in the Region. On May 30, 1967 the Republic of Biafra was declared.

6.1.1 The Famine in Biafra

Nigerian and Biafran responses to the famine in the East created by the civil war were shaped by their requirements for internal and external support (De St. Jorre, 1972 233-52; Cervenka 1971, 153-63). Both states sought to maintain and strengthen their internal bases of support. The Nigerian state was founded upon a fragile coalition of minority ethnic groups and politically moderate Hausa. The implication of this fact--that in the long run accommodation was critical for the survival of the state--was not lost upon Nigerian leaders who opposed unrestrained war against Biafra. Gowon permitted relief food to enter Biafra through most of the war, and saw the relief of Ibo civilians as crucial to the resolution of the conflict. Embattled Biafra, which asked its citizens to make enormous daily sacrifices, was even more dependent upon popular support then Nigeria. The Government of Biafra energetically pursued international relief. But Biafra and Nigeria had motives that went

beyond obtaining food for hungry refugees. By publicizing the famine Biafra was able to convince some European countries to ban arms sales to Nigeria and to send relief food, foreign exchange for food purchases, and even weapons. Nigeria, for its part, insisted that the efforts of relief agencies on Biafra's behalf were prolonging the war. The Federal Government tried to persuade the international community that it was not deliberately starving Biafrans, but in fact was the surest conduit for relief.

Even before refugees poured in the densely populated region which became Biafra, it had a hunger problem that was disguised by above average incomes and well-stocked markets. Biafra's vulnerability lay in two areas. First, it was an importer of high-protein foods like pulses, fish and beef; second, many Biafrans worked or operated businesses outside the area and sent remittances to their relatives back home. Those with insufficient land to feed themselves, especially those who did not have other sources of income or relatives outside Biafra sending cash to them, were at risk of malnutrition because they might be unable purchase enough high-protein food. After the war began the Federal Government imposed a blockade upon Biafra that immediately created a food crisis. The blockade all but eliminated the importation of protein-rich foods and the flow of remittances. As a result the prices of protein-rich food items jumped 1,200 percent (De St. Jorre 1972, 225). The blockade hit the land-poor hardest because they were forced to find alternate ways of supplementing their food budgets at a time when resources were scarce and few people had cash to spend. Thus, even though the nominal prices of staple food items like bananas did not rise, real incomes fell, so that even staple food was difficult to obtain (Orick 1968, 4).

The ICRC and Oxfam were among the first agencies to respond to the influx of Ibo refugees after the pogroms in the north (Jacobs 1987, 16, 28).[31] They helped the Eastern government establish 500 feeding centers to care for half a million people who were not absorbed by unaffected households. At the end of 1967 the ICRC sent out an international "SOS" calling for donations from the international community. The head of the Nigerian Red Cross, Sir Adetokunbo Ademola, obtained permission for the ICRC to conduct relief work inside Biafra from the Nigerian Government, and eleven relief flights carrying 100 tons of UNICEF food flew into Biafra. An equal amount of aid went to war refugees in Nigeria.

When the war began, Biafra was the first to use hunger as a weapon (De St. Jorre 1972, 117, 163). Biafra struck deep into Midwest State, occupying areas in which the Ibo were only a minority. Initially Biafran troops followed a strategy of hearts and minds in non-Ibo areas. Explaining that they had liberated Southerners from Northern domination, the occupiers distributed food and did not interfere with commerce or local government. But without adequate logistical support and with the war and Nigerian blockade driving up food prices and creating shortages, Biafran troops began requisitioning food to sustain themselves. Local resistance to their increasing demands was violently crushed, and soon the soldiers were pillaging food stores. A similar pattern unfolded within Biafra itself, where hunger affected the third of the population that was not ethnically Ibo worst of all. Non-Ibo areas that had been occupied by Biafran troops were later the scenes of some of the worst atrocities of the war, whether committed by retreating Biafrans or against Ibo civilians for revenge after re-occupation by Federal troops.

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31. At that time the ICRC had no experience in large-scale relief work. The ICRC's war-time mission was to aid prisoners of war, trace missing persons, treat the war wounded, and promote observation of the Geneva Convention. It was the League of Red Cross Societies, an umbrella organization for national Red Cross societies, that handled relief work. The Nigerian Civil war transformed the ICRC into its modern form.

By 1968 the Biafran gains had been erased and the rebellion had suffered reversals. The capital of Enugu fell in February and Port Harcourt was lost in May, making Biafra completely dependent on deliveries of food by air. As Federal authorities debated how to bring the war to an end the use of hunger as a weapon was publicly debated (Africa Confidential 9, 1; Is Starvation? 1968, 28). Hardliners like Awolowo called for a "quick kill" and urged the use of hunger as a weapon. He said, "All is fair in war, and starvation is one of the weapons of war" (Awolowo 1981, ix). Awolowo argued that allowing the Biafrans to obtain food from outside would needlessly lengthen the war and in fact elevate the final number of casualties. In contrast, Gowon was worried about food aid sustaining Biafran fighters but was sensitive to the political consequences of appearing to starve civilians. As a compromise, he ordered the ICRC to fly food only to airfields controlled by the Federal government while agreeing to permit it to be driven overland to feeding stations in Biafra. The Biafrans, however, feared that corridors of peace would be used for invasion by the Nigerian forces and refused to cooperate. It is true that Gowon's major proposal was for a corridor south from Enugu, a front on which the Biafrans were taking a beating and were vulnerable (Jacobs 1987, 32).

Some foreign leaders and relief officials took the arguments for a "quick kill" seriously. For example, the State Department and the American ambassador in Nigeria were convinced the war would be over in a few months unless relief food sustained Biafra's determination to fight. They threw their support behind the Federals (Jacobs 1987, 55, 145-147, fn. 68). On the basis of its assessment that the war would be over by September, the British Government convinced the ICRC that it should not jeopardize its ability to work in Nigeria and that it should continue observe its code of strict neutrality. The ICRC decided to halt relief flights and to position relief supplies around Biafra so as to be in the best possible

position to move them in once Biafra fell. The World Council of Churches even debated whether halting humanitarian assistance could be used to pressure Oujukwu to negotiate (Okpoko 1986, 58).

But what happened instead was slow starvation. The Nigerian army was uncoordinated. It had grown to 130,000 soldiers in less than a year and the officer corps was riven with conflict between field officers, whose divisions were virtual fiefs, and staff officers who struggled to impose Federal policies on them (Cervenka 1971, 138; Scott 1970, 312). As a result, the Federal forces had almost no logistical system. Troops could not move far or quickly, and communication was extremely poor.

Partly because of such conditions, atrocities were committed against Ibo civilians in the first months of the war (De St. Jorre 1972, 285; Jacobs 1987, 124). In October 1967 the village of Asaba on the Niger was occupied by Federal soldiers who were tense following an assassination attempt against one of their officers. After demanding food and being fed, they began rounding up and executing adult males and any women who resisted them. Fifty men were spared by the arrival of a Major who announced that harming civilians was against the latest orders. Hearing about such atrocities, Ibo civilians, who feared they would be killed if captured, kept retreating into the interior of the enclave, concentrating more and more people in a smaller and smaller area.

As the front crawled toward the new Biafran capital at Umuahia, hunger intensified. By August 1968 Biafra was reduced to a strip of land only 60 by 30 miles in size stretching between Umuahia and Uli airfield (Cervenka 1971, 64; Orick 1968, 1). Its population density had risen from 500 persons per square mile to over 2,000. Starvation deaths soared. The World Council of Churches, which tabulated statistics from the various feeding centers around Biafra, reported that daily deaths from hunger-related causes climbed from 300 a day at the

beginning of 1968 to 6,000 as the famine peaked in August and September (Schwab 1971, 54).[32]

Biafran leaders were acutely conscious of the fact that the state depended entirely on the support of its people for its existence. The Biafran Government coped bravely with the crisis given the conditions it faced and deserves credit for saving thousands of lives (Samuels 1969, 9). It created a documentation system that enabled it to track the needs and entitlements

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32. Daily hunger-related mortality probably never reached 6,000 per day. Mortality estimates were politicized during the war and various observers had motives for inflating or reducing their estimates (Okpoko 1986, 9-11). The ICRC was accused of exaggerating in order to obtain larger donations, while the propaganda generated by the Biafran government during the peak of the famine in 1968 obviously overstated the crisis by several orders of magnitude. Relief agencies in turn accused the United States of favoring a lower estimate in order make its aid commitments appear sufficient. Consider the problem of estimating the total mortality for the war. Such estimates range from De St. Jorre's low of 600,000 (1971, 412) to the ICRC's high that put the toll at two and one half million (Schwab 1971, 99).

All writers agree that the vast majority of deaths were due to complications of kwashiokor. There were comparatively few combat deaths because the Biafrans lacked ammunition and because of poor fire control by the slowly advancing Nigerian forces (Scott 1970, 310). I derived my own estimate of the total mortality related to hunger by summing monthly mortality figures. Monthly figures reported by Schwab are those given by the World Council of Churches in 1968 and by the Government of Biafra in 1969 (1971, 54, 99). Using these I get the following total mortality related to hunger:

Period	Deaths/Day	Deaths/Month	Months
July 1967-January 1968	100	3,000	7
January-March 1968	500	15,000	3
April-May 1968	1,000	30,000	2
June 1968	3,000	90,000	1
July-September 1968	6,000	180,000	3
October	3,000	90,000	1
November-December 1968	1,000	30,000	2
January 1969-June 1969	500	15,000	6
July-December 1969	1,000	30,000	7

Thus the estimated total mortality is 1,206,000.

Given that these are the highest credible monthly estimates of mortality related to hunger, it is hard to see how the ICRC could come up with a total of two and a half million. If United States and British government estimates that daily hunger deaths never exceeded 1,000 are used, a figure of only 636,000 total deaths is obtained.

of the majority of its citizens, who received family allowances, pensions and health benefits as these could be paid. Biafran relief workers conducted surveys of the population's needs and campaigned vigorously for food aid. A fleet of trucks was kept in repair and fueled almost throughout the entire war to transport food to feeding centers. And Biafra's Directorate for Food Production distributed seed and brought new land under production (Nwankwo 1972, 78). John De. St. Jorre wrote:

> The quality of popular support for the [Biafran] government helps to explain why, in defiance of all the normal functional laws of the modern state, life inside Biafra kept going on. 'From an economists point of view, the present situation doesn't make sense,' Dr. Pius Okigbo, Biafra's chief economic planner told me one day just before Aba fell. 'But it is the human factors and the context that matter here, and they make nonsense of theoretical economics.' Improvisation was the order of the day. Electrical engineers and chemists were making rockets, . . . Villagers were manning roadblocks, camouflaging buildings against air-raids and feeding troops in their areas. There was a very efficient Biafran Red Cross. . . Petrol was rationed but home-made refineries were soon to be put into operation--the low sulfur oil was 'cooked' and distilled in huge water tanks set up on trestles--which kept essential transport moving until the collapse. (1972, 224)

6.1.2 The International Response

Initially, Biafran leaders tried to conceal the growing famine from the international press because they thought it raised questions about their ability to govern. But they quickly learned that pictures of starving children could be used to drum up support for their cause. To raise money for relief, the ICRC and Oxfam had spontaneously started using informational material including pictures of starving children (Jacob 28-29). These materials produced an outpouring of offers of assistance from around the world. West Germans donated 23.5 million dollars for Biafran relief, while Norwegians gave 13.3 million dollars and the Dutch gave 9.7 million (Okpoko 1986, 30). In the Netherlands, a one hour television documentary on Biafra

was followed by an hour of dead air during which people phoned or telegraphed pledges of support to relief agencies (Jacobs 1987, 75).

Impressed by these results, Biafra organized press tours of areas hard hit by hunger, and urged journalists to broadcast the film abroad. And Biafra hired Markpress of Geneva and the American public relations firms of Ruder and Finn, and Robert S. Goldstein to further publicize their plight (De St. Jorre 1972, 306-07). Their job was to bring pressure to bear on foreign governments by appealing to the public with images of famine.

Press coverage affected the course of the war because it changed how foreign governments and international organizations responded to it. The press aroused public opinion in Europe and America, making Nigeria and Biafra part of European and American domestic politics. For example, the British Government believed that the Federals would prevail and wanted to preclude growing Soviet influence in Nigeria (De St. Jorre 1972, 356). Therefore, Britain sought to arm Nigeria. But the British television stations ITV and BBC competed with one another to draw viewers using footage of the war and famine. This turned much of the public against the Federal side. Labour MPs used the war as "a ready made stick to crack over the heads of political opponents." As a result, the British Government was forced to reduce its arms shipments and make token pledges of assistance (Cervenka 1971 107-08, 319; Okpoko 1986, 23-25). Nigeria had to turn to the Soviet Union, with whom it had a very uneasy relationship, for part of its military assistance.

In the United States the wing of the Democratic party opposed to the war in Vietnam drew parallels with Biafra. George McGovern, Eugene McCarthy and fifteen other legislators attacked the Johnson administration's position on Biafra and called for an international airlift into Biafra (Jacobs 1987, 75).

During the 1968 presidential campaign, Richard Nixon bashed Hubert Humphrey with propaganda provided by Markpress, accusing the Democratic Government of allowing a Soviet-backed state (Nigeria) to starve civilians (Africa Confidential 10, 3). Pressed by both the left and the right, Humphrey called upon the ICRC to head an effort to move food into Biafra. Once elected, Nixon increased United States efforts in support of Biafran relief. The United States with its huge food surpluses became the main donor to Nigeria and Biafra, giving over 62 million dollars worth of aid (Okpoko 1968, table 3.3 (a)).

Partly as a result of media attention, the situation temporarily turned in Biafra's favor. First, by late September the famine began to abate (Nwankwo 1972, 78). In August Joint Church Aid (JCA), a consortium including the Catholic CARITAS and the World Council of Churches, began making regular relief flights from the island Sao Tomé to Uli airfield (Okpoko 1986, 62-63).

In September there were 207 flights to Uli for an average of 6.7 a day. Soon over 300 flights were going daily, making total monthly deliveries of about 3,500 tons of food. In August, under pressure from world opinion, the ICRC decided to defy the Nigerian Government and began flying into Uli from Fernando Po. It began with a single aircraft, but soon was making over 200 flights a month delivering an average total of 2,300 tons. Since Biafrans were suffering from kwashiokor, most of the food delivered was selected for its protein content: fish, milk, cheese, and pulses. The yam harvest in October meant that many people were able to obtain sufficient calories, and only required protein supplements. Two million Biafrans received assistance from the JCA and the ICRC (Cervenka 1971, 210; Okpoko 1986, 59). Second, Holland, Italy, Belgium, and later the United States, agreed to ban arms sales to Nigeria. And more importantly, France began supplying Biafra with arms that were airlifted in by gun-runners operating from Sao Tomé (Cervenka 1971, 65; Stremlau

1977, 141). In one of the most dramatic moments of the war, Ojukwu personally rallied the remnants of the Fourth Commando Brigade, who had just been decimated in a battle for the town of Aba. The Fourth Commando Brigade broke the siege of Uli airfield, saving Biafra by ensuring that both French weapons and relief food would continue to get through. With new weapons, Biafran forces were able to recapture important agricultural areas in the south that they had lost in time for the yam harvest.

Not surprisingly, given the clear connection between food aid and Biafra's ability to keep fighting, hunger was openly used as a weapon of war. For example, Federal forces often attempted to stop relief agencies from assisting Biafrans. Third Marine Commandos Colonel Benjamin Adekunle, who was in charge of the southern front, was especially hostile to relief workers and impeded their work by detaining them, withholding permission to travel, and impounding relief food. He told reporters:

> I do not want to see any Red Cross, any CARITAS, any World Council of Churches, any Pope, any mission or any United Nations delegation. I want to stop every single Ibo being fed as long as these people refuse to capitulate. I did not want this war. But I want to win this war. That is why I must kill the Ibos. Sorry. (from Cervenka 1971, fn. 162)

Many Nigerian officials regarded relief workers as nothing other than foreign supporters of Biafra. During the height of the famine in September 1968, two ICRC and two World Council of Churches workers who stayed at their feeding center in Okigwe as the front passed through were executed by a Nigerian officer (Jacobs 1987, 121).

In fact, Nigerian fears about the relief operation were not without foundation. Relief food probably did sustain the Biafran army. Zdenek Cervenka cited a British High Commission report that Biafran troops, who numbered only about 40,000, ate about 10 percent

of the relief food (Cervenka 1971, 141, fn. 278). And the airlift of food was thoroughly entangled with arms shipments. Count Carl Gustav Von Rosen, who supervised the JCA airlift, later organized the Biafran air force which bombed Nigerian oil fields and aircraft on the ground (De St. Jorre 1972, 242). Hank Wharton, the largest gun-runner during the first year of the war, worked for the ICRC and JCA for several months (Jacobs 1987, 37, 119). And the French Red Cross was involved in the covert delivery of weapons to Biafra for the French government.

Flows of relief food unintentionally enhanced Biafra's ability to purchase weapons. Relief agencies sent cash to their staff in the field that was spent locally on their operations and to buy food. These funds, probably over four million dollars and perhaps as much as ten million, contributed to Biafra's foreign exchange reserves (De St. Jorre 1972, 250). Biafra purchased thousands of tons of arms on the international market with hard currency (Okpoko 1986, 28; Schwab 1971, 72). And, as a result of participating in the relief effort, many aid workers became politicized and supported the Biafran cause. Relief agencies campaigned for an internationally supervised cease-fire, which would have resulted in international recognition of Biafran independence (Cervenka 1971, 154). Prominent relief officials like George Orick of UNICEF participated in pro-Biafran political activities when abroad (Orick 1968, 1).

6.1.3 Nigerian Policy

Gowon was aware of these things. His air force was supplied with Russian Migs and, said observers of the war, he could have ordered the relief flights downed at any time (De St. Jorre 1972, 244-45). However Gowon turned a blind eye to the airlift for nearly a

year.[33] In part, Gowon's policy was a response to international criticism of Nigeria and was an effort to ensure that American and British support would not waver. Gowon was quick to react affirmatively whenever Nigerian behavior was criticized. For example, when television stations in Europe and the United States broadcast Newsweek footage of the deliberate shooting of an unarmed Ibo young man, Gowon responded by inviting an International Observer Team to monitor the fronts. The International Observer Team later issued a report concluding that the Nigerian government and army were "taking positive action to obtain the confidence of the local population by assisting them in re-establishing a normal life" (Observer Team 1968, 336). When the press reported that Federal troops diverted relief food and hindered relief workers, Gowon ordered his officers to allow the ICRC to supervise relief work. He responded to an outcry about the bombing of civilians by ordering that air strikes be restricted to military targets. Gowon even invited the press to film the executions of Nigerian soldiers convicted of committing human rights abuses.

But according to John De St. Jorre, Gowon allowed relief food to enter Biafra mostly because of his concern for Nigeria's political future (1972, 244). De St. Jorre maintains that Gowon's frame of mind is accurately reflected in his famous Operational Code, issued at the beginning of the war, which he required his officers explain to their troops. The code required that civilians and prisoners-of-war be well treated, prohibited torture, rape, looting, the destruction of property, interference with medical personnel, and many other offenses. In part it read:

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33. De St. Jorre adds that Gowon knew the pilots of his MiGs would not aggressively attack relief flights unless pressured to do so (1972, 317-18). His most effective combat pilots were mercenaries who had reasons for not shooting down relief planes. First, if the airlift ended so would their employment. Furthermore, many of them had friends flying for Biafra. What is clear is that when Gowon decided he wanted Uli closed he was able to achieve his goal in about a week.

> You must all bear in mind at all times that the other nations in Africa and the rest of the world are looking at us to see how well we can perform this task, which the nation demands of us. You must also remember that you are not fighting a religious war or a Jihad. You are only subduing the rebellion of Lt.-Col. Odumegwu Ojukwu and his clique. You must not do anything that will endanger the future of the country. . . Remember that some of the soldiers Lt.-Col. Ojukwu has now forced to oppose you were once your old comrades-at-arms and would like to remain so. You must therefore treat them with respect and dignity. (Directive to All Officers, 1967).

Gowon believed that permitting Biafrans to obtain food could help convince at least some that the Federal Government was committed to the reintegration of Nigeria. First Division Colonel Mohammed Shuwa, on the northern front, for example, was more responsive to Gowon than Adekunle (De St. Jorre 1972, 381).

Shuwa used food aid as an inducement to encourage Biafran refugees to cross over to the Federal side. He encouraged the ICRC and Nigerian Red Cross to set up relief camps near the front and would then wait patiently as civilians trickled in seeking food. After neutralizing civilian resistance in this way he would then move deeper into Biafra and repeat the process. Shuwa could do this because Nigeria succeeded in convincing the United States that it was not committing genocide. Fifty-five percent of the food aid destined for victims of the conflict went to Nigeria not Biafra (Okpoko 1968, table 4.2 (a)).

Some observers concluded that in fact it was the Biafrans, not the Federal government, that bore primary responsibility for the famine (De. St. Jorre 1972, 241-45). As evidence, they pointed to Biafra's unwillingness to consider methods of obtaining relief food other than night-time mercy flights. Ojukwu's objections to overland relief have already been mentioned.

And after the departure of Dr. Nnamadi Azikiwe for the Federal side in August 1968, Biafra was governed by "hawks" who were willing to pay a high price for victory (Africa Confidential 10, 1). The leadership was unwilling to give up the opportunity to smuggle weapons into the enclave afforded by night flights. In July 1969 Gowon stated that he would

give permission for relief flights to enter Biafra during the day on the condition that none went at night. A daytime schedule would enable Nigerian Migs to blaze away at gun runners flying at night without fear of hitting relief flights. This also would have benefited the relief operation since night flights increased the risks pilots faced. Ojukwu officially continued to refuse to let any planes land at Uli during the day (Okpoko 1986, 111; Schwab 1971, 99).

Robert Goldstein, a public relations consultant for Biafra who had brought in many of the reporters who later documented the war with such skill, was so incensed by Ojukwu's failure to seize opportunities to obtain greater supplies of relief food, that he resigned and returned all the fees he had received, saying:

> It is inconceivable to me that you would stop the feeding of thousands of your countrymen . . .via a land corridor which is the only practical way to bring in food to help at this time. It is inconceivable to me that men of good faith would try to twist world opinion in such a manner as to deceive people into believing that the starvation and hunger that is consuming "Biafra" is a plot of Britain, Nigeria, and others to commit genocide. (Goldstein 1968, 3)

Biafra finally succumbed after Gowon decided to resume the use of hunger as a weapon. When Von Rosen began making air strikes on Nigerian oil and air fields in May 1969, Gowon's attitude toward the relief agencies changed. Gowon viewed Von Rosen's action as evidence that the relief effort was not primarily humanitarian, but a partisan effort on behalf of Biafra (Schwab 1971, 97). One day after Von Rosen's first attack Gowon detained--and then expelled--Auguste Lindt, the Commissioner General of the ICRC in Nigeria and Von Rosen's former employer (Jacobs 1987, 85). On June 5, an ICRC plane was shot down by a Nigerian Mig, and the airlift came to a halt. Gowon ordered the ICRC to turn their equipment over the Nigerian Red Cross. Without supplies of protein from outside, kwashiokor began to reappear in Biafra within a month.

