International NGOs and 'Social Cohesion' after Civil War: Micro-level Evidence from Liberia[1]

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WORKING DRAFT. COMMENTS AND SUGGESTIONS ARE WELCOME.

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Abstract

This paper investigates the effects of programming by international non-governmental organizations (INGOs) on measures of social cohesion in postwar Liberia. Using rainfall as an instrumental variable for INGO access to communities and two-stage least square estimations (2SLS), I find that INGO interventions have positive effects on self-reported measures of collective action; on indicators of social integration and reconciliation and on the presence of institutions to manage and resolve local disputes. However, I do not find evidence for INGO effects on behavioral measures of interpersonal trust or on the levels of contribution to a community fund in a public good game. Finally, I find evidence suggesting that INGO effects on some outcome measures may be heterogeneous. I discuss the theoretical and practical implication of these results.

[1] This paper is part of my broader research agenda on the micro-foundations of peace-building in postwar countries. For helpful comments and advice, I am indebted to Bernd Beber; Guy Grosman; Aly Sanoh; and Boliang Zhu. All remaining errors are my own.

I. Introduction

Many scholars have argued that social cohesion is important for development (Easterly 2006) and democracy (Putnam 1993 & 2002; Boix and Posner 1998). In particular, social cohesion is considered to be a precondition for stable and self-sustaining peace in countries coming out of civil war (Woolcock and Narayan 1999). Yet, there are concerns that war-torn societies are prone to cycles of violence, presumably due to the devastating effects of civil war on social cohesion. Civil war, scholars argue, destroys the human and physical capital and hence the capacities for collective action (World Bank 2003; Collier 2002); damages norms of reciprocity and interpersonal trust (Posner 2004; Letki 2008); polarizes communities along socioeconomic cleavages (Wood 2008) and destroys formal and informal disputes management mechanisms (Ahmed and Green 1999). These destructions and their effects, the argument continues, pose serious challenges to peacebulding efforts.

In response, the international community embarked on ambitious social programming to restore the social fabric and patterns of relations in communities shattered by civil war (Jenson 2010; World Bank 2005). In particular, International Non-Governmental Organizations (INGOs) have undertaken a variety of programs and activities ranging from development projects to reconciliation interventions through mass media or workshops to disputes management skills training in order to foster social trust, promote inter-group reconciliation and enable collective action, among other objectives (Kumar 1999). [2] Ultimately these sorts of intervention seek to generate social cohesion—a concept used to describe the extent of connectedness and/or a sense of shared purpose among members of a given social setting—on the theory that without sufficient levels of it communities would be vulnerable to social unrest and conflict rekindling (Colletta and Cullen 2000).

But to what extent do these international interventions produce intended effects? Can outside actors, for example, have an influence on levels of interpersonal trust among community dwellers or enhance collective action between individuals and groups who don't

[2] These interventions have been part of a holistic strategy of the international community to build lasting peace in war-torn societies targeting by rebuilding their social, economic and political structures of war-torn societies with respect to pre-war status quo or transforming them altogether (Boutros-Ghalis 1995; Stedman et.al 2002; Paris 2004; Roeder and Rothchild 2005; Pouligny 2005& 2006; Newman et.al 2009).

see eye to eye? Unfortunately, we have very poor understanding of the relationship between international interventions and social cohesion in civil war's aftermath. There are a few studies (see, for example, Goodhand and Lewer 1999; Goodhand 2006; Werker and Ahmed 2007) that provide an assessment of the growing role of INGOs in peacebuilding and development processes. These, however, are largely descriptive accounts and, more importantly, they do not specifically focus on INGOs' role in promoting social cohesion. The few existing theoretical studies argue that social cohesion is a result of long-term indigenous processes (Bowles and Gintis 2004), while the political economy literature—largely cross-national—points to features such as levels of inequality or cultural diversity (Muntaner and Lynch 1999; Alesina and Ferrara 2002; Letki 2008). Studies in the latter category do not specifically address the role of outside interventions in promoting social cohesion. It is clear, however, that they imply that social cohesion is driven by structural factors rooted within society and over which outside actors can have very little influence.

The more serious challenge, however, is that it is very difficult to identify impacts of INGOs on social cohesion, both from a practical and methodological standpoint. Practically speaking, conflict and post-conflict settings are often very unstable and as a result researchers are not always able to collect information on INGO operations and on the changes they purport to bring about. Furthermore, by necessity, INGO interventions are assigned purposively to areas of greater needs such that areas that did and did not receive an intervention (or those did receive more or less programs) differ in important ways, for example, in terms of their prior histories in organizing or their levels of conflict-affectedness. There is no catchall way to separate out the effects of INGO interventions from the effects of confounding factors that may have prompted the intervention in the first place. An emerging field of enquiry has attempted to get around these identification issues through the use of experimental methods. Scholars have teamed-up with INGOs and helped randomize the relevant programmatic aspects so that any causal effects on social cohesion can be isolated. Studies in this research program have particularly focused on one aspect of international interventions, Community Driven Development programs (CDD) (Mansuri and Rao 2004; King et.al 2010). While it is too early to talk about knowledge accumulation in this fledging experimental literature, a consensus that

CDD programs have positive effects on measures of social cohesion, at least in the short term, has emerged (Fearon et.al 2009; Gugerty and Kremer 2008; Labonne and Chase 2008). At the same time, however, there is yet to be convincing empirical evidence of long-term effects of CDD interventions (Casey et.al 2011).

These recent experimental studies make an important empirical contribution to the study of outside interventions to promote social cohesion. The problem, however, is that in focusing on CDD—rather than on actual programs carried out by INGOs—these studies are actually not very informative about the efficacy of international interventions. CDD is not a specific program or activity. Rather, it is an approach that uses participatory processes (i.e. involves local populations and communities) in the delivery of relief and/or development aid provided by outsiders (Mansuri and Rao 2004).[3] Thus understood, at one level, it is difficult to disentangle the effects of CDD—as a participatory approach—from the effects of the program or activities being carried out. This is especially so given that control communities do not typically receive an intervention.[4] Moreover, the CDD framework does not capture the complexity of INGO programing. Not only do INGOs undertake a wide range of activities—sometimes through CDD, other times not—but also there is usually more than one INGO intervening. Thus, there is need to supplement these experimental studies with empirical studies that investigate INGO interventions more holistically.

This paper complements existing studies and attempts to estimate the effects of a wide range of INGO interventions on social cohesion across communities in postwar Liberia. I employ original surveys containing very rich information on all INGO activities carried out since the end

[3] This approach has become popular with the growing role of INGOs in international programming. Traditionally, relief and development programs have been carried out in a top-down fashion, often working with the host government. With the weakness or collapse of governments in many places, outside help was increasingly channeled through INGOs directly to local communities. INGOs frequently used participatory approaches in the delivery of services, the rational bring that local communities know their needs better and involving them in decisions about project selection and implementation would be most efficient and effective (Crowther 2001).

[4] Indeed, Olken's (2010) study on democratic outcomes in Indonesia suggests that effects from CDD programs may have do to more with the process rather the activities themselves. Unlike most CDD studies, all the 48 communities in his study were eligible to receive a public works project with the selection process being the only thing randomized (in half the sample, communities were allowed to decide on a project through voting of residents, while in the other half, decisions were made by a small council of traditional leaders). He finds that while there were no differences in terms of the types of projects that the two sets of communities selected, residents in participatory communities expressed greater contentment with the results than their counterparts in communities where the selection process was managed by a small clique of local elites.

of the civil war in 2003 as well as a wide range of survey and behavioral outcome measures of social cohesion in this postwar country. Using rainfall as an instrumental variable for INGO activities and a two-stage least square (2SLS) estimations, I find that INGO interventions have positive effects on self-reported measures of collective action; on indicators of social integration and reconciliation and on the presence of institutions to manage and resolve local disputes. However, I do not find evidence for INGO effects on measures of interpersonal trust or on the levels of contribution to a community fund in a public good game. Moreover, the results suggest INGO effects on some outcome measures may be heterogeneous.[5]

This paper proceeds as follows: Section two discusses the rationale for international promotion of social cohesion in postwar societies and possible mechanisms that are suggested in the literature. Section three provides a brief background to INGO interventions in Liberia and discusses my strategy for identifying the effects of INGOs. Section four discusses data sources and measurement of variables of interest. Section five presents the main empirical findings, while in section presents preliminary evidence on potential heterogeneity in INGO effects across different groups and settings. Section seven provides a detailed discussion and interpretation of these findings and section eight provides some conclusions.

