Recruiting Children for Armed Conflict

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This working paper is a product of the Ford Institute's working group, "Child Soldiers Initative: Building Knowledge about Children and Armed Conflict". The Child Soldiers Initiative is an ongoing network of scholars, policymakers and representatives of civil society engaged in promoting and developing policy proposals addressing the recruitment and reintegration of child soldiers.

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What are the precipitant causes of child soldiering? Why would a military organization recruit a child as a soldier? In other words, why employ individuals before their technical and decision-making capabilities are fully developed and before their preferences are fixed? And, why are there so many children participating in some military organizations and few or none in others? Moreover, why do some children voluntarily join while other children are forced to join such organizations in situations of conflict? Data on child recruitment in sub-Saharan Africa collected by Reich & Achvarina (2006) and case study analyses from around the world demonstrate that the number of child soldiers varies considerably from one group to another.[1] These works also suggest that the welfare of the children employed by these violent groups varies across organizations. In this paper we focus on this variance and examine the patterns of recruitment across different kinds of violent organizations.

Most research on children in armed conflict has featured post-conflict reintegration and rehabilitation and has been multi-disciplinary. In contrast, social science research of the phenomenon of child soldier recruitment has until recently focused on the supply side of child soldiering. Factors such as poverty, education, war, refugee camp securitization, religious or ethnic identity, family or its absence, and friends all play a role in determining the supply of children available for recruitment (Goodwin-Gill& Cohen, 1994; Brett & Specht, 2004; Reich & Achvarina, 2006; Singer, 2006). The dynamic interaction of a rebel group and the government may also affect supply, particularly when government actions provoke grievances and a desire for retribution. Such supply factors are indeed important, but they neglect demand. To understand the demand for child soldiers, we must look more

closely into civil wars and violent organizations as well as understand what motivates the children themselves. Many of the factors that shape supply are rather invariant across many of the conflicts; demand is what determines the actual number of children who are asked to kill.

In order to begin to answer the questions raised in our opening paragraph, we draw from three different fields of research: the study of violent intrastate conflicts, child psychology, and child labor. We review relevant empirical knowledge about children, child labor and the violent organizations where children participate in order to gain a broad understanding of child soldiering and to formulate sensible hypotheses. Our analysis is to a large degree exploratory, but it is also integrative in that it seeks to identify common findings across three disparate research traditions. The paper is organized as follows. We begin with a discussion of childhood. How do children and adults generally differ, to be reflected in the differences between child and adult soldiers? Next is a brief overview of the contexts in which child soldiers are recruited. The main part of the paper is an examination of different kinds of violent organizations and their varying propensity to recruit children. We finally summarize our analysis by examining different conditions of supply and demand for child soldiers.

Child soldiering and child capabilities

A child soldier is a child who participates actively in a violent conflict as a member of an organization that applies violence in a systematic way. But what is a child in this context? The standard definition of a child as a person below 18 years old is used by most NGOs engaged in child soldier advocacy and much of the received research of the phenomenon (Goodwin-Gill & Cohen, 1994; Brett & Specht, 2004). This definition, however, is in many respects too broad when we focus on the specific reasons why one should worry about child

recruitment from either a normative or analytical point of view. From a comparative perspective, defining a child to be a person below 15 years makes better sense.[2]

Children's capabilities and their relevance to the tasks available are important in explaining whether children are employed at all,[3] and to which tasks they are assigned. To lump all children below eighteen together is obviously misleading in this context, since their capabilities obviously change extensively between six years of age, when the youngest child soldiers have observed to be recruited, and eighteen, the standard international upper age limit for a child. Similar objections may of course be raised against an age limit of fifteen, but it at least excludes most individuals who behave as adults for most purposes

The standard reason given for why fairly young children seem to play a more prominent role in warfare than before is due to the easy availability of very light, cheap and easily maintained weapons with considerable fire power, which may be of considerable effect without extensive training (Singer, 2006). This argument is probably correct as far as it goes, but it does not preclude that children are mainly involved in regular household tasks[4] or may be involved in organized killings based on the use of weapons like machetes or spears, but then probably mainly at moments when the enemies or civilians were unorganized. In this regard, the Singer argument about lighter weapons, points to a view of children and adults as substitutes for one another, whereby the weight of weapons no longer serves as a physical constraint.[5] The differentiation of task between younger children and adults, however, indicates a complementarity[6] between child and adult labor in a military organization.

Analysis of child labor in the context of households and farms indicates that (young) children and adults are likely to be employed as complementary goods, while two adults' unskilled labor are substitutes. At a certain age, however, a transition takes place whereby children can begin to perform adult work and from an economic point of view can be viewed

as substitutes for adults. Something similar must also occur in military contests as children physically mature.

Evidence of physical maturation of children and their (in)ability to fight effectively is incontrovertible. Whether children fundamentally differ with regard to decision-making ability, emotional maturity and psychological stability is more difficult to assess. Given the lack of concrete evidence from child soldiers, we juxtapose casual observations of child soldiers' behavior with experimental evidence of children in the United States in quiet, peaceful conditions. Most of the observations of child soldiering are taken from West or Central Africa.

One may question whether the results of these experiments and other psychological research on children's development are relevant at all. Can experiments regarding well-off U.S. children and the prospects that they might lose a toy worth $5, tell us anything about an Achole girl in Uganda who daily risks her life? Can the behavior of isolated children in a cool emotional state inform us about how a group of angry and scared children behave when their emotional states reinforce each other? Maybe not, but we lack systematic data regarding the specifics of child soldier behavior.[7]

Officers of any armed force need to make assessments of child vs. adult capabilities both in their recruitment and when allocating tasks. And in some respects, children may be viewed favorably. One Congolese rebel officer has summarized the three main myths as to why children make very good soldiers: "they obey orders; they are not concerned with getting back to their wife and family; and they don't know fear" (The Economist July 10, 1999: 22). Indeed, these three characteristics come up again and again in the context of child soldiers, but is there good psychological evidence to support these views?

