Why Do Children Fight? Explaining Child Soldier Ratios in African Intra-State Conflicts

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The growing phenomenon of child soldiers in intrastate armed conflict has been greeted with increasing alarm by both international organizations and the popular press.[1] Evidence suggests that the numbers have increased significantly over the course of the last decade, and the expectation is of a continued problem.[2] In this paper we use the conventionally accepted definition of a 'child soldier' offered by UNICEF: a child soldier is "any child – boy or girl – under 18 years of age, who is part of any kind of regular or irregular armed force or armed group in any capacity, including, but not limited to: cooks, porters, messengers, and anyone accompanying such groups other than family members."[3] According to a 2003 UNICEF report,[4] there were then an estimated 300,000

[1] Armed conflict is defined as "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths." See Strand, Havard, Lars W. Wilhelmsen, Nils Petter Gleditsch in collaboration with Peter Wallensteen, Margarita Sollenberg, Mikael Eriksson, Halvard Buhaug, Jan Ketilrod, "Armed Conflict Dataset Codebook," Version 1.1 (September 2002), http://www.prio.no/cwp/armedconflict/current/codebook_v2_1.pdf, p.3. "Armed Conflict Dataset Codebook" is a part of the "Armed Conflict Dataset", a joint project between the Department of Peace and Conflict Studies, Uppsala University and the Centre for the Study of Civil War at the International Peace Research Institute, Oslo (PRIO).

[2] For contrasting positions on the relative growth rate of child soldiers see "Children in War," in *The State of the World's Children: 1996* (UNICEF, 1996), http://www.unicef.org/sowc96/2csoldrs.htm; "UNICEF Report Finds Number of Child Soldiers Growing," *U.N.Wire*, June 2, 2004, http://www.unwire.org/UNWire/20040602/449_24442.asp; and Jo Becker, "Children as Weapons of War," in *World Report 2004: Human Rights and Armed Conflict (* New York: Human Rights Watch, 2004), http://www.hrw.org/wr2k4/download/wr2k4.pdf, p.219.

[3] "Factsheet: Child Soldiers," on the UNICEF official website, http://www.unicef.org/protection/childsoldiers.pdf, p. 4.

[4] UNICEF, *Adult Wars, Child Soldiers* (Bangkok: UNICEF, 2002), http://www.unicef.org/emerg/AdultWarsChildSoldiers.pdf, p.8.

such children serving in 72 government military forces or in armed rebel groups in about 20 countries around the world the prior year.[5] Although the figure may be inadequate and outdated, generated and circulated chiefly by activists, the evidence that the numbers of child soldiers are growing is convincing.

In terms of both numbers of child soldiers and number of conflicts in which they participated, Africa has provided the largest concentration of such conflicts. By the late 1990s, fourteen out of the 40 current or recent armed conflicts where children participated took place in Africa.[6] Furthermore, it is estimated that about 120,000 children, or 40 % of all child soldiers at the time, were active in Africa at the beginning of this century.[7] East Asia and the Pacific ranked a distant second, with approximately 75,000 child soldiers,[8] making Africa the largest single continent in terms of child soldier concerns. Furthermore, Africa has been the fastest growing region for child soldiers in recent years[9] and sources suggest that the average age of the children enlisted in some African countries is declining – from the teenage years to as low as nine or ten.[10]

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[5] "U.N. Cites Child Recruiters But Omits Leading Offenders," *Human Rights News*, December 16, 2002, http://www.hrw.org/press/2002/12/childsoldiers1216.htm

[6] Eleven countries in East Asia and the Pacific had child soldier participants. Laura Barnitz, Child Soldiers: Youth Who Participate in Armed Conflict (Washington: Youth Advocate Program International, 1999, 2nd edition), pp. 2-3.

[7] *The Use of Children as Soldiers in Africa: A Country Analysis of Child Recruitment and Participation in Armed Conflict* (The Coalition to Stop the Use of Child Soldiers, August 2000), http://www.reliefweb.int/library/documents/chilsold.htm; Afua Twum-Danso, "Africa's Young Soldiers: The Co-option of Childhood," Monograph 82, Institute for Security Studies, April 2003, http://www.iss.co.za/Pubs/Monographs/No82/Content.html, p.8.

[8] See UNICEF, Adult Wars, Child Soldiers, op.cit.

[9] Evidence to support this claim is extensive. Reportedly, child soldier numbers in Uganda and the DRC, for example, increased dramatically during 2002-2003 from the previous years. See Jo Becker, "Children as Weapons of War," in *World Report 2004: Human Rights and Armed Conflict* (New York: Human Rights Watch, 2004), http://www.hrw.org/wr2k4/download/wr2k4.pdf, p.219. Observers also claim that there was a massive increase in recruitment in the Ivory Coast in 2003. See "Child Soldier Use 2004: A Briefing for the 4th UN Security Council, Open Debate on Children and Armed Conflict" (Coalition to Stop the Use of Child Soldiers, 2004), http://hrw.org/reports/2004/childsoldiers0104/1.htm. Our data analysis also revealed

Yet, there has been remarkably little systematic evidence collected on the issue of the causes of child soldier participation rates in armed conflicts. The UN has actively encouraged researchers to focus on explaining the root causes of the participation of child soldiers in intrastate wars.[11] Leading international humanitarian organizations such as UNICEF, Human Rights Watch, The Swedish Save the Children organization, and the Coalition to Stop the Use of Child Soldiers have responded to such encouragement with a wave of reports. But much of the evidence compiled by international organizations (IOs) and nongovernmental organizations (NGOs) has focused on individual country studies rather than systematically conducting cross-national comparisons. Certainly, reliable data has proven to be very hard to generate and such organizations have generally been concerned with the dynamics of individual cases rather than a broader empirical perspective. We, however, have amassed figures on nineteen cases (listed below) in an effort to generate and comparatively test explanations of the causes of child soldier participation rates. This represents an unprecedented number in this area of research. Although hardly conclusive, we believe that our findings form the basis for an initial research program.

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that in Angola the number of child soldiers increased from 8,000 in its 20-year conflict of 1975-1995 to at least 20,000 in the recent 7-year civil war of 1996-2002.We furthermore found that in Liberia the number of children who participated in the recent 5 year conflict of (1999-2003), numbering 21,000, was higher than the number of child soldiers in the previous seven year conflict of 1989-95 (17,500).

[10] See Joe Becker and Tony Tate, "Stolen Children: Abduction and Recruitment in Northern Uganda" (New York: Human Rights Watch, 2003), http://www.hrw.org/reports/2003/uganda0303/uganda0403.pdf, p. 7. These authors report that in Uganda the age of children being abducted had fallen from the 13-15 range to as low as 9 or 10. When child soldiers were demobilized in Mozambique at the conclusion of hostilities, 4,678 of all officially demobilized children, or 18 %, were under 13 when recruited; 6,829, (27 %), were 14-15-year-old; and 13,982, (55 %), were 16-17 years old (see Rädda Barnen, *Childwar database*, citing a joint report by UNHCR and International Save the Children Alliance, 1998)

[11] "Child Soldiers," UN Official Website, Office of the Special Representative of the Secretary-General for Children and Armed Conflict, http://www.un.org/special-rep/children-armed-conflict/English/ChildSoldiers.html.

Guy Goodwin-Gill and Ilene Cohn, in their landmark work published a decade ago, listed multiple factors as possible driving forces behind the recruitment of child soldiers,[12] a general tendency evident in other research on this subject.[13] But the scholarship on this issue has been relatively limited and characteristically prone to broad generalizations that are often hard to compare operationally across cases.

Poverty is most often cited as a key factor in explaining the phenomenon of child soldier participation by a variety of academics, activists and intergovernmental organizations. It certainly makes intuitive sense to suggest that there is a relationship between the two. UN sources, for example, often cite the relationship between child soldiers and poverty in the context of broader developmental issues with good reason.[14] Richer countries, when they experience such conflict, generally don't employ child soldiers.

Why should poverty be a causal factor? One conventional explanation offered in the literature is that intrastate conflicts generally lead to food shortages (and, in extreme cases, famine) because conflict destroys both the productive capacity and infrastructure of a country. While some select groups may benefit financially, most suffer and poverty rates increase. A corollary to this argument is that a lack of food or destruction of

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[12] Guy Goodwin-Gill and Ilene Cohn. *Child Soldiers: The Role of Children in Armed Conflict* (New York: Clarendon Press, Oxford, 1994), pp. 23, 31 and 38. The authors invoke such a long list that the factors they cite cannot be considered as explanatory in any meaningful sense.

[13] See, for example, Laura Barnitz, op. cit., p. 4.

[14] See, for example, Laura Barnitz,op. cit., p.23; Afua Twum-Danso, op. cit., pp. 8,10; "Impact of Armed Conflict on Children," Report of Graça Machel, Expert of the Secretary-General of the United Nations (UNICEF), http://www.unicef.org/graca/, p.11; "Child Soldier Use 2003: A Briefing for the 4th UN Security Council, Open Debate on Children and Armed Conflict" (Coalition to Stop the Use of Child Soldiers, 2004), http://www.hrw.org/reports/2004/childsoldiers0104/childsoldiers.pdf, p.2; *Child Soldiers: Global Report 2001* (Coalition to Stop the Use of Child Soldiers, June 2001), http://www.child-soldiers.org/cs/childsoldiers.nsf/f30d86b5e33403a180256ae500381213/d3fd060bf388329f80256ae6002426d7?OpenDocument

productive resources caused by conflict often forces families to send their children to join military forces, whether rebellion or governmental groups. Both forces characteristically participate in looting of civilian populations, providing opportunities for children to reap the benefits for themselves and their families. Indeed, forces will often avoid direct confrontations in order to concentrate on the lucrative process of looting.[15] Child soldiers therefore relieve their families from the burden of feeding them while also assuming the responsibility of being providers.

All the countries we examine in this paper, however, are poor, with alarming poverty rates by OECD standards; all have significantly higher rates of child soldiers than is historically the case in the context of Western intrastate conflicts. Yet our data suggests that substantial poverty rates inform us little about whether a country is likely to have child soldier participants in armed conflicts. Lots of poor countries, even in Africa, don't employ child soldiers when they experience intrastate wars.