Adding to Biafra's woes at that critical juncture, corruption and indiscipline in the Government became a serious problem. As food supplies began to run low, some officials were accused of taking kickbacks for food distribution contracts and of reselling food intended for relief (Nwankwo 1972, 101). Public confidence in Ojukwu's regime began to ebb. As Biafran morale finally collapsed and Federal forces rolled toward Uli, Ojukwu abdicated and left the country. January 12, 19770, the officers who remained in Biafra called on their soldiers to lay down their arms and arranged a surrender.

The end of the war brought on a brief but intense bout of famine. A Joint Nigerian Red Cross and United States survey of the nutritional status of the population of Eastern Nigeria conducted in February 1970 found that nearly one million people were malnourished, most of whom were children and the elderly (Jacobs 1971, 286).[34] There was a sharp peak in malnutrition deaths of 4,000 a week in February.

The famine intensified in part because of the chaos that followed the end of the war. Many people in the re-occupied areas under military rule ate next to nothing during January (Jacobs 1971, 276). Hunger was most severe in the southern areas of former Biafra around Owerri, which had been occupied by the Third Marine Commandos. Adekunle's old unit went on a rampage of looting and rape. Order was restored only after soldiers guilty of gross human rights violations were executed. Moreover, the major international relief organizations that had worked with Biafra were unwelcome in reunited Nigeria (Schwab 1971, 119-21). When volunteers who had worked with Biafra were captured by the Federal forces they were

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34. The United States had gained permission to participate in the study in part by promising to keep the results of the so-called Lythcott-Latham nutritional survey a secret. The report was leaked by the Bureau of African Affairs of the State Department to put pressure on the Nigerian government to step up the relief effort (Jacobs 1987, 290).

charged with entering Nigeria illegally and expelled. Some thought that genocide actually might occur. From exile in Côte d'Ivoire Ojukwu said:

> Nigeria's insistence to control the distribution of relief is both to ensure that Biafrans get no such relief, and also to shut out outsiders who might witness and expose the enormous crimes she plans to commit against our people. (Ojukwu 1970, 329)

Instead the Nigerian Red Cross, under Ademola's leadership, quickly established a presence in the East. It took several weeks for it to replace the capacity lost when the Government of Biafra and the network of services the relief organizations had provided disappeared. Nevertheless, the Nigerian Red Cross had nearly 500 personnel in place by the end of February and was moving over 3,000 tons of food a week (Jacobs 1987, 276).

In The Brutality of Nations, Dan Jacobs (1986, 291) relates an anecdote that illustrates how the struggle between Federal officials who wanted to rehabilitate the East and hard-liners was fought in the war's aftermath. Jessie Zimmerman of the International Union of Child Welfare, who was working in the East after the war, was declared persona non-grata and ordered expelled by local Federal officials for hiring trucks to transport food without proper authorization. Her case came before the Supreme Military Council chaired by Gowon. When Gowon found out what the charges were, he rebuked the local officials and persuaded the other Council members to dismiss the case.

6.1.4 Summary

The total amount of food delivered into Biafra by air during the war was 86,000 tons (Okpoko 1986, 63). In contrast to the other cases, the amount of food delivered was small.

However, it must be remembered that the Biafran famine was primarily a protein, not a calorie famine. The amount of protein delivered to Biafra would sustain a three-quarters of a million people for a year.

Furthermore, considered in its historical context it must be recognized that the Biafran airlift was the first modern African famine relief effort. Many of the organizations that are now world leaders in famine relief gained their first experience Biafra. There is no doubt that hundreds of thousands of people were saved because of the airlift, making it a "success" by the criteria used here.

Why was a major relief effort sustainable during the Nigerian civil war? Let me recapitulate. First of all, the Nigerian state was very different from the other cases we have examined thus far. In Nigeria, key groups in the Government strongly favored preservation of the federal system. These groups saw the rehabilitation of the Ibo as vital. Henry Bienen asked rhetorically:

> Nigeria had a history of bargaining over ethnic relationships which was at least as important as its history of overt ethnic conflict. Moreover, the military had within it important components from minority areas, including General Gowon himself, and these elements needed the Ibos back in the Nigerian system in order to balance that system against the power of the Moslem north and Yoruba west. It is difficult to say how much one can attribute the emergence of Gowon the reconciler as compared to Mengistu the conqueror to Nigeria's perceived needs. Does the man fit the needs of the time or does he define those needs with his own views and positions? The process is an interactive one. (Bienen 1989, 150)

Secondly, although perhaps more importantly, the rebel leadership recognized that it could not survive unless it could feed its supporters. As mentioned at the outset, the Biafran Government was quite unlike a guerrilla insurgency, having most of the attributes of a state. Yet the use of food policy to enhance political legitimacy described among rural rebels

occurred in Biafra. Having the capacities of a state, Biafra was able to ward off an apocalyptic famine.

To be sure, there was tension between the imperatives of military and food security, but food security was paramount. To paraphrase Bienen, it is difficult to say how much one can attribute the Biafran airlift (as contrasted, say, to Renamo's use of hunger as a weapon) to Biafra's perceived needs. Does a rebel leadership fit the needs of its time or does it define those needs? Whatever the case, unless rebel leaders support relief, food cannot flow. Finally, the airlift was sustainable in part because foreign powers played a different role in Nigeria than in the Angolan and Mozambican cases. Rather than attempting to create client states or proxy insurgencies to extend their hegemony, foreign governments took positions in response to domestic public pressure inflamed by media attention in a way more similar to Ethiopia. Public pressure created opportunities for all parties to the relief effort. It enabled combatants to manipulate information about the famine to influence the behavior of foreign governments and international organizations. Biafra brought international opprobrium upon the Federals and used it to obtain quantities of food aid and weapons. The Nigerians, though, ultimately were able to demonstrate credible concern for the welfare of civilians and won the support of Britain and the United States. Furthermore, domestic pressures on foreign governments strengthened international organizations like the ICRC, who were able to take stances independent of either foreign or African positions. And the attention of international media affected the behavior of combatants, especially Nigeria, who had to compromise with donors to keep food and weapons flowing.

Why did Gowon change his mind about permitting relief flights to land at Uli in June 1969? In 1969 the Nigerian Government began to feel more secure. First, the tide of world opinion had turned in favor of the Federals. Official callousness toward the suffering of its

own people on the part of Biafra had become apparent. And Nigeria had successfully defended itself against charges of genocide. Second, Federal troops had begun to win back Ibo civilians in areas under its control on the northern and southern fronts. Finally, Nigeria clearly had won the race to import arms. It was poised for victory if only it could cut off food to Biafra once and for all.

6.2 Sudan

Sudan, like Nigeria, is a case in which the state did not embark upon a socialist effort to transform the countryside. However, Sudan is as different from Nigeria as it is from Angola, Ethiopia, or Mozambique. In contrast to all of the previous cases, the Sudanese Government has had no credible ambition whatever to shape the development of the country--not to forge a nation; not to develop commercial agriculture; not to socialize the means of production. The Government was and is concerned primarily with the politics of the capital city, a few important towns, and an Arabic and Islamic heartland in the west where politicians vie for the support of commercial, working-class, and military interests. Its policies toward the Black and African hinterland in the south have been largely derivative; the war it has waged against the Sudan Peoples Liberation Army (SPLA), which seeks autonomy for the south, has been little more than a political symbol around which northern constituents can be organized. During the period when the so-called modern forces in Khartoum were ascendant the Government sought a negotiated solution to the war. When Islamic revivalism and Arab nationalism were preponderant, support for the war was seen as both devout and patriotic.

The Sudanese famines prompted large-scale international relief efforts. In contrast to Ethiopia and Nigeria, however, these efforts were not propelled by the international media or

domestic political battles in donor countries. Although Sudan received scant attention from the press, in 1985, and again in 1988 the United States brought pressure to bear on the Government to permit relief efforts. In 1985 the Reagan Administration was intent on offsetting Libyan influence in the country. In 1988 some of the Administration's foreign assistance specialists got the ears of key Cabinet members. In these cases relief food was delivered in the face of Sudanese Government obstructionism.

Nevertheless, it would not have been possible to get food into the south in 1988 without the cooperation of the SPLA, which had taken control of most of the region. During the course of the war, the SPLA evolved from predatory banditry to the practice of sophisticated food politics. In 1988 the SPLA leadership recognized the political benefits they could derive from cooperation with international organizations.

Four different food crises are considered in the case of Sudan: the drought and famine in the western provinces of Darfur and Kordofan in 1985, and the conflict-related famines in the south in 1987-1988, 1989, and 1990. Strictly speaking, the first is not a case of military famine because it did not occur in the midst of war. It is a counter-factual case in which differences between military famine and famine occurring in the absence of war can be explored. The next three are among the best examples of domestic political conditions which create military famine. In Sudan conflict-related famine evolved through what may be considered an "ideal-typical" pattern. The war began with combatants using hunger as a weapon and refusing to cooperate with relief efforts. Later, they both used the respite provided by a relief effort to consolidate their gains after which time they returned to the use of hunger as a weapon.

The events of 1983 exemplify of how politics in northern Sudan has driven Government policies toward the south. At that time the regime of President Jaffar Nimeiri

was faced with an economic crisis. Sudan had an annual trade deficit of a billion dollars, and Government expenditures were three times revenues (IMF 1989, table 732; UNDP 1989, table 3-12). Borrowing to finance the deficits had pushed the interest on the foreign debt to 33 percent of export earnings. The debt burden caused consumer prices (except for food which was supported by the Government) to double semi-annually. Rapid inflation incited urban unrest, and Nimeiry feared devaluing the pound or cutting food subsidies to placate international creditors would precipitate further violent reactions. Unable to control the economy, he opted to strengthen his grip on power by appeasing northern conservatives.

First, Nimeiry announced the Regional Government Act, abrogating the 1972 Addis Ababa Peace Agreement which granted political unity and autonomy to the three southern provinces of Bahar-al-Ghazal, Upper Nile, and Equatoria. From independence in 1956 to 1972 civil war had flared between the southern *Anyanya* guerrillas and the northern government. The Addis Ababa Peace Agreement had brought that war to an end.[35] Second, Nimeiri imposed Islamic law, *Shaaria* throughout Sudan, including the south where many people are Christian and where Christian churches play important political roles (Africa Confidential 25, 7; 26, 4). These proclamations sent a wave of new recruits into the anti-Government rebel movements.[36] Conflict-related famine followed within three years.

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35. Nimeiri hoped that the Regional Government Act would pacify conservatives while also winning him support among minority ethnic groups in the south (Africa Confidential 25, 4). The union of the southern provinces under the Addis Ababa Peace Agreement enabled the Dinka, the most numerous southern ethnic group, to dominate regional politics. Politicians from Equatoria province where few Dinka live, including the vice-president, Joseph Lagu supported the Regional Government Act because they felt it would give them more representation in Khartoum.

36. Under the Addis Ababa Peace Agreement, the Anyanya guerrillas were to be integrated into the Sudanese army (ARB 6846). As late as 1983, however, this had not yet been completely accomplished. In January 1983 the 105th Battalion at Bor, an unintegrated Anyanya unit, refused orders to be transferred to north because of its remoteness and climate. The Government responded by withholding their salaries. As the soldiers learned of the

6.2.1 Darfur and Kordofan

However, the conflict-related famines in the south were proceeded by a drought-induced famine in the west. The provinces of Darfur and Kordofan suffered consecutive years of low rainfall from 1981 through 1984 (NOAA 1981-84). The people of this region, who are mostly pastoralists, had been able to cope for some time by concentrating grazing in areas that were well-watered, selling animals and household possessions, seeking wage employment, and engaging in petty commodity production (De Waal 1989, 196-203). But by December 1984 much of the livestock in the west was dead, and food surpluses were consumed. Seven million people were affected by hunger. At the same time 120,000 refugees crossed into Sudan fleeing a civil war in Chad. The government of Darfur began supplying grain to destitute families and the Mellit Area Council appealed to the Government for aid.

Both Sudan and the United States were interested in feeding the western provinces (Africa Confidential 26, 11; 26, 13). Nimeiri was concerned about growing political unrest

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Regional Government Act and the impending imposition of Shaaria, what had perhaps been a frivolous strike developed into a political insurrection.

In May Colonel John Garang, who had been the Anyanya commander during the war of 1956-72, went to Bor to negotiate a settlement. During the talks, however, Sudanese troops approached Bor from Juba and the mutineers ambushed them. At the behest of his former comrades, Garang resumed command of the Anyanya movement. When word of the events at Bor reached other former Anyanya units they also revolted.

Almost immediately the Anyanya insurgency fractured. Garang formed the SPLA (Salih 1990, 215). The SPLA was well led, having attracted former Sudanese army officers from many southern ethnic groups, and its ranks were swollen by 3,000 civilian recruits. Under Garang the SPLA pursued moderate political goals, seeking autonomy for the south and the repeal of Shaaria. Lieutenant-Colonel Samuel Gai Tut broke off and established Anyanya II (Africa Confidential 25, 22). Gai Tut sought complete independence for the south. Anyanya II was hampered by the fact that most of its soldiers were ethnic Nuer, and it came to be seen as a Nuer movement. Gai Tut was killed in an Anyanya II attack on an SPLA armory April 30, 1984. After a period of instability in the organization, Lieutenant-Colonel William Abdullah Chuol took control of Anyanya II. During Chuol's tenure Anyanya II was turned by the Nimeiri Government. Chuol accepted arms under Nimeiri's program of arming non-Dinka people against the SPLA.

there, and the United States regarded Sudan as a buffer against Muammar Gadaffi. The west is the base of the Mahdist Ansar movement and of the left-of-center Umma Party. It is also the home of the regionally based Darfur Development Front and the General Union of Nuba. The latter was known to have had contacts with the SPLA. Furthermore Libya was exploiting discontent in the west by distributing relief food and weapons there.

The United Nations tried to meet the crisis by moving half a million tons of grain to drought affected areas (Gill 1986, 170-173). The United States Agency for International Development (USAID), which had the largest budget for relief, played the leading role in distribution. It contracted with private traders and the Sudanese railroads to ship half of this amount to distant parts of the west. However in May 1985 USAID discovered that less than a quarter of the scheduled deliveries had been made. Only 20 tons of grain reached the worst affected parts of Darfur during the critical early months 1984 (Africa Confidential 26, 13; De Waal 1989, 207-08). There were three reasons for the delays: First of all, the truckers hired by the United States were simply overwhelmed by the size of the job. A bigger problem was corruption. Haulers would bump grain shipments if someone else was willing to pay more for their services. And as opposition to Nimeiri mounted, strikes paralyzed the Sudanese transport system.

To overcome these problems USAID organized air drops and hired PVOs like Save the Children to deliver food to outlying villages (Select Committee 1989, 101). The effort still suffered difficulties--convoys were held up by bandits or bogged down in the rains which returned in August causing widespread flooding. But when corruption, bureaucratic intransigence or natural disasters made it seem impossible to reach Darfur, camel and donkey caravans were organized to carry grain across the desert. After May a quarter of a million tons of grain entered the west and seven million people were fed.

Although the war did not affect Darfur and Kordofan directly, the western famine still contains lessons about the impact of violent political conflict on food security. The harvest in October 1985 exceeded expectations. Heads of households had left feeding stations and gone back to their fields with carefully hoarded seed in anticipation of the coming rains. However, around Dar Masalit on the Chadian border hunger continued to be a problem. According to Alexander De Waal (1989, 234) the reason was that Dar Masalit had absorbed the bulk of the Chadian war refugees. Since fighting continued in Chad the refugees could not return to their farms. The Chadians continued to dispose of their animals, depressing livestock prices, bought up the available grain, pushing up food prices, and contributed to an oversupply of agricultural labor.[37]

The western relief operation of 1985 is sometimes said to have been bungled because of the delays and corruption which plagued it (Gill 1986, 166-72). The death toll, 86,000, was high, but it was an order of magnitude lower than the death toll from conflict-related famine which would follow in a few years (De Waal 1989, 176).[38] As many as two million people may have been saved from starvation by the operation, and tremendous obstacles were overcome in the effort. By these criteria, it was a success.

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37. In 1984 De Waal attempted to conduct comparative research at Sabola, a community of Binga people in Bahr al Ghazal province that was also affected by the drought (1989, 238-43). Sabola was frequently raided by Rizeigat militias. He found that food insecurity was chronic there, irrespective of the weather, because of political violence. Furthermore Sabola had a higher mortality rate than Darfur during the drought. Because of the fighting he had to curtail his research prematurely.

38. This estimate of the death toll comes from Alexander De Waal (1989, 176). It is a simple linear extrapolation from a sample to the entire population. In all probability it overestimates total mortality substantially. De Waal admitted finding lower rates of mortality in some parts of Darfur (1989, 192-202).

6.2.2 War and Famine in the South

Nimeiri was swept aside in the midst of the food crisis. But he did not fall like Heili Selassi--the seemingly remote western famine affected his popularity neither positively nor negatively. Instead, he fell afoul of urban and bureaucratic interests. The army was tired of the war in the south which seemed to be going nowhere; intellectuals were disillusioned with Shaaria; and the poor were battered by inflation. The military launched a coup on March 1985 and Sudan was placed under the control of a Transitional Military Council (TMC) led by General Abdul Rahman Sowar al Dahab. The TMC moved Sudanese politics to the left (Africa Confidential 26, 9; 26, 10; 26, 11). It signed military protocols with Libya, and abrogated agreements with the United States.

To bring the war in the south to a quick end the TMC adopted a two-part strategy. First, it began a rapid build up of its forces, moving more troops into the garrison towns of the south.[39] Second, it attempted to isolate the SPLA so that it could negotiate a settlement from a position of strength (Africa Confidential 26, 18; 26, 20). To isolate the SPLA the TMC brought moderate southerners into the government and opened talks with Ethiopia which had been serving as a rear base for the rebels. But the government had little presence in the south outside of the garrison towns. To contain the SPLA the government tried to drive a wedge

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39. Under Nimeiri Sudan was heavily militarized as the military was involved in commerce, manufacturing, and banking (Bienen and Moore 1989, 75-80). But after his ouster this was no longer true. The TMC broke up the military monopolies. The southern build-up was primarily accomplished simply by redeploying forces rather than militarizing the state.

Annual military spending was about 150 million dollars in 1984 and grew to 175 million by 1988 (ACDA 1989, table 1; UNDP 1989; table 4-27). During the period Sudan imported around 50 million dollars a year in armaments. The main reason for low levels of military spending was the poor performance of the Sudanese economy which stagnated right through the end of the 1980s. Several authors have reported without attribution that the war cost Sudan "a million dollars a day" (Minear 1991, 20; Select Committee 1989, 120). This overestimates Sudan's military burden by at least 65 percent.

between the Dinka, the ethnic group from which most SPLA guerrillas are drawn, and other southern ethnic groups. This policy was to have unforeseen and tragic consequences.

By 1985 the SPLA controlled the countryside in the traditional Dinka areas of eastern Bahar-al-Ghazal and central Upper Nile provinces (Africa Confidential 26, 11; 26, 20; 27, 10). However, in its early years the SPLA was quite undisciplined. It spread itself by recruiting undisciplined Dinka youths who used their weapons to rustle the cattle of Bari speakers, the Latuka and the Toposa in Equatoria Province. The TMC attempted to take advantage of this increase in banditry. It expanded the policy, first practiced under Nimeiry, of exploiting ethnic conflicts by supplying Equatorians with weapons (Salih, M. 1989, 170). The TMC also accelerated the practice of organizing and arming civilian militias among the Arab Baggara, Kabbabish, Missiriya and Rizeigat who had traditionally raided the Dinka for slaves.

There was an explosion of ethnic conflict in the south (Africa Confidential 26, 11; 27, 10). In 1985, 60,000 Bari people were displaced by Dinka raids. But Baggara and Missiriya militias uprooted twice as many Dinka in northern Bahar-al-Ghazal Province. The northern militias were particularly notorious for kidnapping children who were kept as slaves, and for rape. Conventional military conflict affected a wide area of the south when the SPLA laid siege to the town of Rumbek and Government forces marched from Wau to rescue the garrison there. The region was also affected by banditry and fighting between soldiers driven out of Uganda by the war there.

Most Sudanese expected peace to follow when Sadiq el Mahdi, leader of the Umma Party, was elected Prime Minister in April 1986 and formed a coalition with the Democratic Unionist Party (DUP) (Africa Confidential 27, 9; 27, 10; 27, 16). Sadiq was said to draw his support from the *modern forces*--army officers, students, and business. His coalition government was unstable, though, as the radical National Islamic Front (NIF), which

demanded continuation of Shaaria and vigorous prosecution of the war in the south, made a strong showing, winning 20 percent of the contested seats in parliament and 42 percent of the seats in Khartoum (Salih, K. 1990, 202). A representative of the Umma party had met with the SPLA even before the elections, and a joint statement called the Koka Dam Accords had been produced which called for a constitutional convention to address southern grievances. But the NIF, by appealing to popular nationalism and religious extremism, was able to pressure Sadiq to back away from repeal of Shaaria and the Koka Dam Accord.

As more and more people were displaced by the violence, relief agencies began to shift the their attention from the west to the south (Bonner 1989, 88; ECOSOC 1986, 14). In 1986 the Sudan Council of Churches alerted aid agencies to the possibility that the south would experience a purely conflict-related famine, estimating that up to 30 percent of the seven million southerners had been displaced in some areas (Minear 1991, 7).[40] That year, amid great fanfare, the United Nations launched *Operation Rainbow*, which was to airlift food into southern towns. USAID provided over five million dollars to the Government's Relief and Rehabilitation Commission (RRC) for overland and barge deliveries and to CRS for air drops in garrison towns. Dozens of small PVOs under the umbrella of the Combined Agencies Relief Team took receipt of WFP and USAID grain and began to distribute it to feeding stations in southern towns.

But the SPLA's strategy was to weaken the Government's hold on the towns by cutting off their food supply (Africa Confidential 27, 10). Food convoys and relief workers were

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40. Data on precipitation for southern Sudan for many months from 1986 up to the present are often missing because of the war. However the data that exist indicate that rainfall was normal (NOAA 1986-89). For example, the National Oceanographic and Atmospheric Administration report rainfall in Juba for only five months in 1986 and the very rainy months of July and August are missing. But the total for the five reported months is 539 millimeters which is 71 percent of the annual average of 750 millimeters.

considered legitimate military targets. The SPLA attacked the Norwegian People's Aid (NPA) center at Torit, and fighting forced Médecins Sans Frontières to pull out of Aweil. When a Buffalo military aircraft carrying Operation Rainbow volunteers including Band Aid representative Mark Fletcher was shot down by the SPLA over Rumbek, Operation Rainbow had to be canceled. In spite of the risks, some groups like the NPA, Church World Service and Lutheran World Relief were willing to make the dangerous cross-border journey from Kenya and Zaire into southern Sudan, but it was hard to find drivers. In June 1987 a relief convoy from Kenya was completely destroyed by the SPLA and all of the drivers brutally murdered. The total amount of grain delivered to the south by the end of 1987 including the abortive Operation Rainbow was only 30,000 tons (Select Committee 1988, 103-110).