Take the myth of fearlessness first. For example, in Sierra Leone, one observer claimed one of the reasons for the higher casualty rate of children was the children's

"fearlessness" (Amnesty International, 2000: 2), or from the Democratic Republic of the Congo (DRC): "Children are daring because they are unaware of death" (ILO/IPEC, 2003: 26).[8] This may only be an attribute of their group behavior, but translated to a hypothesis for each individual child, we should expect children in general to show less risk avoidance. Here we have some experimental observations of potential interest. Harbaugh et al (2001) have studied whether risk behavior changes systematically with age.[9] Roughly, their main result is that children underestimate low probability risks when associated with losses, even if the risk of loss is fairly high. The degree of underestimation is somewhat higher for children than adolescents. If transferable to the widely different setting of child soldiers, this gives weak support for the myth - it may be easier for the management of a violent organization to employ children, if they are at all capable, to the organization's extreme high risk ventures, but we should for the same reason expect much higher attrition rates among children with the same technical competence as the adults.

Another myth regarding child soldiers is that they are crueler than adults and in general lack compassion for others. Such characteristics point to a lack of altruism. Contrary to this myth is the one claiming that child soldiers are more loyal to the group than adults, lacking a spouse and children of their own, and thereby more willing to sacrifice for the group. This characteristic reflects a high degree of altruism. Both sets of behavior have been asserted about child soldiers, but are they based on any general behavioral tendencies in children?

Again there are available experimental results (linear public goods experiment as reported in Harbaugh and Krause, 1999) that touch the issue. In this case children like adults start out by being more generous than one would predict on the basis of pure rational choice models. Age has no influence here. But unlike adults, children's voluntary contributions do not decline and even increase with the number of repetitions. Group attachment has an

increasing effect. If we by a leap of faith allow the transfer of this result to child soldier situations, we may not expect children to have a stronger tendency to run away than adults. In addition, since the lack of altruism is not confirmed in the first place, cruelty may not be tied to a lack of altruism in the way suggested above. But then again, we do not have any substantiation for the claim that children are crueler than adults. While they mainly study the effects of the war on the children after their violent engagements had ended, the findings reported in Annan et al (2006) and Blattman (2006a) that surprisingly few of the LRA soldier abducted as children showed any serious post conflict psychological disturbances, and fewer than the adults, may be suggestive of the effects during the war.

Related to the myth of loyalty is the myth that children are more obedient. In this regard there is some evidence that children respond better to punishment than adults. As children they are more used to getting publicly admonished and taking orders without question.

We find indirect support for three myths regarding child soldiers. They are more fearless, loyal, and obedient. To the extent that children differ in other psychological respects is limited. With regard to children's bargaining capability, their ability to account for future payoffs (assigning a discount factor), and most importantly, their capacity to frame a conceptual problem, experimental evidence indicates that while there are some differences, mostly in expected direction, the thrust of the results is nevertheless that the difference between child and adult behavior is surprisingly small. Thus, in these respects, children's decision-making aptitude is not significantly different than adults'.[10]

The obvious consequence is that when possessing sufficient physical strength, children may in a technical sense substitute for adults to a degree that is surprising given Western attitudes to and expectations about childhood. The degree to which they may substitute clearly depends on the nature of the tasks to be solved and decisions to be made. In

most countries, children must shoulder adult work responsibilities at an earlier age than is accepted in the West. Iversen (2005: 11) based on his research on child migration in India reaches a fairly clear conclusion: “boys aged 12 -14 regularly made labor migration decisions independently of their parents and often without the consent or even informing the parents about their departure.” Despite many cultural differences, it is also at about this age that children may seek military employment on their own and solve many of the simpler military tasks independently, if employed. Before this age, we may assume that the children will be more dependent on older soldiers.

While children generally lack the physical capacity of grown men, indirect psychological evidence indicates that they exhibit certain tendencies that some military leaders unconstrained by any normative concerns might find appealing. If we treat child soldiers as a labor issue, children beyond a certain age can be regarded substitute and not to adult labor. Below that age they will need adult management and may not contribute to the organization if not complemented by adult labor.

The context of children in armed conflict

To Clausewitz’s famous adage that “war is nothing but a continuation of political intercourse with the admixture of different means” (1976: 605) one could also add ‘social and economic relations’. Wars where children have become active soldiers now typify the wars of today – “a stalemated guerrilla war confined to a rural periphery of a low-income, post-colonial state” (Fearon, 2005). These are also areas where children are engaged in all kinds of adult economic activities. In sub-Saharan Africa, the more rural a country is, the higher the child labor participation rates tend to be (Andvig, 1998).

Based on detailed observations from several long field stays, Shepler (2004) documents that many of the specific ways children are employed in violent organizations of

present-day Sierra Leone can be traced back to traditional age group organizations, West African child fosterage traditions, secret societies, and so on. Moreover, she demonstrates that many of the killings performed by the children were carried out with machetes and other traditional weapons. Her presentation gives the most detailed description of how established social and economic forms may have impact on the violent organizations and generate prescriptions for how many and how children could be used.

What the extensive economic participation of children in rural areas does explain in the broader sense, however, is that children are more likely to become potential recruits when commanders from their own experience are used to seeing children do the household and farming tasks. This is reinforced by the tendency of the violent organizations to emulate the dominant patterns for organizing economic activities in their neighborhoods and families. The most visible manifestation of the copying of family-based organization is a tendency of the male commanders (and often also soldiers) to acquire "wives" in many of the conflicts.[11]

Nonetheless, if we hope to explain the variation in the number of child soldiers in any given conflict, we will need to examine more specific mechanisms, most likely to be found in the violent organizations themselves. Each organization is likely to have its own ways of adapting the established customs regarding child/ adult task allocations when recruiting children. The dramatic variation in child/adult soldier ratios even for a number of African conflicts all taking place in countries dominated by rural populations is reflected in the numbers reported in Reich and Achvarina (2006). How can such large variation be explained?