II. INGO interventions and social cohesion after civil war

Students of postwar social processes typically make two claims: (i) there is very little social cohesion that remains in the wake of civil war, leaving postwar societies vulnerable to another violent conflict; and (ii) postwar societies are unable to regenerate social cohesion on their own, in part due to institutional deficiencies. These two claims typically provide a rationale for international interventions. I discuss these claims in turn, highlighting the logics underpinning the presumed links between international interventions and social cohesion in the aftermath of civil war. But given that there is little consistency in how these two concepts are employed in the literature, some conceptual clarifications are in order.

[5] Many readers may argue that rainfall is likely to be related to many other factors such as economic growth (see, for example, Miguel et.al 2007) and thus might affect social cohesion by way of those other factors rather than through the INGO channel. However, as I will show, rainfall within Liberia tended to be uncorrelated with theoretically relevant observable characteristics and this increase the likelihood that the exclusion restriction requirement will be satisfied.

a. Defining INGO interventions

INGOs are generally defined as private organizations not established by a government or by intergovernmental agreements that serve a particular cause or mission—such as poverty alleviation, promotion of human rights and democracy, education, environmental conservation, to name a few— on a not for profit or voluntary basis (Charnowitz 1997; Martens 2002). While INGO interventions are not new phenomena, their burgeoning and growing importance in global affairs is, in Weiss's (1999) words, "a striking dimension of contemporary international relations." The growing importance of INGOs is in part due to the decay of many states in the developing world, and with this decay, their inability to fulfill functions as basic as the delivery of social services. There has also been increasing realization that INGOs possess comparative advantage relative to other responders such as bi-lateral and multilateral agencies, host governments or local civil society groups. Typically, INGOs: (i) are viewed as more efficient and cost-effective service providers; (ii) have the least barriers to entry in the disaster or impacted zones; and (iii) have greater ability to respond fast and more flexibly (Edwards and Hulme1998; Crowther 2001; Werker and Ahmed 2007; Muriuki 2005).[6]

Moreover, contemporary INGO programming differs from traditional interventions in a number of ways. First, the traditional role of INGOs tended to be limited in time and scope.[7] INGOs typically intervened in response to complex emergencies such as natural disasters to provide quick immediate relief to the affected population. Contemporary INGOs, however, provide much more than relief support and play a prominent role in peacebuilding and development activities (Duffield 1994; Natsios 1995; Uvin and Weiss 1998; Large 2001; Spiro 2002; Goodhand 2006; Lewis and Kanji 2009).[8] Second, contemporary INGO interventions have

[6] For instance, bi-lateral and multilateral agencies often have stringent procurement rules and regulations—not to mention bureaucratic red tapes—that may hamper timely service delivery to populations in need. Moreover, these agencies tend to have stiffer security requirements which, which again limit their flexibility in the field.

[7] A distinction should be drawn between INGOs two other sets of impact actors: (i) bilateral organizations such as the United States Development Agency (USAID) and multilateral institutions such as the World Bank; and (ii) local NGOs Community-Based Organizations. The former typically provide funding and other resources to INGOs, while the latter typically help to implement projects on the ground (Crowther 2001).

[8] Humanitarians typically make a distinction between relief and rehabilitation activities that target immediate needs to help people survive in the aftermath of a shock and rehabilitation or reconstruction activities that target long-term, capacity-building in terms of helping people reestablish their livelihoods in a self-sustaining way (McClelland 2000). This paper investigates both.

the novelty of assuming functions that were once seen as the prerogative of domestic governments (Doyle and Sambanis 2006). Indeed these interventions have penetrated in postwar societies with unprecedented level of breath and depth, targeting directly the social, economic and political aspects of local people's lives (Kumar 1998; Russett and O'Neil 2001; Paris 2004; Pouligny 2006). This paper investigates impacts of INGO interventions on social cohesion, another concept loaded with many different meanings.

b. Conceptualizing social cohesion

While social cohesion has increasingly become a subject of extensive inquiry in the literature on postwar social and political processes, there is very little clarity and consistency in how it is employed (King et.al 2010). Social cohesion is variously defined to refer to: positive attitudes (or at least tolerance) towards members of the outer group (Maynard 1997; Whitt and Wilson 2007; Bowles and Gintis 2004); greater levels of interpersonal trust (Posner 2004; Widner 2004; Glasser et.al 2000; Alesina and Ferara 2000&2002); the presence of strong social bonds reflected in, for example, levels of cooperation or greater propensity to contribute to a common good (Putnam 1993&2000; Mansuri and Rao 2004; Bowles and Gintis 2003; Easterly et.al 2006; Fearon et.al 2009; Gilligan et.al 2011); the presence of formal and informal networks—especially, institutions to manage and resolve disputes peacefully (Maynard 1997; Varshney 2001); or to all of the above (Colletta and Cullen 2000; Letki 2008; Casey et.al 2011). Each of these definitions makes claims (at least implicitly) about certain aspects of social relations in a given setting.[9] Implicit in these various definitions is that people in more socially cohesive communities possess a sense of shared purpose as well as individual and social assets such as networks of relationships or ethnic tolerance that enable them to work towards the wellbeing of all their members (Hooghe and Stolle 2003; Friedkin's 2004). In short, each of these definitions highlights some aspects or attributes of social cohesion such that the more cohesive a community the better it will fare along many of these attributes (Colletta and Cullen 2000; King et.al 2010).

[9] Hence, Friedkin's (2004) conceptualization suggesting that these different indicators of social cohesion are theoretically close in the sense that "they deal with aspects of a person's attraction or attachment to a group" and thus "they might be treated as multiple indicators of a single individual-level construct, as different dimensions (each with multiple indicators) [sic] on which social cohesion is manifested, or causally related variables."

The question, then, is whether these various indicators have a common or multiple underlying structures or dimensions. The tendency in the peacebuilding literature is to assume that these various aspects of social cohesion is a unidimensional concept in the sense that people use these various aspects of social relations interchangeably. For instance, a community with greater levels of collective action is as cohesive as one with greater levels of social trust even if the latter does not have commensurate levels of trust. However, as Friedkin (2004) remarked, groups may be cohesive in different ways and within the same group, members may contribute to the cohesion of the group in different ways. Thus, it may be more useful to think of social cohesion as a multidimensional concept and each dimension may have multiple indicators on which social cohesion is manifested. The implication here is that people and/or groups will tend to specialize in aspects of social relations that they deem most effective to serve their purpose. For instance, some groups might put more emphasis on interpersonal trust while others put more emphasis on contribution to public goods and this difference would not necessarily suggest that one is more cohesive than the other.

For the purpose of this paper, I follow (Colletta and Cullen 2000) in employing a definition of social cohesion that emphasizes two features of community: (i) the presence of strong social bonds reflected in, for example, levels of trust; propensity for cooperative action; levels of ethnic tension and other forms of polarization; norms of reciprocity that *go beyond ethnic boundaries* (Putnam 1995);[10] and (ii) the presence of institutions and mechanisms to manage and resolve disputes peacefully (Varshney 2001).[11] But I go a step further and argue that the various indicators that the peacebuilding literature links to social cohesion can be clustered, at least from an analytical standpoint, in four dimensions: (i) *capacity-building*, mostly defined by outcomes related to collective action; (ii) *enabling environment*, mostly

[10] It should be noted that the project focuses on heterogenous communities in which a variety of cleavages exist. As such, the concept of social cohesion, as employed in this paper, is closely related to Putnam's (2000) notion of "bridging" social capital.