The situation came to a head during 1987 when out-of-control Government forces began to vigorously suppress anyone thought to support the SPLA (Keesings 35881). In March rampaging Rizeigat militias killed as many as 1,000 Dinka refugees camped at Ad-Daein in Darfur. World Vision relief workers were ordered to leave Wau after inexperienced new recruits killed several civilians. Then two hundred and fifty Dinka residents were rounded up and summarily shot in August. Alarmed southern police officers engaged in a shoot-out with northern army troops. The final toll in Wau was over 400. Fear of violence created a stampede of refugees. Over 300,000 people fled Sudan for Ethiopia. Three million were internally displaced (USCR 1989, table 1).

In November the Government was stunned when the SPLA captured Kurmuk in Blue Nile Province, considered a northern town. The Khartoum press was filled with calls for reprisals (Salih, K. 1990, 217). Under pressure from its right wing, the Government appeared to condone a policy of civilian starvation through inaction caused by political paralysis (Bonner 1989, 88-89; The Washington Post November 19, 1988). For example, relief

organizations were denied permission to work in the south other than in the garrison towns. Winston Prattley, the director of United Nations relief operations was expelled from the country by Sadiq after he protested official obstructionism. In 1988, Save The Children and Oxfam had to leave Abyei in Northern Bahar-al-Ghazal after the Government refused to issue necessary permits. UNICEF and the WFP offered to set up feeding programs at El Meiram but were rejected. The ICRC attempted to negotiate a corridors of peace agreement between the government of Sudan and the SPLA (Bonner 1989, 90; ICRC 1988, 30). They proposed to survey the Government towns of Wau, Malakal and Juba and SPLA held Yirol, Kongor and Pochala (later changed to Akon) so that it could prepare a relief plan. The SPLA agreed after some hesitation but the Government stalled for months--once warning off an ICRC plane already in the air with the required clearances aboard. The ICRC finally gave up in disgust.

The Government also denied food to parts of the south in an attempt to control population movements (Bonner 1989, 90-91). Over a quarter of a million people had fled attacks by militias to towns like Aweil and Abyei in northern Bahar-al-Ghazal and southern Darfur. But the government did not want southerners to move north. Boxcars of food aid intended for people in Aweil and Wau were held up in Babanusa to prevent towns north SPLA territory from attracting too many refugees. In Aweil 100 persons a day died of hunger in mid-1988 while food sat in Babanusa. At one point it was reported over 10,000 people a day passed through Aweil on their way north.[41]

An additional quarter of a million displaced people gathered in southern garrison towns like Malakal and Juba. The government treated them like hostages (Minear 1991, 74). When

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41. Yet things got no better for them as they approached the capital. The Government often refused to allow refugees to enter Khartoum, and in 1987 began kasha, campaigns to return Black Africans to the south (USCR 1991, 55).

Juba was under siege the Government refused to permit civilians to leave. Some who tried to leave were shot. This way if the SPLA shelled the town it risked hitting southern civilians. But because of the efforts of the SPLA to block food aid, these people were starving also.[42]

USAID and other PVOs were finally successful in getting food to Abyei and Aweil in 1988 under the aegis of the much smaller *Operation Concern*, but not until tens of thousands of people had starved to death there. By the end of 1988 over a quarter of a million had died of hunger (Select Committee 1989, 63).

6.2.3 Malakal

A story on the Sudanese civil war that appeared in Africa Confidential (27, 23) in November 1986 shows how the relationship between the military and the citizenry in the Sudanese Garrison town of Malakal revolved around control of the food supply. Because of fighting farther to the south, Malakal had a population of several thousand displaced persons. In addition, the war reduced food production around the town creating a local food shortage. While the death rate at Malakal was never reported to be high, the food policies of the Sudanese army and its supporters--restricting food production, requisitioning food, outright theft, and the diversion of relief food--placed the people of Malakal and the surrounding area in precarious circumstances. These policies were in part a result of the counter-insurgency operations. But they were also influenced by the political struggle between northerners and

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42. One of the reasons the Government decided to cooperate with Operation Lifeline, discussed below, in 1988 was because the Commander of the Government forces in Juba told Khartoum he would have to permit civilians to leave town because there was absolutely nothing left to eat (Minear 1991, 74). The Government was afraid that if that happened Juba would be indiscriminately shelled and would fall. Thus Operation Lifeline helped the garrison at Juba hold out.

local political leaders, by opportunities for profiteering, and by ethnic bigotry. When members of the local community attempted to gain access to relief food that was made available, their efforts were blocked; the occupiers feared that concessions would strengthen southern leaders, and they had parochial reasons for wanting to control the food supply.

People in Malakal got food in three different ways. The main sources of food were the grain *dura*, a kind of sorghum, and the animals raised by Nuer and Shilluk households in the countryside. The Army occupying the town also received sporadic food shipments from the north. And the town government, including Dinka "moderates" who favored a negotiated settlement with the north, got food aid from relief agencies for distribution to the needy.

But Malakal was located in an area infiltrated by the SPLA, and could only be reached by Nile barge--an airliner having been brought down by the rebels there the previous year. The army could not move more than a few miles outside the town. Instead, it controlled the surrounding countryside through Anyanya II. The Anyanya II fighters were supposed to make sure that local people did not give food to the SPLA and supervised their farms closely. But the unpaid fighters were also encouraged to support themselves by taxing the local dura crop. Anyanya II also had its own fields that it coerced local people to cultivate for it. Inside Malakal the army ordered people not to grow dura completely. This was because it was feared that the tall stalks could be used as cover during an attack (Africa Confidential 27, 23).

But another reason the army restricted dura production was that they controlled the black market inside the town. Cut off form Khartoum, soldiers and officers in Malakal often went unpaid for more than a year. They bought dura from the Anyanya II which they then sold to the captive citizens of Malakal at high prices. Frequently shop owners, usually northerners on good terms with the military, bought and resold the grain or used it in other

ways such as beer brewing. Garrison towns like Malakal were described by Larry Minear, as being in the "grip of Arab merchants." (1991, 69)

These interests brought them into conflict with the town government and citizens concerned about hunger. The mayor, David Okwara, and the town council tried to break the army's stranglehold on the economy by conducting a survey of the citizens' food needs and arranging for a shipment of relief food from the Sudan Council of Churches. When the food arrived after months on barges the army impounded it, insisting that for security reasons only the army should distribute food (Africa Confidential 27, 23).

Malakal provides a good example of the operation of food control tactics at many levels. The Sudanese army was mostly concerned with preventing the SPLA from obtaining support from local people and with preventing potential rivals from boosting their legitimacy by distributing food. Anyanya II, in contrast, was primarily predatory, opportunisticly filling a political void the way Renamo did in Mozambique. But the government was all too willing to use the group to coerce people beyond its reach. And the army was not without private interests of its own after all; officers also wanted to control food distribution was so that they could profiteer on the market for dura. Without credible support at the national level, local people could not overcome the military's grip.

6.2.4 Narus

People inside the SPLA liberated zone were clearly better off than those outside. As many as 100,000 people were receiving assistance in 22 feeding stations in the SPLA zone in 1988 (Select Committee 1989, 63-68). In contrast to Malakal, Narus, which fell under the control of the SPLA, actually experienced an improvement in food security in 1988. This was

due to changes in the relationship between the SPLA and the local people. These changes did not happen spontaneously, they were advocated by SPLA officers and facilitated by international organizations.

In 1983 Narus was the name of a watering hole in Equatoria Province used mostly by Toposa people while at their rainy season cattle camps (Africa Confidential 26, 11; Africa News November 8, 1988). When the SPLA spread onto the Boma plateau north of Narus, they encountered little resistance from the Government and provisioned themselves by descending the plateau to rustle cattle from the villages below. They hit Toposa communities around Narus particularly hard. As a consequence the Toposa volunteered to join Sudanese civilian militias and were given weapons by the Government.

SPLA attacks on transport arteries isolated most of southeastern Sudan in 1984 and the Toposa militias were abandoned as Government forces retreated to garrison towns. The SPLA then began its violent conquest of the Toposa. Besides rustling cattle and attacking people, the SPLA burned Toposa farms and confiscated millet and sorghum displacing tens of thousands. Displaced people had little recourse other than foraging and begging. The nearest source of Government relief food was Kapoeta, over 100 miles away. Because it had water, Narus became a gathering point for Toposa people dispossessed by fighting with the SPLA.

The numbers of people gathered at Narus attracted the attention of relief agencies which began twice monthly air drops of grain in 1985 (ICRC 1986, 24-27). The new availability of food drew even more people, and the population of Narus grew to 20,000, forcing the relief operation to expand in size. The ICRC established an intensive feeding program for infants and brought in an engineer to clean and enlarge the well at Narus so that safe water could be ensured. And continuing violence caused an influx of war wounded who came to Narus to be airlifted to Kenya for treatment.

Fighting around Narus intensified. The SPLA identified the relief work there as a source of support for recalcitrant Toposa and fired at relief workers on several occasions (Bonner 1989, 101). Only the ICRC, which was conducting separate negotiations with the SPLA about providing aid to nearby Pochala and other SPLA held towns was allowed to continue to work in Narus. In 1986 the SPLA subdued the Toposa and the area around Narus fell entirely under its control.

The pacification of Narus produced important changes in food security. First, new relief agencies now negotiated with the SPLA and obtained clearance to operate in the area. With assistance from the WFP and the United States, the NPA brought 5,000 tons of grain and many tons of medicines overland to Narus (Bonner 1989, 101). Second, the cessation of fighting enabled people to return to farming and the SPLA curtailed cattle rustling. In 1987 an ICRC survey concluded that malnourishment was decreasing and overland and air operations switched from delivering food to agricultural inputs. By the end of the year the ICRC said that hunger had all but disappeared.

Third, relations between the SPLA and the Toposa changed (Africa News November 8, 1988). With prodding from Equatorian cadre like political officer Joseph Oduho, the SPLA began an effort to win over non-Dinka people. It emphasized the activities of its Sudan Relief and Rehabilitation Association (SRRA) which launched hearts and minds programs, opening bush schools and feeding centers distributing food provided by the NPA (Christian Science Monitor February 23, 1990). In 1987 the Sudan Council of Churches approached the SRRA about a program to inoculate children against measles. It agreed to cooperate and over 100,000 children were vaccinated (Minear 1991, 44). Of particular importance to the Toposa was the SRRA campaign to vaccinate their cattle against rinderpest when the disease was discovered elsewhere in the south (ICRC 1988, 30-32).

After the experience at Narus the relationship between the relief agencies and the SPLA changed. The two realized they had a common goal of stabilizing civilian populations and they began to cooperate more closely. For example, with SPLA approval, Narus became a staging point for relief operations farther west at Kapoeta where fighting between the SPLA and the Government was intense (Africa News November 8, 1988). An ICRC hospital there was trying to care for 500 war wounded while evacuating the worst cases to Kenya.

In 1988 Norwegian People's Aid in cooperation with the SRRA began to send all of its relief food directly to Kapoeta. Working with the SPLA had a similar effect on foreign relief personnel as working with Biafrans did. Some of them began to promote the SPLA's cause. Egil Hagen, the representative of the NPA in Sudan told Minear, "Relief in war situations is politics. I am one hundred percent with the SPLA." (Minear 1991, 85)[43]

6.2.5 The South Under the SPLA

Before 1988 the international community was unable to compel the Government of Sudan to permit relief operations in the south because the United States and international relief

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43. The SPLA's record in Ethiopia is, in contrast, tragic. Ethiopia allowed the SPLA to use its territory as a rear base. SPLA units housed in Ethiopia were without ties to the local community and Mengistu exploited this fact. He paid SPLA fighters bounty to capture people fleeing collective villages (Clay, Steingraber, and Niggli 1988, 46). Some refugees interviewed by Cultural Survival said they had been held in slave-like conditions at SPLA camps and women said they were raped.

Reliance upon Ethiopia appears to have had a damaging effect on the SPLA. Mengistu encouraged Garang to detain his critics, including Joseph Oduho, the Equatorian who opposed the use of hunger as a weapon, aggravating ethnic conflict. Another Equatorian SPLA officer Bari Wanji, who escaped from detention in Ethiopia, formed the nucleus of an anti-Garang faction in exile (Africa Confidential 31, 2).

After the advent of the EPRDM government in Ethiopia the SPLA was expelled from the country, and the arrival of the predatory units in Sudan contributed to the destabilization of the SPLA leadership.

organizations were reluctant to sanction the Government of Sudan. The State Department wanted to maintain good relations with Sadiq's government to keep Sudan from becoming an ally of Libya (Bonner 1989, 91-92). The State Department had tried to rebuild American military ties with Sudan in 1988, signing military agreements worth 22 million dollars (Select Committee 1989, 30). Assistant Secretary of State for Africa Kenneth Brown told Congress:

> We do feel that it is important for us to maintain a good relationship with the Sudanese military because of the important role the Sudanese military plays in that society and because of the fact that it is a moderate professional military. As we can see right now it is playing a role in current events and one which we hope will be a positive one for whatever outcome there may be. (Select Committee 1989, 30)

Similarly, relief organizations were afraid they would be expelled from the country if they criticized the regime, causing more innocent people to suffer than those who would be helped.

> The private organizations faced a painful dilemma. They didn't want to be tossed out of the country--didn't want to meet the same fate as Winston Prattley, World Vision, and the others. . . Mark Duffield, of Oxfam, stated the predicament. Oxfam projects, he said, serve at least half a million people in the Sudan. "Do we throw away that for the sake of saving thousands in the south?" (in Bonner 1989, 9)

However, during 1988 relief officials who favored taking a tough stance with Sudan began to gain influence. Relief organizations cooperating with the United States Government in Sudan tried to draw press attention to the American's inaction (Bonner 1989, 91-92). In August 1988 Médecins Sans Frontières and CONCERN talked to reporters about the relief community's paralysis. Although the story never became as big as the Nigerian internal war or the Ethiopian famine of 1984-1985, it was sufficient to stimulate a change in policy in the United States. Late in the year Roger Winter of the U. S. Committee for Refugees (USCR)

toured SPLA territory in southern Sudan returning to damn the Sudanese Government and praise SRRA in *The Washington Post* (November 19, 1988). Julie Vadalla Taft of the Office of Foreign Disaster Assistance (OFDA) lobbied Secretary of State George Schultz to pressure the Sudanese Government to open the south to relief. Winter and Taft testified before the Select Committee on Hunger urging the United States to expand support for cross-border feeding and arguing that this would require cooperation with the SPLA (Select Committee 1989, 12, 33). In 1989 members of the Select Committee fresh back from a trip to the Horn of Africa urged the new Secretary of State, James Baker, to permit the United States to increase support for cross-border feeding.

Some officials in the United States and Great Britain, in statements off-the-record, went so far as to let it be known that they "wouldn't mind seeing a coup" against Sadiq (Bonner 1989, 97, 101; New York Times October 29, 1989; Select Committee 1989, 116, 33). They believed, ironically, that in such an event Sadiq would be replaced by a more moderate leader.

Sadiq's government came under increasing pressure internally as well as externally (Salih, K. 1990, 207-14). The SPLA made new gains on the ground in 1988, capturing Liria, Nasir and Torit (Keesings 35879-35881, 36454). Meanwhile strikes and demonstrations shook Khartoum as workers and students protested shortages and rising prices. And the military issued a memorandum calling for steps to bring the war to an end. As Sadiq lost the initiative the NIF and DUP struggled to fill the vacuum. In November the DUP negotiated an independent agreement with the SPLA, the Addis Ababa Accords, calling for a cease fire and constitutional convention, and then walked out of the government after it was rejected by the

parliament.[44] In order to rebuild its coalition the Umma party had to make progress toward a settlement of the war.

In February 1989 Baker announced that the United States would supply food to any PVO that was willing to move it into SPLA territory. Sadiq now faced the possibility of loosing all control of food policy in the south (New York Times September 9, 1989). The State Department confirms that the Bush administration threatened Sudan with sanctions if it did not permit aid to enter SPLA held territory. Although it will not disclose what the threat consisted of, given subsequent events it appears to have been the cut-off of all food assistance to the country, which would have created shortages in the capital as well as in the west. Sudan consumed an average of 860,000 tons of food aid per year between 1985 and 1987 (UNDP 1989, table 5-10). But food aid decline 30 percent in 1988 as donors cut back on shipments to signal their disapproval over the situation in the south.

The pressure on Sadiq and changes in the SPLA finally produced conditions which permitted relief food to get through. Sadiq was forced to spurn the NIF and embrace the dialogue between the DUP and SPLA (Keesings 36517). In March 1989 Sadiq formed a new government committed to the Addis Ababa Accords. In May the SPLA declared a cease-fire and the Government responded in kind. And in June the Government and the SPLA agreed to a September meeting to plan a constitutional convention. Under these conditions, the ICRC and United Nations were at last able to obtain agreement from the Government for corridors of peace.

Between May and November the United Nations ran Operation Lifeline--a largely successful effort to orchestrate the kind of humanitarian response that had occurred

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44. This was the pinnacle of the SPLA's strength in the sense that its ethnic base was broadest. The Addis Ababa Accords were signed by factions of Anyanya II that recognized Garang as their leader, and it was beginning to win over Equatorian groups like the Toposa.

spontaneously in Ethiopia in 1985 (Minear 1989, 36). It included press briefings, disaster tourism, and ubiquitous photographs of the hungry. Donor nations pledged over 200 million dollars. Over 100,000 tons of grain flowed to 30 feeding sites in the south (The Christian Science Monitor November 1, 1989). Twenty-four percent of the grain went to SPLA held territory. Under Operation Lifeline the ICRC built a one million dollar barge in Kenya and hauled it to Bor on the White Nile where it was to ferry grain north deeper into SPLA territory (The Washington Post Weekly Edition 8, 8). The NPA also began working more closely with SRRA, training relief workers and building up infra-structure to make them capable of controlling a full-scale relief effort.

Interestingly, now that food was flowing into areas under its control the SPLA came in for some of the same criticism which is perennially leveled at Governments during relief operations (The Christian Science Monitor January 29, 1990). Relief workers documented cases of pilfering by SPLA fighters in places like Kapoeta and Torit and protested vigorously. At first the response by local SPLA officials was to expel the workers. But before the situation had deteriorated too far the SPLA leadership agreed to permit PVO monitors to supervise the distribution of all grain.

6.2.6 The Bashir Regime

Unfortunately, Sadiq's attempts to patch his coalition together were unsuccessful. Fearing that the NIF would be locked out in the event that the Government made peace with the SPLA, Brigadier-General Omar Hasan Ahmad al-Bashir and other NIF-backed officers overthrew Sadiq, establishing a Revolutionary Command Council to govern the country in

June 1989. The Council declared its intention to implement Shaaria and realigned Sudan with Libya.

The escalation of rhetoric by the United States in 1988 may have given Bashir and the other NIF officers the false impression that it would welcome their ouster of Sadiq. Instead relations between donors and the Council deteriorated rapidly. Bashir began to attack southern food security immediately. He fired the commissioner of the RRC and had the police investigate it (Minear 1991, 33). When negotiations between the SPLA and the Government resumed in the fall, the Council insisted that any future constitution must be based on Islamic Law. The SPLA promptly walked out.

To punish the SPLA, Bashir closed the corridors of peace in January 1990 and refused to allow the ICRC to operate in the south. In December 1989 Government forces shot down a Médecins Sans Frontières aircraft killing all aboard (Africa Confidential 31, 22). And Libyan Migs bombed SPLA held towns where PVOs were distributing food. Confronted by United Nations representative Michael Priestly and United States ambassador James Cheek, Bashir was intransigent. "We are not following the kind of line the Western Governments desire," he said. Priestly described the meeting as the worst he had experienced in his career (New York Times October 3, 1990).

In addition to continuing civil war, Sudan experienced a serious drought in 1990 affecting ten million people across the country (Africa Confidential 31, 22). Narrowly based in the NIF, Bashir's regime contained no elements supportive of famine relief. Although the Combined Agencies Relief Team was able to organize Operation Lifeline II in March, the government's agreement to participate was a propaganda ploy (Keesings 10143; The Washington Post Weekly Edition 8, 8). After extracting a promise that 85 percent of the food to be distributed would go to Government-controlled areas, the Government returned to

obstructionism, denying the existence of famine to the press, withholding permits from relief workers, and blocking grain shipments.

The United States and other governments continued to apply pressure. In March the United States cut off all but emergency economic assistance to Sudan and prodded IMF to declare it a "non-cooperating partner"--tantamount to expulsion (New York Times September 4, 1990). In September the United States accused Bashir of trading 300,000 tons of sorghum for Libyan weapons. Sudan tried to brazen it out, asking the United States for 150 million dollars in food aid a month later. Instead, Baker ordered the merchant ship the Omi Sacramento to leave Port Sudan before it could off load 45,400 tons of grain meant for bakeries in Khartoum, a city rocked by bread riots almost yearly. The United States later relented, but also increased support for cross-border operations. The main effect of Bashir's actions may have been to weaken his grip on the north, rather than to hurt the SPLA. Food riots at Atbara, north of Khartoum were violently crushed by the government later that year (Human Rights Watch 1990, 93-99).

The collapse of Operation Lifeline revealed that the SPLA had not yet succeeded in consolidating itself outside of the Dinka heartland (ARB 10282, 10355). Renewed ethnic conflict broke out within its ranks in 1990. It is difficult to tell to what extent the reduction in flows of food aid and the drought may have rekindled buried tensions. Whatever the case, Africa Confidential reported that SPLA leader John Garang had been unable or unwilling to completely restrain SPLA fighters from preying on vulnerable households and villages in southern Sudan (31, 2). Equatorian officers like Joseph Oduho who charged the SPLA with continuing human rights violations were locked up in Ethiopia. And groups of Nuer SPLA fighters mutinied and fused with Anyanya II units, asserting that they had overthrown Garang. In fact Garang still controlled the largest SPLA units. Intra-SPLA clashes displaced 100,000

people in the south in 1990 (World Refugee Survey 1991, 55-56). The strife within the SPLA caused it to lose control of the towns it had captured, and its gains were rolled back by Government forces. Many of the relief workers who had been sheltered by the SPLA were forced to pull out.

6.2.7 Summary

The food control tactics used by the Government of Sudan reflected the nature relationship between the state in Khartoum and the people in the south. With little ability to penetrate the south and engage the rebels, the Government instead deliberately inflamed ethnic conflict, both between Arabs and Africans, and between Africans themselves. The Government withheld food from towns north of the conflict zone to discourage African refugees from coming to the capital. And the Government shielded itself from the SPLA by refusing to permit civilians to leave garrison towns where they were trapped without adequate food supplies. Unlike many of the other cases studied, the Government of Sudan did not have the capacity to villagize or reconcentrate people, but given the remoteness of the south, interdicting relief food proved just as lethal.