Violent organizations and their demand for children

The guiding aims of a violent organization (not necessarily its professed ones) in many ways define the behavior of the group, including its reasons for recruiting children and

its ways of treating them. Since every organization operates under some form of financial constraint, such organizations should only substitute children for adults if they are cost-effective. A key assumption here is, of course, that children and adults are substitutes. The only formal theoretical discussions of the recruitment of child soldiers of which we are aware are Gates (2004) and Blattman (2006). Gates develops his ideas about child recruitment by means of a principal agent model.[12] Put simply, agents of a military organization (that is soldiers) when recruited on a voluntary basis, have to receive sufficient utility by joining that they don't run away (the participation constraint). Furthermore the leadership (the principal) must be able to find a way to reward the soldiers so that they choose to act in a way that will produce the maximum increase of the probability of winning (or sustaining a "profitable" conflict) with the lowest financial costs (incentive compatibility constraint). Hence the leadership may employ children if they are sufficiently cheap to compensate for their (potentially) lower military efficiency.

In another article, Gates (2002) makes the point that non-pecuniary benefits can be used to meet the compatibility and participatory constraints. Indeed, all groups distribute benefits that exhibit a mixture of pecuniary and non-pecuniary rewards. Pecuniary rewards consist of wages, one-shot monetary rewards (often associated with loot), and other tangible rewards such as drugs or alcohol. Indeed, drugs have played a large role in several civil wars (e.g. Liberia and Sierra Leone). A non-pecuniary reward can come in the form of the satisfaction associated with performing a given task. In a military organization, functional rewards can come with participating in the "good fight." At the other end of the moral spectrum, groups may appeal to the sadistic tendencies of certain elements of any population (thugs and hooligans) by giving them license to commit acts of extreme violence. But it is also a reality that military fighting might be experienced as exciting, particularly when the most likely alternatives are either boring idleness or drudgery. When asked why they became

soldiers 15 % of the children selected for interviews in DRC, Congo and Rwanda who had joined one of their violent organization, told that fascination with the military was their main reason (ILO/IPEC, 2003: 29).[13]

Non-pecuniary benefits can also be seen in the comradeship shared by members of an armed group. Spending day and night together in life-threatening situations can create strong bonds between fellow soldiers. Identity-based groups (based on ethnicity or religion) also tend to be characterized by higher solidarity preferences than other types of groups. Religious mystical groups such as the LRA in Uganda (Veale and Stavrou, 2003, 27) and expressive violent organizations (the RUF in Sierra Leone) employ mixes of functional and solidarity benefits.

The extent to which a group can rely on pecuniary benefits depends on the group's resource base. Non-pecuniary benefits, alternatively, can be created by the group and can be used to motivate members instead of material benefits. Leaders have an incentive to inculcate a sense of membership and solidarity and thereby construct an identity for their organization. Indeed, all effective militaries depend on such non-pecuniary rewards. Indirect evidence from child psychology indicates that such non-pecuniary benefits may be more influential for children than adults (Harbaugh and Krause, 1999). It may take less effort on the part of the organization to create solidarity norms for children due to their greater tendency towards altruism and bonding to a group (Blattman, 2006).

If children's outside options are sufficiently bad such that they will accept a lower compensation in order to join (and stay) or they are easier to supervise so less resources are needed (including the positive economic rewards) for them not to shirk in contrast to adults, this model would predict that a group would focus its recruitment energy on children. The model is easier to interpret if we assume the children to be decision-makers themselves, although it possible to let them be family-controlled when determining their participation

constraints. It is, however, difficult to see how the model may handle recruitment by force. Participation of children is often forced at gunpoint or at least through coercion. This sets up an interesting situation for a rebel group that requires forced recruits; how does such a group induce compliance when the members never wanted to participate in the first place? In such a situation, it becomes imperative for the group to either maintain compliance through the threat of violent punishment or to make participation in the group attractive through the distribution of pecuniary and non-pecuniary benefits.

Members of a military group are kept attached to the organization through three forms of incentives: force; non-pecuniary benefits (which are often linked to ideology, religion or ethnicity); and economic incentives. All forms of incentives may in principle be present at the soldier level whatever the forms of leadership motivation. When force is applied in recruitment, force will, of course be one of the incentives for staying, but both non-pecuniary and pecuniary incentives may be applied to some degree in order to reduce the desertion rate. Here children and adults may possibly differ. From experimental evidence we know that children bond more tightly to a group (Harbaugh and Krause, 1999). As a result of this re-framing, children may "forget" more quickly that they were recruited by force. Hence, they may have relatively lower desertion rates than adults recruited by force.

Military activities are in the end decentralized activities where both the final killing and the organizational infrastructure around it need to be improvised. No pre-constructed assembly lines exist. Centralized monitoring is difficult because of classical asymmetric information issues. The risks of death and molestation in battles make it rational for the individual to exit before the battle begins.[14] If many do so, the organization will lose, and the remaining members will be exposed to larger risks of death. The incentive to exit for an individual will increase with the number of others exiting; hence, the sudden switch from

collective fighting to collective exiting when it becomes clear that one's side is losing the battle.