The evidence we have generated also questions whether poverty rates explain the enormous variations in child soldier rates. According to our calculations, these child soldier participation rates measured between 0 % and a staggering 53 % of all combatants in the 17 African intrastate conflicts for which we were able to locate measurable evidence of child soldier participants and poverty (the relevant numbers are summarized in a table entitled Appendix 2).[16]

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[15] In the Liberian civil war, for instance, factions avoided fighting as far as possible, so that these "simulated attacks" could facilitate looting. See Stephen Ellis, *The Mask of* Anarchy (London: Hurst & Company, 1999), p. 145 cited in Mats Berdal and David Malone (eds.), *Greed and Grievance: Economic Agendas in Civil Wars* (Boulder, Colo.: Lynne Rienner Publishers, 2000), p. 5

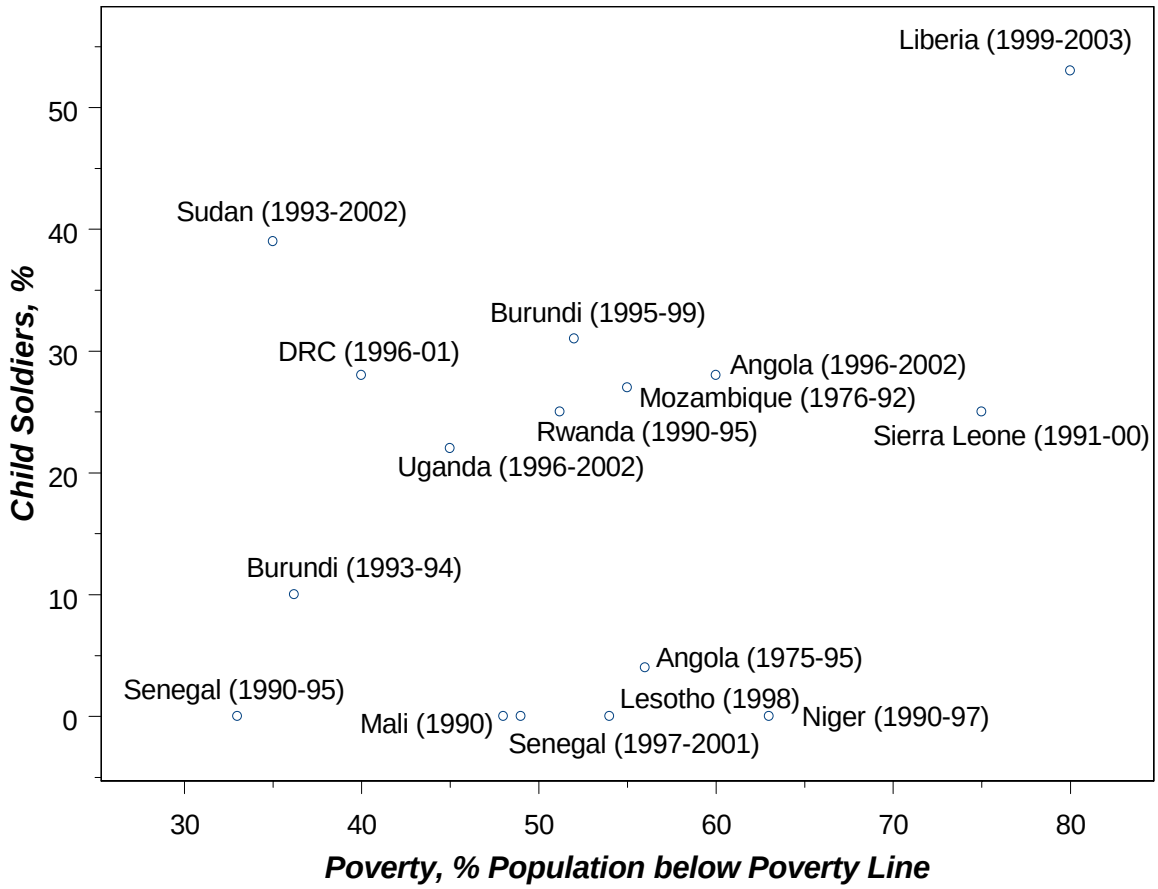
[16] Other cases involved claims of child soldier use without us being able to generate specific figures. Poverty is measurable in several ways (For the overview of different dimensions of poverty see, for example, the World Bank Official Website, http://www.worldbank.org/poverty/mission/up1.htm; or the Human Development Indicators, http://hdr.undp.org/reports/global/2003/indicator/index.html). Here we

Graphing the relationship between poverty and child soldier rates, as we have done in Chart 1 below, confirms that there is no systematic relationship between the two among these measurable cases of child participation.[17]

focus on income and consumption levels as indicators of the degree of 'economic need' in our sample, selecting the percentage of the population living below the poverty line as a measure. We chose poverty measures for the years as close to the middle of the duration of a conflict as possible, believing that a midpoint calculation provides the fairest reflection of the conditions that could lead to child recruitment. The data on poverty was unavailable in the case of Liberia between 1989 and 1995. In two further cases, those of Lesotho (1998) and Mali (1994), no data on poverty was available for the years of the conflicts themselves. In the case of Lesotho, however, the poverty measure available was for just one year after the conflict concluded, and we included this case in the sample. Mali was excluded from our calculations. Furthermore, we address the absence of data on poverty in the middle of the conflict for the case of Uganda, which lasted eight years, by calculating the average figure between the poverty rate at the outset and at the end of the conflict. We believe that, as a second option, this calculated average represents a balanced characterization of the degree of poverty during the conflict. We identified a further complication in the case of Angola (1975-95). Here, data regarding the percent of the population living below the poverty line was only available for rural areas of the country. According to Africa Fact Files Database (Institute for Security Studies, http://www.iss.org.za/AF/profiles/angola/Table_Population.html#Anchor-43556), urban population of Angola constituted 17.8 % in 1975, and 32.3 % in 1997. The average of these numbers, or 25 %, represents the urban population share during the conflict of 1975-95. Given that the rural population of Angola constituted 75 % of the country's population during its conflict, we incorporated only the rural value of poverty as a proxy for poverty measurement in this case. While this risks skewing the data, information in our other cases suggest that differences in the poverty rates between rural and urban settings are generally nominal by the midpoint of any conflict – justifying the inclusion of the Angolan case given our relatively small N.

[17] The anticipated positive relationship would entail a clustering around an imaginary diagonal trend line. Instead, the cases are clearly relatively widely distributed away from that line. So no strong relationship is discernable according to this measure.

CHART 1. Graphing the Relationship Between Poverty and Child Soldier Rates.



Considering and evaluating, before subsequently (and not surprisingly) rejecting the 'poverty hypothesis', this paper therefore attempts to address the puzzle of the varying rate of child soldier participants in a more systematic way. It seeks to posit a preliminary explanation (that we believe is the basis for further research) for the variation in child soldier rates in the 19 African intrastate conflicts for which calculable data was available.[18] We therefore attempt to provide a provisional answer to the following question: *under what conditions are child soldier recruitment rates likely to be relatively high?*

[18] We used the Armed Conflict dataset compiled by researches at International Peace Research Institute in Oslo to identify the types and longevity of African conflicts. See Havard Strand et. al, op. cit.

In this paper *we argue that the key factor in explaining child soldier recruitment rates is the degree of access to refugee and/or internally displaced people (IDP) camps enjoyed by the belligerent parties in each conflict.*[19] Poverty may provide a lure to potential recruits; high orphan rates (another popular explanation examined in this paper) may make those potential child recruits more vulnerable to either incentives or threats. *But, we argue that it is the vulnerability of children concentrated and located in camps that ultimately explains their participation rates*. In our answer, we therefore focus on the supply of child soldiers rather than the demand for them. Whether orphans or not, children conveniently massed in large groups are so vulnerable that they are too tempting a recruitment target for armed forces seeking recruits if there are insufficient deterrents to stop them. Where camps are relatively vulnerable to being infiltrated or raided, we argue that child soldiers will constitute a larger percentage of belligerent forces.

Part of the current literature on intrastate conflict discusses children as a vulnerable group; another discusses the varied vulnerabilities of orphans in conflict; and a third emphasizes the militarization of refugees (although more in the context of adults). Our intent is to link some of these ideas in original ways and to examine our claims in a systematic, albeit rudimentary, way as part of a larger project of which this paper is a component.

When do Children become Soldiers? The Current Literature

The current literature is pioneering, and often has the advantage of being based on primary field research (such as interviews with child soldiers themselves). But to

[19] We observe that the relevant literature suggests that IDP camps really started appearing on a widespread basis in these conflicts only in late 1990s, whereas refugee camps were widespread many years earlier.

unashamedly borrow the language of a recent unrelated piece, in summarizing the activist-oriented work in this field, "this literature offers a comprehensive picture of the trend, but one which is far from parsimonious and which fails to specify the relative significance of various causal factors".[20] Work to date has highlighted the issue of child soldiers and narrowed the explanatory factors to a pool of possible candidates. But it has six notable problems.

1. The plethora of explanations. Perhaps the most widely cited piece in the current literature on child soldiers is the aforementioned Goodwin-Gill and Cohn book. The authors provide a long list of possible explanatory factors, although much of what they include can effectively be reduced to poverty, exposure to violence, and cultural attitudes as the main causal factors behind the decision of children to bear arms.[21] Afua Twum-Danso also echoes the importance of poverty and an exposure to violence as factors, but further adds the significance of a group of children vulnerable to recruitment who come from a 'disrupted family background', presumably orphans.[22]

Laura Barnitz offers an expanded list of possible explanations for child recruitment. In addition to poverty, exposure to violence, and the loss of parents and family, she adds weakened bonds with family members, and the destruction of the child's immediate society, including its schools, homes, places of worship and hospitals as possible causes.[23] Various UNICEF reports, likewise, offer an even greater myriad of

[20] R. Daniel Keleman and Eric C. Sibbitt, 'The Globalization of American Law", *International Organization*, 58 (Winter 2004), p.104.

[21] Guy Goodwin-Gill and Ilene Cohn, op. cit., pp. 23, 31, 38.

[22] Afua Twum-Danso, op.cit.

[23] Laura A. Barnitz, op.cit.

possible reasons.[24] In other words, the general consensus among this group is that potential explanations abound.[25]

2. A surfeit of duplication. Second, these authors duplicate the long list of possible causative factors for child soldier participation rather than building greater novelty. Twum-Danso's 'disrupted family background' is comparable to Barnitz's focus on 'the loss of parents and family'.[26] The latter also mentions the importance of 'weakened bonds with family members' and 'the destruction of the child's immediate society'. These factors are comparable to Goodwin-Gill and Cohn's focus on the importance of the 'exposure to physical and structural violence'.

3. A lack of specificity. These explanations are often vague, ill-defined and not well operationalized (if at all).[27] As mentioned earlier, Afua Twum-Danso – for example

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[24] See, for example, UNICEF, *Adult Wars, Child Soldiers* (Bangkok: UNICEF, 2002), http://www.unicef.org/emerg/AdultWarsChildSoldiers.pdf.

[25] Note that both Brett and Nordstrom take a differing approach, being rather more specific in arguing that "what people tolerate in peace shapes what they will tolerate in war", and that "the categories of children most likely to be child laborers in peacetime are also the most likely to become child combatants in times of war." But the formulation in both pieces is so vague that it is difficult to employ this as the basis for explanation and testing. See Rachel Brett, "Causes, Consequences and International Responses" in Elizabeth Bennett, Virginia Gamba and Deirdre van der Merwe (eds.), *ACT Against Child Soldiers in Africa: A Reader* (Pretoria: Institute of Security Studies, 2000); Carolyn Nordstrom, *Girls and War Zones: Troubling Questions* (Uppsala: Life and Peace Institute, May 1997).

[26] Both of these authors derive the significance of that factor from the same work, that by Brett and McCallin: Rachel Brett and Margaret McCallin, *Children: The Invisible Soldiers* (Växjö, Sweden: Rädda Barnen, 1996).