It is interesting to compare Sudan with Mozambique. In each case governments that were so weak they barely had the capacity to penetrate the countryside inflamed rural rebellion by pushing social policies derived from the politics of the urban center on rural people. Yet in Sudan, unlike Mozambique, a successful relief operation occurred in the midst of war. A critical difference was the leadership of the SPLA which included educated, experienced officers--defectors from the Sudanese army--who were fighting in their own communities. These people were quick to perceive the potential benefits of cooperation with an international

relief effort. And the Government of Sudan also supported famine relief, albeit reluctantly. Minear, who analyzed the strategic impact of the relief operation wrote:

> If the government endorsed Lifeline out of weakness, the insurgents did so more from a position of strength. Nonetheless, by early 1989 they too had reasons for welcoming a reprieve. Rapid military successes had outrun their ability to govern the areas taken. They needed time to consolidate control, provide services to the civilian population, and cultivate its loyalty. SPLA forces, like their opposite numbers, also wanted to prepare for the next stage of war. (1991, 66-67)

Although Sadiq vacillated, the importance of his willingness to cooperate with the relief operations was thrown into high relief when compared with Bashir's subsequent rapid cut-off of food.

The case of Sudan also highlights the role that the international community can play in prompting a relief effort during wartime *even when their is little awareness of the crisis in donor countries*. As a result of the experience of the famine of 1984-85 in Ethiopia, the Government of the United States, especially OFDA, contained staff prepared and qualified to engage in an international relief effort. And Congress and the Administration were sensitized to the possible domestic consequences of failure to act. Thus, in contrast to Ethiopia and Nigeria--the global public was suffering "famine fatigue" by 1988--pressure was brought to bear on Sudan without dramatic media attention. The United States abandoned its policy of supporting the Khartoum government and added its weight to the relief effort.

With the United States on board, the international relief community was able to induce Sadiq to gamble that the West would support him against NIF. And because of the vigorous efforts of groups like NPA, the SPLA had the opportunity to learn from experience in places like Narus that it could improve its ability to control the south, feed itself, and build bridges with international organizations if it participated in an international relief operation.

Although the SPLA later fractured when Bashir cut off food to the south, it should not be concluded that Operation Lifeline is meaningless to this analysis. First of all, conditions in the south improved substantially during Operation Lifeline. Second, when Sudan is compared to the other cases studied here, Operation Lifeline is further evidence of the tendency of insurgents to develop policies that sustain the food security of people under their control, and of a latent ambition on the part of insurgents to penetrate the international system using famine relief as their vehicle.

6.3 Famine Relief and Conflict-Related Famine

These case studies confirm that participating in famine relief operations is one of the most important things that combatants do in an attempt to enhance their domestic political legitimacy and strengthen their ties with the international community during conflict-related famine. Famine relief is central to the outcome of conflict-related famine, both because a successful relief effort can reduce mortality, and because relief flows can affect the course of the conflict. Because of the political role relief plays, the study of famine relief can illuminate the nature of the internal wars that cause famine.

Famine relief affects the outcome of conflict-related famine, first of all, because combatant relief efforts are not ineffectual. In every case I studied but that of Mozambique, rebel relief efforts--or at least rebel cooperation with relief efforts--have been vital to the food security of people isolated by fighting. Needs assessments conducted by relief workers in Angola in 1990 found hunger in Government controlled territory, but less hunger in the UNITA liberated zone (Morrison 1991, 16). ERA sustained people liberated Eritrea by bringing in up to half of the food consumed by those living there (Kaplan 1989, 57, 73-74).

And REST, in cooperation with international relief agencies, organized evacuations and relief operations that benefited tens of thousands of people (Clark 1988a). The Biafran Government's Directorate for Food Production helped avert a calorie famine in the rebel enclave (Nwankwo 1972, 78). And during Operation Lifeline food reached three million people in southern Sudan (Minear 1991, 35).

Furthermore, some of the largest and most successful relief operations in Africa have occurred during internal war on occasions when governments have agreed to permit international organizations to deliver food to disaffected, potentially rebellious populations. A million tons of grain entered Ethiopia under RRC supervision during 1984-85 and nearly half a million tons entered Sudan during Operation Lifeline. Every one of the governments in the case studies permitted relief food to flow into rebel controlled areas at least once during the periods studied.

Second, there is evidence that when it is employed as part of a comprehensive strategy during internal war, the use of food by combatants to sustain civilian supporters has changed people's minds with serious political consequences. The enduring popularity of UNITA, the Biafran Government, and the SPLA can be attributed in part to these movements' food policies. Survey data collected by Clay and Holcomb document the impact of rebel food policies in Ethiopia (1986, 66, 151). Refugees who fled the country before the famine of 1984-85 were generally indifferent to the liberation movements. But after ERA, REST and ORA participated in relief efforts, refugee statements changed, indicating that these efforts convinced some people to support the rebels. Later, the Ethiopian Government fell to a coalition of rebel groups with extensive popular backing.

Famine relief affects the outcome of military famine, thirdly, because efforts to boost food security can alter the strategic balance between combatants by changing the attitude of

the international community toward them. For example, the ostensible efforts of UNITA to feed its supporters in southeastern Angola were important to the decision of the United States Congress to repeal the Clark Amendment and resume aid to the rebels. In 1984-85 the Ethiopian RRC succeeded in fending off criticism and maintaining the confidence of aid officials like UN Assistant Secretary General for Emergency Operations Kurt Jansson, deflecting calls for a cutoff of aid (Jansson, Harris and Penrose 1987, 1). But over subsequent years Ethiopia lost control of flows of food to rebel relief organizations, who convinced the United States and the World Food Program to increase the proportion of grain allotments delivered through them. The efforts of the Biafran Government on behalf of non-combatants persuaded relief officials like George Orick of UNICEF to participate in pro-Biafran political activities. Later the Nigerian Government convinced most media and foreign governmental observers that in fact it was not starving Ibo civilians (Orick 1968, 1). In Sudan, the apparent indifference of the Government to starvation in the south motivated US officials to threaten Sadiq's regime with cross-border feeding operations. After working with SRRA, Egil Hagen of Norwegian People's Aid and other PVO workers campaigned for the insurgents' cause (Minear 1991, 85). Conversely, the failure of Renamo in Mozambique to win support from the United States can be attributed in part to its refusal to participate in relief efforts. This left the organization without supporters in the international community who would speak on its behalf.

For these three reasons--because combatants sometimes participate in successful relief efforts, because relief affects the domestic political situation, and because relief affects the international situation also--distinguishing the factors that influence whether combatants may find food security germane is critical to understanding the course of a given conflict-related famine. Now I want to bring this dissertation to a close by summarizing what the case studies

say about the conditions under which a successful relief effort can occur during conflict-related famine.

7. CONCLUSION

I have had three main goals in this dissertation. The first goal was to test whether war has been an important cause of hunger in Africa even when other factors that cause hunger are held constant. The results of the quantitative analyses support the intuition that even when things like low rainfall or adverse economic policies are taken into account, war still has a strong independent and negative effect on one of the most important exchange entitlements of the African peasantry--the cereal area harvested.

In addition, I wanted to try to disaggregate military activity to see whether both the direct effects of political violence and the economic effects of military spending have depressed food security in Africa. While the occurrence of armed attacks profoundly curtailed the cereal area harvested, in my data, military spending had significant negative effects on cereal yields, in part through the distortion of economic policies. Furthermore, I found evidence for a simultaneous relationship between military activity and food security that is reflective of the dilemma new states face in establishing their political legitimacy. In response to threats to their security in the form of armed attacks, governments increase military spending. To obtain the resources to do this, they employ distorting economic policies--mostly food pricing policy in my data from Africa. But economic policy distortions cause hunger to grow, which in turn leads to further rebellion. In the African countries I studied a spiral of political and food insecurity developed in the 1960s, 1970s and 1980s that led to the great conflict-related famines such as occurred in Angola, Chad, Ethiopia, Mozambique, Nigeria, Sudan and are occurring now in places like Liberia and Somalia.

The second goal of this dissertation was to explore in greater detail how hunger occurs during internal war. To do this I investigated five cases of conflict-related famine from Africa.

First of all, I looked at the relationship between the kind of tactics likely to be employed by and against insurgent groups fighting in rural agricultural areas--the tactics of guerrilla and counter-insurgency war--and food security. Central to these tactics is the doctrine of food control. Insurgents hope that if they can establish reliable access to supplies of locally-provided food they have a better chance of enduring government efforts to dislodge them. Furthermore, food production and distribution are easy targets for guerrillas who want to demonstrate that government is impotent to contain them. Guerrillas can break up markets, attack vulnerable agricultural projects and stop traffic on roads fairly easily, plunging the population of government-controlled towns into hunger. To defeat guerrillas, governments try to separate them from their rural supporters and from the food supply rural people produce. Concern for food control prompts governments to slap onerous restrictions on food movement, cut down crops in the field, and herd rural people into camps.

However, in some conflict-related famines civilians fare better than in others. The conundrum of political legitimacy presents insurgents facing a government implacably committed to the tactics of food control with an opportunity to strengthen their popular base if they can position themselves as guarantors of food security. Even governments, recognizing the political cost of brutal food control policies, sometimes attempt to use food policy to demonstrate an ostensible commitment to the welfare of rural people. Thus combatants at times permit, participate in, and even encourage famine relief operations during war. Such observations led to the third goal of this dissertation--to account for the occurrence of successful famine relief operations during conflict-related famine in Africa.

In the case studies five factors were identified that could contribute to the success of famine relief during conflict-related famine. These are: 1) the presence of individuals or groups among combatant leadership committed to promoting famine relief, 2) an ethnic base

linking rural people to combatants, 3) military intervention by foreign powers, 4) pressure on combatants to promote relief by foreign governments and international organizations, 5) the attention of international media. Now I want to conclude by recapitulating and extending the findings of the case studies. Of these five factors, which is associated with successful relief and why? What is it that distinguishes the cases in which relief efforts failed? A summary of my conclusions are presented in tabular form in table 16.

Of these five factors affecting the success of famine relief, numbers 2 and 3, the ethnic bases of combatant groups and foreign military intervention, have already been discussed at some length, so that only a brief summary is necessary here.

Relief operations may be more likely to succeed if combatants are linked to rural people by ethnic or other ties. The theme of ethnicity recurred several times in the literature and in the case studies. Some Africanists attribute political instability in Africa in part to the predominance of ethnic bonds over national allegiance (Callaghy 1987, Lemarchand 1987). In the literature on guerrilla and counter-insurgency war it is held that insurgents rely on local people for food supplies; this is the justification for food control tactics (Paget 1967, Rice 1988). In the case studies successful relief operations often occurred where insurgent fighters were ethnically identified with local people: UNITA and the Ovimbundu, the TPLF and the Tigray, the EPLF and the Eritreans, Biafra and the Ibo, the SPLA and the Dinka. Yet ethnicity was not the only important factor. UNITA attacked Ovimbundu people on the planalto and vetoed relief efforts for years while people starved.

In the case of Angola, foreign military intervention was critical. Recall that the world systems theorists hold foreign military intervention primarily responsible for hunger in Africa (Schultheis 1989). Some Africanists also wrote that the willingness of the superpowers and regional hegemons like South Africa to supply arms to proxies during the Cold War

exacerbated internal wars in Africa (Lemarchand 1987). Indeed the quantitative analysis it appeared that more militarized states had greater hunger problems. The case of Angola tends to confirm this association. In Angola when combatants were assured of high levels of foreign military support, they adopted an uncompromising attitude toward civilian relief.

These two factors alone cannot explain the success or failure of relief operations, however. For example, relief was successful in Ethiopia in 1984-85 but unsuccessful in 1988 even though neither the level of U.S. intervention nor the ethnic makeup of combatant groups had changed. Similarly relief entered Biafra in late 1968 but was cut off in June 1969. In concluding I want to discuss the other three factors, international pressure, media attention, but especially the presence of people among combatant leaders who want to promote relief. These three factors are interconnected with one another through the process by which an international relief occurs during conflict-related famine; for a war-time relief effort cannot succeed unless grain donors, relief organizations, and combatant groups find it acceptable.

7.1 The International Politics of Relief

What could make a combatant eschew so effective a weapon as hunger and permit food to reach people--some of whom could be his enemies? The reason is that the use of hunger as a weapon can lead to powerful backlashes from both domestic and international political actors.

As has already been seen, the use of hunger as a weapon can delegitimize a combatant in the eyes of affected people. The case studies illustrate that point that the rigid application of food control tactics can backfire (Paget 1967). The enervating restrictions placed upon households in the garrison towns of the Planalto turned peasants against the Angolan

Government, causing some to flee into UNITA territory (Rone 1989, 42). Famine conditions created by the war in Southern Sudan moved youths to strike out for SPLA camps to sign up (Africa Confidential 26, 11; 31, 2). The SPLA itself suffered a popular backlash when its leaders were unable or unwilling to restrain its fighters from pillaging the homesteads and rustling the cattle of non-Dinka people. During 1985-87 the Government organized non-Dinka civilians disaffected by SPLA tactics into civilian militias that threw the movement on the defensive. In 1990 the Government similarly was able to induce ethnic Nuer fighters to defect from the SPLA over such issues.

A domestic political backlash resulting from the use of hunger as a weapon may be strong enough on occasion to topple a regime. This is the explanation given for the fall of both the Selassi and Mengistu regimes in Ethiopia by at least some observers (Giorgis 1989, 124).

7.1.1 The Strategic Significance of Food Relief

But a domestic backlash is only one of the consequences that can result from the use of hunger as a weapon. Combatants' domestic food policies affect their prospects for receiving international support they may require in their struggle. Thus, domestic policies and international politics are intertwined.

Combatants seek international aid in the form of both military hardware and ammunition, and food. However, international sources of food aid may be just as important as access to weapons, because food can alter the ability of combatants to pursue hearts and minds strategies with decisive effects on the strategic situation. As we saw, in 1984-85 the Government of Ethiopia was assured of continuing military support from the Soviet Union. It

permitted food to enter the north because it feared a loss of food aid from the West that it also counted upon to stabilize the Amhara and Wollo heartlands if it did not.

Food aid is also sought both to provision troops. Relief workers complain bitterly about the fact that food aid given to the relief arms of insurgencies--and to governments for that matter--winds up being eaten by soldiers. In the Ethiopian civil war the TPLF and EPLF all were discovered to have given relief food to fighters, as were Government troops (Cliffe 1989, 374). Rebel soldiers ate about 10 percent of the relief food entering Biafra (Samuels 1969, 20-29). PVOs in Sudan documented numerous cases in which relief food was diverted to SPLA fighters (Christian Science Monitor January 29, 1990).

Nonetheless, reporters who investigated these incidents were not able to show that the amounts diverted were so large that civilian hunger was aggravated as a result. In general, soldiers could not eat much of the food aid if they tried. In a typical conflict-related famine the number of people at risk of starvation is many times larger than the number of soldiers. So the tonnage of relief grain moving through a zone of conflict is much too large for the armed portion of the population to consume. Not only that, but militaries often have other sources of food. Food aid is an important supplement to a military's commissary, but its main benefit is in helping it to work with civilians. Even if soldiers do eat relief food, this enables them to reduce the burden they place directly upon civilians. Rather, the diversion of food aid is deadly when it is part of an overall policy of pernicious food control, including the deliberate interdiction of relief, such as was carried out by the Governments of Ethiopia and Sudan, or by insurgents like Renamo or UNITA in the Angolan Planalto.

In their quest for food assistance combatants must take the world views of foreign donors into account. In general, the military aid allocations of foreign governments are influenced by geo-political considerations. But the governments of donor countries also

consider domestic political consequences when making decisions about food aid. As others have observed, when donor governments are subject to internal criticism for inaction, particularly if amplified by the press, they are more likely to give food aid during a conflict-related famine (Subcommittee on Rights 1989, 32). Thus the United States primary source of food aid to Angola and Ethiopia. However, if the press and other influential shapers of public opinion like international organizations condemn a combatant for its food policies, donor governments may be pressed to cut off food assistance. Thus combatants--irrespective of any disregard shown to the consequences of their tactics at other times--do become concerned with how the foreign press and publics view them when vying for food aid.

7.1.2 The International Press

During conflict-related famines African governments have been subjected to withering criticism in the international press. I do not disagree that insufficient attention is paid to conflict-related famines and that culprits often ignore any bad publicity they receive. My point is that on occasion criticism has reached a level sufficient to threaten real consequences and that combatants may try to ward off these consequences. There are numerous interesting examples.

Nigerian air raids and the blockade of Biafra in 1967-68 led to such an outcry in the international press that the Federals believed their international arms supplies to be in jeopardy (De St. Jorre 1972, 356). In 1985, after the famine in Ethiopia received widespread attention from the media, the United States and the ICRC threatened to stop supplying the Government of Ethiopia with relief food if it did not permit more of it to enter Tigray. Mounting protests

from PVOs, United Nations agencies and donor countries prompted the Government of Sudan to agree to corridors for peace in the south in 1988.

Insurgencies also respond to international pressure at times. The PVOs that provided food to REST in northern Ethiopia depended on WFP grain provided by the United States. When the United States denounced TPLF raids on Ethiopian food convoys and threatened to curtail shipments of food for cross-border operations, the TPLF, encouraged by the PVOs, is said to have backed off from such attacks (Africa Confidential 26: 1; 27, 1). To maintain access to food supplies flowing into the south under Operation Lifeline, the SPLA submitted to audits of its distribution program by PVO monitors (The Christian Science Monitor January 29, 1990).

7.1.3 How Famine Relief Influences International Politics

International assistance is particularly important to insurgents. It is true that many African guerrilla groups have fought for years without receiving much direct assistance. They can provision themselves in the rural areas and arm themselves by capturing weapons from government forces. However, if an insurgency is to consolidate itself, it must establish links with the international community at some point. Guerrilla leaders often can accomplish this during an conflict-related famine.

By in large, governments in the cases I studied did not campaign for hearts and minds, or they did so belatedly or in a way which did not actually address peasants' needs. In contrast, there appears to be consistent domestic and international political pressures on armed groups operating in rural areas to adopt a strategy of articulating peasant interests. This is not to say that rural bandits are Robin Hoods. They are not. Nor am I saying that most or many

armed groups pretend to have political goals. I do not imagine that successful insurgent movements must have a political line or avoid brutalizing the peasantry. Renamo has forced the government of Mozambique to negotiate with it by relying primarily on the use of terror. However, in virtually every case that I investigated there was at least some evidence of insurgent cooperation with peasants. And over time there was a tendency for guerrillas, even Renamo, to promulgate a populist line coupled with a drive to penetrate the international system, even if only opportunistically. The reason is that insurgencies gain more than food from participating in relief efforts. Successfully cooperating with donor organizations and governments in an international relief effort--being seen to deliver food to civilians in distress--wins allies for the movement from among the press and relief agencies.

These people--people like Hagen, Kaplan, and Orick, described earlier--help the insurgents put their case before the international community. Furthermore, during a conflict-related famine international donors may be seeking ways to deliver food to groups of people isolated by the conflict. Insurgents are uniquely able to control access to liberated zones and zones of conflict. Thus rebels can argue to people who are not politically inclined to support them that they ought to do so for pragmatic reasons. Roger Winter of the U. S. Committee for Refugees lobbied Congress to back cross-border feeding operations into southern Sudan because he believed it was the most practical and effective way of delivering aid (Select Committee 1989, 12, 33). If an insurgency can establish that it can reliably deliver relief supplies to persons isolated by fighting, relief organizations and domestic pressure groups are liable to ask donor governments to negotiate with it. Jonas Savimbi believed he could bring pressure to bear on the United States Congress to back his demand for negotiations with the Government of Angola when he began to lead press groups on tours of UNITA farms around Jamba.

If conflict-related famine continues unabated the appeals of insurgents become more credible. The EPLF and TPLF established communication with United States, which had eschewed these groups as Marxist extremists, while hammering out deals for corridors of peace with relief officials in 1985. As the United States began supplying grain to groups funneling food into rebel held territory in Eritrea and Tigray, the Senate heard testimony for the first time from its own United States Committee on Refugees (USCR) and Office of Foreign Disaster Assistance (OFDA) that the EPLF and the TPLF were not aligned with the East Block and might present an alternative to Mengistu acceptable to the West (Select Committee 1989). In the Horn of Africa, support to PVO cross-border feeding operations into rebel held territory that deliver food to rebel relief arms became standard United States policy (New York Times October 3, 1990; Select Committee 1989, 33). Thus participating in relief efforts fuses the guerrilla's three goals of sustaining itself, winning hearts and minds, and establishing linkages with international organizations.

But governments, too, may use conflict-related famine as an opportunity to build international credibility. After the Angolan Government decided to permit the SRPA to go ahead in 1990, it complained petulantly of UNITA violations of corridors of peace and attempted to portray itself as genuinely committed to famine relief (Morrison 1991, 14-16). Nigeria moved aggressively to reassure the British that it could be trusted to safeguard the rights of Ibos after the war with Biafra, issuing the operational code and permitting observer teams to go to the fronts (Observer Team 1968, 336). Like relief officials who work with rebel groups, those who deliver aid through governments often see their hosts transgressions as less than egregious and advocate channeling relief food through them. Kurt Jansson and Peter Gill who worked with RRC officials during the 1984-85 famine in Ethiopia believed that the

Ethiopian Government was sincerely committed to the relief effort (Gill 1986, 144; Jansson, Harris and Penrose 1987, 23).

The possibility that rebels could come to be regarded by foreign governments and international organizations as having a legitimate role in food policy--at least inside their liberated zone--makes it imperative that African governments neutralize this threat. Governments always denounce cross-border feeding operation as violations of their sovereignty. If foreign pressure makes it politically impossible to block assistance to rebel enclaves by force, the only other way governments have of preventing insurgents from gaining control of food policy inside liberated zones is by taking on the responsibility for delivering food to civilians in the zone themselves. This forces governments to compete directly with insurgents for legitimacy in the arena of food policy. Thus we saw the Government of Ethiopia delivering limited amounts of grain into the north, the Government of Angola accepting the SRPA, and Sadiq's regime permitting Operation Lifeline.

If formerly recalcitrant governments begin to participate in relief efforts it forces rebels to reevaluate their strategies. They must decide between attacking government relief convoys and enduring the criticism that will follow or permitting the government to get some credit for the operation. If rebels block government feeding efforts they are also liable to receive negative publicity and be threatened with international sanctions. If they lose access to international flows of food their ability to stabilize their liberated zones will be compromised. For example, UNITA, faced with the prospect that world opinion would swing toward the Angolan Government, eventually succumbed to pressure to accept the SRPA and stopped attacking convoys going to Government-held towns in 1991 (Morrison 1991, 15). When Sadiq's government committed itself to allowing food to flow into the south in 1989, the SPLA had to agree to permit food to reach the garrison towns. If it had not, Operation

Lifeline might have circumvented the SRRA entirely (Minear 1991, 155). In 1986 the RRC agreed--pending the approval of Mengistu--to permit corridors of peace into TPLF territory. The TPLF was forced to agree to this move, even though the RRC would get much of the credit for the relief operation, or risk losing credibility among PVOs and international relief organizations (Giorgis 1989, 189).