The use of economic incentives to manage a violent organization in any precise way is hampered by strong versions of the classical problems of asymmetric information, collective action and adverse selection: if recruiting soldiers on the basis of expected economic gain, the organization has a higher risk of getting a mix of members who will tend to run away before a battle or during it with any set-back of winning prospects; asymmetric information makes it difficult to reward efforts. Result-oriented selective rewards that may avoid battle desertion imply looting, a risky strategy since the organization will lose local support. To prevent severe collective action problems, the use of force to prevent desertion is obviously necessary and remains necessary even when most soldiers are recruited on an ideological, ethnic or religious basis and they possess a strong sense of solidarity. When combined with a corresponding intrinsic motivation,[15] political conviction is clearly ideal to mitigate this classical incentive problem of military action. In general, non-pecuniary rewards motivate actions when motivation is needed, and they are relatively inexpensive to distribute once an organization is endowed with social factors that promote solidarity and functional benefits. By reducing the severe collective action problems involved in actual fighting, functional rewards and solidarity norms can substantially reduce the need for harsh physical punishment.

But as pointed out by Frey (1997) in a general context (and by Weinstein in the context of violent organizations) both external force and economic rewards may crowd out and destroy intrinsic motivation.[16] The organizations are not able to choose their incentive mix freely. The ability to create or inculcate intrinsic motivations is severely limited. Ethnic, religious and ideological identities from which it is much easier to sculpt solidarity are difficult to create. Force and economic rewards, however, may be both managed and more

easily combined.[17] Hence we may expect significant differences across organizations as to their mix of pecuniary and non-pecuniary rewards and with respect to how incentives are combined with harsh punishment to prevent disintegration.

The predictions of Gates' (2004) model follow: 1) more children will be recruited if their military efficiency increases relative to adults', 2) if children's income possibilities outside the organization decline compared to the adults' outside options, (for example, increasing land scarcity may block children's access to land while adults remain holding the land),[18] or if for some reason 3) the relative cost of monitoring children compared to adult decreases. This will happen, for example, if the fighting is moving further away from the soldier's homestead, since children have lower geographical mobility. The difference will naturally be larger for younger children. Moreover, if child soldiers are added to a contest function (modeling the conflict between the rebel group and the government), they are by implication (when properly weighed for their lower efficiency) perfect substitutes for adults. Hence, a wide variation in its adult/child composition would not be surprising, for example caused by shifts in their respective participation constraints. With this paper we extend Gates' work, recasting the focus on military organizations' demand for child soldiers to explaining the extreme variance in the use of child soldiers across groups, even within similar economic and cultural contexts.

Motivations, group endowments and the demand for child soldiers

A dominant theme in conflict research during the last decade or so has been the role of economic factors in causing violent conflicts. For some time this led to a rather fruitless debate over whether greed or grievances served as the chief motivation for groups to take up arms against the state.[19] The general problem is that professed motivations (and alleged motivations) do not necessarily coincide with "real" or ultimate motivations. This is a

hermeneutic problem. Can we ever know whether politics or religion provides the fundamental motivation for groups in Chechnya or in the Middle East? Equally difficult is deciding whether money or politics provides the fundamental motivation for other groups, which finance their operations through lootable resources such as opium, cocaine or diamonds. Also difficult to determine is whether professed goals are for a broad public who are not members of the military group or for the group members themselves. As in other contexts, the actors may have good reasons for trying to misrepresent their goals (and those of their adversaries). Religion may be a pretext for politics, and politics a pretext for money. The hermeneutic issue is how to impute motivations when statements about motivation may themselves be motivated.

While we may not be able to uncover the ultimate motivation for a group (or at least its leadership), groups do exhibit behavioral tendencies and we can make assumptions about such motivations on the basis of the resource endowment of a group, which will affect the ability and the form of rewards a group allocates to its subordinates. Weinstein (2005) examines two types of leadership motivation and asks how they may arise and be sustained. He points out that if a rebel movement initially has access to large economic endowments (easy looting, control of diamonds, and so on) compared to social endowments (shared identities, and ideology, social networks) it may drive out political altruism in the organization, a kind of rebellion's natural resource curse. It is not the ambition here to explain the motivational dynamics of violent organizations as such, however, but rather to explore whether such dynamics may cause systematic change in the share and method of recruitment of the child soldiers, and their treatment over time. The chapters in this volume by Gutierrez and Pugel point to the kinds of variation across groups in these regards. (In particular note Gutierrez's Table 3 and Pugel's Figure 4.)

Selective economic incentives are expensive and most rebel organizations are poor even when their violence activities are the most individually remunerative in the neighborhood. Hence, their leaderships would try to restrict the number of members who are allowed to share in the net income. Again physical punishment is useful to restrict access, but there are also reasons to expect that children are more easily kept away from sharing; thus organizations that rely on economic incentives have more to gain financially by employing children.[20] Both economically and socially endowed organizations may apply force in order to recruit members but on average one would expect that voluntary recruits of socially-endowed organizations will be motivated by non-pecuniary benefits and voluntary recruits of economically-endowed organizations will be motivated by material rewards. Indeed, these two types of groups, “greed” and “grievance” organizations, are likely to demand children for different reasons and to treat them differently once they have joined.

In the preceding discussion we have presented the possibilities in terms of dichotomies. There is no inherent reason that a group must distribute material rewards at the expense of non-material benefits, however. Often pecuniary and non-pecuniary benefits are jointly evident as when a child defends his own right to his homestead as part of his tribe’s control right of the land to which his homestead is a part.

If economic endowments serve to crowd out non-pecuniary social benefits as proposed by Weinstein (2005), after a while “greed”-based organizations may reveal themselves as such and will receive fewer ideologically committed recruits. The fraction that has to be recruited by force will tend to increase over time. While not empirically well documented, we will expect that children who are recruited by force may have lower desertion rates than adults recruited the same way. This applies more clearly for younger children. It is more difficult for them to desert.[21] Hence, we expect that the fraction of child soldiers in small-scale, economically-endowed violent organizations to increase over time.