[27] For examples of vagueness, 'militarization of daily life' is defined by Goodwin-Gill and Cohn as the "presence of heavily armed policemen or soldiers patrolling the streets, military personnel occupying high government posts, military censorship of social life, armed guards in schools and public buildings, armed checkpoints along the roads, and curfews." Goodwin-Gill and Cohn, op.cit., p. 31. This is a hard concept to actually operationalize. Comparably, they define 'physical violence' as "summary executions, death squad killings, disappearances, torture, arbitrary arrest or detention, sexual abuse, bombings, forced displacement, destruction of home or property, and massacres."(p.32). The link between child experiences of physical violence and their desire to take arms is specified by the authors as a "desire for revenge, conviction to continue the struggles of lost loved ones, the need to substitute an annihilated family or social structure, and the desire to take control over events that shape one's circumstances."(p.32). In reference to 'structural violence', Goodwin-Gill and Cohn mean social and economic injustices. They vaguely identify the types of these injustices or their sources, rather link them to motivations of children to obtain "the long-term effecting change" or just food for the day. (pp.32-33).

– identifies several possible causal factors. But he neither quantitatively nor qualitatively tests any of these arguments. The evidence used in this literature is generally anecdotal, albeit based on primary interviews.[28] Some policy studies reports are broad based, drawing from evidence across multiple countries, an example being one published by the 'Coalition to Stop the Use of Child Soldiers'.[29] Another is a UNICEF report that lists conditions in six Asian and Pacific countries.[30] Many others are simply single country reports.[31] But these studies are characteristically unsystematic in terms of data collection and analysis across cases. There is no consistent methodology to the compilation of data in these cases and they are often a collection of reports that are simply descriptive in character.

4. Examining poverty critically. These authors all agree that poverty (as the dominant explanation) matters. But they don't address the issue of how variations in poverty rates influence child soldier participation rates. Is there a threshold at which poverty matters, with the crossing of that threshold initiating participation? And how, if

[28] For examples of this type of approach see "Impact of Armed Conflict on Children," op. cit.; *Child Soldiers: Global Report 2001*, op. cit.; UNICEF, *Adult Wars, Child Soldiers*, op. cit.; Afua Twum-Danso, op. cit.; Laura Barnitz, op. cit.; Goodwin-Gill and Cohn, op. cit.

[29] See "Child Soldiers: An Overview" in *Child Soldiers: Global Report 2001* (Coalition to Stop the Use of Child Soldiers, June 2001), http://www.child-soldiers.org/cs/childsoldiers.nsf/f30d86b5e33403a180256ae500381213/c654714db75e84f880256ae50045e5c1?OpenDocument#Sub-Saharan%20Africa.

[30] For example, interviews were reported with 69 former and current child soldiers in UNICEF, *Adult Wars, Child Soldiers*, op. cit.

[31] See UNICEF, Adult Wars, Child Soldiers, op. cit. For individual country reports see also Joe Becker and Tony Tate, op. cit.; *Forgotten Fighters: Child Soldiers in Angola* (Human Rights Watch, 2003), http://www.hrw.org/reports/2003/angola0403/; *How to Fight, How to Kill: Child Soldiers in Liberia* (Human Rights Watch, 2004), http://www.hrw.org/reports/2004/liberia0204/liberia0204.pdf; *Easy Prey: Child Soldiers in Liberia* (Human Rights Watch, 1994), http://www.hrw.org/reports/1994/liberia2/#1; Alfred B. Zack-Williams, "Child soldiers in the Civil War in Sierra Leone" (Working Paper, University of Central Lancashire, 1999), http://www.devstud.org.uk/publications/papers/conf99/dsaconf99zackwilliams.pdf.

at all, does poverty explain variations in participation rates among instances where it occurs?

5. An over-reliance on inferential analysis. Data drawn from individual cases is characteristically used to infer many of the kind of explanations noted above. While inference and inductive approaches are perfectly legitimate means of enquiry, we argue that they are the bases for developing contingent generalizations and hypotheses, not where the process should end. One aforesaid UNICEF study on the use of child soldiers in Asia, for example, offers the possibility that fear plays a possible role in the recruitment process, based on the statement of children about how fearful they felt. It does not, however, develop the argument, nor test it against a series of cases.

6. A general neglect of the importance of an accessible pool of children. It is notable that in all the extensive lists of possible explanations offered in the literature, none systematically examines the potential importance of the access of belligerents to either refugee or 'Internally Displaced Persons' (IDP) camps. Indicative of our earlier suggestion, we must note that Laura Barnitz does mention that, "children who are in refugee camps or in orphanages are particularly vulnerable to joining armed organizations when conflict erupts".[32] But she doesn't address the issue of raids and (related) protection as factors. Goodwin-Gill and Cohn also suggest in passing that refugee children are vulnerable to political exploitation and are possibly being primed to use guns.[33] But, again, they don't focus on assaults on camps designed to recruit children, nor on the related issue of protecting children in camps.

[32] Barnitz, op. cit., p.4.

[33] Goodwin-Gill and Cohn, op. cit., p.32.

Beyond these vaguely related comments to our question, these three distinct literatures (on poverty, orphans and refugees) therefore remain analytically unconnected. One literature does discuss the possible militarization of refugees, whether voluntarily or through forced conscription, but doesn't focus on children.[34] A second does discuss the importance of the issue of protecting camps – but only in terms of the delivery of aid.[35] And little is studied in the third literature on child soldiers – on the issue of whether children in refugee or IDP camps are an especially vulnerable group prone to joining armed organizations when conflict erupts.[36] Indeed, we could find no empirical work on the linkage between the vulnerability of refugee and IDP camps to entry by belligerents and the recruitment of child soldiers.

This, we believe is an important omission. IDP and refugee camps, if unprotected, form an important resource pool for child soldiers – whether conscripted or voluntary. The image of children plucked off the street or out of the fields may be accurate. But it is an inefficient way for belligerents, already shorn of sufficient manpower, to recruit soldiers and is unlikely to account for relative high participation rates. Rounding children up at unprotected IDP or refugee camps presents a far more attractive means of recruiting them,[37] as examined in the analysis that follows.

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[34] See, for example, Stephen John Stedman and Fred Tanner, "Refugees as Resources in War" in *Refugee Manipulation: War, Politics, and the Abuse of Human Sufferin*, (Washington: Brookings Institution Press, 2003), pp. 1-15.

[35] See, for examples, Bill Frelick, "Assistance without Protection: Feed the Hungry, Clothe the Naked and Watch Them Die" in *Worldwide Refugee Information* (US Committee for Refugees, 1997), http://preview.refugees.org/world/articles/assist_protect_wrs97.htm; and Fiona Terry, "Humanitarian Action and Responsibility" in *Condemned to Repeat? The Paradox of Humanitarian Action* (Ithaca: Cornell University Press, 2002)

[36] Barnitz, op.cit., p.4

[37] See, for example, "Child Soldier Use 2004: A Briefing for the 4th UN Security Council, Open Debate on Children and Armed Conflict", op. cit., p. 2

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In this paper we attempt to build upon this prior work, our goal is to move the process of understanding incrementally forward by positing an alternative explanation and then offering a preliminary test in order to outline the rudiments of a research program.

In the remainder of the paper, we will first address some methodological considerations we believe to be of importance in the study of child soldier cases in Africa. We then, secondly, we will contrast two further alternative explanations for the relative recruitment rates of child soldiers – orphan rates and the vulnerability of IDP and refugee camps – developing a series of measures to test these two explanations.

The first test we perform is a simple measurement of each independent variable against child labor recruitment rates in order to assess how well they correlate (if at all). Then we test for these explanations, as well as for poverty, against the relevant conflicts in Africa over a twenty-seven year period by conducting a multiple regression to evaluate which, if any, of our formulations can best explain the variance in child soldier participation rates in a number of cases for which we have reliable data with specific reported figures. Finally, we offer a third evaluation of sorts; an analysis of two cases of conflict in Liberia as an illustration of our argument. This final means of evaluation provides no serious test in this context, but rather a means for providing some 'texture' to our quantitative assessment.

We emphasize that in this paper our purpose is primarily heuristic: We only offer a preliminary evaluation of all three explanations as the foundation for future, more

comprehensive research. We do not claim that our findings should be considered in any way definitive. Nonetheless, we believe that the process is valuable, in that it is helpful in identifying promising avenues for future research.

Methodological Considerations: Data Samples, and the Dependent Variable

We confine our data analysis to cases involving intrastate conflicts in Africa between 1975 and 2002.[38] These years were chosen because of data availability concerns. As we subsequently explain in greater detail, relevant materials were unavailable prior to 1975.

We have chosen to examine only intrastate conflicts because, characteristically, according to one UNICEF report, "The conflicts that involve child soldiers are usually relatively small, internal struggles. Rather than fighting in international wars, children serve in civil wars, which have bitter religious or ethnic enmities and create social pressures to fight."[39]

I. Selection Process for cases. We were able to identify 33 African countries that had suffered intrastate violence, together experiencing 124 identifiable intrastate conflicts, for the time period dating from 1975 to 2002.[40] For the purposes of our

[38] For the purposes of this paper, we define an intrastate conflict in terms of two classifications of armed conflict formulated by Harvard Strand et. al. The first is *internal conflict*, being within a country between a government and one or more opposition groups, with no interference from other countries. The second is *internationalized internal conflict* where the distinction from the first category is that one or both sides receive support from other governments. See Havard Strand et al., *op.cit*.

[39] "Reintegration of Child Soldiers," *Model United Nations of the University of Chicago*, 2003. p.5., http://www.munuc.org/2003pdf/UNICEF_A.pdf. Among our universe of cases, we included some conflicts that commenced before 1975 as long as they concluded in 1975 or after and suitable data was available. Conflicts that concluded prior to 1975 were omitted due to a lack of suitable data.

[40] An intrastate conflict is defined as a concentrated period of hostility for a discreet time span punctuated by a cessation of hostilities

analysis, the minimal conflicts in terms of intensity included in our study were those classified as 'minor' on the scale generated by Strand et. al., entailing more than 25 battle-related deaths per year for every year in the period (and a total conflict history of less than 1,000 battle-related deaths).[41] Not all of the conflicts included in our sample involved only domestic actors. Some also involve neighboring countries or international actors, albeit generally indirectly -- what Strand et. al. define as an *internationalized internal conflict* (as mentioned in endnote 38). But in all coded cases included in the analysis, the primary belligerents were domestic actors and not opposing states (which would therefore constitute an *inter-state conflict*). Between 1975 and 2002, however, there were only 8 ***started and ongoing*** international interstate conflicts out of 132 conflicts.

II. Our universe of cases. Of these 132 possible conflicts, we ended up with 61 cases of possible (child soldier) conflicts because, in order to be included, we define a case as a cluster of adjacent episodes of violence that occur over a twelve-month span with, minimally, the same core actors involved. [42] The number of core actors can expand during the course of a case as different factions become involved but cannot contract.[43]

III. Dependent Variable: Child Soldier Participation Rates. Of the 61 cases in our dataset, our research revealed that child soldiers were either definitely reported as

[41]It is notable, however, that our positive cases where child soldiers were used involve high intensity conflicts where battle deaths of more than 1,000 per year Havard Strand et al., op. cit.

[42] Furthermore, for the sake of clarification we note that a country, for the purpose of our analysis, is a sovereignty territory; an episode is a relatively large-scale act of violence between belligerents of varying duration. Different cases involving the same country are distinguished by a period of at least twelve consecutive months in which no reported episodes of violence occur.