[11] Arguably, every society has some level of conflict (Lipset 1981; Doyle and Sambanis 2006). But these two features are what distinguish violent societies from less violent ones. More cohesive societies not only possess values and norms that enable positive relationships and cooperation between groups, but they also possess institutions and mechanisms necessary to mediate and manage conflicts before they escalate into violence. Less cohesive societies, on the other, possess neither and this put them at greater risk of fragmentation and violence. As Colletta and Cullen (2000) notes, "Weak social cohesion increases the risk of social disorganization, fragmentation and exclusion and the potential for violent conflict." (13).

defined by outcomes related to physical security; (iii) *disputes management mechanisms*, defined by outcomes related to institutions and mechanisms of dispute settlements; and (iv) *social integration and reconciliation,* defined by outcomes related to inter-personal trust, mutual acceptance, ethnic prejudices etc. Different communities might have different needs along these dimensions. From an empirical standpoint, we may not be able to measure social cohesion directly. But each of the dimensions I propose has indicators that can be readily measured. The purpose of this paper is to investigate whether and how INGO interventions affect these dimensions in the aftermath of civil war.

c. Civil war, INGO interventions and social cohesion in the aftermath of civil war

Why should international INGOs be expected to effectively promote social cohesion? Conventional wisdom argues that civil war weakens social cohesion, making it difficult for individuals and groups to live in peace and work with one another once the war is over, or worse, threatening resumption of civil war violence (Colletta and Cullen 2000; World Bank 2005; Collier 2006).[12] A corollary to the claim that civil war depletes social cohesion is that it also exhausts local capacities, especially state institutions, which are supposed recreate social cohesion by repairing broken social relations or at least to shape the context within which social cohesion might be generated.[13] More problematic, however, is that the state might have been one of the conflict protagonists, thereby loosing legitimacy in the eyes of some individuals and/or groups and thus any leverage to mediate relations and conflict. Either way, the concern among international interveners is that simmering tensions in postwar settings, coupled with

[12] However, there is no evidence base for this new conventional wisdom. Much of what we know about the links between civil war and postwar social cohesion comes from case studies that describe relations between individuals and groups such, without taking into account what those relations might have looked like before the civil war (Bakke et.al 2009). Indeed, a growing number of recent empirical studies have challenged this conventional wisdom with findings suggesting that were severely affected by civil war tend to fare better than those than were not affected as severely (see, for example, Whitt and Wilson's 2007 study on patterns of ethnic cooperation in postwar Bosnia and Herzegovina and Gilligan et.al's 2011 study of social cohesion in postwar Nepal). Crucially, though, these studies do not take into consideration that areas that experienced high levels of conflict may also have been beneficiary of greater international interventions.

[13] There is a large literature on the role of the state in fostering social cohesion (see, for example, Putnam 1995; Easterly et.al 2006). Levi (1998), for instance, notes that individuals and groups do not often trust one another because of their inability to overcome informational, monitoring and enforcement problems. She goes on to argue that the state can facilitate trust by solving these problems, as when it increases social rights to reduce personal dependencies that often result in distrusts and conflicts. Yet, in many postwar settings, states existing only nominally with very little capacity to fulfill basic functions expected of them (Jackson and Rosenberg 1989; Fearon and Laitin 2004; Rotenberg et.al 2004; Bates 2008).

the absence of strong institutions to manage such conflicts can increase the risk of conflict rekindling. Consider, for example, the following excerpt from a concept note prepared by the civil affairs section of the United Nations Mission in Liberia (UNMIL) to motivate a social cohesion intervention:

> Post-conflict Liberia has clearly demonstrated that social relations are still marked by rampant distrust, suspicion, bias and disarticulation that are normally associated with protracted social conflicts. The country has multiple sharp ethnic, religious and geographical cleavages that make for a highly combustible combination. They pre-date, and in some cases, caused the violent conflicts. In fact, cleavages, and the simmering tensions associated with them cut across communities all over the country; ethnic, religious, and cultural differences coincide with different preferences, interests and resource access and availability, and problems associated with past or current political affiliations, to find different expressions in different communities. A more systematic government framework to manage such conflicts however remains absent. While localized conflicts are unlikely to derail the country in the short-term, they could re-ignite potentially violent tensions in the medium-to-long term (UNMIL-CAS, 2009).

A state's inability to provide a predictable environment and basic services such as security means that individuals and/or groups might try to find alternative providers. Very often this means turning to their own groups who might (re) militarize in an attempt to keep opponents in check, if not to gain the upper hand in an event of a struggle. This situation might prompt the other side to follow suit and quickly spiral into a punishing security dilemma (Posen 1993; Kaufman 1996; Lake and Rothchild 1996).[14] Likewise, individuals and groups are less likely to entrust their security and well-being to a government they have been battling or which they hold responsible for their predicaments. If anything, the battle lines and cleavages might even harden, thereby dashing any hopes for the state's ability to create stable social order (Lake 2006). Indeed, in an influential article, Kaufman (1996) goes so far as to claim that "Restoring civil politics in multi-ethnic states shattered by war is impossible because the war itself destroys the possibilities for ethnic cooperation."[15]

Posner (2004) argues that a state's failure or unwillingness to provide basic functions necessary for a minimum of normal social relations can be supplied by civil society—that is, the intermediate associational realm that lies between the state and basic social units such as individuals and families" (Caparini 2006). The problem, however, is that postwar settings don't

[14] But see Fearon and Laitin (1996) on intergroup cooperation mechanisms, even in a low trust environment.
[15] See Sambanis (2000) for a critique of this line of arguments.

typically have a viable civil society that can step up to the plate. The decay of the state, as many scholars have pointed out, tends to go hand-in-hand with the impotence of other societal actors, thereby creating huge local deficiencies. Thus, outside actors are often the only viable outlets to compensate for local deficiencies—at least in the initial stages of recovery (Weiss 1999; Doyle 1996; Doyle and Sambanis 2006; Russett and O'Neal 2001). But how do international interventions, INGO in particular, compensate for these local deficiencies? The literature has not laid out (at least explicitly) a theory linking international interventions to social cohesion after civil war. However, it seems to suggest three distinct roles for international interveners in the process of fostering social cohesion: (i) substitution; (ii) advocacy and (iii) mediation. Each of these mechanisms is linked to a particular dimension of social cohesion and entails different sets of roles or functions. I discuss these mechanisms to highlight different ways through which the literature links international interventions to social cohesion in post-conflict settings and deduce a general hypothesis about these relationships. The goal, however, is not to test the relative relevance of these mechanisms.

The first mechanism suggests that international interveners compensate (albeit temporarily) for the weakness of the state by providing institutional infrastructure as well as basic services such as security or law and order. Substitution has been variously described in the peace-building literature, from transitional authority or administration (Doyle 1996; Chesterman 2004) to international trusteeship (Krasner 2004; Fearon and Laitin 2004). These different descriptions, in essence, capture some form of control or governance over significant areas of domestic affairs on behalf of local residents (Lake 2006).[16] In practice, substitution entails first and foremost provision of security to create an enabling environment for social relations and this is typically the task of peacekeeping forces with coercive capacities (Fortna 2008).[17] But perhaps more relevant to INGO programming, the substitution mechanism also

[16] Broadly speaking, the form and extent of substitution varies a great deal can also range from providing support or technical assistance to local institutions to take over of significant parts or whole of the state apparatus at least for some time. The latter typically involves multidimensional peacekeeping operations, as it was the case in Cambodia with the United Nations Transitional Authority in Cambodia (UNTAC) or in Sierra Leone with the United Nations Mission in Sierra Leone (UNAMSIL).

[17] I do not discuss this aspect of substitution in detail, in part because focus on this paper is not on peacekeeping. But the underlying logic is that without a secure and predictable environment, as Maynard (1997) notes, "healthy social patterns between dissimilar groups are replaced by distrust, apprehension, and outrage, impairing

entails provision of social services such as food, schools, clinics and other non-material services such as psychological counseling or peace education directly to the local population. In current peacebuilding strategies, these activities are typically delegated to INGOs (Lake 2006). Indeed, provision of social services has arguably become a defining function of INGOs such as the US-based International Rescue Committee (IRC) or the UK-based Oxfam international (Weiss and Uvin 1998; Spiro 2002; Werker and Ahmed 2007).

Some INGO projects and activities seek primarily to promote social cohesion by enhancing community capacity for collective action, the rationale being that such capacity will help "return the community to its prewar state and reestablish a sense of normality…help local populations regain control over their lives, inducing a profound calming and reassuring effect" (Maynard 1997).[18] Other INGO projects have trust-building attributes. For instance, some projects require intergroup participation or shared management and maintenance, as was the case of a water project in postwar Bosnia that was conditioned on the participation of previously warring ethnic groups in the process of construction and management (Maynard 1997).[19] Two logics underpin the links between capacity-building interventions and social cohesion. On one hand, the presumption is that healthy social relations cannot be established without a minimum of economic security, especially since competition over scarce resources is often at the root of social conflict (Kumar 1999). On the other hand, greater personal and group investment in bridging activities means that one's well-being is now tied to the well-being of the outer group. Thus INGO projects aim either to rebuild capacities and thus facilitate the

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community cohesion, interdependence, and mutual protection" (207). Thus, by providing a modicum of security services, international peacekeepers help create conditions that enable normal relations between individuals and groups and thus increase the likelihood of social cohesion.

[18] Moreover, INGO projects and activities are increasingly carried out through the CDD approach, which emphasizes participation of beneficiaries in selection process and implementation and presumed to be a mechanism linking the intervention to social cohesion. The hypothesis, then is that, as King et.al (2010) notes, "by handing over control of decisions and resources to the community, the sub-projects will better meet communities' needs and enhance ownership; and that the experience of being involved in this participatory process will empower communities, improve capacity for development and improve social cohesion."

