

To Cultivate Peace: Agriculture in a World of Conflict

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Abstract: In this article we examine the post–Cold War pattern of conflict with a focus on the role of agriculture. In developing countries, the primary sector of the economy is dominant. Closely linked to basic human needs, it is directly affected by environmental degradation and by violence. The agricultural sector is subject to strong governmental intervention in most countries, and can easily suffer from capricious politics. The conditions of food production and distribution is a good arena for observing the interaction of politics, economics, and environmental issues as they influence violent conflict – how it is generated, how it is escalated, how it is contained, and how it is resolved. We conclude that the rehabilitation of agriculture is a central condition for development, reducing poverty, preventing environmental destruction, and for reducing violence. Poor conditions for agriculture hold grave implications for socio-economic development and sustainable peace. We also see good governance as crucial in building healthy conditions for agriculture, and thus in breaking the vicious cycle of poverty, scarcity, and violence. The central issues are not merely technical: they relate directly to the way human beings organize their affairs and how they cope with natural and man-made crises.

INTRODUCTION

The end of the Cold War has spawned a sharp debate on the future of global security. For over forty years, world politics had been dominated by the all-encompassing conflict between two systems with claims to world hegemony. Each system was headed by a superpower and the military stand-off between them was sometimes referred to as ‘the Long Peace’ because of the absence of direct armed confrontation (Gaddis, 1987). In global terms, this was not a particularly peaceful period. There were some 120 wars during the Cold War. Five of these wars claimed more than one million casualties each, and a further six more than 200,000. About half of these wars—those in Korea (1950-53), Vietnam (1960-75), Afghanistan (1978-), Angola (1975-94), and Mozambique (1979-92), along with a host of smaller confrontations in Ethiopia, Nicaragua, and elsewhere were directly or indirectly related to the East-West confrontation. Indeed, it can plausibly be argued that the superpowers were fighting by proxy in the Third World (Gleditsch, 1995: 544-546). The level of casualties in these wars lie somewhere between the total casualties of the First and Second World Wars.

In the post-Cold War world, despite early expectations of a ‘New World Order’, armed conflict has not been abolished, although it follows a different pattern. Some have seen emerging a ‘Clash of Civilizations’, (Huntington, 1996), where differences between world-views, religion, and culture form the main battle-lines. Others have linked violence, particularly in the developing world, to environmental degradation and resource scarcity (Bächler et al., 1996; Homer-Dixon and Blitt, 1998). Yet others have seen violence as intimately connected to the failure of development, where violent conflict can destroy in a year what development assistance and local efforts have built in decades, and where poverty and deprivation in turn generate new conflict (Collier, 1998; Snow, 1996). Some have attributed armed conflict to dysfunctional political processes (Hegre et al., 1998; Rummel, 1995). And others have seen all of these processes at work in mutually reinforcing ways. These factors add up to create a vicious cycle of poverty, deprivation, poor governance, and violence in a ‘zone of turmoil’, particularly in parts of the Third World, and a virtuous cycle of prosperity, democracy, and peace in a ‘zone of peace’ (Singer and Wildavsky, 1993) in the North Atlantic area and smaller

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pockets elsewhere.

In this article we examine the post-Cold War pattern of conflict with a focus on the role of agriculture. The primary sector of the economy is dominant in developing countries. It is closely linked to basic human needs, and it is directly affected by environmental degradation and by violence. The agricultural sector is subject to strong governmental intervention in most countries, and can easily suffer from capricious politics. The conditions of food production and distribution is a good arena to watch the interaction of politics, economics, and environmental issues as they influence violent conflict—how it is generated, how it is escalated, how it is contained, and how it is resolved. *We conclude that the rehabilitation of agriculture is a central condition for development, reducing poverty, preventing environmental destruction—and for reducing violence.* Poor conditions for agriculture hold grave implications for socioeconomic development and sustainable peace. We see good governance as absolutely crucial in building healthy conditions for agriculture, which can help to break the vicious cycle of poverty, scarcity, and violence. The crucial issues are not merely technical, they relate directly to the way human beings organize their affairs.

THE POST-COLD WAR SECURITY ENVIRONMENT

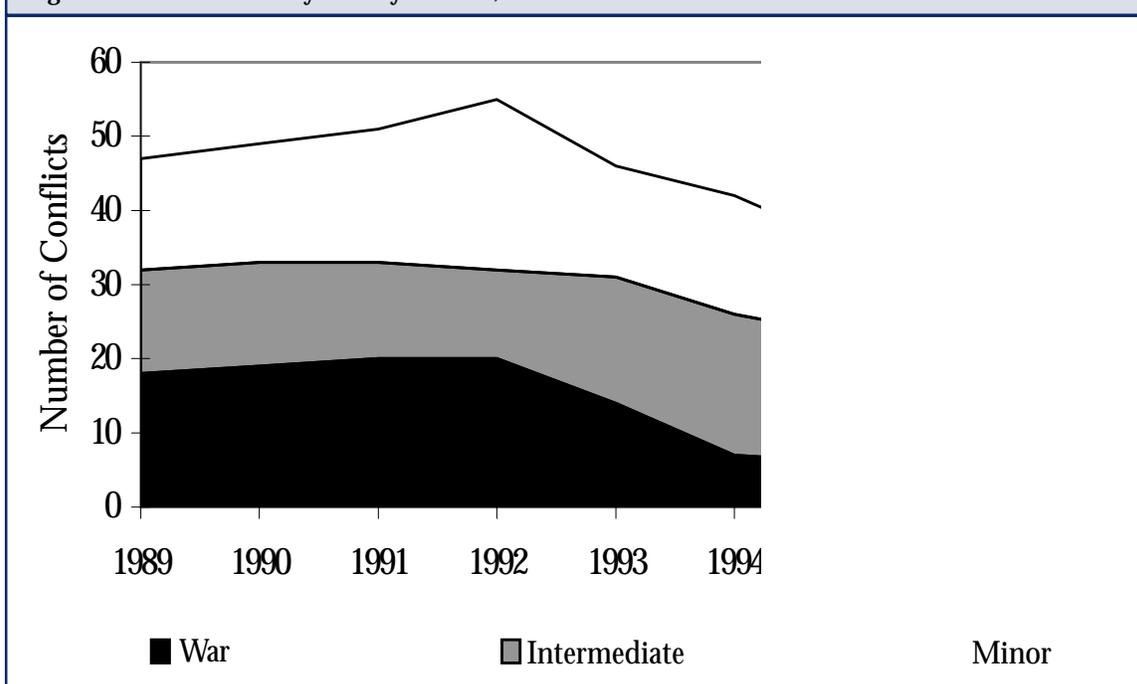
The end of the East-West conflict has inspired two conflicting sets of expectations regarding the future of human security. An optimistic view saw the withering of totalitarian ideology and the rejection of Mutual Assured Destruction as the basis of international security, as a window of opportunity for liberal values (Kegley, 1993). Freed from the burden of the

arms race, states would be able to spend the peace dividend on the fight against poverty and environmental degradation. The third wave of democratization (Huntington, 1991) would usher in an era of good governance. Like slavery and the duel, war would increasingly be seen as an outmoded institution (Mueller, 1989). Both states and sub-national actors would realize that war does not pay and would shift to nonviolent ways of solving their differences. To the extent that the conflicting parties themselves did not accomplish this, the United Nations and the great powers would work together to contain armed conflicts instead of competing for support among the warring factions.