[43] Our data comes from different reports of major international organizations. Most of them are listed on the official website *of International Labor Organization*, www.ilo.org.

present or absent in 43 of them (Appendix 1 provides a list of these cases). Of the 43 cases mentioned, 12 cases had positive, confirmed reporting of child soldiers for which we were able to calculate positive child soldier ratios. Three countries in this category each had two discreet conflicts in which there were reports of child soldiers (Angola, Liberia, and Burundi). Seven cases present in five countries had confirmed reports of a zero number of child soldiers. In a further 14 cases, substantial use of child soldiers was reported, but reliable estimates were unavailable. Another 10 cases provided evidence of the minor use of child soldiers, but these also offered no reliable estimates. We code 'minor use' as involving no evidence of systematic attempts to recruit children, no large-scale usage of them in conflict or as auxiliaries, nor any competition to engage them by the government and competing factions. The occasional report of a child in or near combat does not, for our purposes, constitute the basis for inclusion as a case. For the remaining 18 cases there was no indication of any data on child soldier presence at all.

Interestingly, the cases where we know that child soldiers were used (even if we could not generate reliable estimates) varied in duration. Four cases lasted one year; six cases lasted two years; twenty-seven cases lasted three years or more. The zero cases also varied in duration significantly. Three lasted one year; one lasted two years; and three lasted more than five years. So there seemed to be little relationship between duration and the use of child soldiers in cases where we are definitive about their use.[44] The details of the duration of each conflict are listed in Table 1.

[44] Although less reliable, the duration of a conflict may also serve as a proxy for the age distribution of a population as a possible explanation of child soldier rates. In principle, the percentage of child soldiers might rise as a war progresses because adults die in conflict and so children become an increasing percentage of the population. But we found no evidence to support that claim.

This table also provides further key information on the twelve cases where we could identify reliable estimates on child soldier recruitment, including the total number of combatants, the number of child soldiers in each conflict, and the *ratio of child soldiers* in each case. The ratio was calculated by dividing the number of children recruited by all armed factions (including governmental forces) in each case of intrastate conflict by the number of all combatants participating in the same hostilities in the country. Interestingly, the data we compiled revealed that in all 12 cases both parties engaged in child recruitment, with approximately the same distribution of numbers with the exception of Uganda where rebel forces recruited disproportionately more children, and in Mozambique where the opposite was the case. These figures are listed as follows:

TABLE 1 Child Soldiers: Countries, Conflicts and Percentages

Country and Conflict	***Number of Child Soldiers***	***Number of Combatants***	***Percent of Child Soldiers***
Angola (1975-94)	8,000	194,000	4%
Burundi (1993-93)	5,000	50,000	10%
Uganda (1994-2002)	16,000	74,000	22%
Rwanda (1990-95)	17,500	70,000	25%
Sierra Leone (1991-2000)	10,000	45,000	25%
Angola (1996-02)	20,000	72,500	28%
DRC (1996-01)	20,000	72,000	28%
Mozambique (1976-92)	25,498	92 881	28%
Liberia (1989-95)	17,500	60,000	29%
Burundi (1995-99)	14,000	45,000	31%
Sudan (1993-02)	15,700	40,000	39%
Liberia (2000-2002)	21,000	40,000	53%

The percentage column of child soldiers in Table 1 therefore constitutes the variability in our dependent variable, bearing in mind that there are an additional **seven** cases for which the percentage is zero.

Alternative Explanations

Among alternatives, *the rate of child orphans* is often cited as a popular explanation for child soldier recruitment rates because orphaned children are purportedly more prone to joining existing quasi-institutions represented by military factions. They therefore constitute a vulnerable potential pool who are easier to conscript or coax into military service. Such institutions provide protection, shelter, and food as incentives, although the probability of conscription is also increased by a lack of adult protection and supervision.[45] The major alternative, being cared for by relatives of the same village, is usually diminished by two factors; the corrosive effects of poverty and the greater propensity towards the loss of relatives as a result of mass murder. The whole problem of high orphan rates in Africa is exacerbated by the growing level of HIV/Aids. *This argument therefore postulates that orphaned children provide an available recruitment pool and that the larger the percentage of orphaned children is in any one country, the larger will be the ratio of child soldiers to the overall percentage of military forces.*

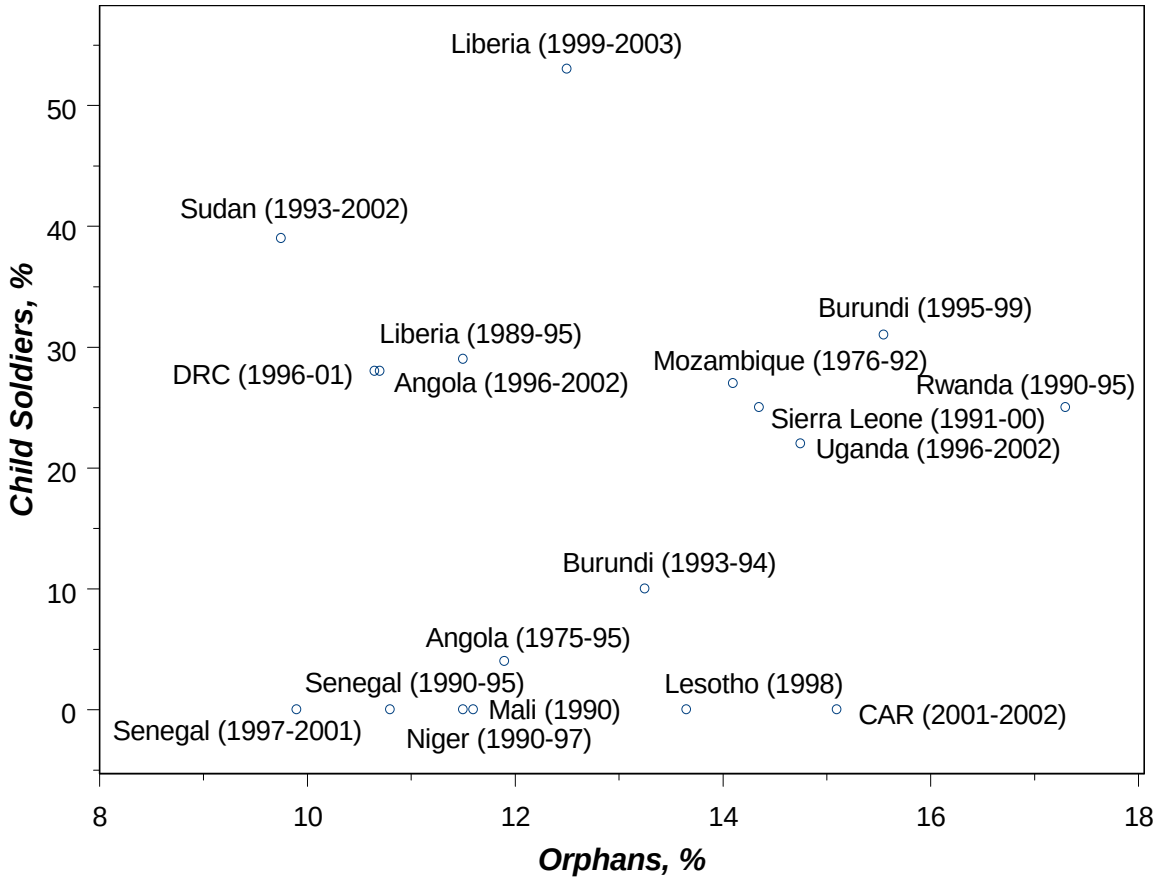
In order to evaluate that argument, we calculated the rate of child orphans as close to the middle of the conflict as possible, based on a UNAIDS and UNICEF joint report on orphan estimates.[46] The middle was chosen bearing in mind that the growing mortality rate from armed violence -- and the generally ensuing consequences of famine and disease -- ensure that the percentage of orphans generally accelerates as the conflict progresses. The percentage of orphans to all children in the zero-to-14 age group was

[45] On this issue see Goodwin-Gill and Cohn, op. cit., pp. 30, 32 and 33.

[46] *Children on the Brink 2002* (UNAIDS/UNICEF, July, 2002), www.usaid.gov.

obtained for 18 cases (with the exception of Mali) in our sample (Appendix 3).[47] Chart 2 shows the lack of proximity to the imaginary trend line and thus there seems to be little discernable relationship between orphan rates and child soldier participation rates.

CHART 2. Graphing the Relationship between Orphan and Child Soldier Rates



But with a few brief exceptions noted above, the literature discussed to date largely ignores the importance of another explanation -- *whether belligerents have access to IDP and refugee camps*. Historically, such camps are legally protected by a series of global norms.[48] They are supposed to be off limits to belligerents and generally assumed

[47] Three cases were later than the middle (Angola (1975-1995), Angola (1996-2002), Mozambique (76-92); three cases were slightly earlier than he middle (Senegal (1997-2001), Niger (1990-97), Central African Republic (2001-2002)); and one case was excluded due to the fact that the poverty figure was reported for the year of 1995, just one year after the conflict ceased (Mali (1994)).

[48] Fiona Terry, op. cit., p.28.

to be under the protection of a legitimate judicial authority, whether a sovereign government, a regional authority or an international organization. But protection is often, in practice, uneven or non-existent; more often, perhaps, than is commonly recognized. Reaching a refugee or IDP camp does not ensure either personal security against outside forces nor a relief from hunger. Often, it is little more than a place for those in danger to congregate.

Armed factions who infiltrate camps and organize them have, according to reports, recruited or seized refugees and IDP inhabitants in such cases (including children) through the use of coercion or propaganda. This phenomenon is referred to as *refugee manipulation and militarization*.[49]

According to the UNHCR, about 15 percent of refugee crises "foment refugee militarization".[50] In other instances, however, lack of physical protection of camps incites insurgencies and attacks on camps by both rebels and government militias.

Refugee manipulation and militarization is not confined to adults. It inevitably includes children clustered in refugee and (more recently, in our sample) IDP camps as potential targets for the parties in conflict. Their probability of successful recruitment of both adults and children increases *if the camps are not suitably protected from incursion against raids, whether they are located within national borders or in accessible geographic regions*. Children representing the vast majority of refugee camps

[49] Stephen John Stedman and Fred Tanner, "Refugees as Resources in War," *Refugee Manipulation: War, Politics, and the Abuse of Human Suffering* (Washington: Brookings Institution Press, 2003), p.4

[50] Ibid, p.3

population, they will be more prone to recruitment or kidnapping if left vulnerable.[51] So, we anticipate that the larger the number of instances of camp militarization or outside incursions, the higher the number (and thus ratio) of child soldiers there will be; a lack of protection provides an incentive that will likely increase the probability of successful raids by armed factions looking for recruits.

Our independent variable of access is measured/operationalized as a ratio. The nominator of the ratio represents a sum of *instances of camp militarization and attacks* during the conflict years of a case. Militarization of one or a number of camps in *one country* by all parties participating in a conflict during one year is counted as one instance of militarization. Attacks, irrespective of their number, on one or several camps in *one country* in one year are counted as one i*nstance of attacks on camps.*[52] In the denominator of the ratio is the number of years the conflict lasted in a particular case.

The refugee camps included in the calculations are either refugee camps in neighboring countries that host the population of the home country or camps in home countries that hosted foreign refugees. We considered camps for IDPs irrespective of whether they were located within states' borders or in neighboring countries, as long as they were vulnerable to attacks or militarization by armed groups originating from their home country.