[19] Another logic behind these trust-building project is that what undermines social cohesions is the misconceptions that parties form of each other and that repeated contacts and interactions between groups are necessary to reduce threat perceptions. Given that such interactions may be difficult to initiate—let alone sustain—in the immediate aftermath of civil war, the presence of a third-party that is trusted by both sides may be necessary. Overtime, as parties get to know each other, they will update their perceptions and beliefs about the other and interactions will become self-sustaining. The implication for social cohesion here is not that parties have to fully trust each other or have intimate relations, but rather that they do not perceive each other as a threat.

restoration of normal social relations or to enhance cooperation between people who might have reasons to avoid each other. Hence, we should expect to see that activities carried out under this part of the substitution model to have greater impacts on outcomes related to the capacity building dimension of social cohesion.

Advocacy, the second function of international interventions, is generally used to highlight the growing power and role of non-state actors (e.g., transitional advocacy networks) in global politics (Keck and Sikkink 1999) and, particularly, in reference to activities by INGOs aimed to influence the global agenda or pressure governments to undertake a particular policy course (Weiss 1999). This is the case, for example, when INGOs such as Human Rights Watch or Amnesty International bring human rights abuses to the attention of the United Nations and lobby it to adopt a resolution or sanctions to get the offending governments change their behavior (Risse et.al 1999). There is a counterpart to this mechanism in the context of social cohesion interventions in postwar settings. International actors—especially INGOs and the civilian components of peacekeeping missions—carry out advocacy campaigns designed to convey specific messages that might lead to attitudinal and behavioral change (King et.al 2010). Interventions in this category include specialized training and workshops on conflict resolution methods (See, for example, Staub et.al 2005); media programming focusing on intergroup reconciliation messages (Kumar 1999; Levy-Paluck 2009) and various formal and informal education programs.[20] Advocacy programs, sometimes referred to as curriculum interventions, presume that people in war-torn societies mistrust each other and these mistrusts often lead to greater misunderstandings and threat perceptions. Misunderstandings and threat perceptions, in turn, can lead to intolerance and violence (Gibson and Gouws 2001; Whitt and Wilson 2007). Advocacy interventions tend to draw from a theory of change that emphasizes the role of specific messages in fostering mutual understanding and transforming deep-rooted issues at the heart of the conflict. The presumption then is that, greater understanding of the other will reduce prejudices against them—'humanize' them so to speak—such that they are no longer perceived as a threat. [21] This change in threat perception, in turn, will enable better

[20] See Kumar (1999) and King et.al (2010) for a review of these interventions.

[21] Along these lines, the Inter-agency Network for Education in Emergencies (INEE)—a global network of representatives from INGOs and UN and bilateral agencies working in the educational sector—developed a peace

communication and dialogue, alleviation of mistrusts and accommodation of the outer-group and greater social cohesion as a result (Kumar 1999). Thus, we should expect to see that activities carried out under this model have greater impact on outcomes related to the social integration and reconciliation dimension of social cohesion.

Finally, international actors also can play the role of third-party mediator between contending local forces. As mediators, international actors typically work with individuals or communities to directly help resolve specific social tensions and problems, ranging from domestic violence, to land conflict to property disputes, to name a few. International interveners attempt to settle the contentious issues and diffuse tensions, generally through mediation or negotiation or to prevent their escalation into widespread violence (Maynard 1997). As in the substitution model, the involvement of outside actors is often triggered by the absence or weakness of relevant institution. But in many cases, the relevant institutions are either absent, weak or simply corrupt and thus not trusted. Left unattended, people may try to take matters in their own hands and the situation can quickly escalate beyond the original parties and lead to deadly clashes. Thus, international actors often fill this vacuum, sometimes by getting directly involved in the settlement process[22] and other times by helping to set up mechanisms or supporting local institutions such as peace committees or Community-Based Organizations (CBOs) that can mediate and resolve disputes[23] (Lederach 1997). In either case, the association of international actors in the process of local dispute settlements gives it more legitimacy because they possess something that is often in short supply locally: they are not a party to the conflict and this means they can be trusted by contending forces (Maynard 1997). Thus, we should expect INGO activities carried out under this model to have greater impacts on outcomes related to the disputes settlement mechanism dimension of social cohesion.

To sum up, the foregoing discussion suggests why international assistance to promote social cohesion may be necessary and reveals potential mechanisms through which that aid

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education curriculum to promote mutual understanding and thus prevent and resolve conflict peacefully and has been used in thousands of schools and communities in dozens postwar countries. See http://www.ineesite.org/

[22] Examples of direct interventions include work by the Norwegian Refugee Council's (NRC) in helping to mediate land disputes at the grass-root level in Liberian communities, especially between, on the one hand, refugees and returnees and on the other hand, local residents (see, NRC report http://www.nrc.no/arch/_img/9546544.pdf).

[23] Examples of this indirect intervention include the Carter Center's work with traditional leaders in Liberia on conflict management and dispute resolution methods.

may produce the intended effects. INGO activities are necessary because levels of social cohesion and capacities remaining after civil war are presumed to be low and these deficiencies can increase the risk of conflict. More specifically, INGO interventions can contribute to social cohesion in three distinct ways: (i) through *substitution* by carrying out activities designed to increase economic security and the capacity of local communities for collective action; (ii) through *advocacy* by carrying out a variety of activities such as educational curriculums or media programming designed to induce attitudinal and behavioral changes (e.g., prejudice reduction); and (iii) through *mediation* by helping to settle contentious issues and diffuse tensions or supporting local institutions that manage such disputes. Furthermore, the foregoing discussion also suggests that each of these mechanisms is linked to a particular dimension of social cohesion. These arguments are summarized in Figure 1 below.

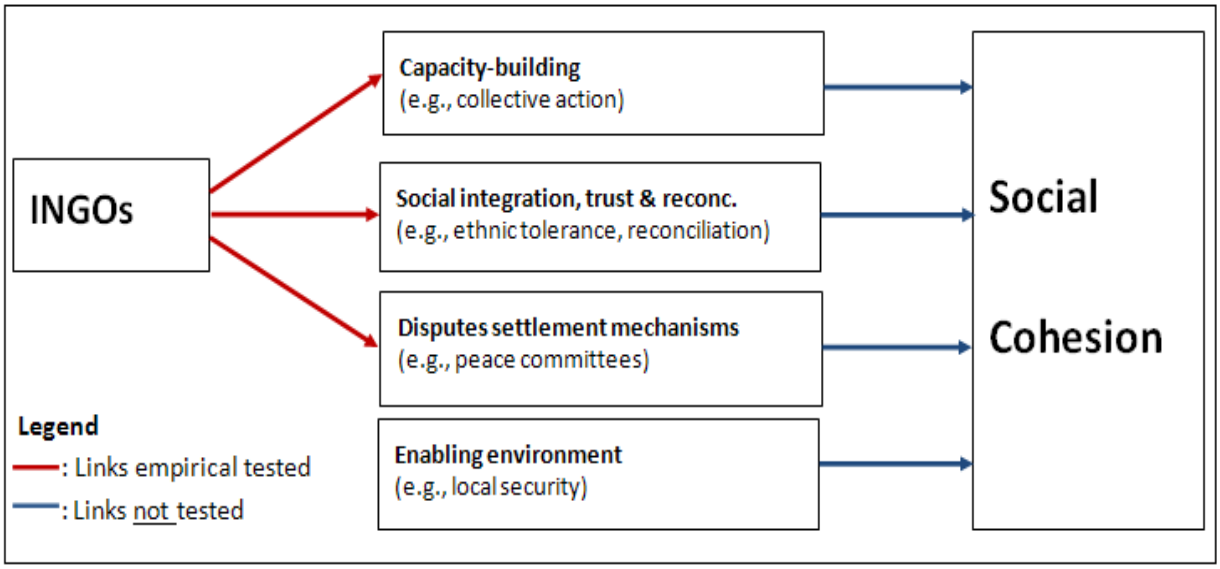
The implication and thus a research hypothesis I investigate in the following empirical section is that *the more INGOs intervene in a given community the more outcomes associated with dimensions of social cohesion we will expect to see.* This hypothesis is motivated by two assumptions. First, INGOs tend to specialize in specific activities and thus it is reasonable to assume that they will carry out activities that fit within their mission or mandate. Second, the more INGOs intervene in a particular community, the more likely they will be diverse in terms of the activities they carry out.[24] Thus, the density of INGO activities will be the primary explanatory measure of interest. Admittedly, INGOs are heterogeneous in their sizes and functions that counts alone cannot fully capture the relevant aspects needed to be measured. [25] Therefore this paper will also look at alternative measurements, including the duration of INGO projects. Furthermore, social cohesion may not just (or even primarily) be a result of INGO interventions and contextual factors such as baseline levels of social cohesion, the amount of existing local capacities, levels of conflict affectedness may matter a great deal. Moreover, there may be a tension between short-term success of INGO programming on social cohesion

[24] This follows directly from the division of labor principle and likelihood of INGO coordination.