The pessimists argued that the end of bloc politics and mutual deterrence would open up for a variety of old and new conflicts, which could no longer be contained by the fear of escalation to major power confrontation. Mearsheimer (1990) likened Europe to a pressure cooker with the lid taken off. Old conflicts, temporarily suppressed by the superpower confrontation, would once again come to the surface. Ethnic and religious tension would stoke the fires in many divided nations—and, indeed, most nations are divided along such lines. The gap between the rich and the poor would widen. Environmental degradation would increase and resource scarcity would be exacerbated (Homer-Dixon and Blitt, 1998). The economic, cultural, and environmental dividing lines might coalesce and promote ever-sharper conflict (Kaplan, 1994). Water scarcities would lead to 'water wars' (Starr, 1991).

A one-sided focus on a single set of events may easily reinforce either an optimistic or a pessimistic paradigm. A more balanced perspective may be gained by looking at the data on post-Cold War armed conflicts from the Uppsala University Conflict Project (Wallensteen and Sollenberg, 1998: 621-623). For the period

Figure 1. Armed Conflict by Severity and Year, 1989-97



War is defined as an armed conflict with over 1,000 battle deaths in a single year. Intermediate conflicts are those with over 1,000 battle deaths in the course of the entire conflict, and minor conflicts are those that have reached at least 25 battle deaths, but less than 1,000. Both interstate and domestic conflicts are included. (Wallensteen and Sollenberg, 1998).

1989-97 this dataset includes a total of 103 armed conflicts with at least 25 battle deaths in a single year. Forty-two of these conflicts exceeded the level of 1,000 deaths per year to qualify as wars. Figure 1 shows the development of armed conflict over the eight-year period. We see a small increase in violent conflict immediately after the end of the Cold War, peaking in 1992. Since then the incidence of armed conflict has declined steadily and it is presently at a much lower level than at the end of the Cold War.

The initial increase in armed conflict is largely due to the violence that followed the dissolution of Yugoslavia and the Soviet Union. These conflicts ostensibly supported the pessimistic predictions of Mearsheimer and Huntington. By 1993, the decline in the Cold War-related conflicts in the Third World already compensated for the revival of armed conflict in Europe, and by 1994 the number of conflicts in Europe had started to decline. While it is still too early to proclaim all of Europe a zone of peace, it is noteworthy that in 1997, no conflict in Europe exceeded 25 dead. The bulk of the armed conflicts we once again find in the Middle East, Africa, and Asia, while the Americas seem to be more peaceful than they were during the Cold War.

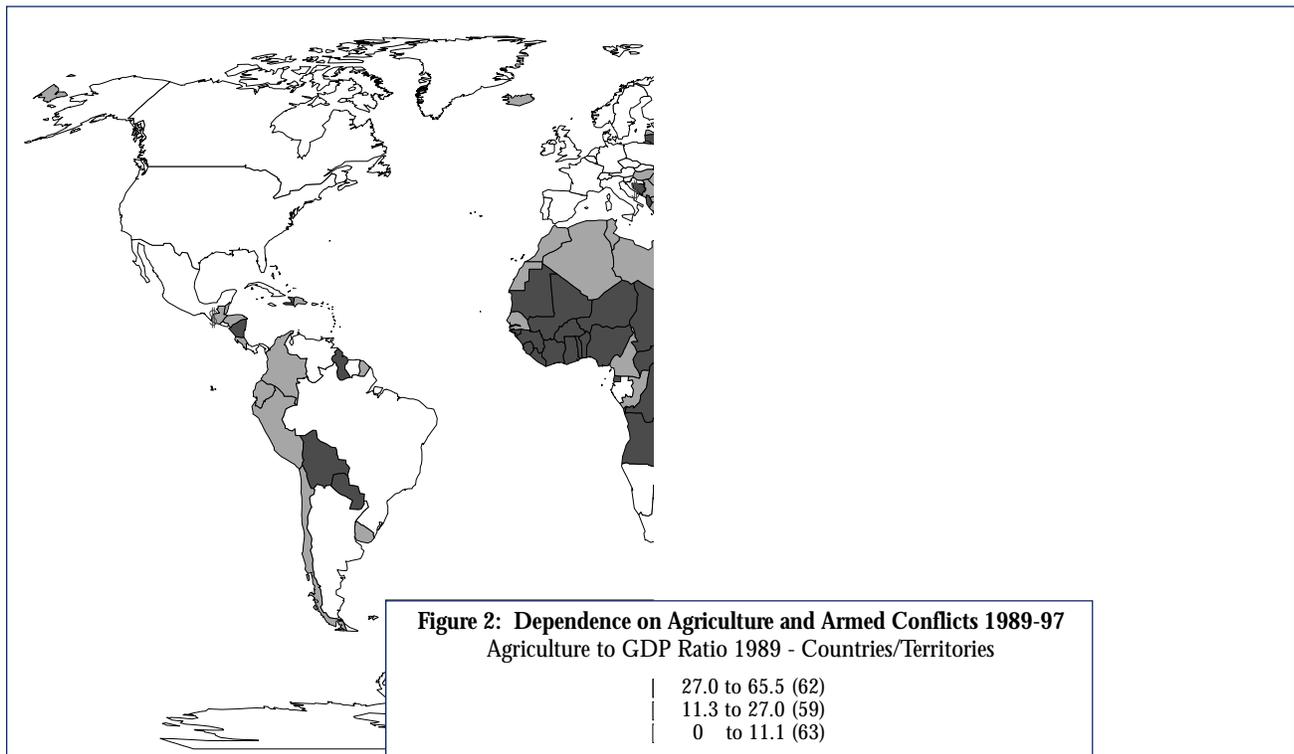
During 1989-97, intrastate conflicts accounted for the bulk of violence, with 88 of the 103 conflicts being purely domestic and another nine classified as 'intrastate with foreign intervention'. The number of interstate armed conflicts varied between zero and four per year during this period. Most interstate conflicts have been at relatively low levels of violence, while many of the

intrastate conflicts have been quite bloody, and affect the civilian population most severely. The UNDP (1998) and World Bank (1998) estimate that as much as 90 percent of the casualties in recent conflicts have been civilian, mainly women and children.