[51] According to a UNHCR report, for example, children constitute 57 percent of the inhabitants of refugee camps' in the UNHCR mandated facilities in Africa. See *Refugee Children in Africa: Trends and Patterns in the Refugee population in Africa below the Age of 18 Years, 2000* (UNHCR, 2001), www.unhcr.ch.

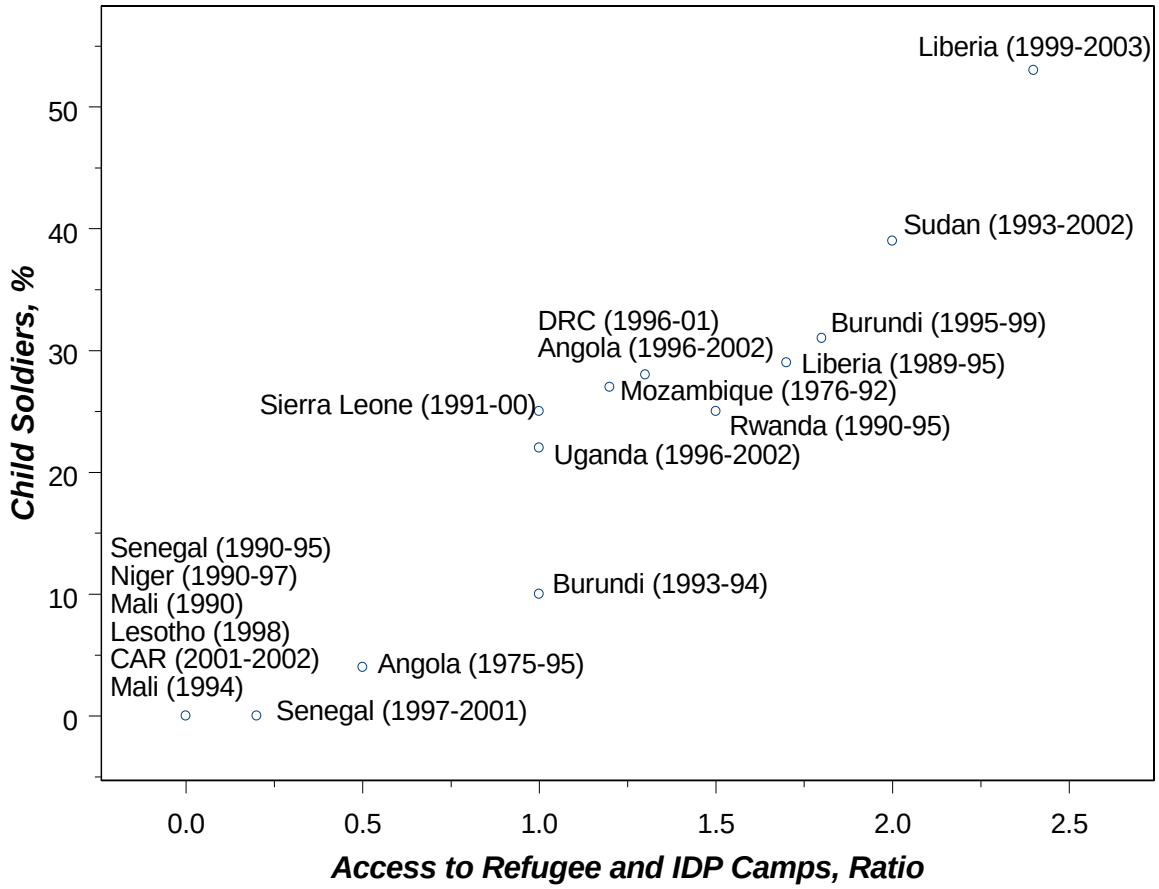
[52] We are aware of the limits of this approach, the product of data limitations. Our method does not account for the number of militarized camps or attacks, nor the number of camps and their population, in one country in each year. Unfortunately, such detailed data is currently unavailable although one of our goals in this project is to develop such a database.

To assess the degree of access to refugee and IDP sites, as well as camp militarization, we employ the qualitative information provided by relevant organizations, as well as reports, papers, and news articles. The major data source for our calculations for refugee violence is a dataset compiled by Sarah Lischer for the years between 1988 and 1998.[53] We relied on data from the yearly reports of the US Committee for Refugees as our main source of the information for the years after 1998, while the information on IDP camps came primarily from the Global IDP Database country reports. Appendix 4 lists all *instances of camp militarization and attacks* in each case. The values for the access variable in our 19 cases, when compared with child soldier rates, are outlined in Appendix 5.

Chart 3 *supports the proposition that access and child soldier rates are correlated.* With relatively limited variations, the graph shows a rise in access rates to be consistent with the rise in child soldier rates. There is a much stronger relationship between access and child soldier rates than is the case with poverty or orphan rates. Clearly, these results suggest that examining the susceptibility of IDP and refugee camps to raids by belligerents is a promising avenue of research, both for theoretical and policy reasons.

[53] For reference, please see Sarah Kenyon Lischer, "Refugee Involvement in Political Violence: Quantitative Evidence from 1987-1998" (Working Paper No 26, Center for International Studies, Massachusetts Institute of Technology, June 2000), http://www.jha.ac/articles/u026.pdf. Professor Lischer also provided us with her data set on which we based our calculations. The data on refugee militarization or attacks against them for the years prior to 1988 was unavailable, reducing the data points in our two historical cases of Mozambique (1976-1992) to 5 years (from 12) and in Angola (1975-95) to 8 years (from 13). We nonetheless include these cases in our sample.

CHART 3. Graphing the Relationship Between Access and Child Soldier Rates



Performing a Second, Quantitative Test

We seek to evaluate these alternative explanations further but are keenly aware that quantitative tests require a large number of cases. In this instance, we have only identified 19 cases of child soldiers and cognizant of the limitations of any sophisticated tests. Nonetheless, we have made exhaustive efforts to locate reliable evidence upon which to base our calculations. As a result of the limited number of cases tested, we make no definitive claims on basis of the analysis we now present. The findings are meant to be suggestive and, in the spirit of the comments made in both the King, Keohane and Verba volume, and more recently in the one by Barbara Geddes, we believe that quantitative analysis based on a limited N, if genuinely exhaustive and recognized as a plausibility probe, is better than none at all.[54]

[54] For a defense of the use of regression analysis even when one has a relatively limited 'N', see Gary King, Robert O. Keohane, and Sidney Verba, Designing Social Inquiry: Scientific Inference in Qualitative Research (Princeton, N.J. : Princeton University Press, c1994); Barbara Geddes, Paradigms and Sand

Certainly, bivariate correlations, such as the ones displayed in the charts above, capture only a co-movement of the two variables involved. Any change in the dependent variable could have been caused by some other independent variable that we have not considered. Changes in the dependent variable thus may not be uniquely associated with the independent variable in question – that being in this case, that of access.

To evaluate the relationship further, we performed a multiple regression test on 19 observations for which the data on the third independent variable (access) and the dependent variable (child soldier ratios) was available, minus three cases where the data on poverty was unavailable. In conducting a multiple regression test, we assessed the impact of our three independent variables -- namely poverty, orphans, and access -- on the dependent variable.

In contrast to bivariate correlations, multiple regression coefficients capture the marginal effect of each independent variable on the dependent variable that is unique to the respective independent variable in the model. Hence, for example, the coefficient on the access variable expresses the rate of change in the child soldiers' variable, which could not have been associated with poverty or orphans. In this way, the multiple regression model "controls" for the effects of poverty and orphans.

The standard errors indicate the distance from the "sample" regression coefficients within which the "true" coefficient value is also likely to lie. The smaller the standard errors, the higher the accuracy of the estimated coefficient value based on the sample data. Loosely speaking, if the standard errors are small enough, relative to the coefficient value, then the coefficient is termed "significant", i.e. estimated with a

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Castles: Theory Building and Research Design in Comparative Politics (Ann Arbor: University of Michigan Press, 2003).

sufficient precision (and vice versa). The standard errors in our results are presented in brackets under their associated coefficient estimates. The general model to be estimated in our paper is written as

$$Y = \alpha + \sum_{k=1}^{K} \beta_k X_k + \varepsilon_k$$

where *K* is the number of our independent variables.

If the independent variables are mutually correlated then it becomes harder to distinguish their individual effects on the dependent variable. Such cases usually result in lower precision of the coefficient estimates and hence higher standard errors. The coefficients of correlation between our independent variables are presented in Table 5. They suggest that none of the independent variables is significantly correlated with any other one. Therefore, collinearity is not a problem.[55]

TABLE 5. Correlation Coefficients for Independent Variables

		Poverty	Orphans	Access
Poverty	Pearson Correlation			
Orphans	Pearson Correlation	.194		
Access	Pearson Correlation	.212	.108	

*** Correlation is significant at the 0.01 level (2-tailed).
** Correlation is significant at the 0.05 level
* Correlation is significant at the 0.1 level

Our model is specified as follows:

$$CS = \alpha + \beta_1 Poverty + \beta_2 Orphans + \beta_3 Access + \varepsilon$$

where *CS* stands for child soldier ratios. The regression results are summarized in Table 6. The results demonstrate that only access is significantly related to child soldier ratios. The coefficient value predicts that every single unit increase in access is matched with a 20-unit increase in child soldiers.

[55] R. Carter Hill, William E. Griffiths, George G. Judge. 2001. "Undergraduate Econometrics." 2nd Edition. p. 190.

TABLE 6. Multiple Regression Results

Independent Variable	Coefficient Estimates
Poverty	.156
	(.081)
Orphans	*-.472*
	(0.497)
Access	20.536**
	(1.406)

Notes: N=16, R^2 =0.976, adjusted R^2 =0.953
Dependent Variable: Child Soldier Ratios
Assumptions of multiple regression are assessed in Appendix 6.
Unstandardized coefficients reported.[56] Standard errors are in parentheses.
*** Coefficient is significant at the 0.01 level (2-tailed).
** Coefficient is significant at the 0.05 level.
* Coefficient is significant at the 0.1 level.

The coefficient values on orphans and poverty are insignificant, since the standard errors are too large, relative to the coefficient values. This implies that there is no statistically significant association between poverty and child soldiers, nor orphans and child soldiers.

We concede that we could not accurately obtain the numbers of child soldiers for 24 cases in which we know child soldiers participated in conflicts. It is extremely difficult to collect this data in African countries that are in the midst of war. In some cases it is a hard task to glean information on our independent variables from different sources in the absence of a comprehensive database. But our data compilation is original and we hope in itself might be viewed as a contribution. We conclude this section by acknowledging cases of several unevenly spread data points observed for one country over time, with the result that we could not utilize panel data analysis since individual cross-sections would not be measured each at the same point in time.

[56] Unstandardized coefficients are reported because they convey the true information about the magnitute of the effect on the dependent variable. Mutual comparisons of standardized coefficients are not necessary in our case since only one is statistically significant.

We therefore recognize that the statistical reliability of the test might be questionable due to the relatively small number of observations for which the data was available.[57] Nevertheless, the results do provide some intuitive guidance. Without being conclusive, the findings of this test further reinforce our contention that access is the key determinant of child soldier rates. We hope to address the issue of a large N in further research.