Whether we should expect the fraction of child soldiers in economically-endowed groups to be higher than in socially-endowed organizations is not obvious. In some African countries the main grievances are actually held by the older children and youth who may have lost traditional access to land and marriage (Richards, 1996). Hence we may expect a large share of children among the grievance- motivated recruits and even among the commanders. In the extreme case of Mindanao where whole families are actively engaged (Cagoco-Guiam, 2002), the share of children may also be quite high (but not in command), reflecting the demographic state of the area, but presumably the younger children will be kept away from the most risky tasks.

In either case, the scale of the fighting is also likely to be important for the share of children to be recruited. If heavy, expensive and complex weapons or the disciplined coordination of large units of soldiers are necessary, children are less useful. Research on child labor in general suggests that children have rarely been given responsibility for technically complex and expensive equipment. There is no reason to believe it will be otherwise in child soldiering.[22] Furthermore, if the violent competition is a low-scale one, it is easier to organize consumption in the military units in the same way as in ordinary households, so they will include many tasks that are ordinarily performed by children, and will demand more children for non-combatant tasks.

Socially-endowed organizations are likely to handle collective actions better and therefore to rely less on force as long as the members stay strongly motivated. That motivation embraces not only direct military task solving, but also the motivation to monitor and discipline the other members. Decentralized monitoring is essential in many military situations that are uncontrollable from the command center. The resulting discipline appears to be essential for the welfare of the child soldiers (and women soldiers). Children and youth tend to be at least as strongly motivated as the communities from where they have joined.

The leadership would on average need to treat their members at an acceptable level, including the children. In addition to internal reasons for it, some of the political costs of bad treatment and forced recruitment of children will be internalized. The strength of political motivation is fickle, however, and may quickly decline. As pointed out already these organizations would also need to apply extensive force in order to keep its collective action problems within bounds and to recruit new manpower.[23]

Organizational structure and the welfare of child soldiers

Drawing on extensive surveys of ex-combatants, Humpreys and Weinstein (2004, 2005) have made a systematic investigation of a number of violent organizations in Sierra Leone. They found that violent (sub-) organizations that were “more ethnically fragmented, use material incentives, have weak social capital and lack mechanisms for punishing indiscipline” (Humphreys and Weinstein, 2005:1) engaged in higher levels of abuse of civilians and killed more of them.[24] Does this observation have any relevance to research about child soldiering? While their research is based on a systematic study of a sample of ex-combatants in Sierra Leone, we may observe some analogous pattern in the treatment of child soldiers based on two of the more reliable studies of child soldier experiences available. One surveys child soldiers in an Islamist guerrilla movement in Mindanao in the Philippines (Cagoco-Guiam, 2002), the other a number of violent organizations in Central Africa with respondents from Congo, DRC, Burundi and Rwanda (ILO/IPEC, 2003). In this case anecdotal evidence indicates that the leaderships of the organizations in Central African countries have been at the economically-endowed, while the Islamist rebel movement in Mindanao has been at the socially-endowed ends of the spectrum.

Among the child soldiers from three of the Central African countries (Congo, DRC and Rwanda) the largest group answered that they joined for economic reasons, 34 %, while

only 21% indicated ideological reasons as the main driver. Among the Islamist child soldiers from the Philippines, on the other hand, 90 % told about ideological reasons while none mentioned material needs. Another interesting contrast is that while 5% of the Filipino children told that being together with their father was an incentive for joining, 11% of the Central African children told that they joined in order to leave their families.

Furthermore, while the study on Central Africa did not ask in a systematic way about the punishment the children were exposed to in case they disobeyed, a regime of harsh punishment and fear among the children evidently prevailed. Fear was both a cause for staying as well for joining.[25] When the children from Mindanao, on the other hand were asked what happened if they did not follow orders, 62% told that nothing would happen. Their participation was voluntary. Indeed, the atmosphere in Mindanao appears strikingly different than in Uganda as does the welfare of the children who joined.

In order to gain a better understanding of these differences in organizational culture more closely, we now turn our attention to the application of force as a selective incentive. A violent organization must produce violence as a major part of its “output”. When the violence apparatus is already there, it is tempting to apply it for other purposes. It may be used both for recruitment of soldiers and as a (negative) incentive for controlling the behavior of the members after recruitment. It is selective in the sense that it is meted out to individuals, but it has also important spillover effects by creating general fear either among members or the population at large. While the spillover effects may reinforce the original selective effects, they are obviously imprecise. The fear may make soldiers more obedient or make them desert.[26] Fear may break resistance against recruitment or increase the efforts of potential recruits to hide. Children may respond differently from adults both to forced recruitment and to the internal force spillovers. A violent organization needs to consider both the effects of

any given mix of incentives and recruitment mechanisms when choosing its child soldier ratio.

Since the children who joined the Mindanao movement could stay in their home area most of the time, they did not lose contact with their family and could also even (with some interruptions) continue their studies at school. The data referred to above is about the motivation of the children, however, not the motives of the leadership of the organizations.

Another important organizational "variable" is the degree to which the structure of the organization is personalized: Is the loyalty towards a superior mainly based on his formal position or who he is? Children may more easily adjust to the latter form of management, which may be one of many reasons why child soldiering is mainly observed in poor countries where this management style is still quite common. As pointed out by Weinstein (2005) violent organizations with high social endowments are likely to use it to greater advantage and receive a higher share of voluntarily recruited children. Shepler (2004) describes how personal ties to commanders were important both in the recruiting and management of children in Sierra Leone. Children's need for security, to have someone to love and respect may be – rather perversely many would feel - transferred to military commanders.

An obvious factor is the nature of war and the kind of violence the children become involved in personally. In the exceptionally well-documented research from Northern Uganda reported in Annan et al (2006) and Blattman (2006a), children in the LRA who were involved in exceptionally violent situations show clear signs of psycho-social maladjustment.