Given the main locations of armed conflict in the post-Cold War period, it is not surprising that we find a strong link between agricultural dependence and conflict, which is depicted graphically in Figure 2. The armed conflicts of the post-Cold War years are plotted on a background of the value of agricultural production as a share of GDP.

Most of the armed conflicts, whether domestic or international, are concentrated in regions heavily dependent on agriculture, such as South Asia, Central Africa, and parts of Latin America. In countries that have a low dependence on agriculture (white on the map), we find only a handful of conflicts. Indeed, only five out of 63 states who exhibit a low dependence on agriculture have suffered armed conflict after the Cold War. Of these five, none have exceeded 1,000 battle deaths per year, and only the conflict in Northern Ireland has a cumulative death toll exceeding 1,000.

In some cases, examination of the individual conflicts reveal clear links between issues relating to agriculture and the origin of the armed conflict. In the Appendix we examine this question in some detail. In several of the conflicts in South Asia and South and Central America a call for the redistribution of land is an important part of the ideological claims of the opposition



Sources: The list of conflicts are from Wallenstein and Sollenberg (1998). The agriculture to GDP ratios are from *World Resources* (WRI, 1997). Additional data is obtained from *World Fact Book* (CIA, 1997) and two data points were estimated as regional averages. Conflicts classified by Wallenstein & Sollenberg as concerning government were located at the capital, whereas territorial conflicts have been placed in the approximate area where they occurred. A red star indicates a major conflict where battle-deaths reached a threshold of 1,000 in at least one of the years 1989-97. A red flag indicates a minor conflict where battle-deaths did not reach 1,000 in any year during the 1989-97 period. The map includes interstate as well as internal armed conflicts. The vast majority of the conflicts during this period were internal.

movement. In Israel, Bangladesh, and elsewhere settlers in agricultural areas provoke violence. In the Sahel and the Middle East, among other places, environmental change, man-made environmental destruction, or wasteful resource practices have exacerbated conflicts over freshwater for irrigation, agricultural land, and other scarce resources. Food riots, a recurring phenomenon in many poor countries, although hardly ever large enough to be recognized as a full-scale war, also result in the destruction of property and occasional deaths.

Neither the statistical association presented in Figure 2, nor the impression gained from the cases described in the Appendix should lead us to conclude that there is an overall *causal* link between the heavy economic dependence on agriculture and the incidence of armed conflict. Heavy dependence on agriculture is usually associated with a 'backward' economy. We shall argue strongly in the following sections that the missing link here is *poverty*, which we understand as the lack of physical, human, and social capital. The lack of these factors generates conditions which are unfavorable for development, and hence for peace. The conflict-producing conditions that may emanate from agricultural and rural issues, such as land tenure conflicts, are manifestations of the incapacity of social and political systems to handle such crises. Moreover, capricious politics are likely to create conditions of underdevelopment such as low economic growth and simultaneously cause the extreme grievances that drive individuals and groups to take up arms.

According to some recent systematic analyses, poverty predicts the risk of civil war most strongly (Collier and Hoeffler, 1998; Hegre et al., 1998). The interconnected nature of the dependence on agriculture, socio-economic deprivation, and conflict is illustrated by Table I. Africa and South Asia in particular exhibit low per capita income, low levels of human development, high dependence on agriculture and agricultural labor, and slow mobility of per capita income given the low level of wealth—and

they have also experienced a high number of severe armed conflicts since 1989. Of course, these averages do not capture the enormous variance within regions. For example, Mauritius and Botswana have comparatively high per capita incomes and growth rates within Africa, and they have been relatively peaceful. Cambodia, Myanmar, and Laos, on the other hand, are low-income countries within the East and Southeast Asian region, and these states have been conflictual. Latin America contains some of the poorest (Bolivia, Nicaragua) and richest states (Chile, Argentina) among the developing countries, with many places suffering some of the highest levels of income inequality in the world.

STAGNATION, STATE COLLAPSE, AND CONFLICT VULNERABILITY

Such heralded studies as the Brundtland Commission's report on sustainable development (1987), the former Secretary General of the United Nations, Boutros Boutros-Ghali's (1995) *An Agenda for Development*, and recent, detailed scholarly studies of conflict (Brown, 1996; Collier, 1998) have cited poverty and deprivation as one of the primary underlying causes of endemic conflict and civil violence. Violence has also accompanied the collapse of state authority in such places as Somalia, Rwanda, Sierra Leone, Liberia, and the Republic of Congo. The collapse of states in turn is attributed primarily to the failure of existing state institutions to ensure socio-economic development and alleviate deprivation. This is especially true of states that were in the hands of dictators, who ran them with little regard for the well-being of citizens, tenuously maintaining power with the financial and political support of outsiders. In the post-Vietnam era the Cold War functioned according to the Nixon and Brezhnev doctrines that committed the two superpowers actively to fight their battles by proxy. These doctrines ensured heavy support for the various states and groups

Table I. Agriculture, Poverty, and Armed Conflict in the Post-Cold War Period, 1989–97 (Regional Averages)

Variable	Africa	Latin America	Middle East	South Asia
Agriculture/GDP ratio 1994	28.9	15.4	6.6	36.7
Agricultural Labor % of Total Labor 1994	73.3	36.1	32.1	70.6
GDP per capita in \$ PPP 1994	2,207	5,498	10,778	1,723
Human Development Index 1994	0.427	0.757	0.799	0.467
Growth of GDP per capita, 1980–93	0.04	-.04	-1.2	2.6
Conflicts with over 1,000 battle deaths in single year, 1989–97	14	3	5	8

All economic data were obtained from the UNDP (1997). The agricultural labor conflict data are from Wallensteen and Sollenberg (1998).

that the superpowers favored ideologically. Armed conflicts in such places as Ethiopia, Angola, Mozambique, and Afghanistan were escalated way beyond what could have been sustained by indigenous resources, with tragic consequences for the local populations.

The end of the Cold War left many states powerless, with no tax base, little legitimacy, and no longer a monopoly over the use of force. Such states have faced an anarchical struggle for the control of power and resources along ethnic and tribal lines and based on political and socio-economic affinities (Zartman, 1995). Not all such conflicts are due solely to the lack of central authority, nor are they simply fought as tribal wars. The wars in Liberia and Sierra Leone, for example, can be viewed as emanating from subsistence crises. Indeed, many of the state failures emanate from the inability of these weak states to provide the basic needs of people. High numbers of unemployed youth in the cities and the countryside are ready combatants within various criminal insurgency groups that form to battle over the control of resources and whatever state power is left intact.