Performing a Third Test: Comparing Two Conflicts in Liberia

In the final empirical section of this paper, we shall present a brief pair of case studies involving the use of child soldiers in intrastate conflict in Liberia. We recognize that these studies by no means constitute a critical test of our argument. But we believe that they do add a qualitative dimension to the research presented in this paper, helping to form the basis for a future comparative case study research agenda.

These two Liberian cases were chosen in order to hold as many variables as possible constant in one country while having significantly different child soldier recruitment policies in camps. We do know that orphan rates remained about the same for both conflicts. Anecdotal evidence concerning the first case, and statistical evidence for the second one suggest that poverty rates were high for both conflicts. We do recognize the possible 'knock on' effect of comparing two cases involving the same country in a limited time period. But we believe that employing this method will help us illustrate the key distinguishing variables in the two cases and, in this context, support our

[57] With three missing values for poverty variable we ended up with 16 out of 19 observations.

claim that the key distinction between the two cases was the relative access to camps enjoyed by belligerents.

1. Liberia, 1989-95. In 1989, the civil war began with the invasion of Liberia from the neighboring Ivory Coast by rebel leader Charles Taylor.[58] Taylor's National Democratic Party of Liberia (NPFL) forces were intent on deposing the existing regime (named The People's Redemption Council) led by Samuel Doe and his National Democratic Party of Liberia (NDPL). The NPFL rebels overran government forces, By 1990 they captured, and subsequently executed, Doe.

This did not end the conflict. Rather, it continued until 1996.[59] The intervening years were notable for the fragmentation of control in Liberia. From 1990 onward, the Economic Community of West African States (ECOMOG) deployed Nigerian–led peacekeeping mission troops who only established control in Monrovia.[60] Nonetheless, conflict was "characterized by brutal ethnic killings and massive abuses against the civilian population."[61] Only Monrovia was an effective safe haven where "protection was effectively ensured by the presence of ECOMOG forces" for most of the war.[62] Rule in the rest of Liberia was divided between Taylor's forces and a number of factions who proliferated over the years, and who battled over the country's rich natural resources. [63]

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[58] *Armed Conflicts Events Data*, available online http://www.onwar.com/aced/nation/lay/liberia/fliberia1989.htm.

[59] "Liberia's Uneasy Peace," *PBS*, http://www.pbs.org/newshour/bb/africa/liberia/post1980_timeline.html.

[60] "Profile of Internal Displacement: Liberia," *Global IDP Database of the Norwegian Refugee Council*, November 2002, http://www.db.idpproject.org/Sites/IdpProjectDb/idpSurvey.nsf/wCountries/Liberia/$file/Liberia+-May+2004.pdf , p. 15.

[61] How to Fight, How to Kill, op. cit., p. 7

[62] "Profile of Internal Displacement: Liberia", op. cit., p.36.

[63] Ibid. p.6.

Fighting was sustained in these areas despite the presence of regional peacekeepers and a United Nations military observer mission.[64] As a result, many thousands of people were "trapped inside conflict zones, to whom humanitarian organizations had no access."[65]

Estimates suggest that by 1996 "there were approximately 750,000 IDPs in Liberia. Of these, an estimated 300,000-500,000 were located in shelters in and around Monrovia." [66] The rest were distributed in IDP camps throughout the country. By the end of the 1994, the total number of Liberian refugees in the neighboring countries exceeded 800,000,[67] with over 500,000 estimated to be located in Guinea, 318,000 in the Ivory Coast, 20,000 in Ghana, 6,000 in Sierra Leone, and 4,000 in Nigeria.[68]

In 1990, Liberian rebels invaded Sierra Leone, reportedly attacking Liberian refugees and in 1991 they were the targets of armed violence from local populations in the Ivory Coast and Guinea.[69] The following August and September, NPLF forces reportedly attacked Liberian refugees in camps located inside the Ivory Coast as part of a campaign conducted until1994 by militias designed to recruit refugees to fight in Liberia from camps in the Ivory Coast.[70] United Liberation Movement for Democracy in Liberia

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[64] Ibid., p.15.

[65] Ibid., p.6.

[66] Ibid., p. 15.

[67] "Liberia" in *Human Rights Watch World Report 1995* (Human Rights Watch, 1995), http://www.hrw.org/reports/1995/WR95/AFRICA-05.htm

[68] Ibid.

[69] Sarah Kenyon Lischer, op.cit., p. 14

[70] Ibid, p. 24

(ULIMO) rebels did the same inside Guinea.[71] Two hundred thousand civilians had reportedly been uprooted as a result of these incursions by the end of 1994.[72]

As the war progressed, even the IDPs located in Monrovia were no longer well protected. Despite the presence of ECOMOG troops, they couldn't spare the capital from the "engulfed violence and horror" in the latter stages of the conflict.[73] By that time, approximately 46 percent, some 361,880, of the estimated 780,000 inhabitants of Monrovia had to abandon their homes. Of these, 30 percent of the population was in shelters and 17 percent had fled the greater Monrovia area -- completely dependent on the international community for their basic needs."[74] Tens of thousands also fled to the central Liberian town of Gbarnga in search of safety."[75]

The role of children. Children were left exposed by these developments. Repeated reports indicate that Taylor's NPFL became infamous for the abduction and use of boys in war dating from the start of conflict in 1989. Other Liberian armed factions replicated this behavior. In the early years of the war, children in Monrovia were protected from these factions by ECOMOG forces. But anecdotal evidence suggests that this wasn't the case by 1996 when, for example, armed men raided an orphanage run jointly by a local agency and UNHCR, where 95 children were sheltered.[76]

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[71] Ibid, p. 24

[72] Liberia" in Human Rights Watch World Report 1995, op. cit.

[73]"Profile of Internal Displacement: Liberia", op. cit., p.10.

[74] Ibid. p. 15.

[75] Ibid. p.15.

[76]*Global IDP Database of the Norwegian Refugee Council*, November 2002, http://www.db.idpproject.org/Sites/IdpProjectDb/idpSurvey.nsf/wCountries/Liberia/$file/Liberia+-May+2004.pdf.

The general pattern was clearly one of unmitigated violence against refugees and IDPs, with hundreds of thousands remaining unprotected outside of Monrovia, and the protection of them breaking down even there in the final stages of the war. Children were clearly the specific targets of an increasing number of factions. It is therefore not surprising that, on average, there were about 17,500 children engaged as child soldiers in the seven-year armed conflict, constituting approximately 29 % of all combatants.[77]

2. Liberia (1999-2003). Charles Taylor ruled for three years before the armed faction of the Liberians United for Reconciliation and Democracy (LURD), operating from Guinea, launched attacks on his regime. This conflict lasted until early in 2003, when the rebels were joined by another opposition faction based in the Ivory Coast named the Movement for Democracy in Liberia (MODEL).[78] A negotiated ceasefire then resulted in the departure of Charles Taylor from office, and a subsequent deployment of regional and later international peacekeepers brought an end to major hostilities.[79]

In contrast to the prior conflict, universal antipathy towards Taylor's human rights record resulted in sanctions being imposed on his regime, rather than troops being sent to quell disorder. As one report noted at the time:

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[77] The data was obtained from different organizations and sources. See, *e.g.*, *Easy Prey: Child Soldiers in Liberia*, op. cit.; UNICEF, *Progress of Nations 2000* (New York, 2000); *Child Soldiers: Global Report 2001*, op. cit., UNICEF, *State of the World's Children*, 1996; "How to Fight, How to Kill: Child Soldiers in Liberia," op. cit.

[78] It is unclear from the literature whether the MODEL split from LURD in early 2003, or was operating as LURD's "integrated force." *Human Rights Watch, for instance, reported on the first version of MODEL origin (See How to Fight, How to Kill: Child Soldiers in Liberia*, op. cit; Jean-Herve Jezequel argues that MODEL joined the LURD in 2003 (Jean-Herve Jezequel, "Liberia: Orchestrated Chaos" in Fabrice Weissman *(ed), In the Shadow of "Just Wars": Violence, Politics and Humanitarian Action* (Cornell University Press, Ithaca: New York, 2004), p.162. Other sources were allowed for both possibilities ("Movement for Democracy in Liberia," *Global Security Database*, http://www.globalsecurity.org/military/world/para/model.htm).

[79] How to Fight, How to Kill: Child Soldiers in Liberia, op. cit., p. 8

> International skepticism of the Charles Taylor administration has remained high since the 1997 elections. Taylor's government has been accused of increasing human rights violations at home, as well as backing armed insurgencies in neighboring countries. The UN Security Council tightened an arms embargo on Liberia in March 2001 to curb arms trafficking to the Revolutionary United Front (RUF) in Sierra Leone, and two months later imposed further sanctions, including travel restrictions on senior government officials and a ban on diamond exports. In May 2002 the sanctions were extended for a further 12 months. [80]

Antipathy towards Taylor was so great that accusations were made by local journalists that he was manufacturing a humanitarian crisis:

> The journalists, in a statement by the Association of Liberian Journalists in the Americas (ALJA), said they were disturbed by press reports that the population displacement and heightened insecurity that preceded the declaration of the state-of-emergency, might have been triggered by exchanges of gunfire between government troops. 'There are growing suspicions,' it added, 'that the unfolding humanitarian catastrophe is being stage-managed, in an attempt to force the United Nations to lift the arms embargo and sanctions imposed on Liberia. The LURD is also suspected of being in complicity with (President Charles) Taylor in creating a sense of chaos."[81]

IDP protection fell under the jurisdiction of the Ministry of Justice, while the Liberian government's refugee agency (LRRRC) was supposed to oversee the management of camps and coordination of relief. Both, however, lacked the necessary expertise and resources to discharge their respective functions, suffering from limited technical, financial and logistical incapacities.[82] The government's inability to protect citizens was consistently reported, linked (for example) to the practices of sexual

[80] "Profile of Internal Displacement: Liberia," op. cit., p.7.

[81] Ibid., p.14

[82] "Consolidated Inter-Agency Appeal 2002: Liberia Internet," *United Nations*, 26 November 2001, http://www.reliefweb.int/appeals/2002/files/lib02.pdf cited in "Profile of Internal Displacement: Liberia," op. cit., p.106.

exploitation of girls in refugee and IDP camps.[83] Donor antipathy forced NGOs to scale down their activities, and to reduce the level of support they have been providing to IDPs and other vulnerable populations.[84] Meanwhile, international humanitarian operations were hampered by both a lack of resources and of access to the critical locations of the conflict.[85] The results were predictable:

> Perhaps the most pressing concern about IDPs from the north of the country has been their total lack of protection from increasingly widespread human rights abuses carried out not only by Liberian security forces but by LURD combatants as well.[86]……. As a result, growing numbers of IDPs continue to concentrate in camps around Monrovia.[87]

Aid agencies were often denied the right to attend the registration of IDPs by Liberian security forces.[88] By 2002, the Liberian government restricted aid agencies to the greater Monrovia area, while blocking IDPs from entering the capital, thus denying the agencies any contact with the vast majority of IDPs.

> Furthermore, the IDP camps were highly geographically concentrated. More than fifty percent of the Liberian IDP population (99,240) had settled in five IDP camps in Montserado County (located in a suburb of Monrovia) by 2002.[89] In the absence of any protection, the plight of these IDPS, and of refugees (mostly those located in camps in Guinea) was

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[83] "Profile of Internal Displacement: Liberia," op. cit., p.78.

[84] Ibid., p.115.

[85] Ibid., p.7.