The "market" for child soldiering and the child soldier ratio

To best understand why there are so many children participating in some military organizations and few or none in others, we need not only look at demand and supply in isolation , but also examine how supply and demand mesh. Children's voluntary supply and

the area characteristics – the ease with which they may be recruited by force constitutes the supply side. For example, factors such as poverty and family disintegration relate to children volunteering to join military groups (Goodwin-Gill & Cohen, 1994), while the protection of refugee camps relate to forced recruitment (Simon and Achvarina, 2006). Organizations' demand for children constitutes the demand side. While Gates (2004) presupposes an equilibrium solution, even though the supply side of his model is extremely rudimentary, this may not be the case. Given the possibility of forced recruitment as well as the high child unemployment rates in many areas in which the violent organizations operate,[27] the actual number observed, and therefore also the actual child soldier ratio, may not be an equilibrium outcome, although that is certainly a possibility. Indeed, while it is possible that the market for child soldiers is efficient, it is unlikely.

As a kind of a base-line analysis of out-of-equilibrium conditions, we focus first on the distribution of pecuniary rewards by a military organization with a rich economic endowment, which has recruited children on a voluntary basis. We then examine the implications of forced recruitment. Finally, we extend this analysis to look at the distribution of non-pecuniary rewards by socially-endowed groups.[28] We proceed with an analysis of pure excess demand and then pure excess supply condition.

Pure excess demand situations – this occurs when a violent organization tries to get more recruits than it is able to acquire of both adults and children. Here the supply side should determine the child/adult rate.

If, for some reason, a violent organization refrains from the use of force when recruiting both adults and children the child/adult ratio will be determined by the voluntary supply functions. The supply of child soldiers relative to adults will be affected by the distribution of landownership and prospects of inheritance for children, the stock of orphans,[29] family cohesion, child poverty levels (which will be influenced by differential birth rates by different

sectors of the population), child unemployment rates, and so on. In addition, children's expectations about their welfare after joining the violent organization are important and may also differ from those of adults. Excess demand situations may also arise in the final days for a military force that is losing. Nazi Germany and the American Confederate Army both employed child soldier volunteers as well as senior citizens in the final days of those odious regimes.

Excess demand may be resolved through forced recruitment, but an organization still may be unable to obtain all the recruits it demands (when forced recruits are not paid, demand may increase). In such a case, the child soldier ratio will be influenced additionally by the characteristics of the accessibility of recruits: the number of usable children vs. adults in the area; the ease of capturing a child compared to an adult; the existence of exceptionally good "fishing grounds" such as refugee camps or secondary schools; and so on. Even in this case the perceived excess demand will be influenced by the nature of the military contest. For example, in the face of losing battles, an organization is likely to experience excess demand.[30]

For socially-endowed groups with the ability to meet participatory and compatibility constraints through the distribution of functional rewards and solidarity norms, a condition of excess demand will also mean that supply conditions dictate. We expect to see no significant differences between socially and materially-endowed groups under conditions of excess demand.

Pure excess supply situations -- here it is the characteristics and the policy of the violent organization itself that will determine the child soldier ratio. The leadership's view about the desirable ratio will be instrumental. Let us again look at a couple of cases. When a violent organization relies only on voluntary recruitment methods and the distribution of economic incentives, excess supply means that at the "going rates" the organization may

recruit as many children and adults as it wants as long as it is able to meet the participation and compatibility constraints of the recruits. Hence, the leadership decides the number of children (and by implication, the child/adult ratio) on the basis of the expected profitability (taking into account the chances of victory in military contests) of their numbers and their mix. The child/adult ratio in this situation is based on cost and efficiency. Assessing the relative cost-efficiency of assigning children or adults to a range of tasks would be critical. Fighting would constitute only one of these tasks.

The case when a violent organization also recruits forcibly is in many ways quite similar. One may of course question the use of the term “excess supply” in cases when force is used. The idea is that the recruitment area contains such rich “fishing grounds” that it is always able to catch the desired number of either adults and/or children and could acquire more on the same terms if it so desired. The size of the organization may be constrained either by a lack of capital (especially with regard to the ability to acquire weapons) or by the nature of the war (especially with regard to its intensity and duration). The choice of the desired ratio is also in this case determined by the cost-effectiveness of children compared to adults, but the ratio is likely to be different. Furthermore, the optimal child soldier ratio will be higher in forced recruitment situations for the reasons outlined above regarding the general differences between children and adults, confirmed by the Uganda case.

When a group decides on a recruitment method, the possible interference on the cost efficiency between the methods should also be considered.[31] In any case, the observed child soldier ratio will be determined as a kind of average of the forced and voluntary rates of recruitment.

For socially-endowed groups in a situation of excess supply, we should expect recruitment to be more selective. Under such conditions, ideological, ethnic and religious criteria may be imposed in addition to a soldier’s ability to engage in violent activity.

Children are likely to be viewed as second-best labor and fewer of them will be recruited. Forced recruitment is also unlikely to be employed. Such organizations operating under conditions of excess supply will tend to have low child/adult soldier ratios. If a group is richly endowed both socially and materially, Weinstein's argument that material-endowments will crowd out social-endowments is unlikely to occur under conditions of excess supply. Because groups can be picky, they will choose those soldiers most positively pre-disposed towards certain non-pecuniary benefits (while taking into account, the soldiers' abilities). Identifying which individuals are more positively predisposed towards solidarity norms and functional benefits will be easier for identity-based groups – in which the criteria for selection is based on already belonging to a particular ethnic or religious group. For purely ideological groups, candidates may have to demonstrate their commitment to the cause, particularly through sacrifice.

Equilibrium – when supply and demand are in balance, we should expect marginal conditions to dictate recruitment patterns. Equilibrium may occur under different child/adult soldier ratios depending primarily on the nature of the war being fought. Military organizations engaged in direct competition with many battles will favor adults over children regardless of the nature of their resource endowment. Groups will also distribute a mix of pecuniary and non-pecuniary benefits to ensure that members' participatory and compatibility constraints are met. These conditions follow more directly from Gates (2004).