In the past, internal war has usually been discussed in terms of rebellion and insurgency, and as highly orchestrated politico-military action against the superior power of a state. Ordinary peasants became the foot soldiers of collective movements that brought together disparate, disaffected elements by the promise of a revolution of the existing political and economic order. The tactics of the insurgents were designed to capture the seat of government according to the principles of guerrilla war. As Mao's famous dictum illustrates, people are to guerrillas what water is to fish. In military terms, therefore, the center of gravity of guerrilla movements was located in the people, whose passive and active support constituted the lifeblood of these movements. Similarly, counterinsurgency strategies of governments were built on winning the hearts and minds of the populace in order to counter such threats. For these reasons, the old insurgencies were relatively moderate in terms of the level of violence against non-combatants, the level of criminality, and the degree to which general injustice against non-combatants was practiced by both sides. Of course, internal war during the Cold War was also often brutal. However, both insurgents and counterinsurgent forces in general showed themselves up to the society at large to be the most desirable side to support, which disciplined much of their actions. The violence that was perpetrated in many instances was explicitly designed to win political support at home and abroad. In fact, one of the main ways in which political entrepreneurs persuaded peasants to risk their lives for the movement was by providing selective incentives which included various acts of benevolence and justice within rural communities (see Popkin, 1979). Such wars were classically fought according to the Clausewitzian maxim of armed conflict as 'politics by other means.'

The new internal wars are quite different. Restraint in the use of violence has now given way to utter brutality, often committed on the most vulnerable of non-combatants (Carnegie Commission on Preventing Deadly Conflict, 1997; Project Ploughshares, 1997). Consider the long and bloody conflict between *Sendero Luminoso* (the Shining Path) and the Peruvian

government. Although clothed in Marxist jargon and promises of economic and social emancipation for the Indian peasants of the Upper Hualaga valley, the Shining Path seems to have been motivated mainly by the desire to profit from supplying cocaine to the drug cartels in Colombia and Peru. A similar pattern of apolitical violence occurs in Colombia between various guerrilla groups and military and paramilitary forces. Ethnic cleansing in the former Yugoslavia and Rwanda claimed thousands of lives, many of whom were women and children, and the killing had only the remotest political purpose, such as the preservation of a greater Serbia or simply the elimination of ethnic opponents as in Rwanda. Moreover, willful famine that kills *en masse* has proved to be a potent weapon in Liberia, Mozambique, Somalia, and the Sudan, where segments of the population were starved wilfully. The violence in Sierra Leone and Liberia resembled gang-land warfare where youths armed with automatic weapons terrorized civilian populations and each other over the control of diamond mines and other resources that promised quick profit.

In the old insurgencies the means and methods of violence served explicitly politico-military aims, but the new internal wars are simply apolitical brutality. Many of these conflicts are the debris of the Cold War, where the surrogates of the superpowers have vanished to create a vacuum which groups that had been benefiting from shadow economies and underground activity are now vying to fill. The fighting is also intensified by the ready availability of sophisticated weaponry (Project Ploughshares, 1997: 4; Urquhart, 1996: 6). Some have even argued that the new conflicts seem to have merely an economic purpose, despite most explanations that simply rely on ethnicity, tribalism, and primordial hatreds to explain the character of new internal war (Keen, 1998).

Many of the new conflicts persist through pillage, extortion, illicit trade, labor exploitation, land grabbing, illicit resource extraction, and other criminal activities. The mafia-style criminal activities common in most states of the former Soviet Union fit this pattern, as do narco-terrorism, gun-running, and terrorism for hire by various organizations. While the underlying reasons for peasant dissatisfaction, such as the availability of land and threats to livelihood, may have carried over from the Cold War years, the new conflicts are integrally linked to conditions affecting the rural sectors.

The new conflicts may be traced to the loss of livelihood, the hopelessness of surviving at the margins, and the alternative life of crime and banditry. The bulk of the rural population seems to be non-participant victims rather than the active and passive supporters of utopian revolution. Consider, for example, the hapless situation of the Indian peasants of the Upper Hualaga Valley in Peru. Sandwiched in between the Shining Path guerrillas and the state, these peasants were forced to eke out a living supplying coca to the guerrillas, or risk the consequences of non-compliance. If they actively supported the guerrillas, they faced retribution at the hands of the state's military and para-military forces (Snow, 1996). Ironically, the foot soldiers of much of the armed violence today might just be trying to stay alive.

Conditions affecting agriculture, the main source of livelihood in the rural sector in many poor countries, and the level of poverty and deprivation are linked to armed violence in a

positive-feedback loop. While Messer et al. (1998: 21) suggest this two-way causality, they do not find a direct statistical link between indicators of food security and conflict. Nafziger & Auvinen (1997) do find a positive link between low food production per capita and complex humanitarian emergencies. Their strongest result, however, is for tradition of violent conflict. A history of conflict would have in turn affected food production and overall economic activity. We view the links between hunger and violence as emanating from the denial or loss of entitlement as both a result of and a cause of armed conflict in the poorest countries (Drèze and Sen, 1989; Keen, 1994). Unlike Sen (1981) who focuses on the issue of government intervention as a corrective to entitlement loss, we focus on the problems of urban bias and dysfunctional political processes. We believe that this framework explains why the fundamental grievances that motivate violent collective action arise from the same political processes that generate food shortages, underdevelopment, and conflict.

AGRICULTURE AND CONFLICT: A THEORETICAL ASSESSMENT

While ideology is not a salient factor in the internal wars of the post-Cold War world, the underlying causes of anomie and deprivation remain. The new internal violence that affects the rural population is linked directly to the loss of livelihood. In other words, the impetus for violent action emanates from the same source as that which determines the conditions affecting agricultural growth and economic development in general. Agriculture has been plundered by capricious political processes and policies (Schiff and Valdés, 1992). In this section we discuss armed violence emanating from the conditions affecting agriculture in a larger framework offered by theories of rent-seeking and urban bias. Following that, we examine the South Asian region with special emphasis on India, in order to flesh out the origins of rural struggles in poor developing countries. Unlike Somalia and Zaire where state failure led to mass violence, India has a functioning democratic state, which has prevented mass-scale violence and complex humanitarian emergencies.

In contrast to the modernization and dependency explanations of the causes of poverty in the developing world, the political-economy perspective offers the theory of rent-seeking that blames distorted markets and dysfunctional political processes. While dependency theory views exploitation as emanating from the outside, the rent-seeking perspective views exploitation as a result of internal processes. Rent-seeking activity of well-organized farmers in rich countries may also harm the agricultural prospects of poor countries. This factor is especially salient to the rural poor in developing states for whose labor and products the rich markets of industrialized countries are often closed. Thus, agriculture in poor countries is 'milked' because of distorted markets at home and the lack of richer markets abroad.

According to this perspective, underdevelopment occurs because of the rent-seeking activities of well-organized interests who seek excessive profits through control of the market. The governments of developing countries acquiesce in this behavior and coalesce with special interests because of mutual benefits in the political, economic, and social spheres of life. In the

distributional struggles within the market, the powerful often win out because of the control of resources, greater organizational capabilities, and access to the organs of government. The rural poor are systematically exploited by urban interests because they command few resources, are often illiterate, and are poorly suited for collective action.