7.1.4 The Internal Politics of Relief

How do combatant groups identify the opportunities afforded them by participation in international relief efforts? The presence of persons opposed to the use of food as a weapon and supportive of hearts and minds tactics is critical to the success of war time relief. It is the activity of such people that knits the relief effort together. Because they believe it is important to get food to those in need, these people try influence donors and combatant to bring the relief effort into being.

In the case studies, such persons appeared in several different guises. Some combatant leaders, like Gowon, Savimbi, or Aferworki of the EPLF favored hearts and minds strategies as a matter of military doctrine. Lower ranking officials like Dawit of the Ethiopian RRC or Ademola of the Nigerian Red Cross can be advocates of famine relief whatever the world view of the military leadership. In still other cases public citizens like Malakal mayor Okwara or church leaders like those who founded the Joint Relief Partnership in Ethiopia defy combatants to campaign for relief at some personal risk.

Persons who favor relief operations try to influence donors by working with the international press, international organizations and relief agencies to attract the attention of the world to imminent food crises. They goad donor governments to make food aid available by

feeding information to special interest groups concerned with relief and opposition parties seeking policy failures to pin on incumbents. The Government of Biafra drummed up international support for their cause by hiring the public relations firms of Ruder and Finn and Robert S. Goldstein to publicize pictures of starving children (De St. Jorre 1972, 307). As a result, the war received tremendous attention from the international press, especially in the United Kingdom where Labor MPs argued that military assistance to Nigeria should be cut off because of the famine in Biafra. The RRC initially attempted to convince the world that a major relief effort was required in Ethiopia in 1984-85 by working through accepted channels in United Nations organizations. Faced with skepticism about its attentions it also turned to the world press with greater success.

Relief efforts during conflict-related famine will fail unless the persons who back relief can prevail against opposition. In the cases I studied there was always substantial opposition to relief, even when relief was promoted by powerful leaders. Gowon faced opposition from Nigerian leaders who favored the "quick kill" (Awolowo 1981, ix). Operation Lifeline, which appeared to Sudanese hardliners to be tantamount to feeding the enemy, helped precipitate Sadiq's downfall (New York Times October 3, 1990).

Less powerful persons who favor famine relief hope that the availability of large volumes of relief food, if available, will be sufficient inducement to their leaders to cooperate with the relief effort. Mengistu was said to have believed the benefits of having sufficient food in Ethiopia to pacify the population outweighed the risk that some of it would feed dissidents (Giorgis 1989, 336-337).

But if it is not, they may even try to bring pressure to bear on the leaders of their own organizations by exposing any policies that contribute to hunger. They hope that the attention of the world press will protect them from retaliation at least so long as the relief

effort lasts. There are examples less well known than that of the Ethiopian RRC. The activities of the Sudan Council of Churches in southern Sudan, which cooperates with relief organizations, organizes its own food relief and attempts to publicize the problem of hunger and of human rights violations is one example (Minear 1991, 12). The use of hunger as a weapon was also challenged within the SPLA when Bari Wanji and other officers protested cattle raiding and interdiction of relief food during 1987-1988. When their demands went unmet the officers called for the ouster of SPLA leader John Garang and were arrested and held by the SPLA in Ethiopia. Wanji escaped from detention and went to Kenya where he spoke to the press about the SPLA's tactics in 1989. By the time Wanji had escaped the SPLA had already begun to make concessions on food tactics partly as a result of the crisis the dissident officers created (Africa Confidential 31, 2).

When combatants attempt to set up relief agencies they may be transformed in ways that have long-run implications. International flows of food not only alter the ability of combatants to pursue hearts and minds strategies, but may even increase their inclination to do so. The reason is that combatant relief organizations, if they are to be effective, must obtain sufficient quantities of food to meet the needs of those affected by conflict-related famine. This can run into the hundreds of thousands of tons of grain. Only donor nations like the United States, or organizations like the World Food Program (which gets most of its food from the United States) can meet these requirements. Thus large-scale relief efforts bring combatant relief organizations into contact with the United States and international organizations giving them experience in international diplomacy and at least some level of recognition. Furthermore, international organizations and PVOs often have as one of their goals enhancing the capacity of Government and rebel relief organizations to cope with conflict-related famine. They train professional staff and transfer control of resources and

infrastructure to them in hopes that local capacity will be increased. The RRC experienced an enormous infusion of resources during 1984-85. The small and ineffectual Sudanese RRC grew substantially during Operation Lifeline. Rebel organizations benefit from such efforts at times also. Training and development of the infrastructure of SRRA were explicit goals of Operation Lifeline (Minear 1991, 59). REST and ERA benefited from training and donations of trucks and equipment from PVOs and the WFP. The ICRC distributed aid through ERA and REST from 1984 to 1986 and trained REST workers in 1985 (ICRC 1984; 1985; 1986a).

These changes may alter the orientation of combatant groups by creating or sustaining a cadre of people within them who strongly favor policies that would support food security. Relief operations supported by the international community increase the resources at the disposal of these groups, potentially enhancing their influence. The clearest examples of this are the RRCs of Ethiopia and Sudan. During the relief effort of 1984-85 the RRC in Ethiopia was able to compromise Government policies and cooperated with international organizations delivering food into the north. During Operation Lifeline the Government of Sudan lost control of food policy in the south but the Sudanese RRC gained control of hundreds of thousands of tons of grain and the vehicles and personnel to transport and store it.

7.2 What Accounts for Successful Relief?

Table 16 at the end of this chapter presents the conclusions drawn from the case studies formally. I used Charles Ragin's (1987) method. Ragin's method is well suited to case studies because it works with nominal data. The method, akin to deductive logic, uses Boolean algebra which treats each case like a logical statement and reduces the variables associated with the cases to those both necessary and sufficient to produce a specified

outcome--in this case successful famine relief. The math involved can be cumbersome and the patterns uncovered complex. In my cases, happily, no math is required to read the table. The results are apparent to the eye.

Before I could use Ragin's method I had to determine whether a relief operation could be judged a "success." In judging whether a relief operation was a success or not, I used the criteria outlined in Chapter Five. First, sufficient quantities of food must have been delivered to sustain those estimated to be at risk. Second, some evidence must exist that this food actually reached those at risk. The outcomes of relief operations were described in detail in the case studies and summarized in Table 15.

There were six "successful" relief operations: The SRPA in Angola in 1990-91 after the formation of the Joint Politico-Military Commission; the 1984-85 operation in Ethiopia and again after the advent of the Joint Relief Partnership; in Biafra until June 1969; during the western drought in Sudan in 1985 (which was not a case of conflict-related famine) and in the south during Operation Lifeline. These cases are indicated in the table below by a "YES" in the column marked "Successful Relief."

There were also six cases with unsuccessful relief operations: In 1985-85 the relief operation in Angola failed to reach those in need; in Ethiopia in 1988 and in Sudan in 1987-88 official obstructionism prevented successful relief; in Nigeria after 1969 and in Sudan in 1990 the Government simply cut off food assistance to rebel held areas; finally in Mozambique relief operations were never successful because of the inability of the Government to penetrate the countryside. These cases have a "no" in the column marked "Successful Relief."

In the table below, two indicators of foreign military intervention are displayed, one that indicates if a combatant in a case was a proxy of western powers--the United States and South Africa, and a second that shows if a regime was a client of the Soviet Union. Ragin's

method would tell us if military intervention by one, either or *both* of the powers was necessary and sufficient to block relief. It is important to note if intervention by both makes a difference, since that is the case of proxy war. I also have two measures of international pressure, one for pressure by the United States and one for other international pressure. This is because the United States with its grain surpluses is so critical to famine relief, and because in cases where the United States is backing a proxy in an African conflict, it may not bring pressure to bear for relief while other countries do. "Pressure" refers to pressure on combatants to cooperate with relief efforts, as described in the case studies, in the form of public condemnations or threats to withhold aid. Again, Ragin's method makes it possible to determine if pressure by the United States alone makes relief possible, if other pressure is, or if a concert of intervenors is required.

Two indicators of the attitudes of combatants are required as well, one--"Insurgent Cooperation"--which indicates if insurgents were attempting to promote food security among their supporters, and one--"Government Cooperation"--that indicates if governments agreed to participate in relief operations. The coding of these variables comes from the case studies.

Table 16
Factors That Could Affect the Success of
Famine Relief Operations During War--Twelve Cases from Africa

Successful Country	Drought	Media Attention	US Pressure	Other Pressure	Soviet Client	Western Proxy	Ethnic Base	Insurgent Cooperation	Government Cooperation	Relief
ANGOLA 1985-86	YES	no	no	no	YES	YES	YES	no	no	no
ANGOLA 1990-91	YES	no	no	YES	no	YES	YES	YES	YES	YES
ETHIOPIA 1984-85	YES	YES	YES	YES	YES	no	YES	YES	YES	YES
ETHIOPIA 1988	YES	no	YES	YES	no	no	YES	YES	no	no
ETHIOPIA 1990	no	no	YES	YES	no	no	YES	YES	YES	YES
MOZAMBIQUE 1987-88	no	no	no	YES	no	YES	no	no	YES	no
NIGERIA-BIAFRA 1968-69	no	YES	no	YES	no	no	YES	YES	YES	YES
NIGERIA-BIAFRA 1969-70	no	YES	no	YES	no	no	YES	YES	no	no
SUDAN (Western) 1985	YES	no	YES	YES	-	-	-	-	no	YES
SUDAN 1987-88	no	no	no	no	no	no	YES	no	no	no
SUDAN 1989	no	no	YES	YES	no	no	YES	YES	YES	YES
SUDAN 1990	Yes	no	YES	YES	no	no	YES	YES	no	no

"Successful" relief operations were coded on the basis of Table 15.

Ragin's method supports the conclusion that the attitude of combatants is critical to the success of relief operations. As the table shows, in the every one of cases I studied in which a successful relief effort occurred during war, insurgents were intent on using food to sustain

their rural bases. Each of the columns containing a YES under "Successful Relief" also has a YES under "Insurgent Cooperation" and a YES under "Government Cooperation." Relief is always the result of a mutually acceptable political resolution, however fleeting, of the conflict that created the food crisis.

In every case of successful relief foreign pressure was brought to bear upon the combatants to permit relief work to go ahead. The column marked "Other Pressure" refers to pressure from the United Nations, international relief organizations or foreign governments other than the United States. For example, in the case of the Nigerian civil war the British Parliament vigorously pressed the Federal government not to interfere with relief flights. In Angola during 1990-91 the Soviet Union, Portugal, the ICRC and the United Nations were weighed in for corridors for peace. Interestingly, pressure from the United States, the world's leading food donor, is not necessary for successful relief. In Nigeria and Angola other relief organizations moved grain from the United States, which was peroccupied with other concerns, to those in need.

It seems conceivable that food aid could be delivered in the absence of foreign pressure, but in these cases foreign pressure was essential. First of all, foreign financial support was essential because of the cost of the operations. Foreign countries not only donated millions of dollars and hundreds of thousands of tons of grain, but also vehicles and technical expertise. Second, part of the reason combatants support a hearts and minds approach to food control is that they expect such tactics to influence the behavior of donors and foreign governments. They expect to get food, weapons or international recognition as a result. Without the opportunity to benefit from the relief effort combatants have less incentive to come in from the cold.

Finally, in every case of successful relief, insurgents had ethnic ties to the people living where they were fighting. Conversely, one could say "in every case in which insurgents did not have ethnic ties to local people relief failed." Of course I have only a single observation of a case in which insurgents were fighting outside their ethnic base, that of Mozambique. But one can think of other cases--for example that of Liberia where Charles Taylor's forces have retreated away from their home area with devastating consequences for food security--that could be added to strengthen this result. The ethnic identification of rebels with local people is important because it motivates fighters to desire to enhance food security. The table contains two cases, Angola in 1985-86 and Sudan in 1987-88, in which insurgents were fighting in their home areas without practicing hearts and minds tactics. Ethnic identification does not automatically lead to cooperation between guerrillas and local people. But in my cases, when both occurred together with other factors, famine relief efforts were successful.

The table also shows why relief fails. In every case where relief failed, at least one combatant group continued to use hunger as a weapon to veto relief operations. Non-participation by one combatant was always sufficient to scuttle relief.

It is interesting to note that the table refutes some of the popular truisms about conflict-related famine. First of all, the idea that conflict-related famines always happen together with droughts is falsified. Clearly, drought is important in exacerbating conflict-related famines. But in five of the nine conflict-related famines described drought was not a factor. Mozambique, Nigeria and Sudan since 1986 are cases of entirely man-made famine. And I have been generous in the case of Ethiopia during 1988. Although rainfall was below normal in some parts of the country in 1988, Ethiopia should not have experienced a famine.

Production surpluses from other parts of the country would easily have covered regional shortfalls if it were not for the war.

And the table does not support the deduction that foreign military intervention prevents relief. There is only a single case of that here, that of Angola in 1985-86. But even if an additional case had been added, Mozambique before 1987, that would have yielded the same result--foreign military intervention is also accompanied by combatant intransigence which is the sole necessary and sufficient condition for the failure of relief. It is also interesting to note that lower levels of foreign military involvement did not affect famine relief. The fact that a government was a client of the Soviet Union did not prevent it from supporting relief operations as illustrated by Ethiopia in 1984-85. And the cessation of Soviet sponsorship such as occurred in Ethiopia in 1988 did not automatically make a government more likely to adopt a more flexible approach to food control.

The idea that media attention is an essential component of large relief operations is not supported by this table, either. Only two of the successful relief operations, the Nigerian civil war and Ethiopia 1984-85, occurred with considerable media attention. While the press role was critical in those two cases, the press was quiet during the food crises in Sudan in 1988 and in Ethiopia in 1990, yet very large food relief efforts were carried out. In these cases the United States, upon whom these governments depend for food, put pressure on them even though media attention, and with it constituent pressure on Congress and the President to act was slight. This dissertation did not analyze the evolving role of American donors and relief organizations, but I cannot help but note that USCR, OFDA, and USAID acquired considerable expertise and influence during the late 1980s after their experiences in the Sahel and the Horn of Africa. Surely the development of a professional, committed staff contributed to the more aggressive role played by the United States later on.

It is no accident that hearts and minds tactics occurred together with pressure from foreign donor and international organization. Combatants who are the most dependent on the development of an internal base of support--and are hence most concerned with questions of legitimacy--are more likely to adopt a hearts and minds strategy. This impels them to seek access to relief food and the political support of external actors. And foreign pressure both strengthens factions supportive of relief operations and, if sufficiently threatening, induces combatant leaders to compromise. Thus when the interests of domestic and international actors are mutually reinforcing famine relief is possible during war time. Only if each party is prepared to play its role can relief occur.

APPENDIX I
Cereal Area Harvested and the Number of Armed Attacks
Six African Countries 1964-84

Figure 5.

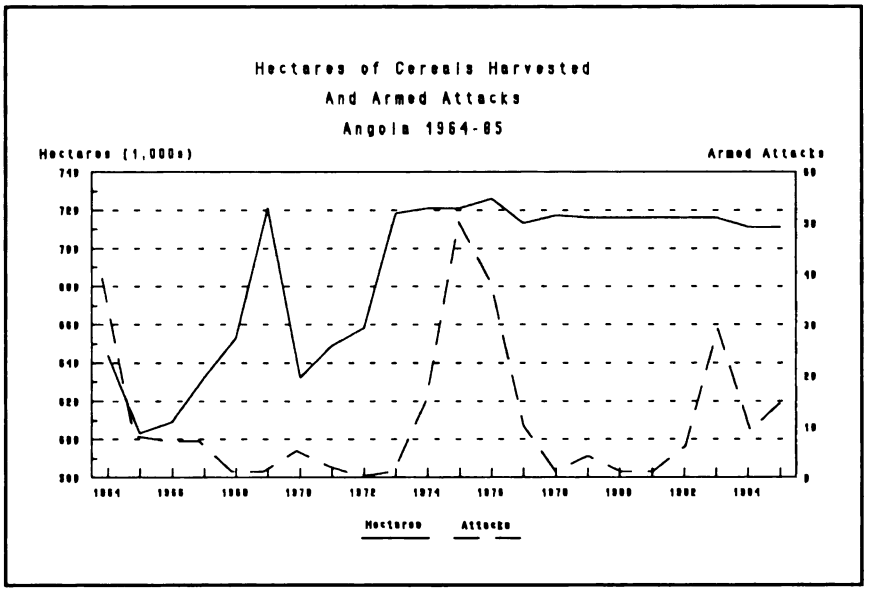


Figure 6.

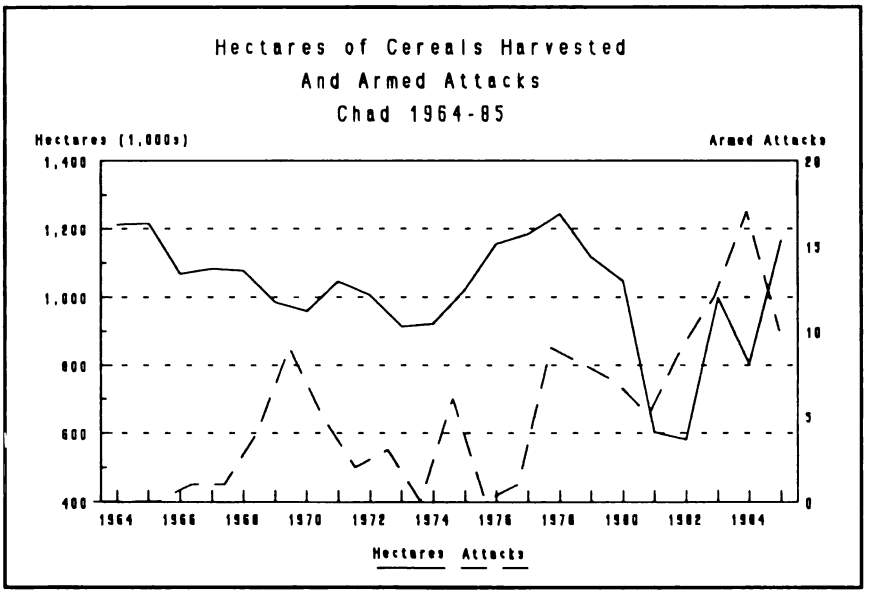


Figure 7.

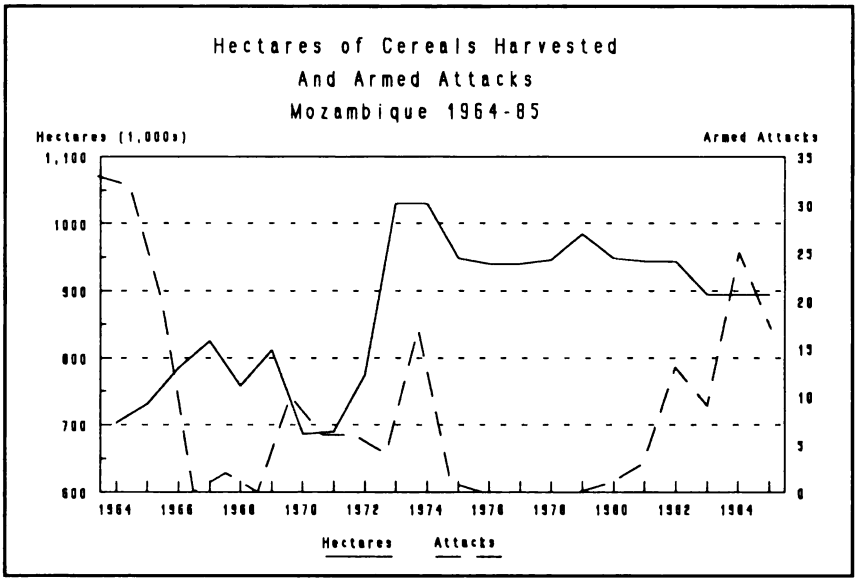


Figure 8.

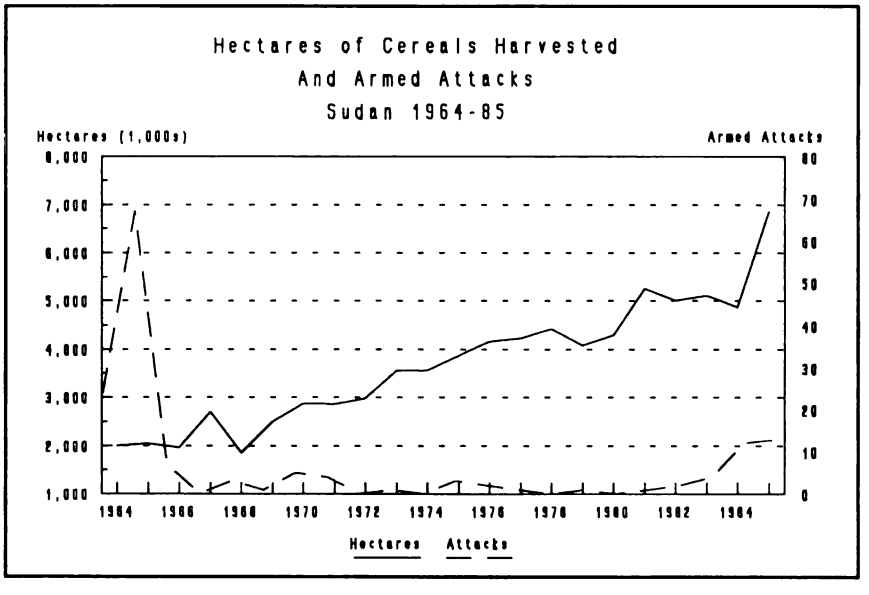


Figure 9.