[25] Moreover, some studies have pointed out that to be effective, international interventions (including INGOs) have to get the design of the programs right; have adequate resources commensurably with the taks at hand (Doyle and Sambanis 2006) and be seen as neutral and legitimate (Talentino 1997; Lake 2006)—which is not always the case. Moreover, INGOs tend to be heterogeneous in their sizes and functions such that the number alone cannot capture

and long-term sustainability—as a recent foreign-funded CDD program in postwar Sierra Leone illustrates (Casey et.al 2011). These are important research issues, but beyond the scope of this paper. The primary purpose in this paper is to investigate the effects of INGO interventions on levels of postwar social cohesion, while acknowledging that levels of social cohesion may result from other contextual factors that I do not investigate in depth here.

Figure 1. INGO Interventions and Social Cohesion after Civil War



Note: The middle boxes represent dimensions of social cohesion and each has various indicators that can be measured empirically. Notice that there is no arrow going from INGOs to the enabling environment dimension defined by security-related outcomes—at least in the traditional sense—because I do not expect INGOs to have direct impact on outcomes associated with this dimension.

III. Identification Strategy

a. Background to international interventions in Liberia

Liberia, a small coastal country in Western Africa, was embroiled in a 14-year civil war that claimed the lives of 200,000 people and displaced more than a million others into neighboring countries.[26] The causes of this civil war were multiple and complex (Adebajo 2002; Amos 2005). Armed rebellion started in 1989 when the self-proclaimed National Patriotic Liberation Front (NPLF) launched attacks in Nimba County, from neighboring Ivory Coast. The conflict escalated when the Kran-dominated government forces retaliated against civilian populations from the Mandingo and Gio tribes of the region. The rebel forces led by Charles Taylor, a former

[26] http://www.un.org/en/peacekeeping/missions/unmil/background.shtml

government employee, quickly overran much of the countryside and a splinter faction led by Prince Johnson captured and executed the dictator Samuel Doe. The country plunged quickly into turmoil, as no faction was able to gain a decisive upper hand. This civil war saw many twists and turns with several ceasefires signed and violated by the warring parties and a fraudulent election that brought one of the warlords, Charles Taylor, to power but ultimately proved to be short-lived, as the armed groups reconstituted themselves and started new rounds of violence (McGovern 2008). The situation came to a head in 2003 when Charles Taylor was forced to step down under pressure from the United States.

This development paved the way for the establishment multidimensional peacekeeping operation, the United Nations Mission in Liberia (UNMIL), with 15,000-strong peacekeeping troops and hundreds of international and local civilian personnel to accompany the political transition and rebuild the country's social, economic and political structures. Perhaps more relevant to this study, this civil war wrought unimaginable social toll to individuals and communities such as the thousands of families who lost their loved ones, communities completely destroyed, millions of people who were forced out of their homes and property or forced to separate with their loved ones, to name a few. Indeed, with the end of the civil war and people settling back in their communities, new challenges such as land conflict and tensions between returnees and those who stayed behind started to threaten the fragile peace.[27] It is against this backdrop that the international community intervened to, among other things, rebuild the social fabric and prevent the country from slipping in another civil war. INGOs started to make their way to Liberia as early as 1998 and by 2005, more than sixty INGOs (not counting bi-lateral and multilateral agencies) were already carrying out a variety of programs and activities to, among other things, promote social cohesion across communities in Liberia (MSG Report 2009).[28] The objective in this paper is to investigate whether and the extent to which these INGO interventions contributed to levels of social cohesion in this postwar country. Below I outline an empirical strategy for identifying any such effects.

[27] http://www.nrc.no/arch/_img/9531749.pdf

[28] The Management Steering Group (MSG) is a network of international NGOs operating in Liberia. This report lists INGOs (at least those that accepted to register with the MSG) as well as the projects and activities they carried out and the general locations. The list does not include UN agencies such as the United Nations Development Program (UNDP) or government agencies such as the USAID, who often carried out interventions in partnership with INGOs.

b. Identification strategy

Identifying the effects of international interventions is challenging due to what statisticians call "selection" or "omitted variable" bias. Insights from the macro-level peacekeeping literature (see, for example, Stedman and Gilligan 2003; Gilligan and Sergenti 2007; Fortna 2008) suggest that outside interventions, peacekeeping or otherwise INGOs, are seldom random. By necessity, international presence and tasks are assigned purposively to areas of greater needs such that areas that did and did not receive an intervention (or those did receive more or less programs) differ in important ways, for example, in terms of their prior histories or organizing, levels of conflict-affectedness and these characteristics could be driving both the decision to intervene and the potential outcomes of interest between the two areas. These problems are often compounded by researchers' inability to identify—let alone accurately measure—all factors that might be influencing both the explanatory factor and outcome of interest. As a result, it is often difficult to obtain causal estimates that are consistent (i.e. closer to the true value). Statisticians have suggested a variety of techniques, such as matching or instrumental variables, to get around these challenges and try to disentangle the effects of an intervention of interest (of INGOs in this case) from those of these other factors that may have prompted an intervention in the first place (Gelman and Hill 2007).

In this paper, I use an instrumental variable (IV) approach to identify the effects of INGO interventions on measures of social cohesion across sets of communities in postwar Liberia. I argue that upon arrival on the ground, INGOs have to make quick decisions about programming locations based on limited and imperfect information about local conditions. They often rely on short-cuts such as the most recent weather patterns and conditions to make inferences about accessibility in the various communities eligible to receive program activities, even though these short-cuts are not reliable predictor of the information they ultimately seek to get.[29] Once decisions are made, they can be difficult to undo. While it is always possible to get updated information at a later stage, such information is less likely to dramatically alter programing patterns, in part due to public relation implications and fixed costs of the initial deployment. More specifically, in Liberia, I argue that rainfall levels in 1998 and 1999—dates at

[29]The reasoning will be that communities that experienced more rain are more likely to be inaccessible. Ironically, there is virtually zero correlation between rainfall and road networks and accessibility.

which INGOs started planning interventions in this country—strongly influenced programming decisions and patterns in the ensuing decade and thus provide an exogenous source of variation in INGO access and activities. I use rainfall levels in 1998 and 1999 because this period marked the debut of INGO programming (see Figure 4 in Appendix A). The war was believed to have come to end and several INGOs were on the ground to do their need assessments and plan responses. As we know, however, the window of peace was a very brief one, as the second war started in late 1999, before many of these INGOs even had a chance to rollout activities on the ground. Thus, to the extent that INGOs use weather patterns and conditions in their planning, then it makes sense to use weather information in 1998 and 1999 when most INGOs were doing their planning as an exogenous predictor of where they ultimately decided to operate. Before I proceed, however, a quick summary of an IV approach is in order.

The basic idea behind an IV solution is to find a variable Z that is plausibly exogenous, but highly correlated to explanatory variable of interest X suspected of being endogenous (i.e., correlated to the error term) whose effect on some outcome variable Y we are trying to estimate. Then the portion of variance in X that is explained by Z can be isolated to estimate causal effects on Y (Imbens and Angrist 1994; Angrist and Krieger 2001). To be valid, however, an instrument has to meet a number of assumptions, the most important being: (i) a non-zero (ideally stronger) correlation with the endogenous explanatory variable; and (ii) an exclusion restriction stipulating that the instrument affects the outcome only through its effects on the explanatory variable. The estimation procedure itself proceeds in two stages. In the first stage, the offending explanatory factor is regressed on the instrument alongside other exogenous variables to obtain predicted values of the offending regressor (i.e. isolate that overlapping portion of variance that is correlated to the instrument).

Moreover, the goal of the first stage regression is to test the relevance of the instrumental variable (i.e., the first assumption). That is, a strong instrument should be fairly significant in the first-stage regression and there are some diagnostic tests for this. In the second stage, the fitted values obtained in the first stage substitute for the endogenous variable of interest in the original model. Estimates from this stage should be reliable causal estimates (since the fitted values used in place of the endogenous regressor should not be

correlated with the error term).[30] I make the case that rainfall for 1998 and 1999 across Liberian communities is a valid instrument for the levels of INGO programming in subsequent years, with communities that experienced relatively heavy rainfall receiving fewer INGO activities and those that experienced relatively less rainfall receiving more, almost randomly.