According to Bates (1988), the primary motive of any government is to retain power. Governments, therefore, pander to bases of support among well-organized private interests such as urbanites and the rural elite. This is especially true when it comes to the control of food prices in developing countries. Urban dwellers, a major portion of whose incomes is spent on food, prefer low food prices. Moreover, urban industries lobby for protection against imported goods by way of high tariffs on imports and exchange controls. Food prices are set artificially by para-statal marketing boards, and imported food becomes cheaper as a result of artificially inflating the value of the local currency. These measures hurt the rural sectors, squeezing the small-holder producer of food crops.

The large export-crop producers benefit from the artificially inflated local currency, which provides incentives for people to produce cash crops rather than food. This arrangement benefits the rural elite and the urban industrialists. This arrangement is also advantageous to some segments of urban dwellers, such as those who are formally employed by the state, but not for the mass of poor, whose ranks grow rapidly as impoverished small farmers and landless peasants move to the city in search of alternative occupations. The policy of artificially lowering food prices does not translate into food security for the urban poor because lower economic growth reduces the opportunity of formal employment. At the same time, the influx of rural poor to the cities lowers the overall wage rate (Krueger, Schiff, and Valdés, 1991). Thus, the artificially lowered food prices may still command a large percentage of the earnings of the masses of poor that flock to the cities.

The rural poor, who are pushed out into the cities, contribute to increased urban bias. This has grave consequences by lowering the incentives for food production, land reform, the development of agricultural infrastructure, education, and the alleviation of rural poverty. Such a policy environment leads to clientelistic politics and corruption, with governments providing sidepayments to its supporters in the form of subsidization. In general, the distortion of markets and of the political process contribute to lowering overall economic growth and perpetuating underdevelopment (Weede, 1987). This accounts for widespread dissatisfaction that cuts across the urban-rural divide and explains the incentive structure for rebellion and banditry.

Under such conditions, it is not surprising that historically the foot soldiers of rebellions against states have been landless peasants and their poor cousins recently moved to the urban slums. Moreover, rent-seeking and urban bias have implications for violence through the creation of patrimonial politics, patronage, and the destruction of social capital. Clientelism creates vertical ties of dependency between patron and clients at the expense of horizontal ties of association, which are the foundations of the effectiveness of government and the level of satisfaction with government performance (Knack and Keefer,

1997; Putnam, 1993; World Bank, 1997). The role of social capital in the political and economic development process is generally neglected by those who study conflict, even in studies which place a great deal of emphasis on the notion of good governance as a precondition for peace and prosperity (Carnegie Commission on Preventing and Deadly Conflict, 1997).

In what specific ways do poverty and rural vulnerability translate into violent collective action? Underdevelopment, the loss of livelihood, and food shortages lead to the loss of a major component of a poor person's entitlement set. For the many landless peasants, the food entitlement depends upon their ability to exchange labor for wages, which in turn is highly dependent upon the conditions affecting agriculture. If biases emanating from natural conditions or political factors adversely affect agricultural production, then entitlement failure is highly likely among the rural and urban poor.

In the 'bottom-up' violence that we are witnessing in many parts of Africa, armed bands defy authority and live off the land through violent expropriation (Keen, 1998). The ready availability of automatic weapons fuels the appalling nature and level of violence. The problems associated with the rural sectors can, therefore, have severe repercussions, whereby large segments of the rural youth easily become the perpetrators and victims of mass violence. As Keen (1998: 45) puts it, for many of the unemployed youth, 'it may ... be more dangerous to stay out of an armed band than to join one.' The perpetuation of violence in impoverished areas is intimately related to the problem of ensuring food.

In states which have collapsed or are teetering on the edge, such conflicts resemble the form of collective violence most common in pre-industrial times—rational responses to subsistence crises. Subsistence crises gave rise to mass violence in pre-industrial times when natural or political processes created food shortages. Social banditry or criminal rebellion, what Hobsbawm (1959) refers to as 'robinhoodism', occurred as rational responses to extreme and prolonged hardship and other shocks affecting the supply of food. Such times provide a set of limited options for those affected, as exemplified by a study of collective violence during the Ming dynasty in Imperial China (Tong, 1988). The options for individuals facing extreme hardship were limited to migration, joining religious orders if accepted, becoming eunuchs, pawning family members, prostitution, resorting to cannibalism, or becoming bandits and rebels (Tong, 1988: 110–117).

In other words, faced with deprivation and even death from starvation, people resorted to extreme coping strategies. The decision to resort to banditry and criminal rebellion, however, depended on the severity of sanctions—usually death by quartering or decapitation, or even the decapitation of the entire family or the entire village, depending on the severity of the crime—and the uncertainty of these sanctions. In China, banditry was most pronounced in areas where the likelihood of surviving hardship was at a minimum and the probability of finding refuge from sanctions at a maximum.

Recent work by Collier (1998) delineates some ways in which poverty is responsible for rebellious action. The opportunity cost of rebellion at the individual level is a function of grievance and

employment and the spoils of war (measured as taxable income) if the rebellion is successful. Thus, the expected utility of war is a function of the level of per capita income, where low income reduces the opportunity cost of rebellion, and the government's capacity to effectively defend itself. Collier shows that the economic variables have far more predictive capability than the social variables measuring ethnic and religious fractionalization and measures of inequality. These results do not support relative deprivation arguments, although he does find some support for the grievance hypothesis whereby democracy defuses the conflict proneness of ethnically fragmented societies.

Violence may also be generated by the logic of preemption and spiraling. The foreknowledge of imminent hardship, especially severe food shortfalls, could provoke violence when one party seizes the limited supplies of others. This may take place along ethnic lines. In such instances, the space for negotiation is highly circumscribed as in the case most recently of ethnic riots in Indonesia and Lesotho. In these instances, ethnically distinct groups disproportionately represented in the commercial sector were targeted by the 'leveling crowd' (Tambiah, 1996). Any event can trigger rioting based on the underlying insecurities faced by some of the poorest sections of the population. Often, the crowds target both public and private wealth with little regard for the ethnic composition of ownership. The logic of preemption can be observed in the ethnic slaughter that rapidly spread from urban to rural areas in Rwanda in 1994.

The degree of cooperation and trust among individuals and groups—the social capital—are functions of self-interested pursuit of objectives and as repeated games of reciprocity, as seen most clearly in a stable marriage. Shirking and defection are less likely if people are involved in such games of reciprocity. Memories of earlier instances of the breakdown of cooperation, which resulted in mass suffering through genocide or willful famine, is likely to trigger similar desperate actions in the future. Collective memory mitigates collective action problems (Kahl, 1997). The logic is that 'if I don't do it, the other side will.' In this way, societal tension spirals and violence becomes endemic. The events in Rwanda in 1994 and the Sudan since the late 1980s bear this out.