[86] "Liberian civilians face human rights abuses at home and across borders," Amnesty International, October 2002, http://web.amnesty.org/library/Index/engAFR340202002?OpenDocument&of=COUNTR

IES\LIBERIA?OpenDocument&of=COUNTRIES\LIBERIA cited in "Profile of Internal Displacement: Liberia," op. cit., p. 60.

[87] "Profile of Internal Displacement: Liberia," op. cit., p.37.

[88] Ibid., at p.47.

[89] Jartondo camp (17,000 IDPs), Wilson camp (25,700 IDPs), and Ricks Camp (12,894 IDPs) alone sheltered 25 % of all Liberian's IDPs and 56 percent of all IDPs settled in the region. See *Global IDP Database of the Norwegian Refugee Council,* op. cit.

desperate one, with numerous reports of substantial raids being carried out against them by both government and rebel forces.[90]

Both IDPS and refugees lived in terror and consistently, unsuccessfully, moved to avoid raids.[91] UN attempts to encourage self-protection in IDP camps proved no panacea.[92]

The pattern of vulnerability, violence and conscription was therefore one repeated throughout Liberia and beyond its borders, dating from the early days of the war. One report claimed at that time that "Government forces conducted conscription raids within neighborhoods in Monrovia".[93] Neither in Monrovia nor in rural areas could IDPs or refugees find safety. The LURD's movements and governmental retreat forced the population of villages and IDP camps to flee. Sometimes people fled a-priori the attacks,

[90] One report, for example, noted that "Since the upsurge of fighting in 2000, perhaps the most pressing concern about IDPs from the north of the country has been their total lack of protection from increasingly widespread human rights abuses carried out not only by Liberian security forces but by LURD combatants as well. See "Profile of Internal Displacement: Liberia," op. cit., p.7.

[91] The situation in Gbarpolu County, for example, deteriorated by December of 2001 as fighting forced IDPs in a camp located in Bopolu to move south and northeast. Many sought shelter at Sawmill in Bomi County. But this camp was later attacked in January of 2002, forcing them to flee again. Likewise, in February of 2002, incursions at Klay Junction forced IDPs to move towards Monrovia and to Sinje in Grand Cape Mount County. Ibid., at p.25. But armed activities in Cape Mount and Bomi Counties in May 2002 resulted in a high military presence in the Sinje Camps, causing panic among both refugees and IDPs living there. Ibid., at p.36. By then, the Sinje camps were home to approximately 11,000 Sierra Leonean refugees, and a comparable number of IDPs. Ibid. p.74. This pattern was repeated elsewhere. Fighting in Bong County in April 2002 prompted IDPs to seek refuge near the central town of Gbarnga. Many of them sought refuge from the violence in the four camps established in the county. But the following month the civilians were forced to once again flee when fighting broke out locally and three IDP camps were forced to close. About 75,000 IDPs resided in six IDP camps in Bong County and 7,000 in a camp in Buchanan. During the fighting in June and July, many of these camps and surrounding communities were attacked by both Government and rebel forces. The camps themselves were looted and many of the shelters were burned. Consequently, the majority of IDPs fled these camps. By the year 2002, villages and IDP camps in Lofa and Bong counties were emptied as their population fled to IDP camps closer to Monrovia. Ibid., at pp.7 and 25.

[92] For details regarding this effort see "Profile of Internal Displacement: Liberia," op.cit.

[93] How to Fight, How to Kill: Child Soldiers in Liberia, op. cit., p. 8

sometimes a-posteriori.[94] But both sides had a policy focused on forcible recruitment in newly captured territory.[95]

The role of children. The recruitment of children was a central pillar of all factions from the outset of the war.

> Both of the opposition groups as well as government forces which include militias and paramilitary groups widely used children when civil war resumed in 2000. In some cases, the majority of military units were made up primarily of boys and girls under the age of eighteen. Their use and abuse was a deliberate policy on the part of the highest levels of leadership in all three groups.[96]

Denied protection, many of the children who had fought in the previous conflict of 1989-96 were easily re-recruited from IDP and refugee camps when fighting resumed in 2000," because "according to participants, forced recruitment has been a standard practice in Liberia's recent history."[97]

The initial stage of the war was centered primarily in the gold and diamond–rich area close to the borders of Liberia, Sierra Leone and Guinea. Children were recruited from these areas.[98] Based in Guinea, LURD -- for example -- recruited children among Liberians living in refugee camps there in newly captured territory.[99] MODEL, operating from a base in the Ivory Coast, recruiting children from refugee camps there.[100] Charles Taylor's militia groups also included numerous child combatants from the Sierra

[94] Jean-Herve Jezequel, op. cit., p. 169

[95] How to Fight, How to Kill: Child Soldiers in Liberia, op. cit., p. 9

[96] Ibid, p. 1.

[97] "Profile of Internal Displacement: Liberia," op .cit., p.46.

[98] Ibid., p.6.

[99] How to Fight, How to Kill: Child Soldiers in Liberia, op.cit., p.17

[100] Ibid., p.17.

Leonean Revolutionary United Front (RUF) -- which Taylor had supported since its inception in l991.

Without protection, child recruitment policies became relatively easier to implement over time as the plight of IDPs and refugees became increasingly desperate. The massive movement of IDPs described earlier left a large pool of children unaccompanied, unprotected and unfed in IDP camps – and therefore highly vulnerable to recruitment. As one report suggested:

> Many families have become separated during their flight from Lofa country and there are large numbers of unaccompanied women and children in IDP camps.[101]…..The virtual collapse of most of the family structures and the limited capacity of families to provide adequate care has exacerbated the situation of children, both in IDP camps and in war-affected communities. (UN, November 2001)……. SCF has documented over 6,000 cases of child separation as result of new displacements in Lofa county….. At present, there are an estimated 20,000 separated children in Liberia and neighboring countries. (SCF, 24 November 2000).[102]

Two former child soldiers attested to witnessing both government forces and the LURD forcibly recruiting children from two of the largest IDP camps (The Ricks and Wilson Center camps).[103] "Children, they added, were also taken from Plumkor camp.[104] This time, however, Monrovia was not spared.

> Children were also regularly recruited in government raids on the displaced camps near Monrovia in 2002 and 2003. Parents soon learned to keep their children inside when the government forces visited the camp, since they regularly rounded up adults and boys to fight.[105]

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[101] "Profile of Internal Displacement: Liberia," op.cit., p. 43

[102] Ibid., p.67.

[103] How to Fight, How to Kill: Child Soldiers in Liberia, op. cit. p.10.

[104] *Ibid*, p. 11.

[105] *Ibid*, p. 15

> Subsequent reports of child involvement in combat became widespread.
>
> As LURD and MODEL each pushed towards Monrovia and Buchanan in the first half of 2003, these two groups together with government forces stepped up their recruitment of adults and children. With the attacks on Monrovia from June through August 2003, more children became involved with the fighting forces both as combatants and helpers – some driven by the need to help find scarce food and water for their families."[106]

According to our calculations, we estimate that the number of children who participated in the Liberian war between 2000 and 2003 was 21,000, constituting 53 %of all combatants. [107]

3. A Superficial Comparison. The rates of child soldier involvement in both of Liberia's two wars are very high by historical standards, at 29 % and 53 % respectively. Yet, the amount of protection provided to children is clearly distinct between the two conflicts. In the first war, IDPs had the option of heading for Monrovia and the protection of ECOMOG forces. Although that capacity to protect them became increasingly strained in the latter stages of the war, hundred of thousands of IDP children benefited from their presence for the vast majority of the conflict.

No such protection existed during the second war. Liberians representing all factions in the conflict clearly had a predilection for the use of children in war. That predilection was unhindered and unmitigated by any opposition, and resulted in an escalation of numbers far beyond that of the first conflict. UN efforts to encourage self-

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[106] *Ibid*., p. 9

[107] For figures see Fiona Callister, "Liberia's child soldiers," *The Tablet on-line*, 4 October 2003, http://www.thetablet.co.uk/cgi-bin/archive_db.cgi?tablet-00789; "Liberia: Demand Justice for Child Soldiers," *Amnesty International official Website*, 17 May 2004, http://web.amnesty.org/pages/lbr-170504-action-eng.

protection proved a fruitless option for IDPs and refugees who were geographically concentrated, subject to constant terror, unarmed and largely unfed.

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This comparison of two cases thus offers support to our general argument. The pressure to use child soldiers may have arguably increased in the context of two wars so proximate in time. But it wasn't the demand for children that was key (or any other discernible variable); it was the supply of children that distinguished the two cases. Children were available in far greater numbers in the second conflict as unprotected IDPs and refugees had nowhere to obtain effective protection.

Conclusions

The issue of child soldiers has been drawn to public attention. But systematic study of the issue has lagged behind public concern. The available literature has largely been the product of the work of activists rather than academics, and so suffered from a series of predictable problems; the arguments have been underspecified and over-determined, and the analysis unsystematic. The value of this empirical work may therefore be that it contributes to assisting the process of comparative data compilation. Certainly, if academic and policy work are to both benefit by discovering and addressing the issue of the conditions under which child soldiers participate in intrastate conflict, then the efforts of the two must be synthesized.

In this paper, we have attempted to examine and test for three prevailing explanations for the variance in child soldier participation rates. Poverty in war is often used as the primary reason for the advent of child soldiers. But our results suggests that

while poverty may remain a necessary condition for the advent of child soldiers, and thus may possibly have a threshold effect, it certainly doesn't offer an effective causal explanation for child soldier rates. Richer countries may not have child soldiers in intrastate conflict. But neither do child soldiers serve in all poor ones.

A large pool of orphans is another factor often discussed as a cause for relatively high child soldier rates. Yet, again, our work suggests that there is a relatively weak relationship between the number of orphans and the number of child soldiers. Orphans may be vulnerable but that, apparently, doesn't mean that they are inevitably susceptible.

In contrast, our evidence suggests a relatively robust relationship between the capacity for access to IDP/refugee camps and the rate of child soldier participants. Presumably well-protected children (whether orphans or not) are not as susceptible if well-protected in refugee camps. But large numbers of children who are gathered together in easily identifiable locations and then left unprotected make an easy target as recruits for belligerents – whether voluntarily or coerced. In at least one dimension there is a parallel between the issue of child soldiers and of food aid; the proverbial adage about food aid is that there is a problem with generating food if you do not provide the military force to ensure both that it is delivered to refugees and not stolen from them by belligerents once it is delivered. Likewise, seemingly, there is little point in gathering children together in camps if they are not protected from preying belligerents. Indeed, doing so may further imperil their lives. The policy implications, at least potentially, seem evident. As former Pentagon spokesman Kenneth Bacon noted in an interview with

the authors of this paper, children have now often started to avoid unprotected IDP or refugee camps for fear of being recruited as child soldiers.[108]

In answering the questions specified at the outset of this paper, our findings, while not determinative, suggest that a baseline for poverty may be important but certainly isn't determinative. Unprotected, concentrated, and thus easily accessible children provide an irresistible target for recruitment.

But we are well aware that these findings are only preliminary and we need to do more empirical work on the relationship between protection and child soldier rates. These results only provide t he basis for further, more focused, research and our conclusions should not be regarded in any way as definitive. The number of positive cases with reportable figures, for example, is too small, currently amounting to only twelve. There is a large pool of positive cases for which we need to try and generate reliable estimates Ideally, we would like to expand our database to include these cases and supplement this work with some critical cases studies that further evaluate our core findings. We would further like to verify the existence of child soldiers and, if so, generate accurate figures.