How well does this instrument satisfy the two primary identifying assumptions? Rainfall is as exogenous a variable as one can have (in the sense that the amount of rain that falls and where it decides to fall has nothing to do with underlying social dynamics of the communities of interest to this study). It has a fairly high and negative correlation with INGOs, the explanatory variable of interest in this paper (r= -.45). This, however, only tells part of the story. To be convicting, one needs to show that the exclusion restriction holds by doing two things: (i) provide a convincing argument describing why and how the instrument influences the endogenous regressor (and that this influence remains strong even after controlling for other exogenous variables; and (ii) rule out any other indirect channels through which the instrument might be influencing the outcome and/or any direct effect of the instrument of the outcome variable. I argue, at least the Liberia case, these two elements are fairly satisfied and the reasons are to be found in how INGOs operate in conflict and/or post-conflict situations, which are generally information poor and resource constrained environment. When foreign INGOs arrive on the ground to carry out relief and rehabilitation activities, the first thing they conduct is what is often referred to as "situation analysis"—an exercise to try to understand the conflict background and context and target their response more effectively (Duffield 1994; Slim 1996; McClelland 2000; UNDP 2010). A situation analysis also provides INGO programmers with information about needs in different areas of the target country so that they are able to narrow the range of communities eligible to receive an intervention. Once needs have been assessed and mapped out, the next thing programmers typically do is to determine logistical conditions, especially accessibility, in targeted areas. It is at this juncture, I argue, that the most recent weather patterns introduce randomness in INGO programming.

First, conflict and post-conflict settings are often information poor and not always able to provide INGO programmers with the kind of information they need in terms of accessibility

[30] The IV produces special causal effects typically referred to as local average treatment effects (LATE). In this case, these are estimates of the causal effects of INGO activities induced by variation in rainfall.

of the different communities eligible to receive an intervention. As a result, programmers rely on the most recent weather patterns to make judgments about accessibility, in general, and road conditions, in particular.[31] Given that INGOs tend to be risk averse and thus to direct resources where they believe they are likely to be most effective (Loewen et.al 2011), communities that experienced heavy rain in the recent past are likely to be left out even if they differ little from others in terms of needs.[32] A common response from INGO planners is that resources meant for places that experienced heavy rain in the recent past would be withheld until such time weather conditions permit to operate. However, it is unlikely that INGOs will withhold resources for months while there may be dozens of other places in immediate needs. Second, it is common knowledge that INGOs face resource constraints and needs almost always exceed available resources (Duflo and Kremer 2003; Beamon and Kotleba 2006). This mean that sometimes some communities have to be left behind—at least until more resources become available—and often it is the places with heavier rain that tend to be dropped under the presumption that they are likely to be inaccessible. Rainier communities, therefore, are less likely to be recipient of INGO programming. From this point of view, it may not be an accident that communities like Lexington Township that had some of the highest rainfall in 1998 and 1999 received virtually no INGO programs over the last decade, while only located a few dozen miles away from Monrovia, the capital city, where most INGO are headquartered. On the other hand, communities like Nyanforquelleh that experienced relatively less heavier in 1998 and 1999 managed to get as many of 6 different INGO interventions over the same period.

Obviously, one has to be concerned about whether INGO programming is the only channel through which rainfall levels in 1998 and 1999 affected current levels of social cohesion. In other words, is the exclusion restriction assumption satisfied in this particular case? Unfortunately exclusion restriction is not something that can be tested empirically, since the error term is by definition unobservable. However, there are no strong reasons to suggest that rainfall in 1998 and 1999 in Liberia is related to unobserved characteristics that might

[31] For instance, right after civil war in Liberia, the United Nations Office of Humanitarian Affairs (UNOHA) carried out a rapid assessment survey all over Liberia. Not surprisingly, road accessibility in rainy season was one of the handful items covered in their survey.

[32] The reasoning will be that communities that experienced more rain are more likely to be inaccessible. Ironically, there is virtually zero correlation between rainfall and road networks and accessibility.

determine social dynamics in communities under the study. And if rainfall does correlate to underlying social dynamics, then we should also expect it to be correlated with key community characteristics such as road networks; wealth levels; population densities, among others, which in principle can be tested empirically. I ran simple bivariate regressions between my measure of rainfall averages in 1998 and 1999 and economic and demographic community characteristics. Results are presented in Table 1 below.

Table 1. Probing Exclusion Restriction Requirement

	Rainfall in 1998/1999	**P- value**
Clan-level characteristics		
Population density (2004)	.0016445 (.0010663)	0.128
Road accessibility (wet season)	-4.55e-06 (4.81e-06)	0.348
Peacekeeping force present	2.86e-06 (3.42e-06)	0.406
Wealth levels (1999)	1.34e-06 (1.19e-06)	0.261
No. of violent events during war	-.0000428 (.0000208)	0.044**
Urban settings	-8.61e-06 (7.57e-06)	0.259
Religious fractionalization	-9.80e-07 (9.65e-07)	0.313
Ethnic fractionalization	3.00e-06 1.67e-06	0.077*
Proportion of female	-2.79e-07 (2.80e-07)	0.322
Mortality Rates	4.19e-07 (3.78e-07)	0.272
Aggregate characteristics of selected respondents		
Prop. respondents working in agriculture	1.68e-06 9.39e-07	0.078
Prop. respondents who have skilled jobs	-2.01e-07 (1.01e-06)	0.843
Prop. respondents who work in industry (e.g. timber)	6.16e-07 (5.94e-07)	0.303
Prop. respondents who work in service sector	5.63e-07 (1.01e-06)	0.578
Respondents' levels of education	-1.69e-06 (1.52e-06)	0.271
Table reports coefficients with clustered robust standard errors in parentheses below.*** p<0.01, ** p<0.05, * p<0.1		

As it can be seen from the table, rainfall does not seem to have systematic effects on these community characteristics. For the most part, there is balance. Only conflict events are significantly related to rainfall, though the coefficients sign point in a different direction than the theory would predict. Ethnic fractionalization barely made it (.10 level). This strengthens my claim that rainfall is unlikely to be related to unobservable community characteristics and minimizes violation of the exclusion restriction assumption. Nonetheless, many of these characteristics influence intervention decisions and will be included in the analysis.

IV. Data sources and measurement of variables

a. Rainfall data

I use the "Tropical Rainfall Measuring Mission (TRMM)" database of the National Aeronautics and Space Administration (NASA). The database provides global rainfall estimates (in millimeters) over a 0.25-degree by 0.25-degree spatial resolution (about 12 square miles) on a calendar month basis and these data go as far back as 1998.[33] This means that, even for a small country like Liberia, rainfall data are available for hundreds of location. I then used the Geographic Information System (GIS) software (ArcGIS) to extract rainfall values for each location in my data.[34] These locations vary in size and naturally some areas ended up with higher rainfall values simply because they contained many more grids over which rainfall was measured. Thus, the rainfall measure I employ is a proportion that takes area into account.

b. Sampling and data source for main variables

The data I used in this paper come from the Peacebuilding Survey in Liberia (PBSL), which was especially designed to study the micro-effects of peacekeeping on security and social-political outcomes in the aftermath of civil war.[35] The project draws on a sample of 1500 Liberians (1050 civilians and 450 former combatants) from 70 clans.[36] Figure 2 shows locations where surveys

[33] TRMM data base is publically available at http://trmm.gsfc.nasa.gov/data_dir/data.html

[34] Details about the actual mechanisms and procedures are in the appendix accompanying this paper.

[35] This project was developed in the context of an evaluation commissioned by the Inspections and Evaluations Division of the United Nations Office for Internal Oversight.

[36] See Mvukiyehe and Samii (2010) for details on sampling design and implementation. "Clan" in this context should not be confused with a family unit. It is a third tier administrative unit in Liberia below county and district, but above village and refers to a geographic area containing about 700-1000 households on average. In this paper, I use it interchangeably with community. Clan contains clusters of villages that are linked on the basis of traditional ties, and therefore circumscribe domains of routine economic and social interaction. In Monrovia, the capital city,

were carried out. The project also included a survey with local chiefs in all of the 70 communities as well as a behavioral game module. Thus, the chief survey, household surveys and public good games are the main data sources I employ in this paper. The chief surveys took stock of all INGO projects and activities carried out in each of the 70 communities sampled for the study since the end of the first civil war in the late 1990s and collected information on the start and end dates of these activities, the types (e.g., whether the project was for relief or development purposes) and the population targeted by those activities. My primary measure of *INGO programming* is the total number of INGOs that carried out at least one project in a community from 1998 to 2010 and has a range from 0 to 6. Alternatively, I use the duration of all INGOs activities in the community (i.e. the amount of time from the first INGO project to the most recent). The two measures are strongly correlated (r=. 78). Table 4 in the appendix B provides the number of INGOs that operated in each of the sampled communities as well as starts and end dates of those INGO operations. The chief survey also provided information on demographics and socio-economic characteristics of the community as well as on some outcome variables associated with the disputes management mechanism dimension of social cohesion, specifically the number of committees to manage social issues as well as the number of land disputes and the number of other social disputes (e.g., conflict between individuals or families) brought before the chief within the past 12 months.