CONCLUSIONS AND POLICY RECOMMENDATIONS

We have examined the links between the conditions affecting agriculture and the rural sectors and violent armed conflict. We have also critically discussed some important theories of conflict, suggesting that the new internal wars since the break up of the Soviet Union are devoid of the ideological overlay and do not fit the pattern of the old revolutionary insurgencies. The new internal wars, extremely bloody in terms of civilian casualties, reflect subsistence crises and are largely apolitical. These crises clearly stem from the failure of development, the loss of livelihood, and the collapse of states. We have placed agriculture and the role of the rural sector at the center of the development failure of states, and thus of the socio-economic and political crises that lead to violent conflict. The role of agriculture in this process is especially important given that it supplies the bulk of livelihood for people in poor

developing countries.

The negative impact of warfare on food production is hardly controversial. Indeed, the food dividend from peace can be formidable, especially for those societies suffering severe shortages and are vulnerable to conflict (Messer et al., 1998). We have emphasized the links between conflict and agriculture, focusing particularly on how conflict is generated by subsistence crises, in many respects the genesis of the vicious cycle. Building peace and prosperity clearly requires greater attention to the role of agriculture in creating livelihood, alleviating poverty, and breaking the cycle of violent conflict and scarcity.

The causes of armed conflict are likely to be perpetuated by conflict itself. People fight over vital necessities such as food; to protect a livelihood, economic, and political injustice; and to obtain safety from violence and want. States that provide such necessities also create conditions conducive to peace and prosperity, they gain legitimacy, and they strengthen societal bonds that are crucial for socio-economic and political stability. These factors create conditions amenable for democratic governance, space for civil society, and the development of a civic culture, or what UNESCO (1996) refers to as a culture of peace. Western Europe has evolved into an elaborate security community (Adler and Barnett, 1998) despite a long history of warfare, including two 'world wars' in this century. The rapid recovery of much of East and Southeast Asia from post-war destitution to economic prominence demonstrates that building prosperity and peace is also possible in other areas. Agricultural development and the creation of an abundance of food were crucial in this process.

European recovery and East Asian growth were supported by massive financial, technological, and moral aid in industry, in agriculture, and in the political sphere. Given the collapse of the Soviet model and of the ideological appeal of autarky, the required cooperation between the North and South—and among government, business, and other organizations—is likely to come easier. But the response from those in a privileged position has been lukewarm at best. Since the end of the Cold War, the wealthy states have cut back on aid (UNDP, 1998), have taken protectionist measures against imports from poor countries (Burtless et al., 1998), and have failed to provide adequate relief to war-torn societies. This lack of enthusiasm for engaging the developing world is reflected in the failure of the US and other states to live up to their financial obligations to the United Nations. Despite this, many recognize that resurrecting development from the 'lost decade' of the 1980s is imperative for building peace.

Improving conditions facing the agricultural sector on a global scale is especially vital for peace and prosperity and sustainable development in the long term. Peace and development must be built from the ground up. Addressing the problems facing agriculture and the rural communities should be foremost within strategies that seek to bring about prosperity and peace. One of the issues of contention within rural society that we have focused on particularly is the distribution of land, and history suggests that the social cost of not implementing land reforms in a fair and equitable way can lead to costly long-term conflict (Binswanger, Deininger, and

Feder, 1995). Intimately tied to such issues is the larger political-economy setting where states should minimize taxing agriculture and rural society and eliminate the distortions that harm overall economic performance. These issues are highly salient to what the World Bank and other donor agencies refer to as good-governance issues. Part of the process of eliminating distortions would be for politicians in both the North and the South to come to equitable terms about access to markets, control of capital, and other relevant financial and trading issue through such organs as the World Trade Organization.

Changes in the overall policy environment and the provision of land for small farmers are crucial steps in the campaign to improve productivity. However, systematic analyses of settlements of new lands in West Africa show that the productivity and incomes of these farmers improved only marginally in the absence of good technology and other inputs for intensive production suitable to their specific production

**“STATE INTEREST VS. INTERNATIONAL OBLIGATIONS:
THE CASE OF NORTH KOREAN ‘FOOD REFUGEES’”**
is a work-in-progress by Shin-wha Lee
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The following is an excerpt from this paper:

The current North Korean humanitarian crises can be summarized as follows. First, although unprecedented flooding and drought in recent years exacerbated the food supply problems, years of the government's military-first policies and the inefficient command economy are largely responsible for the current famine-stricken plight of North Koreans. Second, substantial parts of international relief aid are believed to have been diverted for personal gain by North Korea's military and government elites. Third, political calculations of both donor and recipient states have been in the way of aiding North Koreans in desperate need. Fourth, since maintaining a minimum standard of subsistence in their daily life is taken for granted, the majority of North Koreans do not appear to leave their homes unless faced with imminent death due to starvation. The defection of North Koreans in search of food is a strong indicator of the extent and severity of the country's famine. Fifth, North Korean famine victims who fled into China or countries other than South Korea are now trapped by political, diplomatic and legal restraints.

These points clearly represent two dilemmas in reconciling people's security and welfare with the interests of the states involved: one is the misbehavior of state leadership in a sovereign state who place their own interests (greed) over their citizens' basic needs; and the other is the reluctance of many states to provide aid to those suffering at home or asylum to those fleeing their home countries for survival. There are neither international laws and systems that effectively address a state's wrong policies nor are there mandatory international norms dictating a state's humanitarian action for other states in need.

conditions (McMillan et al., 1998). While increasing the productivity of farming to fill the burgeoning demand for food, for example, one must also be mindful of the environmental consequences. Deforestation to satisfy land hunger and the demand for food, for example, could have repercussions in terms of climate change and soil degradation (Tweeten and McClelland, 1997). The development of high-yield crops and better methods of farming is crucial for increasing production without negative environmental consequences. Research to develop high-yield crops that require fewer pesticides and are more environmentally appropriate and better farming methods that conserve water and make production more sustainable, can ensure that productivity increases go hand in hand with the protection of the natural resource base (Pinstrup-Andersen & Pandya-Lorch, 1998).

It may be problematic for donor agencies to bring about sufficiently effective changes in the overall policy environment of a developing country to affect changes in the structure of agricultural production through land reform. However, developing and diffusing new technology through collaborative research activities offers tremendous possibilities. The adoption of new technologies by poor farmers has proved to be effective in increasing production across continents, countries, and commodities (Oehmke, 1997). Typically, the rate of return on the development of new technology is very high, and there are few political considerations for donor agencies and little public-sector influence on the decision to adopt new technologies. Given the opportunity, farmers simply adopt what works (McClelland, 1997). Collaborative agricultural research and extension across continents, regions, and countries promises large dividends.