Conclusion

Drawing from the diverse fields of child labor economics, child psychology, and conflict studies, we have attempted to explain why a military organization would ever recruit a child as a soldier. We have compared the physical and psychological characteristics that distinguish children from adults and shown that aside from normative constraints, child labor

in military organizations can be viewed as a substitute. The implication is that in order to understand the phenomenon of child soldiers we also must understand the nature of the market for soldiers in general for both governmental forces and for groups fighting against the state.

Most research on the phenomenon of child soldiers has focused on factors that affect the supply of child soldiers (i.e. the number of children available for recruitment). The main argument of this paper is that to understand the great variation in the child/adult ratios across military organizations, we must look at the demand for child soldiers in addition to supply factors. This point is echoed in the chapters by Gutierrez and Pugel. Several variables play a key role in determining violent groups' demand for child soldiers. The organizational structure of the military group is especially important. Groups based on personal leadership are more likely to have a higher child/adult soldier ratio. The nature of a group's resource endowment is also an important factor, especially under conditions of equilibrium and excess supply. If a military group is unlikely to engage another army militarily, the physical differences between adults and children are minimized and they become substitutes for one another.

We do not mean to imply that contextual factors are irrelevant, but we are saying that such variables may not impact the child/adult soldier ratio directly. As described by Fearon (2005), the long-lasting low-intensity conflicts fought by violent organizations operating in rural neighborhoods are explained by a variety of political and economic variables. Moreover, these contextual factors, such as the orphan rate and the level of poverty in the area, dictate the supply of child that can be recruited voluntarily by a military group. These conditions, however, do not vary much from one war-zone to another. Indeed, supply factors alone cannot explain the big variance in child-soldier ratios across violent organizations operating in similar areas. Moreover, the fluctuations in the fortunes of war can cause strong

shifts in supply and demand (when losing, the demand goes up and supply down). Ultimately though, the child-soldier ratio is determined mainly by the policies and characteristics of the organizations themselves, not by the characteristics of the areas in which they operate.

Notes

[1] See for example Becker's (2006) comparison of Sri Lanka, Nepal and Burma.

[2] We have much sympathy for Shepler (2004) and other social anthropologists who insist that childhood is a social construct, and should be defined differently in different societies. Persons in their early 30s may then become children for some purposes. For our comparative questions, however, it is obviously difficult to stick to a definition of that kind.

[3] Normative concerns about whether children should be allowed or forced to participate in any armed forces, are equally important. The norms against children participating in wars as soldiers are extremely widespread – close to universal – which calls into question the degree to which it is a pure social construct. Otherwise it would be difficult to explain why there are, after all, so few child soldiers even in countries where children otherwise work with adults in most lines of activity from an early age.

[4] We would have expected children to get more involved in household tasks, but the child soldiers in Central Africa appear to deny it: while 60% claimed that they were "often" and 25% told they were "sometimes" assigned frontline duties only 25% admitted that they "sometimes" did household chores, and no one did it often (ILO/IPEC, 2003: 43). On the other hand, in at least one of the case stories the child boasts he is the only one that did real fighting. In Northern Uganda practically all the abducted children and youths had carried heavy loads, 30% had killed someone, 50% received guns (Blattman, 2006b: 44 – 45). The latter two numbers indicate that frontline duties must have been common, but probably not universal. Most children who were abducted for longer periods did carry guns, however.

[5] Petersen (2006) points out that there is little variation in weapons weight over the course of the 20th century. This argument, however, misses the main point about small arms, which regards their fire-power. An AK-47 is simple to use, easy to maintain, and very deadly. Indeed, the problem with Singer's argument is not about the weights of the weapons, but that the availability of such weapons is global, yet the variation in the number of children employed by different groups is huge.

[6] Informally, a complementary good is one that should be consumed with another good; for example, a printer and an ink cartridge. A substitute good can stand in the place of another good.

[7] In contrast, we have well-founded data about the effects of the experience of child soldiering on later mental states and behavior. See Derleyn, et al. (2004) and Dyregrov, et al. (2002).

[8] At this stage we neither accept nor reject observations of this kind. Observations from Burma (Human Rights Watch, 2002) suggest initially strong feelings of fear among children in their first violent encounters.

[9] They rely on psychological work that they claim has demonstrated that children are able to understand probabilities and expected value calculations. The monetary value at stake in the adult games was 10 times more than the one in the children's games.

[10] See a similar argument about the nature of childhood in the chapter by Gutierrez.

[11] The outcome of this practice is frequently very harmful to the young women or girls who often are abducted by force and exposed to various forms of sexual violence. The effects of society-wide-norms that allow or prescribe early sexual unions get perverted when embedded in organizations that rely on force. Forced recruitment of girls may cause an increase in the voluntary supply of boys, however, particularly in many of the African countries where the traditional marriage "markets" have broken down often due to increased scarcity of land. This illustrates how the surrounding social and economic

institutions impact the forms of violence – and maybe also in this case contribute as a cause. In this paper, however, we have chosen not to analyse systematically the gender aspects of the supply and demand for child soldiers.

[12] Generally speaking principal-agent models are used to model asymmetric information between a principal who employs an agent to perform some task and the agent who possesses an information advantage about his type or his actions. The problem of adverse selection is related to asymmetric information about type, and moral hazard problems are about hidden action problems.

[13] The ultimate exhibition of the functional benefits of fighting would be in the Viking heaven, Valhalla, where the chosen men would fight the whole day while their wounds and pain were healed during the night.

[14] That happened with quite a number of children who were recruited by Renamo in the refugee camps in South Africa when they were about to be sent into Mozambique to do actual fighting.