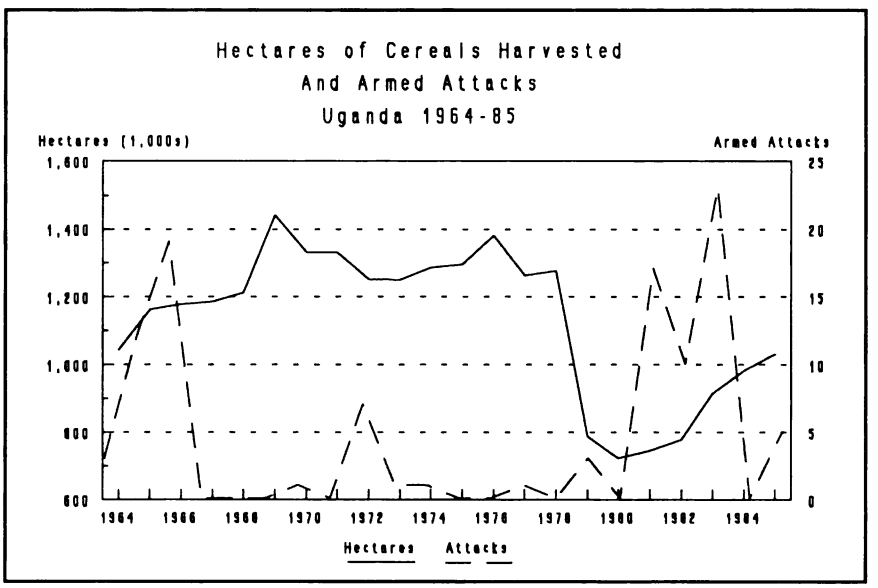
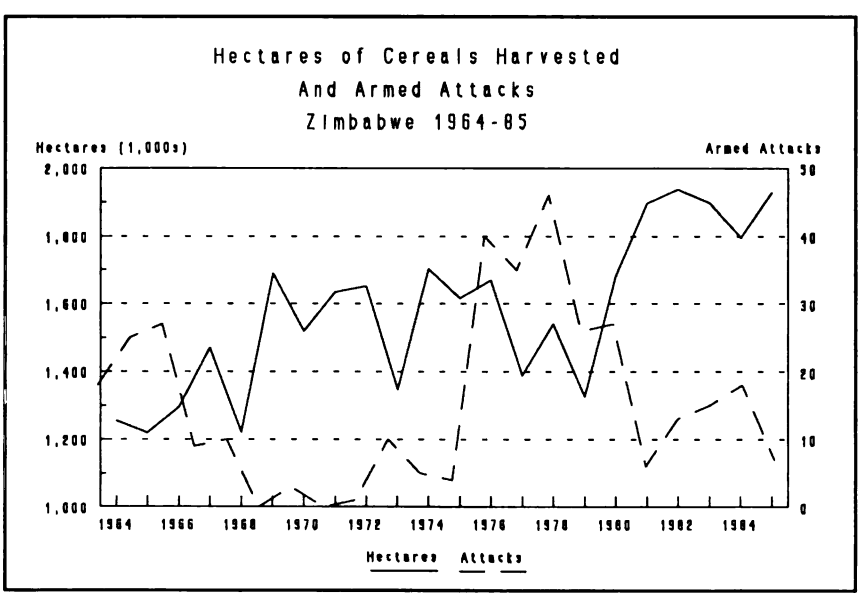
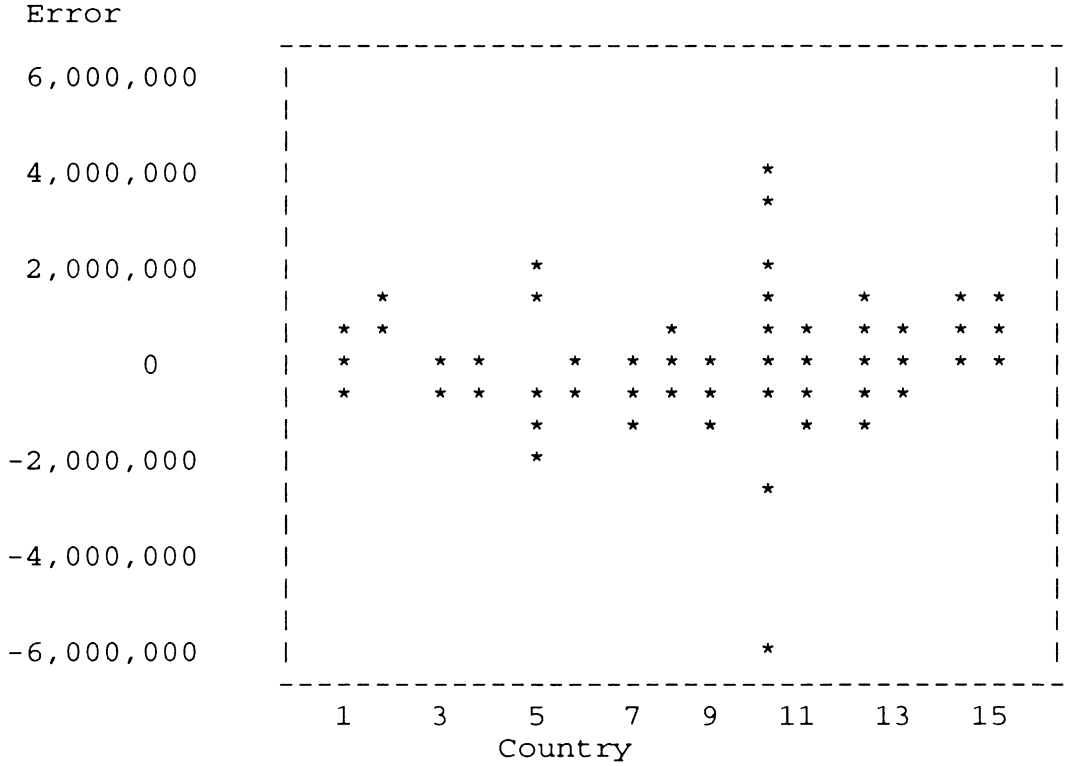


Figure 10.



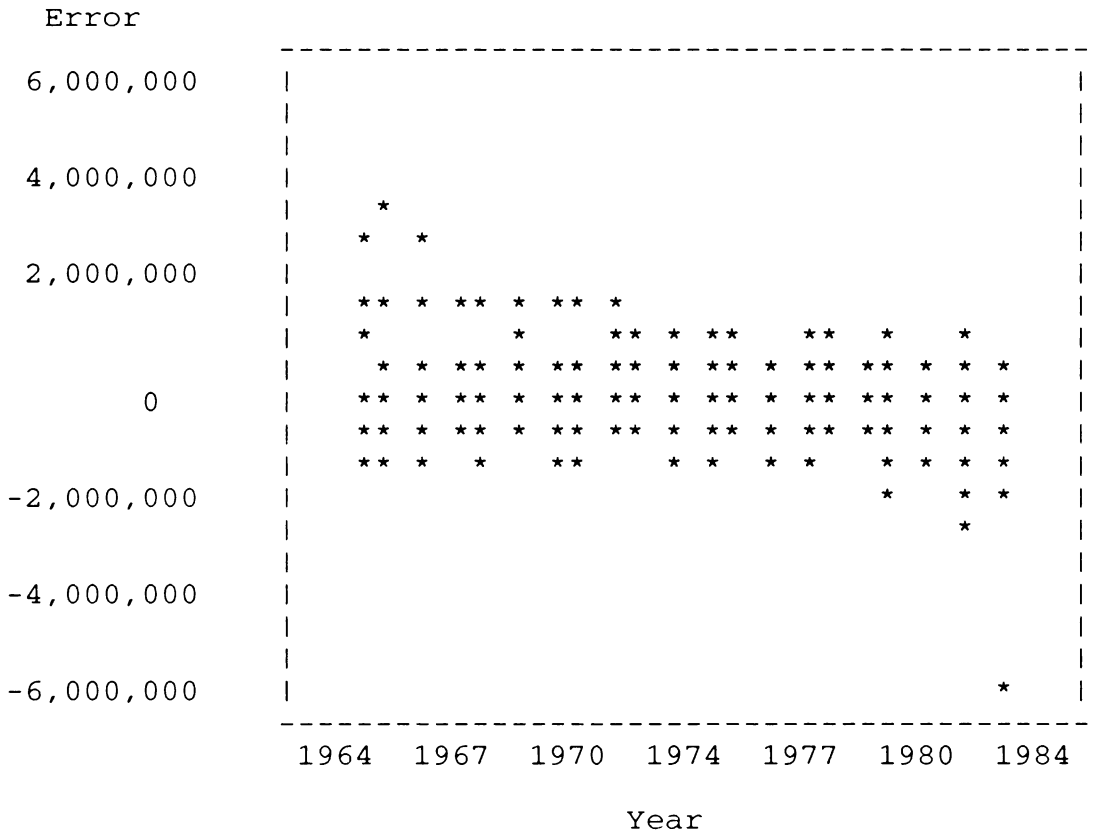
APPENDIX II
Residual Analysis

Figure 11.
Uncorrected Regression Residuals by Country
Area Harvested



This scatterplot demonstrates cross-sectional heteroskedasticity. Take note of the extreme variation in the errors between countries with small error variance, such as number two, Burkina Faso, and those with large error variance like number 10, Nigeria. Also notice that the prediction errors are systematically positive in some cases (numbers two, 14, 15) or negative (three, four, six, sever, nine). These problems will bias the estimation of the regression coefficients and standard errors unless corrected by use of generalized least sqaures.

Figure 12.
Uncorrected Regression Residuals by Year
Area Harvested



This scatterplot shows the presence of cross-sectional and serial correlation. Notice that some kind of systematic shocks bias the errors upwards around 1968, or downwards around 1976. The scatterplot also shows that over time the errors move systematically in one direction (downward) due to positive serial correlation.

Figure 13.
Uncorrected Regression Residuals by Country
Average Cereal Yield

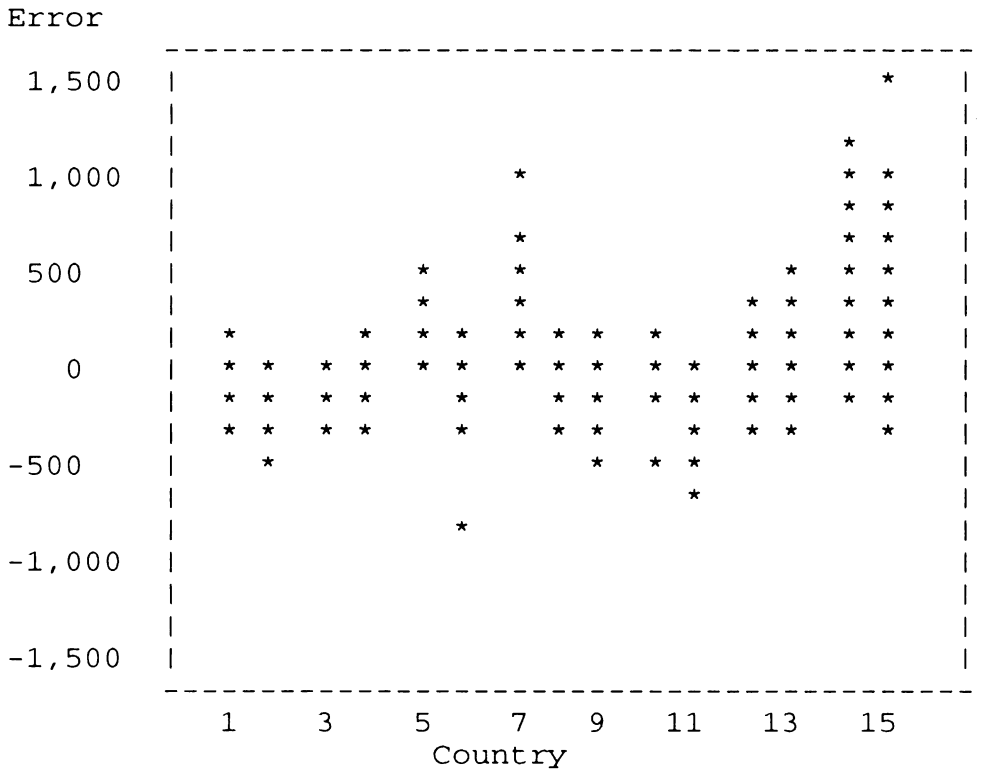


Figure 14.
Uncorrected Regression Residuals by Year
Average Cereal Yield

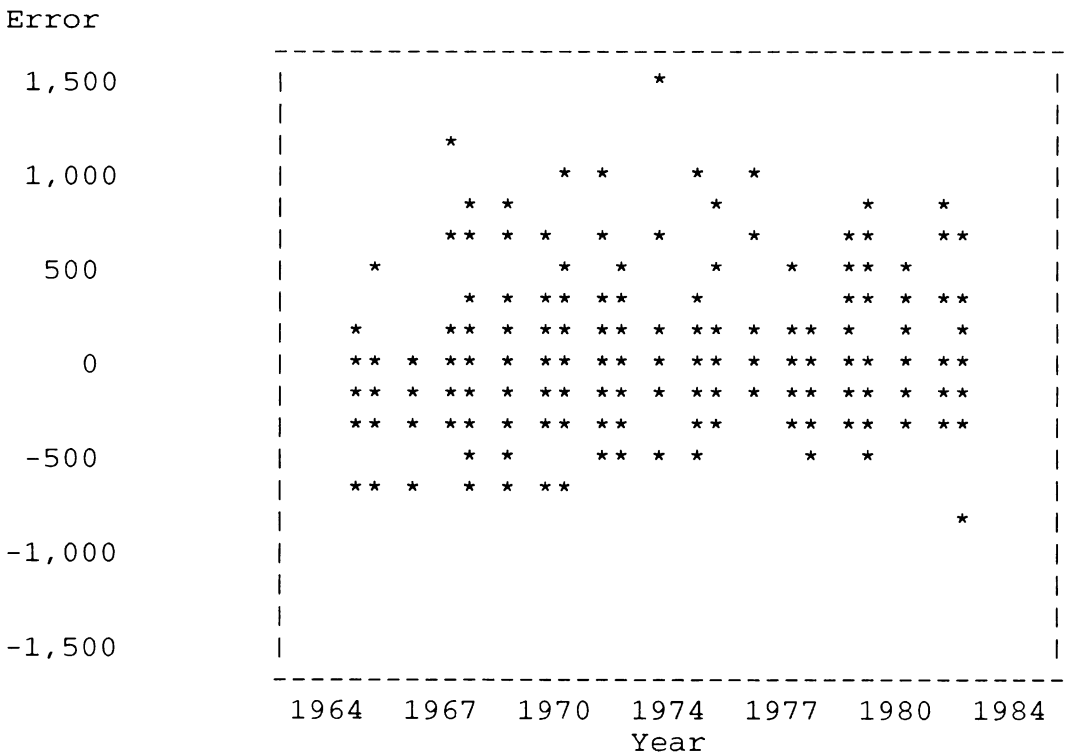


Figure 15.
Uncorrected Regression Residuals by Country
Cereal Production

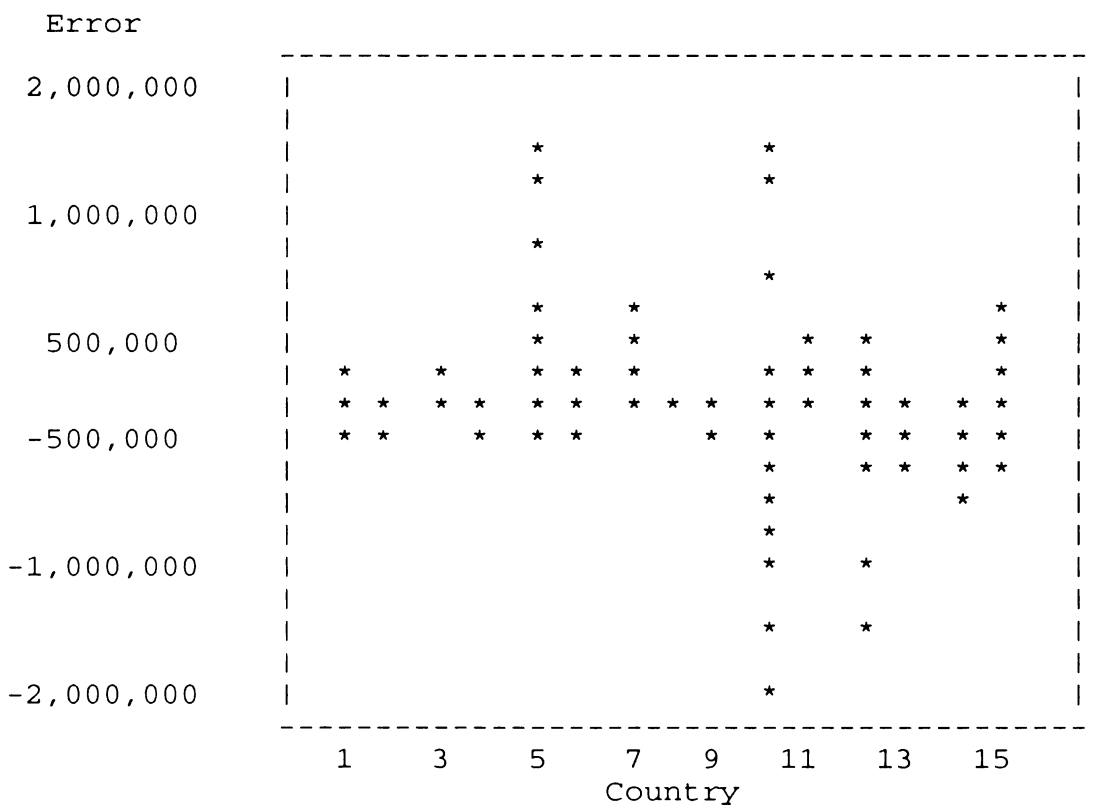


Figure 16.
Uncorrected Regression Residuals by Year
Cereal Production

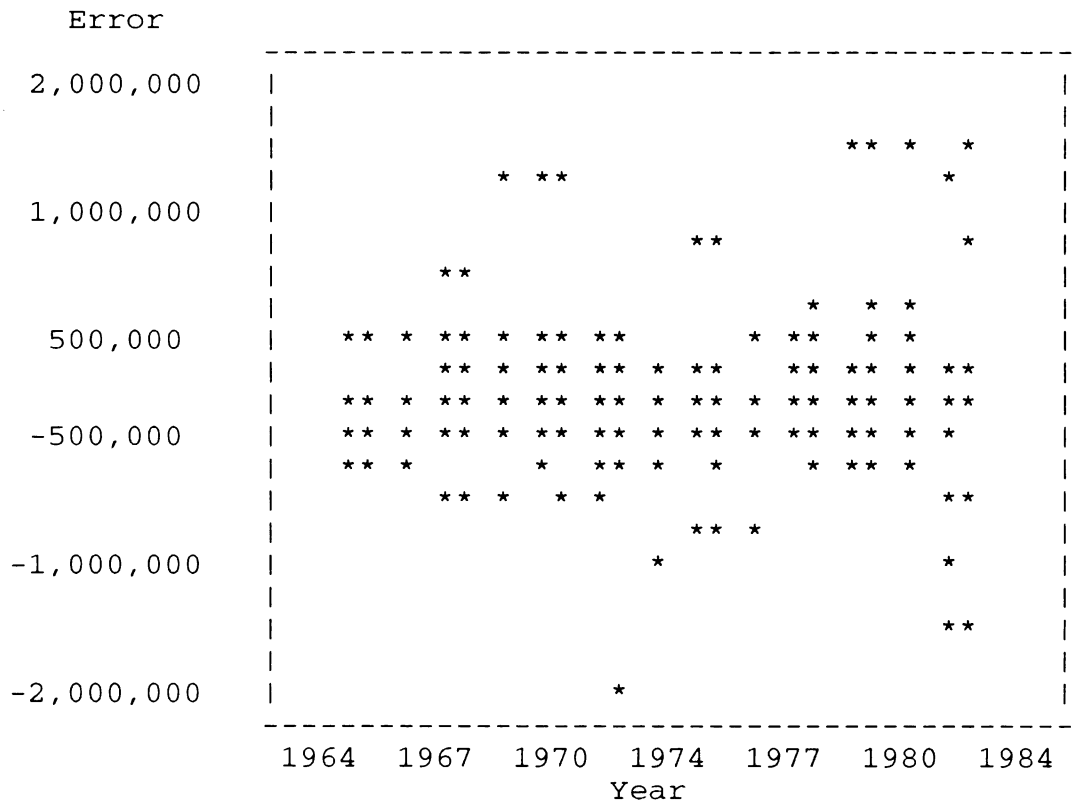
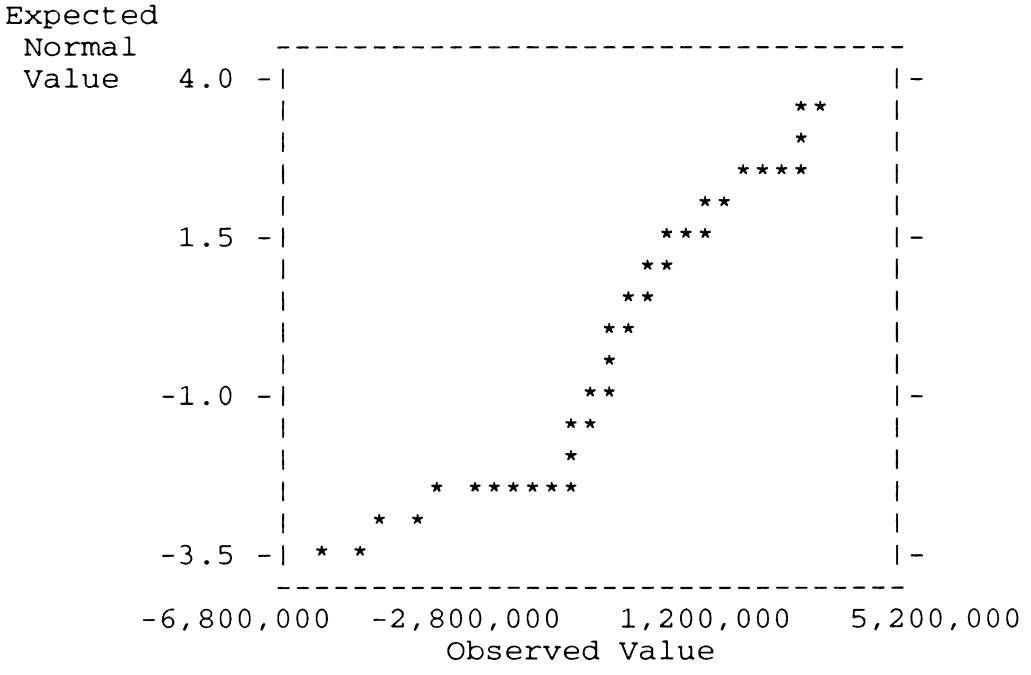


Figure 17.
Normal Uncorrected Residual Plot
Area Harvested



A normal plot graphs the observed value of the regression errors against the expected normalized value assuming a normal distribution. If the plotted points do not lie along the diagonal it indicates the error distribution is not normal and that regression assumptions are violated leading to bias.

The plot above shows that the uncorrected error distribution for the equation in which area harvested is the dependent variable is not normal. For example, if the error distribution were normal, errors one standard deviation below the mean of zero would be errors of about -2,800,000 in size. But such errors are actually about two standard deviations below the mean. The use of generalized least squares will normalize the errors as shown below.