The world's war zones have seen an increasing number of persons who have been displaced internally and externally, as well as an increase in peacekeeping activities to which the industrialized countries commit funding and personnel. Local conflict potentially affects the entire world community, not just the developing world. The international community has interests beyond those grounded in humanitarian reasons, in improving agricultural production and eliminating scarcity in the developing world, in preserving the environment, and ultimately in preventing armed conflict. Such goals can be achieved only if the quest for more efficient ways of producing food, sustaining livelihood, and managing the environment is actively pursued in developing countries.

Most of the know-how for efficient production of food is generated in the North. This research is conducted under conditions very different from those within most developing countries and much of this knowledge bypasses the farmers of the South. Research has an important role to play in lowering the costs of production while sustainably increasing output in Asia, Africa, and Latin America.

If the prices of food are lowered, people will resort less to subsistence production and extensive grazing which are highly detrimental to the environment. Efficient water management and the resolution of water conflicts are essential. Rural societies all over the world stand to gain from technologies and from learning how to improve the quality of food and preserve the

environment. The elimination of scarcity will ultimately promote peace and development and improve the quality of rural life.

The necessary infrastructure already exists. The Food and Agriculture Organization (FAO), the United Nations, and the World Bank are all organizations devoted to improving the conditions facing agriculture. Some 20 international centers are engaged in the research to improve farming and raise the livelihoods of rural smallholder farmers. The Consultative Group on International Agriculture (CGIAR) supports 16 of these centers that, with a national partner, undertake research on food crops, forestry, livestock, irrigation management, aquatic resources, and policy. Working closely with the affected people and governments, these research, technical assistance, and policy groups are centrally located to evaluate the problems and prospects of agriculture in developing countries. However, in a report to the Carnegie Commission on Preventing Deadly Conflict, Kennedy et al. (1998:29) argue that 'the research effort is under some threat from the reduction in funding of the centers of the...CGIAR that have been the source of so much past progress.' This article also deplores the widespread hostility to the use of bio-technology, which may lead to the deployment of valuable methods to improve agricultural production.

Donor agencies and foreign investors are also in a key position to influence national and international decision-makers. Such participatory action is likely also to activate local civil society and thus enhance and preserve democracy. In the longer term, this will have positive consequences in terms of less corruption and less conflict, thereby safeguarding higher returns on these investments. Peace and prosperity in the developing world will also have a positive impact on the well-being of the industrialized societies by helping to create and sustain jobs, and stemming problems arising from mass immigration and refugeeism.

Without cultivating development—a process highly dependent on favorable conditions for agricultural production and rural livelihood—there can be no sustainable peace. Enhanced productivity will provide the burgeoning food needs of a rapidly urbanizing world, especially the urban poor, who are easy conscripts of armed violence. The fight against hunger, scarcity, environmental pollution, and poverty can also convert hapless soldiers of violence into productive members of the global community. If prosperity for all is to be harvested in the 21st century, then the conditions fostering peace will have to be cultivated.

¹ This paragraph builds on Gleditsch (1998: ch. 1) and on data from the Correlates of War (COW) project (Singer and Small, 1994). We follow COW in requiring that an armed conflict contain at least 1,000 battle deaths to be counted as a war.

² High dependence on agriculture (measured in terms of its share in GDP and agricultural labor as a share of the total labor force) are very strongly correlated with per capita income (-.84 and -.79 respectively). The same is true of these two measures and human development variables such as literacy, child mortality, and longevity.

³ See Bates (1981, 1988), Binswanger, Deininger, and Feder (1995), Lipton (1976), Lipton and Ravallion, (1995), and Weede (1986,

1987).

⁴UNDP (1998: 93) cites a figure of US \$335 billion in annual subsidies to agriculture in the OECD countries while all developing countries spent US \$10 billion. However, developing countries spent much more than double the OECD countries subsidizing energy.

⁵This perspective is generally neglected by many of those who cite environmental pressures as the sole cause of rapid urbanization and landlessness. Policy does matter. For more sophisticated links between environmental pressures and policy outcomes, see Kahl (1997: 11), who notes that in the 1990s Sub-Saharan Africa's unemployment is 50–100 percent higher than it was in the 1970s. High population growth and stagnant economies have created bulging labor forces with no work.

⁶ Out of the current global labor force of 2.8 billion, a 120 million are unemployed and another 700 million are underemployed. The International Labor Organization has estimated that 1 billion more people will be added to the labor force in the next two decades, see Kahl (1997: 11–13).

References

Adler, Emmanuel and Michael Barnett, eds, 1998. *Security Communities*. Cambridge Studies in International Relations: 62. Cambridge: Cambridge University Press.

Bächler, Günther; Volker Böge, Stefan Klötzli, Stephan Libiszewski and Kurt R. Spillman, 1996. *Kriegsursache Umweltzerstörung* [Environmental Causes of War, in German]. Three vols. Zürich: Rüegger.

Bates, Robert H. 1981. *Markets and States in Tropical Africa. The Political Basis of Agricultural Policies*. Berkeley, CA: University of California Press.

_____. ed., 1988. *Toward a Political Economy of Development*. Berkeley, CA: University of California Press.

Binswanger, Hans P.; Klaus Deininger and Gershon Feder, 1995. 'Power, Distortions, Revolt and Reform in Agricultural Land Relations', in Jere Behrman & T. N. Srinivasan, eds, *Handbook of Development Economics* IIIb. Amsterdam: Elsevier (2659–2772).

Boutros-Ghali, Boutros, 1995. *An Agenda for Development*. New York: United Nations.

Brown, Michael E., ed., 1996. *International Dimensions of Internal Conflict*. London: MIT Press.

Burtless, Gary; Robert Z. Lawrence, Robert Litan and Robert Shapiro, 1998. *Globophobia: Confronting Fears About Open Trade*. Washington, DC: Brookings.

Carnegie Commission on Preventing Deadly Conflict, 1997. *Report of the Commission*. New York: Carnegie Foundation.

Collier, Paul, 1998. 'The Economics of Civil War,' Unpublished Manuscript. Washington, DC: World Bank.

Collier, Paul, and Anke Hoeffler, 1998. 'On the Economic Causes of Civil War,' *Oxford Economic Papers* 50: 563-573. Oxford: Oxford University Press.

Dreze, Jean, and Amartya Sen, 1989. *Hunger and Public Action*.

Oxford: Clarendon.

Gaddis, John Lewis, 1987. "The Long Peace: Elements of Stability in the Postwar International System," ed. John Lewis Gaddis, *The Long Peace. Inquiries into the History of the Cold War*, 215-245. Oxford & New York, Oxford University Press.

Gleditsch, Nils Petter et al., 1998. *Det nye sikkerhetsbildet. Mot en demokratisk og fredelig verden?* [The New Security Environment: Towards a Democratic and Peaceful World? in Norwegian]. Trondheim: Tapir.