[15] For example under cascade-like recruitment, intrinsic political convictions may be wholly absent and ideological incentives may be as extrinsic as any threat of punishment or promise of dollars.

[16] Note that intrinsic motivation where the task is to kill may develop into what may be perceived as pure evilness and develop into cascades of killing. Here lack of discipline may open up for group behavior where the soldiers mutually stimulate their killing beyond reason. Presumably youth groups may develop such behavior more easily. Intrinsic motivation of this kind is more closely connected to functional rewards in which fighting is pleasure.

[17] However, see Brehm and Gates (1997) on the general futility of the coercive model of supervision.

[18] For example, André and Platteau (1998) who happened to collect land tenure data from a Hutu village just before the genocide, could demonstrate that adolescents were receiving very little land (against established traditions) while older land-holding males were over-represented among the villagers killed. Richards (1996) also notes that an important reason for the recruitment of youths to rebel organizations in Sierra Leone was their lack of access to land (although absolute scarcity of land was less pronounced than in Rwanda).

[19] In the literature on civil wars the terms “greed” and “grievance” are mainly used about different sets of causes of war. Greed is focused on economic factors that make it possible to finance rebel organizations and give them some chances to win military contests. Grievance regards political factors and forms of economic unfairness as explanatory mechanisms.

[20] Renamo made extensive use of economic incentives when they were receiving substantial economic support from South Africa. When that support disappeared, Renamo began to rely on forced recruitment and to recruit children, some very young. Almost nine percent of the recorded, demobilised Renamo soldiers were ten years old or younger (Weinstein, 2005). In Northern Uganda where LRA was relying on forced recruitment, the leadership appears to have some preference for very young ‘recruits since the average abduction ages increase at the later stages of the war when prospective abductees were more difficult to catch. (Blattman (2006b)

[21] This is also one of the reasons why housekeepers prefer young house girls to be recruited from distant areas. In this case they may even be hired before they are able to make any net economic contribution since they will then be locked in with their employer during a longer period before they may be able to run away. For some relevant data in connection with this issue, see Kielland and Sanogu (2002).

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[22] Specific to child soldiering is the observation made by some Western soldiers (in Sierra Leone) that children are more exposed to fears of heavy equipment and heavy noise. U.S. commanders therefore recommend more use of heavy helicopter gunships against child soldier forces than one should normally do, this not in order to kill more easily, but in order to frighten them and – in the end - to kill fewer children (Singer, 2001). We should also note that around 18 or 19 years of age conscripted youths may share considerable responsibility in handling modern tanks in countries like Norway and Sweden.

[23] The present situation in Sri Lanka appears to be a case in point. Internal fighting among Northern and Eastern Tamils have caused the Tamil forces to lose legitimacy and they are now applying more force when re-recruiting children, evidently expecting a new outbreak of the civil war (Becker et al, 2004)

[24] Hovil & Werker (2005) describe a failed rebellion and ascribe an excessive use of violence directed against civilians by the rebel organization as being related to economic motivation. In this case it was the need to signal efforts to an external sponsor that stimulated a seemingly non-rational use of violence. The assertion about higher level of violence noted among economically motivated organizations applies only in the context of guerrilla wars where the civilians are part of its constituency. There are exceptions such as Iraq. Specific ideologies may, of course, even stimulate the killing of non-constituent civilians beyond the point done by any "loot-seeking" organization.

[25] Nine percent joined because of fear. When one of the co-authors (Andvig) asked one of the scientific advisors of the ILO/IPEC study from Central Africa, Jon Pedersen (March 7, 2006) why they had not asked their child soldiers (ex- and present) about what kind of punishment they had received when they were disobedient, Pederson replied that it was common knowledge that disobedience implied death (hence no one to ask).

[26] As pointed out in Wiles (1977: 15--16) to make threats of force work, there must be some form of restraint on physical mobility. In a military organization operating in an area where control is unclear or divided, it is much easier to run away than it is from a jail or an area under strict control. Since many military activities there are limits of what may be achieved through a license to kill, the availability of very strong force incentives. ??? The lack of mobility of young children makes force more efficient in their case. The many stories about children who have to perform abhorrent public killing against and in front of former neighbors is obviously a way to restrain mobility artificially. Mutual monitoring induced by the shared negative consequences of desertion is a further barrier.

[27] Andvig (1998) points to different indicators of severe child unemployment in some African countries. For example, the considerable number of so-called "idle" children in Biggeri, et al (2003) supports this contention.

[28] Our analysis is limited to comparative statics. We will not explore the dynamic processes through which political motives and success in battle form a dynamic feedback. Such dynamic process-tracing would have to be more case-specific in nature.

[29] Reich and Achvarina (2006) explore whether orphan rates have any statistically significant effects on the child soldier ratios in African conflicts, and determine a negative result. This is not so surprising. The orphan rates will not be relevant when there is an excess supply of child soldiers (maybe partly caused by orphanage). It may not have any measurable impact on the aggregate ratio even if all child soldiers are orphans, since the number of child soldiers are so few compared to the total number of employable children. Since the number of orphans would be influenced by the conflict itself, we have also classical statistical problems of identification, particularly so since the variance of the child-soldier ratio is large compared to the variance of the orphanage rate. This is reflected in their range: while

the child soldier in their cases varies between zero and fifty per cent, the orphan rate varies between ten and seventeen per cent.

[30] Normally we would expect that depletion of recruiting grounds will cause an increase in the child soldier ratio and a shift towards younger children. Blattman (2006b) documents an opposite movement in North Uganda. Relying almost wholly on forced recruitment, LRA preferred somewhat younger children, but when this source was almost dried up it moved towards older children and adults.

[31] The ILO/IPEC (2003) reports on the impact of the mix of forced and voluntary recruits on the management of the organization. For example, in Burundi only the children who had volunteered were allowed to visit home.