Figure 18.
Normal Uncorrected Residual Plot
Average Cereal Yield

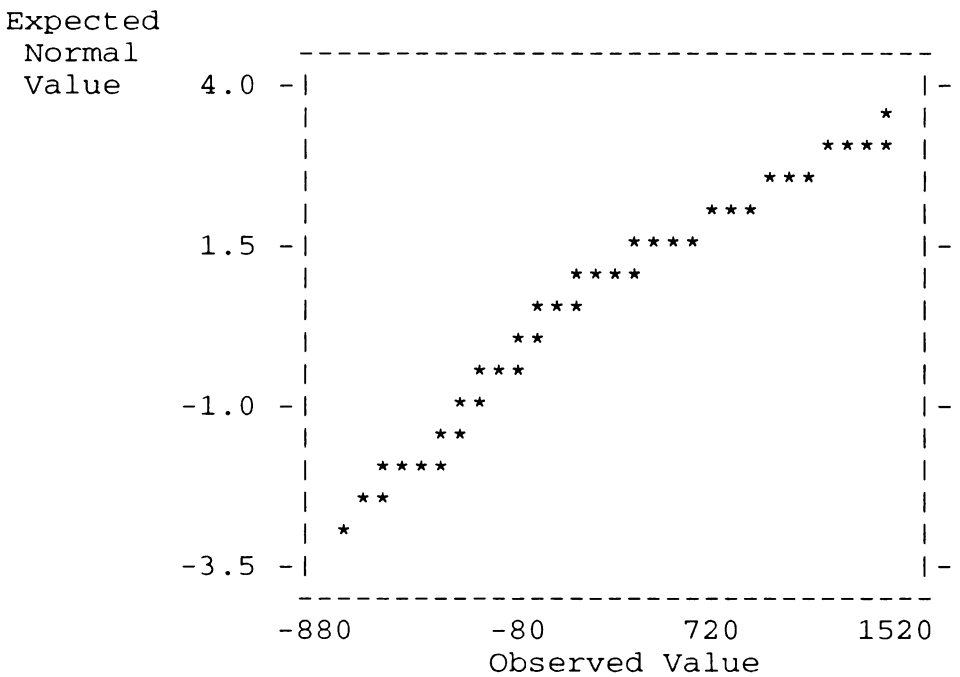


Figure 19.
Normal Uncorrected Residual Plot
Cereal Production

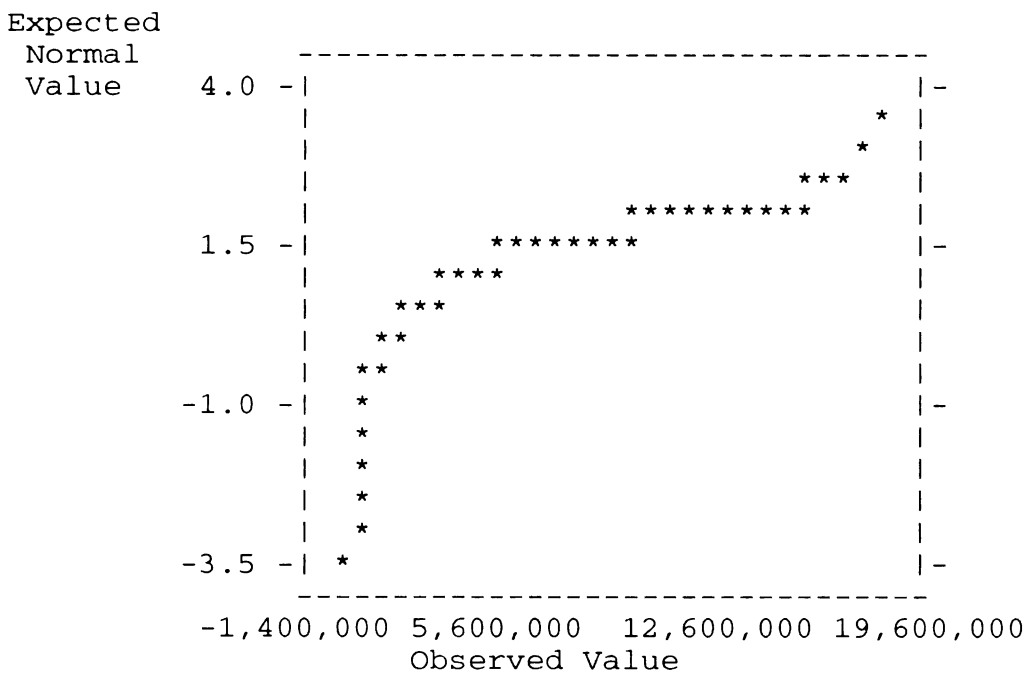
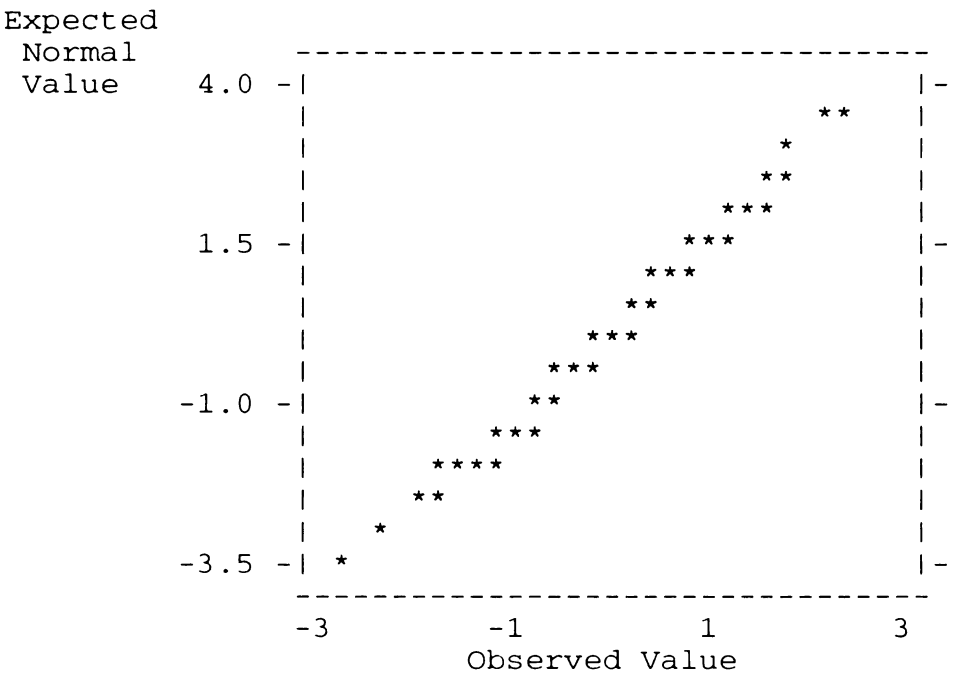


Figure 20.
Normal Corrected Residual Plot
Area Harvested



This plot graphically demonstrates the effectiveness of generalized least squares. The errors have been transformed are now nearly normal in distribution. Bias in the estimation of the equation is negligible.

Figure 21.
Normal Corrected Residual Plot
Average Cereal Yield

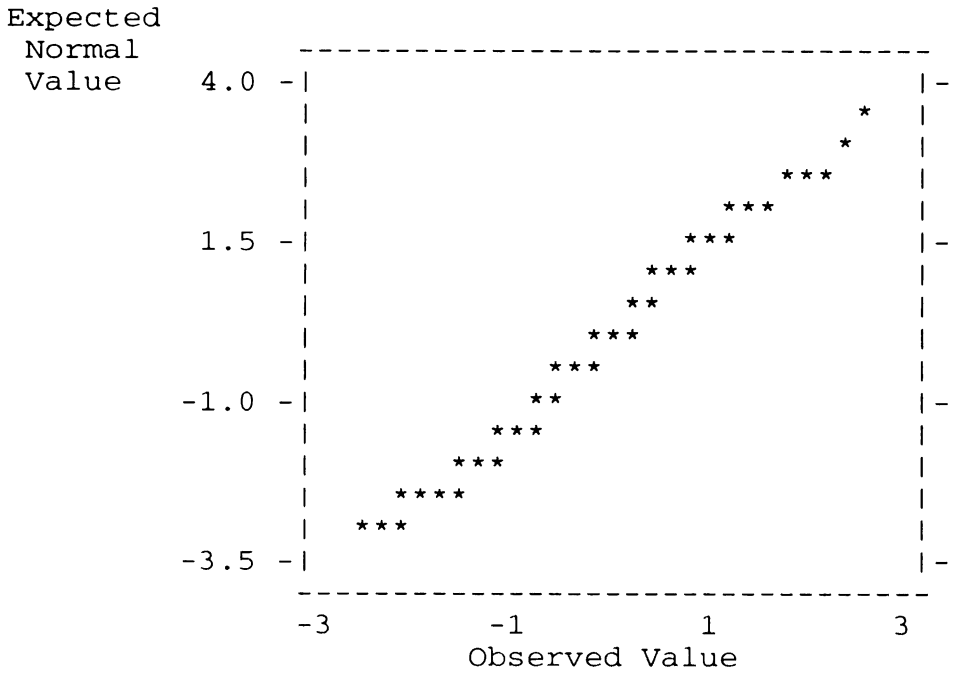
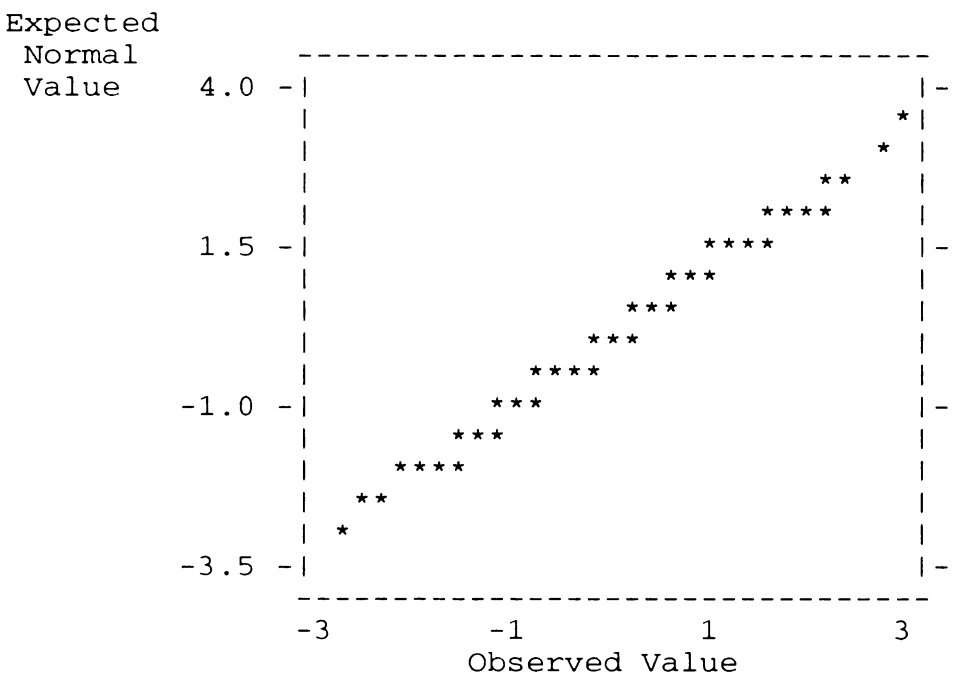


Figure 22.
Normal Corrected Residual Plot
Cereal Production



BIBLIOGRAPHY

Adulis. Periodical. Paris: Central Bureau of Foreign Affairs of the Eritrean Liberation Front. AF Press Clips. Washington, D.C.: U.S. Department of State, Bureau of African Affairs.

Africa Confidential. Periodical. London: Miramoor Publications.

Africa News. Periodical. Durham.

Africa Research Bulletin. (ARB). Periodical. Exeter.

Africa Watch. 1991. Angola: Civilians Devastated by 15-Year War. New York: Human Rights Watch

Agarwala, Ramgopal. 1983. "Price Distortions and Growth in Developing Countries." World Bank Staff Working Paper, No. 575. Washington, D.C.: World Bank.

Alberts, Bruce. 1980. *Insurgency in the Modern World*. Boulder: Westview Press.

Anderson, Jack R. and Pasquale L. Scandizzo. 1984. "Food Risk and the Poor." *Food Policy*. 9,1: 44-52.

Angola News Briefs. (ANB). Periodical. Washington, D.C.: Angola Peace Fund, Inc.

Arnold, David. 1988. *Famine*. London: Basil Blackwell.

Atkinson, Alexander. 1981. *Social Order and the General Theory of Strategy*. London: Routledge & Kegan Paul.

Awolowo, Obafemi. 1981. *Awo on the Nigerian Civil War*. Ikeja: J. West.

Ball, Nicole. 1976. "Understanding the Causes of the African Famine." *Journal of Modern African Studies*. 24:1.

Ball, Nicole. 1988. *Security and Economy in the Third World*. Princeton University Press.

Baluch, Bob. 1987. "Entitlements and the Wollo Famine of 1982-1985." *Disasters*. November: 195-204.

Bass, Thomas A. 1990. *Camping with the Prince and other Tales of Science in Africa*. New York: Penguin Books.

Bates, Robert H. 1981. *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*. Berkeley: The University of California Press.

Bates, Robert H. 1983. "Patterns of Market Intervention in Agrarian Africa." *Food Policy*. 3,4: 297-304.

Bates, Robert H. and Michael F. Lofchie. 1980. *Agricultural development in Africa : Issues of Public Policy*. New York: Praeger.

Bayart, Jean-François. 1986. "Civil Society in Africa." in Patrick Chabal, ed. *Political Domination in Africa: Reflections on the Limits of Power*. Cambridge University Press. 109-125.

Benoit, Emile. 1973. *Defense and Economic Growth in Developing Countries*. Boston: D. C. Heath, Lexington Books.

Berry, Sara. 1989. "Coping with Confusion: African Farmers' Responses to Economic Instability in the 1970s and 1980s." Working Papers in African Studies. No. 141. Boston University: African Studies Center.

Bienen, Henry. 1987. "Domestic Political Considerations for Food Policy." in John W. Mellor, Christopher L. Delgado and Malcolm J. Blackie, eds. *Accelerating Food Production in Sub-Saharan Africa*. Baltimore: The Johns Hopkins University Press. 296-308.

Bonner, Raymond. 1989. "A Reporter At Large: Famine." *The New Yorker Magazine.* March 13. 85-101.

Boot, W. 1985. "Ethiopia: Feasting on Famine." *Columbia Journalism Review.* 23,6: 47-48.

Borgstrom, George. 1965. *The Hungry Planet: The Modern World at the edge of Famine.* New York: MacMillan.

Borton, John and Edward Clay. 1986. "The African Food Crisis of 1982-1986." *Disasters.* 258-272.

Bratton, Michael. 1989. "Beyond the State: Civil Society and Associational Life in Africa." *World Politics.* 41,3: 407-430.

Bratton, Michael and Marcus Cheatham. 1989. "Food as a Weapon: The Effects of Violent Political Conflict on Hunger in Africa." Department of Political Science, Michigan State University. Mimeo.

Bread for the World. annual. *A Report on the State of World Hunger.* Washington, D.C.: Institute on Hunger and Development.

Brown, Lester. 1970. *Seeds of Change: The Green Revolution and Development in the 1970's.* New York: Overseas Development Council.

Brzoska, Michael and Thomas Ohlson. 1987. *Arms Transfers to the Third World: 1971-1985.* Oxford: Oxford University Press.

Bulcha, Mekuria. 1988. *Flight and Integration: Causes of Mass Exodus from Ethiopia and Problems of Integration in Sudan.* Uppsala: Scandinavian Institute of African Studies.

Bush, Ray. 1988. "Hunger in Sudan: The Case of Darfur." *African Affairs.* 87,346: 5-23.

Caldwell, Malcolm. 1977. *The Wealth of Some Nations.* London: Zed Press.

Callaghy, Thomas M. 1987. "The State as Lame Leviathan: The Patrimonial Administrative State in Africa." in Zaki Ergas, ed. *The African State in Transition.* London: MacMillan. 87-116.

Callaghy, Thomas M. 1986. "Politics and Vision in Africa: The Interplay of Domination, Equality, and Liberty." in Patrick Chabal, ed. *Political Domination in Africa: Reflections on the Limits of Power.* Cambridge University Press. 30-51.

Calvocoressi, Peter. 1985. *Independent Africa and the World.* New York: Longman.

Carter, Nick. (Oxfam). 1986. Sudan: *The Roots of Famine: A Report for Oxfam.* Oxford: Oxfam.

Castro, Josué de. 1977. *The Geopolitics of Hunger.* New York: Monthly Review Press [First published as *A Geografia da Fôme*, 1952].

Cervenka, Zdenek. 1971. *The Nigerian War 1967-1970: A History of the War: Selected Bibliography and Documents.* Frankfurt am Main. Bernard & Graefe.

Chabal, Patrick. 1986. "Revolutionary Democracy in Africa." in Patrick Chabal, ed. *Political Domination in Africa: Reflections on the Limits of Power.* Cambridge University Press. 225-240.

Chaliand, Gerard. 1982. *Guerrilla Strategies: An Historical Anthology from the Long March to Afghanistan.* Berkeley: University of California Press.

Chasin, Barbara. 1986. "The Sahel Famine: A Social Disaster." *Politics and the Life Sciences.* 4,2: 166-187.

Chazan, Naomi. 1988. "Patterns of State-Society Incorporation and Disengagement in Africa." in Donald Rothchild and Naomi Chazan, eds. *The Precarious Balance: State and Society in Africa.* Boulder: Westview. 121-148.

Chazan, Naomi, Robert Mortimer, John Ravenhill and Donald Rothchild. 1988. *Politics and Contemporary Society in Africa*. Boulder: Lynne Reinner.

Cheatham, Marcus. 1985. *Constructive Engagement in Mozambique, 1980-1984: The Accord of Nkomati*. University of Oregon: MA Thesis.

Chege, Michael. 1987. "Conflict in the Horn of Africa." in Emmanuel Hansen, ed. *Africa: Perspectives on Peace and Development*. London: Zed Press. 87-100.

Cilliers, J.K. 1985. *Counter Insurgency in Rhodesia*. Berkenham, Kent: Croom Helm.

Clapham, Christopher. *Foreign Policy Making in Developing States: A Comparative Approach*. England: Saxon House.

Clark, Lance. 1988a. Early Warning Case Study: Tigrayans in Eastern Sudan: 1984-85. Washington, D.C.: Refugee Policy Group. Center for Policy Analysis and Research on Refugee Issues.

Clark, Lance. 1988b. Early Warning of Refugee Flows. Washington, D.C.: Refugee Policy Group. Center for Policy Analysis and Research on Refugee Issues.

Clark, Lance. 1988c. Study of Early Warning of Refugee Flows. Washington, D.C.: Refugee Policy Group. Center for Policy Analysis and Research on Refugee Issues.

Clay, Jason E. and Bonnie K. Holcomb. 1986. *Politics and the Ethiopian Famine, 1984-1985*. Cambridge: Cultural Survival, Inc.

Clay, Jason E., Sandra Steingraber, and Peter Niggli. 1988. *The Spoils of Famine*. Cambridge: Cultural Survival, Inc.

Cliffe, Lionel. 1989. "The Impact of War and the Response to it in Different Agrarian Systems in Eritrea." *Development and Change*. London: Sage. 20:373-400.

Collins, William Robert Fitz-Gerald. 1970. *Nigeria in Conflict*. London: Secker and Warburg.

Commander, Simon, ed. 1989. *Structural Adjustment and Agriculture: Theory and Practice in Africa and Latin America*. London: James Curry for the Overseas Development Institute.

Copson, Raymond. (FAND). *Ethiopia: War and Famine*. Washington, D.C.: Foreign Affairs and National Defense Division.

Council on Environmental Quality and the Department of State. 1980. *The Global 2000 Report to the President--Entering the Twenty-first Century*. Washington, D.C.: U.S. Government Printing Office.

Crouch, Louis and Alain de Janvry. 1980. "The Class Basis of Agricultural Growth." *Food Policy*. 5,1: 3-13.

Cuny, Frederick. (Oxfam). 1983. *Disasters and Development*. Oxford: Oxfam.

Curtis, Donald, Michael Hubbard, and Andrew Shepherd. 1988. *Preventing Famine: Policies and Prospects for Africa*. New York: Routledge.

Cutler, Peter. 1985. "The Use of Economic and Social Information in Famine Prediction and Response." London: Overseas Development Administration.

Cutler, Peter. 1986. "The Response to Drought of Beja Famine Refugees in Sudan. *Disasters*. October. 181-188.

Darch, Colin. 1989. "Are There Warlords in Provincial Mozambique? Questions of the Social Base of MNR Banditry." *Review of African Political Economy*. 45/46: 35-49.

De Waal, Alexander. 1989. *Famine That Kills: Darfur, Sudan, 1984-1985*. New York: Oxford University Press.

Deger, Saadet. 1986. *Military Expenditures in Third World Countries: The Economic Effects*. Boston: Routledge and Kegan Paul.

Denny, Lionel and Tony Addison. 1987. *The Alleviation of Poverty under Structural Adjustment*. Washington, D.C.: The World Bank.

De St.Jorre, John. 1972. *The Brother's War: Biafra and Nigeria*. Boston: Houghton Mifflin Company.

Deutsch, Karl W. 1961. "Social Mobilization and Political Development." *American Political Science Review*. 55,3: 493-514.

Diamond, Larry. 1987. "Class Formation in the Swollen African State." The *Journal of Modern African Studies*. 25,4: 567-596.

"Directive to all Officers and Men of the Armed Forces of the Federal Republic of Nigeria on the Conduct of Military Operations." 1967. In Zdenek Cervenka. 1971. *The Nigerian War 1967-1970: A History of the War: Selected Bibliography and Documents*. Frankfurt am Main. Bernard & Graefe. fn. 175.

Donald Curtis, Michael Hubbard, and Andrew Shepherd. 1988. *Preventing Famine: Policies and Prospects for Africa*. New York: Routledge.

Dumont, René. 1966. *False Start in Africa*. New York: Praeger.

Eckholm, Erik P. 1976. *Losing Ground: Environmental Stress and World Food Prospects*. Oxford: Pergamon Press.

Eckstein, Harry. 1970. "On the Causes of Internal Wars." in Eric A. Nordlinger, ed. *Politics and Society*. Englewood Cliffs: Prentice-Hall, Inc. 287-309.

Economic and Social Council. (ECOSOC). 1986. *Report of the Inter-Agency Mission to Sudan*. New York: United Nations.

"Editorial." 1985. *Review of African Political Economy*. 33: 1-3.

Eicher, Carl K. and John Staatz. 1984. *Agricultural Development in the Third World*. Baltimore: Johns Hopkins University Press.

Emmanuel Hansen, ed. 1987. *Africa: Perspectives on Peace and Development*. London: Zed Press.

Evans, Peter B., Dietrich Rueschmeyer, and Theda Skocpol, eds. 1985. *Bringing the State Back In*. New York: Cambridge University Press.

Fatton, Robert, Jr. 1988. "Bringing the Ruling Class Back In: Class, State and Hegemony in Africa." *Comparative Politics*. 20,3: 252-264.

Finnegan, William. 1989. "The Emergency." Parts I and II. The New Yorker Magazine. May 22 and 29.

Firebrace, James. 1984. *Never Kneel Down: Drought, Development and Liberation in Eritrea*. Nottingham: War on Want.

Firebrace, James and Gayle Smith. 1982. *The Hidden Revolution: An Analysis of Social Change in Tigray (Northern Ethiopia) Based on Eyewitness Accounts*. London: War on Want.

First, Ruth. 1983. *Black Gold: The Mozambican Miner, Proletarian and Peasant*. New York: Harvester Press.