Gleditsch, Nils Petter, 1995. "Democracy and the Future of the European Peace," *European Journal of International Relations* 1(4): 539-571.

Hegre, Håvard; Tanja Ellingsen, Nils Petter Gleditsch, and Scott Gates, 1998. 'Towards a Democratic Civil Peace? Opportunity, Grievance, and Civil War 1816–1992', under journal review.

Hobsbawm, Eric, 1959. *Social Bandits and Primitive Rebels: Studies in Archaic Forms of Social Movement in the 19th and 20th Centuries*. Glencoe, IL: Free Press.

Homer-Dixon, Thomas and Jessica Blitt, eds, 1998. *Ecoviolence: Links Among Environment, Population, and Security*. Oxford: Rowman & Littlefield.

Huntington, Samuel P., 1991. *The Third Wave*. Norman, OK: University of Oklahoma Press.

Huntington, Samuel P., 1996. *The Clash of Civilizations and the Remaking of World Order*. New York: Simon & Schuster.

Kahl, Colin, 1997. 'States, Scarcity & Civil Strife in the Developing World', unpublished manuscript. John M. Olin Institute for Strategic Studies, Harvard University.

Kaplan, Robert, 1994. 'The Coming Anarchy', *Atlantic Monthly* 273(2): 44–76.

Keen, David, 1994. *The Benefits of Famine: The Political Economy of Famine and Relief in Southwestern Sudan, 1983–1989*. Princeton, NJ: Princeton University Press.

_____. 1998. 'The Economic Functions of Violence in Civil War', *Adelphi Paper* 320. Oxford: Oxford University Press.

Kegley, Charles, 1993. 'The Neo-Idealist Moment in International Studies? Realist Myths and the New International Realities', *International Studies Quarterly* 37(2): 131-146.

Kennedy, Donald et al., 1998. *Environmental Quality and Regional Conflict*. New York: Carnegie Corporation. Also available at www.ccpdc.org.

Knack, Stephen, and Philip Keefer, 1997. 'Does Social Capital Have an Economic Payoff? A Cross-Country Investigation', Paper Presented at the Annual Meeting of the American Political Science Association, Washington, DC, 25–29 August.

Krueger, Anne; Maurice Schiff & Alberto Valdés, eds, 1991. *The Political Economy of Agricultural Pricing Policy*. Baltimore, MD: Johns

Hopkins University Press, for World Bank.

Lipton, Michael, 1976. *Why Poor People Stay Poor: A Study of Urban Bias in World Development*. Cambridge, MA: Harvard University Press.

Lipton, Michael, and Martin Ravallion, 1995. 'Poverty and Policy', in Jere Behrman & T. N. Srinivasan, eds, *Handbook of Development Economics* vol. III. Amsterdam: Elsevier (2551–2657).

Mearsheimer, John, 1990. 'Back to the Future: Instability in Europe After the Cold War', *International Security* 15(1): 5–56.

McClelland, Donald G., 1997. 'Investments in Agriculture: Synthesis and Overview', in Tweeten & McClelland, eds (1-31).

McMillan, Della E.; John Sanders, Dolores Koenig, Kofi Akwabi-Ameyaw & Thomas Painter, 1998. 'New Land is Not Enough: Agricultural Performance of New Lands Settlement in West Africa', *World Development* 26(2): 187–211.

Messer, Ellen; Marc Cohen, and Jashinta D'Costa, 1998. 'Food From Peace: Breaking the Links Between Conflict and Hunger', *Food, Agriculture, and the Environment Discussion Paper* 24. Washington, DC: International Food Policy Research Institute.

Nafziger, Wayne E., and Juha Auvinen, 1997. 'War, Hunger, and Displacement: An Econometric Investigation into the Sources of Humanitarian Emergencies'. *Working Paper* no. 142. Helsinki: United Nations University, World Institute for Development Economics Research.

Oehmke, James F., 1997. 'Agricultural Technology Development and Diffusion: A Synthesis of the Literature', in Tweeten & McClelland, eds, (59-77).

Pinstrup-Andersen, Per and Rajul Pandya-Lorch, 1998. 'Food Security and Sustainable Use of Natural Resources: A 2020 Vision', *Ecological Economics* 26(1): 1–10.

Popkin, Samuel, 1979. *The Rational Peasant: The Political Economy of Rural Society in Vietnam*. Berkeley, CA: University of California Press.

Project Ploughshares, 1997. *Armed Conflicts Report*. Waterloo: Institute of Peace and Conflict Studies.

Putnam, Robert, 1993. *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.

Rummel, Rudolph J., 1995. 'Democracy, Power, Genocide, and Mass Murder', *Journal of Conflict Resolution* 39(1): 3-26.

Schiff, Maurice and Alberto Valdés, 1992. *The Political Economy of Agricultural Pricing Policy: A Synthesis of the Economics in Developing Countries*, vol. 4. Baltimore, MD: Johns Hopkins University Press, for the World Bank.

Sen, Amartya, 1981. *Poverty and Famines: An Essay on Entitlements and Deprivation*. Oxford: Clarendon.

Singer, J. David and Melvin Small, 1994. *Correlates of War Project: International and Civil War Data, 1816-1992* (ICPR 9905). Ann Arbor, MI: Inter-University Consortium for Political and Social Research.

Snow, Donald M., 1996. *(Un)civil Wars: International Security and the New Internal Conflicts*. Boulder, CO: Lynne Rienner.

Starr, Joyce R., 1991. 'Water Wars,' *Foreign Policy* (82): 17-36.

Tambiah, S. J., 1996. *The Leveling Crowd*. Chicago, IL: University of Chicago Press.

Tong, James, 1988. 'Rational Outlaws: Rebels and Bandits in the Ming Dynasty, 1368-1644', in Michael Taylor, ed., *Rationality and Revolution*. New York: Cambridge University Press (98-128).

UNDP, annual. *Human Development Report*. New York: Oxford University Press, for United Nations Development Program.

Urquhart, Brian, 1996. 'United Nations at the Cross-Roads,' *State of the World Conflict Report, 1995–1996*. Atlanta, GA: Carter Center (1-15).

Wallensteen, Peter and Margareta Sollenberg, 1998. 'Armed Conflict and Regional Conflict Complexes, 1989–97', *Journal of Peace Research* 35(5): 621–634.

Weede, Erich, 1986. 'Rent-Seeking or Dependency as Explanations of Why Poor People Stay Poor', *International Sociology* 1(4): 421–441.

Weede, Erich, 1987. 'Urban Bias and Economic Growth in Cross-National Perspective', *International Journal of Comparative Sociology* 28(1–2): 30–39.

World Bank, 1997. *World Development Report 1997. The State in a Changing World*. Oxford: Oxford University Press.

Zartman, William I., 1995. *Collapsed States: The Disintegration and Restoration of Legitimate Authority*. London: Lynne Rienner.