One key question, for example, is whether a poverty threshold is a necessary, if insufficient, condition for the advent of child soldiers -- a backdrop against which other more proximate factors become more important? Furthermore, do orphan rates influence child soldier rates if the access to camps is high or not? Certainly, we would prefer to have data in which the measure of access is more graduated and sophisticated rather than

[108] Kennethe Bacon, Director of Refugees International, in an interview with authors [DETAILS TO BE PROVIDED UPON ACCEPTANCE OF MANUSCRIPT].

an ordinal measure. One goal is, inevitably, better data on access rates. Likewise, we would like to gather comprehensive, reliable data on refugee protection.

A series of further research goals follow from these considerations. Creating a data base that contain accurate figures on child soldiers by year (rather than cumulative estimates by entire conflict); a disaggregation of child soldiers by different factions as well as greater details regarding individual attacks; and more data about access to refugee camps between 1975 and 1995 and to IDP camps between 1975 and 1995 would be very useful.

Nonetheless, we conclude this paper in the belief that this preliminary work provides a useful foundation for further research. Our principle finding is an unspectacular one; if child soldier rates are to fall then children need to be fed but, not surprisingly, they also need to be protected. How to do so effectively therefore becomes a central logistical and military conundrum.

Appendices

Appendix 1. Child Soldiers Presence in African Conflicts

1. POSITIVE WITH FIGURES	*3. POSITIVE MINOR*
Angola (1975-1995)	Guinea-Bissau (1998-99)
Angola (1996-2002)	Comoros (1989-89)
Burundi (1993-94)	Comoros (1997-97)
Burundi (1995-99)	Guinea (2000-01)
DRC (1996-01)	Ethiopia (1974-91)
Liberia (1989-95)	South Africa (1966-78)
Liberia (1999 - 2002)	Congo-Brazzaville (1993-94)
Mozambique (76-92)	Chad (1989-90)
Rwanda (1990-95)	Chad (1991-94)
Sierra Leone (91-00)	Chad (1997-2002)
Sudan (1993-2002)	
Uganda (1994-2002)	
2. POSITIVE SUBSTANTIAL	***4. NEGATIVE***
Rwanda (1998-2002)	Senegal (1990-95)
Sudan (1983-92)	Senegal (1997-2001)
Uganda (1981-88)	Niger (1990-97)
Uganda (1989-91)	Mali (1990)
Djibouti (1991-94)	Mali (1994)
Somalia (2001-2002)	Lesotho (1998)
Ethiopia (1996-2002)	Central African Republic (2001-2002)
Algeria (1991-2002)	
Congo-Brazzaville (1997-1999)	
Congo-Brazzaville (2002)	
Ivory Coast (2002)	
Somalia (1981-96)	
South Africa (1979-88)	
South Africa (1989-93)	

1 – Reports identified numbers of child soldiers
2 - Reports identified that child soldiers is a substantial problem
3 - Reports identified that child soldiers is a minor problem
4 - Reports identified that child soldiers are not present in a conflict

Appendix 2. Poverty and Child Soldier Rates (in % terms)

Case	*Child Soldiers, %*	*Population below poverty line, %*
Senegal (1997-2001)	0	54
Senegal (1990-95)	0	33
Niger (1990-97)	0	63
Mali (1990)	0	48
Lesotho (1998)	0	49
Angola (1975-95)	4	56
Burundi (1993-94)	10	36.2
Uganda (1996-2002)	22	45
Rwanda (1990-95)	25	51.2
Sierra Leone (1991-00)	25	75
Mozambique (1976-92)	27	55
DRC (1996-01)	28	40
Angola (1996-2002)	28	60
Burundi (1995-99)	31	52
Sudan (1993-2002)	39	35
Liberia (1999-2003)	53	80

Appendix 3. Orphans and Child Soldier rates (in % terms)

Case	*Child Soldier Ratios (%)*	*Orphans (%)*
Senegal (1997-2001)	0	9.90
Senegal (1990-95)	0	10.80
Niger (1990-97)	0	11.50
Mali (1990)	0	11.60
Lesotho (1998)	0	13.65
Central African Republic (2001-2002)	0	15.10
Angola (1975-95)	4	11.90
Burundi (1993-94)	10	13.25
Uganda (1996-2002)	22	14.75
Rwanda (1990-95)	25	17.30
Sierra Leone (1991-00)	25	14.35
Mozambique (1976-92)	27	14.10
DRC (1996-01)	28	10.65
Angola (1996-2002)	28	10.70
Liberia (1989-95)	29	11.50
Burundi (1995-99)	31	15.55
Sudan (1993-2002)	39	9.75
Liberia (1999-2003)	53	12.50

Appendix 4. Access to Refugee/IDP Camps

Case	*Instances of Militarization of refugee camps*	*Instances of Attacks on refugee camps*	*Attacks or militarization of IDP camps*
Angola (1975-1995)[109]	Angolans in Zambia (1 year) Zairian in Angola (2 years)	Angolans in Zambia (1 year)	No reports
Burundi (1993-94)	No reports	Rwandans in Burundi (2 year) *Unconfirmed attacks on Burundi refugees in Rwanda (1 year)* – not included	No reports
Uganda (1994-2002)		Attacks on Sud refugees in Uganda (8 years) Attacks on Ug ref in Congo (1 year)	No reports before 2003
Rwanda (1990-95)	Rwandans in Uganda (3 years) Rwandans in Tanzania (2 years) Rwandans in Burundi (1 year) Rwandans in Zaire (2 years)	Burundians in Rwanda (1 year)	No reports
Sierra Leone (1991-2000)	SL camps in Liberia (4 years) SL camps in Guinea (3 year)	SL camps in Guinea (3 years)	No reports – camps protected
Mozambique (1976-92)[110]	Zimbabwe (2years) Zambia (1 year)	Malawi (1 year) Zimbabwe (1 year) Zambia (1 year)	No reports
DRC (1996-01)	Angola (1 year), Rwanda (1 year), Tanzania (2 years), Zambia (1 year)	Rwanda (2 years) Burundi (1)	No reports – camps since 2002-2003
Angola (1996-2002	Angolans in Zambia (3 years) Zairian in Angola (1	Zambia (1 year) Congo (4 years at least) Angolans and Namibians in	Sites protected by the government

[109] For Angola the data for years 1975-87 was missing. Altogether, the data was obtained for 8 years and was missing for 13 years.

[110] For Mozambique the data for years 1976-87 was not available. Altogether, the data was collected for 5 years; data is missing for 12 years.

	year)	Namibia (5 years)	
Liberia (1989-95)	Cote d'Ivoire (1 year)	Sierra Leone (2 years); Guinea (3 years); Cote d'Ivoire (3 years); Liberia (2 years)	Monrovia region (1 year)
Burundi (1995-99)	Bur camps in Rw (1 year); Bur camps in Zaire (1 year); Bur camps in Tanzania (4 years)	Rw camps in Burundi (1 year); Bur camps in Tanzania (1 year); Fears of attacks on Bur ref in Zaire (1 year)	No reports – Government protection.
Sudan (1993-2002)	Kenya (1 year) CAR (1 year) Ethiopia (1 year) Uganda (1 year)	Dozens of rebel attacks on camps in Uganda (1 year); Ethiopean settlements in Sudan (2 years) SPLA attacks on camps in Zaire (6 years) Attacks by Sud. Rebels in Kenya (3 years) SPLA raid on camp in CAR (2 years) Attack on Eritrean refs by Sudanese factions from Eritrea Skirmishes b/t Eth refugees & Sud troops (1 year)	Attacks started in 2003 with Darfur Crisis
Liberia (1999-2003		SL refugees in Liberia (4 years) Liberian refugees in Guinea (3 years)	Attacks reported for 5 years
Senegal (1997-2001	Guinea-Bissau (1 year)		
Senegal (1990-95)	No reports	No reports	No reports
Niger (1990-1997)	No reports	No reports	No reports
Mali (1990)	No reports	No reports	No reports
Mali (1994)	No reports	No reports	No reports
Lesotho (1998)	No reports	No reports	No reports
CAR (2001-2002)	No reports	No reports	No reports

Appendix 5. Access to IDP/Refugee Camps and Percentage of Child Soldiers

Case	*Child Soldier Ratios, %*	*Access Ratio*
Senegal (1997-2001)	0	0.2
Senegal (1990-95)	0	0
Niger (1990-97)	0	0
Mali (1990)	0	0
Mali (1994)	0	0
Lesotho (1998)	0	0
Central African Republic (2001-2002)	0	0
Angola (1975-95)	4	0.5
Burundi (1993-94)	10	1
Uganda (1996-2002)	22	1
Rwanda (1990-95)	25	1.5
Sierra Leone (1991-00)	25	1
Mozambique (1976-92)	27	1.2
DRC (1996-01)	28	1.3
Angola (1996-2002)	28	1.3
Liberia (1989-95)	29	1.7
Burundi (1995-99)	31	1.8
Sudan (1993-2002)	39	2
Liberia (1999-2003)	53	2.4

Appendix 6. Multiple Regression Assumptions Tests

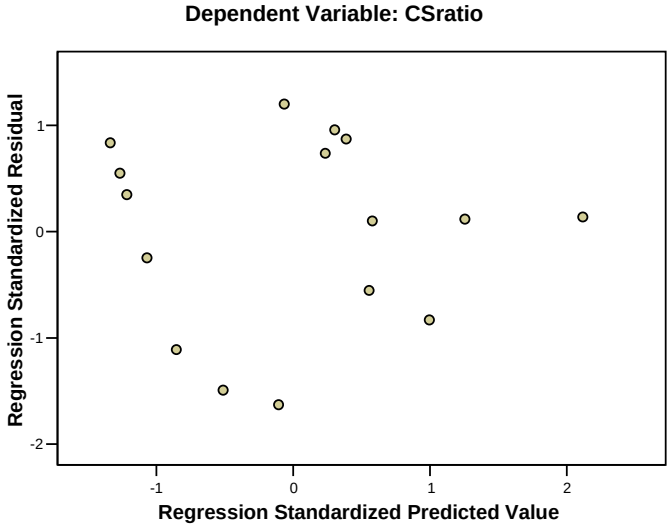
The following table summarizes the results for normality of distributions of the multiple regression variables. All the variables confirm to normality.

One-Sample Kolmogorov-Smirnov Test

	CSratio	Poverty	Orphans	Access
N	19	16	18	19
Kolmogorov-Smirnov Z	.944	.529	.627	.810
Asymp. Sig. (2-tailed)	.335	.942	.827	.528

The model linearity assumption appears satisfied due to the symmetry of the scatterplot below along the horizontal axis. The data display a slight degree of heteroscedasticity, but this will not prove fatal for the analysis.[111]

Scatterplot



Multicollinearity was found not to be a problem (min. Tolerance = 0.910 > 0.1 cutoff value, max. VIF = 1.099 < 10 cutoff value).[112]

[111] Craig A. Mertler, Rachel A. Vannatta. "Advanced and Multivariate Statistical Methods: Practical Application and Interpretation." Los Angeles : Pyrczak Publishing, 2001, p.34.

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