Food and Agriculture Organization (FAO). 1982. *Estimation of Crop Areas and Yields in Agricultural Statistics*. Rome.

Food and Agriculture Organization (FAO). Annual a. *Production Yearbook*. Rome.

Food and Agriculture Organization (FAO). Annual b. *Trade Yearbook*. Rome.

Forrest, Joshua. 1988. "The Quest for State "Hardness" in Africa." *Comparative Politics*. 204: 423-442.

Forsyth, Frederick. 1969. *The Biafra Story*. Baltimore: Penguin Books.

Galli, Rosemary E. 1987. "The Food Crisis and the Socialist State in Lusophone Africa." *The African Studies Review*. 30,1: 19-47.

Geffray, Christian. 1990. *La Cause Des Armes au Mozambique: Anthropologie d'une Guerre Civile*. Collection Les Afriques. Paris: CREDU.

Gelbard, Robert. 1984. Personal letter dated September 27. 1-2.

George, Susan. 1976. *How the Other Half Dies: The Real Reasons for World Hunger*. Montclair: Allanheld, Osmun.

Gersony, Robert. 1988. *Summary of Mozambican Refugee Accounts of Principally Conflict-related Experience in Mozambique*. Washington, D.C.: Bureau for Refugee Programs, Department of State.

Gersony, Robert. 1989. *Why Somalis Flee: Synthesis of Accounts of Conflict Experience in Northern Somalia by Somali Refugees, Displaced Persons, and Others*. Washington, D.C.: Bureau for Refugee Programs, Department of State.

Gill, Peter. 1986. *A Year in the Death of Africa: Politics, Bureaucracy and the Famine*. London: Paladin.

Gittinger, J. Price, Joanne Leslie, and Caroline Hoisington, eds. 1987. *Food Policy: Integrating Supply, Distribution, and Consumption*. Baltimore: Johns Hopkins University Press.

Giorgis, Dawit Wolde. 1989. *Red Tears: War, Famine and Revolution in Ethiopia*. Trenton. The Red Sea Press.

Glantz, Michael, ed. 1987. *Drought and Hunger in Africa: Denying Famine a Future*. Cambridge University Press.

Gordenker, Leon. 1987. *Refugees in International Politics*. London: Croom Helm.

Greene, William H. 1990. *Econometric Analysis*. New York University: MacMillan.

Goldstein, Robert S. 1968. "Open Letter to Odumegu Ojuku by Robert S. Goldstein." In Zdenek Cervenka. 1971. *The Nigerian War 1967-1970: A History of the War: Selected Bibliography and Documents*. Frankfurt am Main. Bernard & Graefe. fn.-175.

Gulhati, Ravi. 1989. *The Political Economy of Reform in Sub-Saharan Africa*. Washington, D.C.: The World Bank.

Hall, Margaret. 1990. "The Mozambican National Resistance Movement (Renamo): A Study in the Destruction of an African Country." *Africa*. 60,1: 39-66.

Hanlon, Joseph. 1984. *Mozambique: Revolution Under Fire*. London: Zed Books.

Harbeson, John W. 1991. "The Horn of Africa: From Chaos, Political Renewal?" *Current History*. New York: Events Publishing Co.

Harris, Michael. 1991. *Anatomy of Disaster Relief*. London: Pinter Publishers.

Harrison, Paul. 1987. *The Greening of Africa: Breaking Through in the Battle for Land and Food*. New York: Penguin Books.

Helleiner, Gerald K., ed. 1986. *Africa and the International Monetary Fund*. Washington, D.C.: International Monetary Fund.

Herbst, Jeffrey. 1990. "War and the State in Afica." *International Security*. 14,4: 117-39.

Human Rights Watch. Annual. *World Report*. New York.

Huntington, Samuel. 1968. *Political Order in Changing Societies.* New Haven: Yale University Press.

Hyden, Goran. 1983. *No Shortcuts to Progress: African Development Management in Perspective.* University of California Press.

Indiana State Board of Health. 1988. *Mozambique Health Assessment Mission: Final Report.* Indianapolis: Division of Media and Publications.

International Committee of the Red Cross. *(ICRC). 1986. International Committee of the Red Cross Bulletin--Special Edition: Angola 85-86.* Geneva.

International Committee of the Red Cross. (ICRC). Annual. *Annual Report.* Geneva.

International Food Policy Research Institute. (IFPRI). Annual. *Report.* Washington, D.C.

The International Institute for Strategic Studies. (IISS). 1989. *Strategic Survey: 1988-1989.* London: Brassey's.

International Labor Office. (ILO). Annual. *Yearbook of Labour Statistics.* Geneva.

International Monetary Fund. (IMF) Annual. *International Financial Statistics.* Washington, D.C.

"Is Starvation a Legitimate Weapon of War?" 1968. *Newsweek.* New York. September 30. 28.

Jackman, Robert W. 1976. "Politicians in Uniform: Military Governments and Social Change in the Third World." *American Political Science Review.* 70: 1078-1097.

Jackman, Robert W. Forthcoming. *The Political Capacity of Nation States: Institutions and Legitimacy.*

Jackson, Robert and Carl Rosberg. 1982. "Why Africa's Weak States Persist: The Empirical and Juridical in Statehood." *World Politics.* 34: 259-82.

Jacobs, Dan. 1987. *The Brutality of Nations.* New York: Knopf.

Jaeger, William. 1987. "Agricultural Incentives and Policy in Sub-Saharan Africa: Some Recent Trends and Methodological Issues."

Jansson, Kurt, Michael Harris, and Angela Penrose. 1987. *The Ethiopian Famine.* London: Zed Books.

Johnson, Phyllis and David Martin. 1986. *Destructive Engagement: Southern Africa at War.* Trenton: Red Sea Press.

Kaplan, Robert D. 1988. *Surrender or Starve: The Wars Behind the Famine.* Boulder: Westview Press.

Kasfir, Nelson. 1984. *State and Class in Africa.* Totowa: Cass and Company.

Keesing's Contemporary Archives. Periodical. London: Keesing'sLtd.

Kibreab, Gaim. 1987. *Refugees and Development in Africa: The Case of Eritrea.* Trenton: The Red Sea Press.

Kight, Virginia Curtin. 1991. "Mozambique's Search for Stability." *Current History.* New York: Events PublishingCo.

Killick, Tony. 1984. *The IMF and Stabilization: Developing Country Experiences.* New York: St. Martin's Press.

Kirkpatrick, C. and C. J. Green. 1982. "A Cross-Section Analysis of Food Insecurity in Developing Countries: Its Magnitude and Sources." *Journal of Development Studies.* 18,2: 202-228.

Kohli, Atul. 1986. *The State and Development in the Third World.* Princeton: Princeton University Press.

Kriger, Norma. 1988. "The Zimbabwean War of Liberation: Struggles Within the Struggle." *Journal of Southern African Studies.* 14,2: 304-322.

Lappé, Francis Moore and Joseph Collins. 1979. *World Hunger: Ten Myths.* San Francisco: Institute for Food and Development Policy.

Lawyers Committee for Human Rights. 1986. *Zimbabwe: Wages of War: A Report on Human Rights.* New York: Lawyers Committee for Human Rights.

Legum, Colin. 1988. *The Battlefronts of Southern Africa.* New York: Holmes and Meier.

Lemarchand, René. 1987. "The Dynamics of Factionalism in Contemporary Africa." in Zaki Ergas, ed. *The African State in Transition.* London: MacMillan. 149-165.

Lipton, Michael. 1977. *Why Poor People Stay Poor: Urban Bias in World Development.* Cambridge: Harvard University Press.

Lofchie, Michael. 1988. *The Policy Factor: Agricultural Performance in Kenya and Tanzania.* Boulder: Lynne Reinner.

Luckham, Robin. 1971. *The Nigerian Military: A Sociological Analysis of Authority and Revolt.* 1960-67. Cambridge University Press.

Magagna, Victor V. 1991. *Communities of Grain: Rural Rebellion in Contemporary Perspective.* New York: Cornell University Press.

Magaia, Lina. 1988. *Dumbe Nenque: Run for Your Life: Peasant Tales of Tragedy in Mozambique.* Trenton: Red Sea Press.

Malaska, Pentti and Paul Pyschas. 1989. "War and Famine." in Aklilu Lemma and Pentti Malaska. *Africa Beyond Famine: A Report to the Club of Rome.* New York: Tycooly.

Marando, Joseph. 1987. *Life in Liberated Eritrea.* Rome: Research and Information Center on Eritrea.

Marcum, John A. 1988. "Angola." *Survival.* 30,1: 3-13.

Mellor, John W., Christopher L. Delgado and Malcolm J. Blackie, eds. 1987. *Accelerating Food Production in Sub-Saharan Africa.* Baltimore: The Johns Hopkins University Press.

Minear, Larry. 1991. *Humanitarianism Under Seige: A Critical Review of Operation Lifeline.* Trenton: Red Sea Press.

Minority Rights Group. 1983. *Eritrea and Tigray.* London.

Minter, William. 1988. *Operation Timber: Pages from the Savimbi Dossier.* Trenton: Africa World Press.

Minter, William. (SIDA). 1989. *The Mozambique National Resistance (RENAMO) As Described by Ex-participants.* New York: Report Submitted to the Ford Foundation and the Swedish International Development Agency.

Minter, William. (SIDA). 1990. *The National Union for the Total Independence of Angola as Described by Ex-Participants and Foreign Visitors.* Swedish International Development Authority.

Morrison, J. Stephen. (USCR). 1991. *The Long Road Home: Angola's Post War Inheritance.* Washington, D.C.: American Council for Nationalities Service.

Morrison, Thomas K. 1984. "Cereal Imports by Developing Countries: Trends and Determinants." *Food Policy.* 9,1: 13-26.

Mozambique Support Network. (MSN). Periodical. *Mozambique Support Network Newsletter*. Chicago.

Nafziger, Wayne E. 1988. *Inequality in Africa: Political Elites, Proletariat and the Poor*. Cambridge University Press.

National Oceanographic and Atmospheric Administration. Periodical. *Monthly Climatic Data for the World*. Asheville, North Carolina.

Nkrumah, Kwame. 1968. *Handbook of Revolutionary Warfare: A Guide to the Armed Phase of the African Revolution*. London: Panaf Books.

Nordlinger, Eric. 1970. "Soldiers in Mufti: The Impact of Military Rule upon Economic and Social Change in non-Western States." *American Political Science Review*. 63: 1131-1148.

Nordlinger, EricA. 1987. "Taking the State Seriously." in Myron Weiner and Samuel P. Huntington, eds. *Understanding Political Development*. Boston: Little, Brown and Co. 353-390.

Nwankwo, Arthur Agwuncha. 1972. *Nigeria: The Challenge of Biafra*. London: R.Collins.

Nyong'o, Peter Anyang'. 1987. *Popular Struggles for Democracy in Africa*. London: Zed Press.

Nzongola-Ntalaja. 1987. "The National Question and the Crisis of Instability in the Horn of Africa." in Emmanuel Hansen, ed. *Africa: Perspectives on Peace and Development*. London: Zed Press. 55-86.

Obasanjo, Olesegun. 1980. *My Command: An Account of the Nigerian Civil War: 1967-1970*. Ibadan: Heinemann.

Observer Team. 1968. "Summary of the Report of the Observer Team to Nigeria covering the period from September 24 to November 23, 1968." In Zdenek Cervenka. 1971. *The Nigerian War 1967-1970: A History of the War: Selected Bibliography and Documents*. Frankfurt am Main. Bernard & Graefe.

Office for Emergency Operations in Africa. (OEOA). 1986. *Status Report on the Emergency Situation as of 1 January 1986*. New York: United Nations.

Ojukwu, Odumegwu. 1970. "Food for My People: A Statement by General Ojukwu on His Departure from Defeated Biafra." in Zdenek Cervenka. 1971. *The Nigerian War 1967-1970: A History of the War: Selected Bibliography and Documents*. Frankfurt am Main. Bernard& Graefe.

Okpoko, John. 1986. *The Biafran Nightmare: The Controversial Role of International Relief Agencies in a War of Genocide*. Enugu: Delta of Nigeria.

Olson, Mancur. 1963. "Rapid Growth as a Destabilizing Force." *Journal of Economic History*. 23,4: 529-552.

Oluleye, James. 1985. *Military Leadership in Nigeria*. Ibadan: University Press.

O'Neill, Bard E., William R. Heaton, and Donald J. Alberts, eds. 1980. *Insurgency in the Modern World*. Boulder: Westview.

Orick, George. 1968. "The Relief Situation in Biafra." Paper presented at the First International Conference on Biafra, Columbia University, December 7 and 8.

Oser, Jacob. 1956. *Must Men Starve? The Malthusian Controversy*. Cape: London.

Paddock, William and Paul. 1967. *Famine 1975! America's Decision: Who will Survive?* Boston: Little, Brown and Company.

Paget, Julian. 1967. *Counter-Insurgency Operations: Techniques of Guerrilla Warfare.* New York: Walker and Company.

Paige, Jeffery. 1975. *Agrarian Revolution: Social Movements and Export Agriculture in the Underdeveloped World.* New York: Free Press.

Paulino, Leonardo A. and Shen Sheng Tseng. 1980. A Comparative Study of FAO and USDA Data on Production, Area, and Trade of Major Food Staples. Research Report 19. Washington, D.C.: International Food Policy Research Institute.

Payer, Cheryl. 1984. *The Debt Trap: The IMF and the Third World.* New York: Monthly Review Press.

Quan, Julia. (Oxfam). 1987. *Mozambique: A Cry for Peace: a Report for Oxfam.* Oxford: Oxfam.

Ragin, Charles C. 1987. *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies.* Berkeley: University of California Press.

Rahmato, Desalgen. 1988. "Peasant Survival Strategies in Ethiopia." *Disasters.* 12, 4: 326-344.

Reardon, Thomas, Peter Matlon and Christopher Delgado. 1988. "Coping with Household-level Food Insecurity in Drought-affected Areas of Burkina Faso." *World Development.* 16,9: 1065-1074.

Rice, Edward E. 1988. *Wars of the Third Kind: Conflict in Underdeveloped Countries.* Berkeley: University of California Press.

Riggs, Fred W. 1964. *Administration in Developing Countries: The Theory of Prismatic Society.* Boston: Houghton Mifflin Co., 1964.

Rogge, John. 1985. *Too Many, Too Long: Sudan's Twenty-Year Refugee Dilemma.* Totowa: Rownam and Allanheld.

Rone, Jemera. 1989. *Angola: Violations of the Laws of War by Both Sides.* New York: Human Rights Watch.

Root, Christine. 1989. "Famine in Mozambique and Angola: The Human Cost of Apartheid's Foreign Wars. Mimeo. Michigan State University.

Rotberg, Robert I. and Theodore K. Rabb, eds. 1985. *Hunger and History: The Impact of Changing Food Production and Consumption Patterns on Society.* Cambridge University Press.

Rothchild, Donald and Caroline Hartzell. 1990. "The Road to Gbadolite: Great Power and African Mediations in Angola." Presented at the 33rd annual meeting of the African Studies Association, Baltimore, November 1-4.

Salih, M. A. Mohamed. 1989. "'New Wine in Old Bottles: Tribal Militias and the Sudanese State." *Review of African Political Economy.* 45/46: 168-74.

Samuels, Michael, ed. 1969. *The Nigeria-Biafra Conflict: Report of a One-Day Conference.* Washington, D.C.: The Center for Strategic and International Studies. Georgetown University.

Sandbrook, Richard. 1985. *The Politics of Africa's Economic Stagnation.* London: Cambridge University Press.

Sayrs, Lois W. 1989. *Pooled Time Series Analysis.* Newbury Park: Sage Publications Inc.

Scholing, Eberhard and Vincenz Timmermann. 1988. "Why LDC Growth Rates Differ: Measuring 'Unmeasurable' Influences." *World Development.* 16,11: 1271-1294.

Schultheis, Michael. 1989. "Refugees in Africa: The Geopolitics of Forced Displacement." *The African Studies Review*. 32,1: 3-30.

Schwab, Peter. 1971. *Biafra*. New York: Facts on File.

Schwab, Peter. 1985. "Political History and Famine in Ethiopia." *Current History*. 84,502: 221-242.

Scott, Colonel R. E. 1970. "Appreciation of the Nigerian Conflict: Report to the British High Commission in Lagos." in Zdenek Cervenka. 1971. *The Nigerian War 1967-1970: A History of the War: Selected Bibliography and Documents*. Frankfurt am Main. Bernard & Graefe.

Scott, James. 1976. *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. New Haven: Yale University Press.

Select Committee on Hunger and the Subcommittee on Africa. Committee on Foreign Affairs. House of Representatives. 1989. Politics of Hunger in the Sudan. Washington, D.C.: Government Printing Office.

Sen, Amartya. 1982. *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford University Press.

Shephard, Jack. 1974. *The Politics of Starvation*. London: Zed Press.

Shindo, Eiichi. 1985. "Hunger and Weapons: The Entropy of Militarisation." Review of African Political Economy. 33:6-22.

Staatz, John M. 1989. "Food Supply and Food Demand in Sub-Saharan Africa." Mimeo. Michigan State University.

Stremlau, John J. 1977. *The International Politics of the Nigerian Civil War: 1967-1970*. Princeton University Press.

Stubbs, Richard. 1989. *Hearts and Minds in Guerrilla Warfare: The Malayan Emergency 1948-1960*. New York: Oxford University Press.

Subcommittee on Africa. Committee on Foreign Affairs. House of Representatives. 1986. Emergency Famine Relief Needs in Ethiopia and Sudan. Washington, D.C.: Government Printing Office.

Subcommittee on Africa. Committee on Foreign Affairs. House of Representatives. 1989a. New Reports of Human Rights Violations in the Angolan Civil War. Washington, D.C.: Government Printing Office.

Subcommittee on Africa. Committee on Foreign Affairs. House of Representatives. 1989b. Reported Massacres and Indiscriminate Killings in Somalia. Washington, D.C.: Government Printing Office.

Subcommittee on Foreign Operations and the Select Committee on Hunger. House of Representatives. 1989. Africa's Uprooted People. Washington, D.C.: Government Printing Office.

Subcommittee on Rights, Subcommittee on International Organizations and Subcomitte on Africa. Committee on Foreign Affairs. House of Representatives. 1988. Update on Recent Developments in Ethiopia: The Famine Crisis. April 21. Washington, D.C.: Government Printing Office.

Taylor, Charles Lewis and David A. Jodice. 1983. *World Handbook of Political and Social Indicators*. Inter-university Consortium for Political and Social Research: Ann Arbor.

Teshome, Tadesse. 1990. "Food, Relief Centers and Forced Migration in N.E. Africa: An Analysis of Institutions and Policies." M.A. Thesis, Michigan State University.

Thompson, Joseph E. 1991. *American Policy and African Famine: The Nigeria-Biafra War.* Contributions in Afro-American and African Studies, No.130. Westport: Greenwood Press.

Thompson, Virginia and Richard Adloff. 1981. *Conflict in Chad.* Institute of International Studies Research Series, No. 45. University of California, Berkeley.

Timberlake, Lloyd. 1985. *Africa in Crisis: The Causes, the Cures of Environmental Bankruptcy.* London: Earthscan.

Timmer, C. Peter. 1984. "Developing a Food Strategy." in Carl K. Eicher and John M. Staatz. *Agricultural Development in the Third World.* Baltimore: The Johns Hopkins University Press. 119-135.

Tinker, Jerry M., Andrew R. Molnar and John D. LeNoir, eds. 1969. *Strategies of Revolutionary Warefare.* S. Chand and Co. New Delhi.

Tordoff, William. 1984. *Government and Politics in Africa.* Bloomington: Indiana University Press.

Turton, D. and P. Turton. 1984. "Spontaneous Resettlement after Drought: An Ethiopian Example." *Disasters.* 11,3: 178-189.

UNDP Emergency Programme--Mozambique. 1988. *Emergency: Mozambique '88.* New York.

United Nations Development Program. (UNDP). 1989. *African Economic and Financial Data.* New York.

United Nations Disaster Relief Organization. (UNDRO) 1981. *Displaced and Drought-affected Persons in Southern and Central Angola.* Geneva.

United States Arms Control and Disarmament Agency. (ACDA). Annual. *World Military Expenditures and Arms Transfers.* Washington, D.C.: Government Printing Office.

United Nations Centre on Transnational Corporations. (CTC). 1988. *Transnational Corporations in World Development.* New York.

U. S. Committee for Refugees. (USCR). Annual. *World Refugee Survey.* Washington, D.C.: American Council for Nationalities Service.

Vailand, Leroy and Landeg White. 1980. *Capitalism and Colonialism in Mozambique.* Minneapolis: University of Minnesota.

Valdés, Alberto, ed. 1981. *Food Security for Developing Countries.* Boulder: Westview Press.

Walton, John. 1984. *Reluctant Rebels.* New York: Columbia University Press.

Watts, Michael. 1983. *Silent Violence: Food, Famine, and Peasantry in Northern Nigeria.* Berkeley: University of California Press.

Weinrich, A.K.H. 1977. "Strategic Resettlement in Rhodesia." *Journal of Southern African Studies.* 3,2: 207-229.

Westlake, M. J. 1987. "The Measurement of Agricultural Price Distortions in Developing Countries." *The Journal of Development Studies.* 23,1: 368-381.

Wheeler, David. 1984. "Sources of Stagnation in Sub-Saharan Africa." *World Development.* 12,1: 1-23.

Whitaker, Jennifer Seymour. 1988. *How Can Africa Survive?* New York: Harper and Rowe.

Woldemeskel, Getachew. 1989. "The Consequences of Resettlement in Ethiopia." *African Affairs.* 88,352: 359-75.

Wolf, Eric R. 1969. *Peasant Wars of the Twentieth Century.* New York: Harper and Row.

Wolpin, Miles. 1986. *Militarization, Internal Repression and Social Welfare in the Third World.* New York: St. Martin's Press.

World Bank. 1981. *Accelerated Development in Sub-Saharan Africa.* Washington, D.C.: The World Bank.

World Bank. 1984. *Toward Sustained Development in Sub-Saharan Africa.* Washington, D.C.

World Bank. 1988. *The Challenge of Hunger in Africa: A Call to Action.* Washington, D.C.

World Bank. 1989. *Africa's Adjustment and Growth in the 1980s.* Washington, D.C.:

World Bank. Annual. *World Tables.* Washington, D.C.: The World Bank.

World Food Program. (WFP). Irregular. *Emergency Operation: Report by the Executive Committee.* Rome.

Worthington, Peter. 1988. "Can We Trust Savimbi?" *The National Review.* March 15.

Wright, George V. 1989. "US Foreign Policy and Destabilisation in Southern Africa." *Review of African Political Economy.* 45/46: 159-68.

Zartman, I. William. 1989. *Ripe for Resolution: Conflict and Intervention in Africa.* Oxford University Press.

Zolberg, Aristide, Astri Suhrke and Sergio Aguayo. 1989. *Escape from Violence: Conflict and the Refugee Crisis in the Developing World.* Oxford University Press.

INDEX