Household surveys are the primary source of information on outcomes of the four dimensions associated with social cohesion. With respect to the capacity-building dimension I have self-reported levels of *community meetings attendance* and the levels of *participation in community public works*—both within the past 12 months. With respect to the acceptance and social reconciliation dimension, I use four indicators. The first is *social acceptance*, measured by indicators of the degree to which the respondent as well as returnees and former combatants—who typically face reintegration challenges after civil war—are associated to the community's socioeconomic life. *Reconciliation and forgiveness*, the second aspect, is measured

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there are no clans, but rather administrative units called "zones." We only study outcomes in communities in Liberia outside the capital of Monrovia. The reason for this exclusion is that Monrovia has different social, economic and political dynamics than the rest of the country due to population density (50% of Liberians live in Monrovia) and economic vibrancy.

by the degree to which individuals still harbor anger and/or resentment toward those who perpetrated abuses during the war and whether and under what circumstances should these perpetrators be forgiven. The third aspect, *ethnic saliency*, captures the extent to which individuals feel attached or otherwise tied to the fate of their co-ethnics and was measured by a series of questions that included: (i) whether the respondent felt obliged to support the ideas of her own group, even if she did not fully agree with them; (ii) whether the respondent felt the well-being of members of her ethnic group had more to do with politics than their hard work; and (iii) whether the respondent felt that what happens to her ethnic group in Liberia will affect her life a great deal. Finally, *interpersonal trust* was measured in two ways: a self-reported measure about participation (during the last planting season in a *koo*—this is a social system whereby individuals participate in farming activities on each other's farm on a rotating basis and it is completely non-coercive. I also employ a behavioral activity embedded in the survey and involved entrusting one's money to a neighbor or friend.[37] With respect to the dimension related institutional mechanisms to manage disputes, I have two indicators (in addition to the number of disputes management committees as well as the number land and other social disputes brought to the local chief which I introduced in the discussion of the chief survey): 1) *membership (and involvement) in voluntary associations, which is a* composite index capturing whether and the extent to which a respondent belonged to social and or economic groups such as PTAs, women's group, farmer associations; and 2) self-reported levels of trust in local leaders who are typically responsible for the managing social disputes.

Finally, the research project involved a real-life public goods game with 25 additional members of each community. This game assessed the willingness of community members to contribute to public goods and their ability to work together to achieve common goals. The randomly selected community-members were invited to a central location, given a small amount of money (the equivalent of $2, which is a typical daily wage) for their time. Participants were then asked to vote on which of five community-level projects their community needed. Once they had decided on the project, they participants were told that

[37] Respondents were offered 70 Liberian dollars (LD, but told that we only had a 100 LD bill, which included 30LD for a neighbor. They then were told that money will be left with the neighbor who will break it down and bring the respondent his or her sum. Acceptance of this arrangement was taken as an indication of trust in the neighbor.

they could anonymously contribute some share of their payment to a communal fund, if they so choose. If the total contribution was at least half of the project cost, they were told that the project team would add another half and help the community get the project. If the total fund contributed was less than half of the project cost, the respondents were told that the contributed funds would be redistributed equally among the participants, regardless of whether they contributed to the fund or not.[38] This game provides two cleaner behavioral measures of community collective action: *levels contribution in a community pot* as measure of participation in collective action and the *number of free riders* (i.e. people who put empty envelopes in the community pot). Table 2 lists each of the outcome variables examined in the study as well the dimension of social cohesion they fit into.

Table 2. Social Cohesion Dimensions and Indicators

Dimension of Social Cohesion	**Indicator/Measure**	**Source**
Capacity-building /collective action	Community meetings Attendance (self-reported)	HHS
	Contribution to public works (self-reported)	HHS
	Amount contributed in a public good game (behavioral)	PGG
	# of empty envelops in a public good game (behavioral)	PGG
	Interpersonal trust (behavioral)	HHS
Social integration, reconciliation & trust	Forgive and forget (self-reported)	HHS
	Community acceptance (self-reported)	
	Ethnic saliency (self-reported)	HHS
	Interpersonal trust (self-reported)	HHS
	Interpersonal trust (behavioral)	HHS
Disputes management mechanisms	# of committees to manage social issues (self-reported)	CS
	# of land disputes brought to chief (self-reported)	CS
	# of other disputes brought to chief (self-reported)	CS
	Membership in associations (self-reported)	HHS
	Trust in local chief (self-reported)	HHS
Enabling environment	Local insecurity (self-reported)	HHS

Key: *HHH: Household survey |CS: Chief survey |PGG: Public good game*

[38] The behavioral activity was very complicated, and this paragraph describes only the first part. After the first round of the game, some communities received additional treatments, which are not analyzed in this paper.

c. Estimation framework

I use a two-stage least square (2SLS) procedure to estimate the effects of INGOs on measures of social cohesion, using rainfall as an instrumental variable for INGOs.[39] In the first stage, I estimate a model in which INGOs is the left hand-side variable and rainfall the right-hand side. However, as I hinted earlier, exogeneity of rainfall might be conditional on other factors that also influence INGO programming. Thus, I include in the model five control variables that are frequently cited as determinants of INGO interventions (see below) and possibly related to social cohesion. In stata, both stages are performed automatically using the "*ivregress 2sls"* command. More formally, the first stage model I estimate can be specified as follows:

$$INGOsc_{ic} = \alpha_{0c} + \alpha_{1ic}Rainfall98_99_{c} + \alpha_{2ic}Conflict\ counts + \alpha_{3ic}Distance\ vc + \alpha_{4ic}Peacekeeping + \alpha_{5ic}Female + \alpha_{6ic}Wealt\square + u_{ic} \quad (1)$$

Where INGO represents the number of INGOs operating in a community (hence the subscript c); Rainfall98_99 represents the monthly average precipitation levels in a community combined for 1998 and 1999; Conflict counts is the number of armed attacks in a community c during the civil war and it measures the levels of conflict-affectedness; Distance vc is the distance of a community to the nearest voting center set up at the end of civil war in 2004 and it is used as a proxy for community isolation; Peacekeeping base indicates the presence of a UN military base in a community after the civil war and is used as a proxy for the extent to which a community was deemed safe enough to enable INGO activities; Female is the proportion of female in a community in 2004 and it is used as a proxy for the concentration of vulnerable populations, the usual target of INGOs; and Wealth is a measure of household possessions in 1999 for all individuals in community c and it is used as a proxy for deprivation or needs in a community. The term u is the disturbance. The last two variables have a subscript i, in addition to c, denoting that they were measured at the individual level.

Given that I have ten different outcomes, I ran separate estimations on each one of them, using the instrument—rainfall—and same set of controls. Thus, the first-stage results

[39] Though my analysis is at the subnational level, I follow in the footstep of cross-national studies such as Miguel et.al (2007) that have used rainfall as an instrument to estimate the effects of some offending regressor. All analyses are performed using stata program version 11.

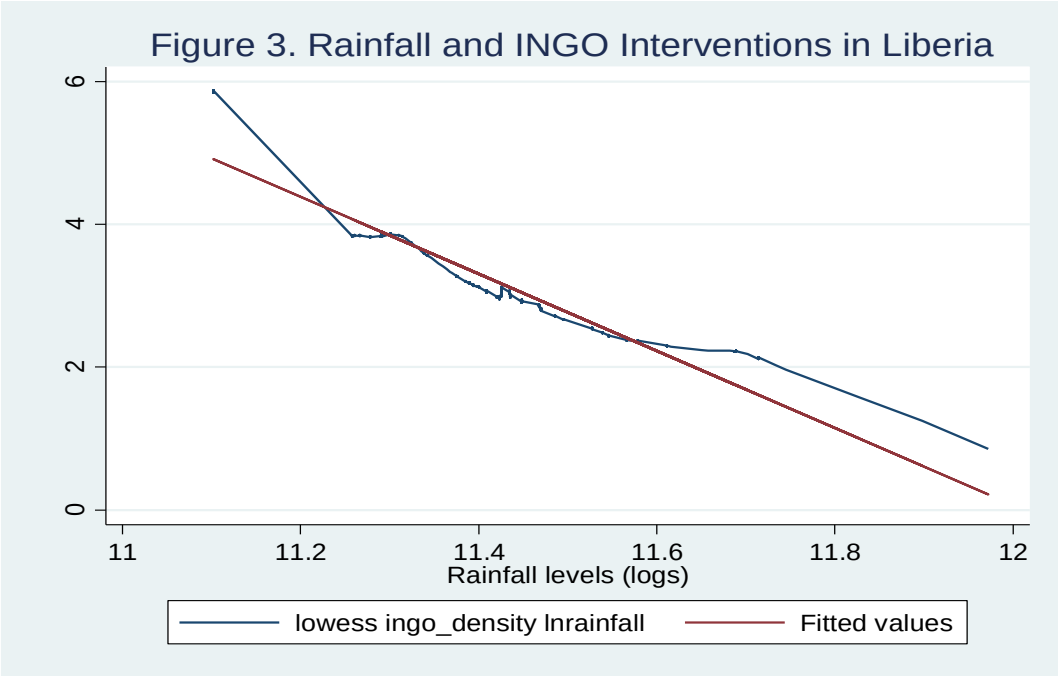
should be the same in all specifications (and they are—virtually). The minor deviations are due to fluctuation in the number of observations in each regression. Table 3 below presents first-stage regression. Model 1 presents first-stage results with rainfall as the only right hand-side variable in the model, while Model 2 presents first-stage results with all the five controls included. A graphical version of the general relationship between rainfall and INGOs in my data is depicted in Figure 3.

As expected, results from first stage regressions reveal a strong negative association between rainfall and the number of INGOs. (The results are virtually similar using an alternative measure, duration of INGO operations) The coefficient on rainfall is statistically significant at the 99 percent confidence level (Model 1) and this relationship remains strong, even after controlling for important community characteristics presumed to determine where INGOs intervene (Model 2). Heavy rainfall does negatively impact the likelihood that a community will

Table 3. First-Stage: Rainfall and INGO Interventions in Liberia
(# of INGOs is the DV)

	Model 1	**Model 2**
Excluded Instrument		
Rainfall (logs)	-4.76*** (1.15)	-5.397*** (0.275)
Included Instruments		
# of War events (1989-2004)		0.15*** (0.04)
Peacekeeping base		-0.65 (0.41)
Distance to nearest voting center (2004)		-11.33 (8.72)
Proportion of female (2004)		-1.03*** (0.27)
Wealth levels (wall materials, 1999)		-0.18 (0.16)
Constant	57.55***	
F statistic (excluded instrument)	17.03	12.36
F probability	0.0000	0.0000
Observations	1430	1395
R-squared (Adj.)	0.18	0.28

Cluster robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1



be recipient of INGO programs, even if that community fits the profile of typical program recipients. Moreover, the diagnostic test based on the F-statistic for joint significance of all the exogenous variables in the model (i.e. the instrument and controls) suggests that rainfall is indeed a valid instrument. The F-statistic in the first model is 17 and even after including control variables it is still bigger than 10, which is the conventional level in case of a single instrument and endogenous regressor (Stock, Wright and Yogo 2002). This is important for the relevancy of the instrument because, since the IV approach only uses variation in the endogenous regressor that is explained by the instrument, a strong relationship between the instrument and the endogenous regressor in the first stage means that the model is using enough of the variation in the endogenous variable and this can improve precision of causal estimates. I can now proceed on the second stage.

In the second stage, I estimate the effects of INGOs on measures of social cohesion. The equation of this estimation can be written as follows:

$$Social\ Co\square esion_{ic} = \delta_{0ic} + \delta_{1ic} INGOs + \delta_{2ic} Conflict\ counts + \delta_{3ic} Distance\ vc + \delta_{4ic} Peacekeeping + \delta_{5ic} Female + \delta_{6ic} Wealt\square + e_{ic} \quad (2)$$

Where Social cohesion takes on the values of each of the 10 individual indicators associated with dimensions of social cohesion (see Table 2 for a description of these dependent variables)

and INGOs is the predicted values obtained in first-stage regressions. The main empirical results are presented in section five below. Estimates were obtained by 2SLS using the same instrument (i.e. rainfall) and set of control variables as in Table 3.

V. Main empirical results

Table 4 below presents the main empirical results. At this stage, I am interested only in the treatment effects of INGO programing on measures of social cohesion and hence the table only depicts coefficients on this variable. Model 2 and Model 3 presents results from second stage regressions on each of the ten outcomes associated with social cohesion, using the *number of INGOs* and *duration of INGO* activities as the main explanatory variable, respectively. [40] Each of these outcomes was standardized to enable comparisons of effect size across outcomes. I also present OLS results for comparison purposes and these are summarized under Model1.[41] The presentation of empirical results is structured around the four dimensions of social cohesion I discussed earlier (i.e. capacity building and collective action; social integration, reconciliation and trust; disputes management mechanisms; and enabling environment). Each coefficient represents a causal effect of INGOs on the relevant outcome, controlling for a set of five confounding factors I discussed in the model. Since these confounding factors are not of direct interest in this paper, I do not present their coefficients.

a. Effects on capacity building and collective action-related outcomes

This dimension of social cohesion has four indicators: two self-reported: community meetings attendance and contribution to community public works, on which INGOs have positive effects; and two behavioral: levels of contributions in a community fund to a public good game and the number of empty envelopes in the public good game, on which INGOs do not have an effect. More specifically, there is a positive INGO effect on community meetings attendance and on self-reported levels of contribution to community works in both OLS and 2SLS estimations. Effect sizes are larger in 2SLS as opposed to OLS (2 and 3 times larger, respectively).

[40] The two alternative measures of INGO programing provide virtually similar results across the different outcomes. I will focus only on the number of INGOs measure throughout the discussion.

[41] It should be noted that some of these outcomes (e.g., trust, involvement in community collection action) are measured at the individual levels, while others are measured (e.g., number of management committees) are measured at the community level. DISCUSS IMPLICATIONS FOR HOW RESULTS WILL BE INTERPRETED.

Table 4. Second-Stage: INGOs and Measures of Social Cohesion
(DV is indicators of social cohesion)

	OLS (1)	2SLS (2)	2SLS (3)
Dimensions and outcome measures of social cohesion			
Capacity-building/collective action			
Meetings attendance (self-reported)	0.088***	0.162***	0.131***
	(0.022)	(0.062)	(0.049)
Participation in public works (self-reported)	0.093***	0.243***	0.191***
	(0.022)	(0.093)	(0.068)
Contributions, publ. good game (behavioral)	-0.146***	-0.103	-.079
	(0.047)	(0.235)	(0.189)
# of empty envelopes (behavioral)	0.005	-0.190	
	(0.068)	(0.147)	
Social integration, reconciliation and trust			
Forgive and forget (self-reported)	0.038	0.129**	0.107**
	(0.030)	(0.064)	(0.051)
Social integration (self-reported)	0.070**	0.192***	0.154***
	(0.035)	(0.063)	(0.051)
Ethnic saliency (self-reported)	0.030	0.110*	0.088*
	(0.026)	(0.059)	(0.047)
Inter-personal trust (self-reported)	.191*	.182**	.147*
	(.115)	(.090)	(.080)
Inter-personal trust (behavioral)	0.021	0.0546	0.042
	(0.017)	(0.058)	(0.045)
Disputes management and resolution mechanisms			
# of management committees (self-reported)	0.125	0.729***	0.562***
	(0.075)	(0.235)	(0.203)
Membership in associations (self-reported)	0.041*	0.164**	0.131**
	(0.023)	(0.082)	(0.064)
# of land disputes before chief (self-reported)	0.199***	0.536**	0.411***
	(0.058)	(0.220)	(0.153)
# of other disputes before chief (self-reported)	0.102	0.036	0.028
	(0.063)	(0.200)	(0.151)
Level of trust in local chief (self-reported)	0.064***	0.131***	0.103***
	(0.019)	(0.041)	(0.027)
Enabling environment			
Local insecurity (self-reported)	0.024	0.0832	0.066
	(0.023)	(0.059)	(0.048)

Note: Each row represents three separate regressions, OLS (model1); 2SLS with # of INGOs as main RHV (model2) and 2SLS with duration of INGO activities as main RHV. Each specification includes the same sets of controls (not displayed): # of war events (1989-2004); peacekeeping base (2004); distance to nearest voting center (2004); proportion of female (2004); and wealth levels (1999). Robust standard errors in parentheses, clustered by sampling location. *** p<0.01, ** p<0.05, * p<0.1

In contrast, 2SLS does not suggest an INGO effect on the levels of contributions in a public good game or on the number of empty envelopes in the same game (i.e. to measure the extent of free riding), whereas OLS suggests a negative association between INGOs and levels of contributions in the public good game.

a. Effects on social integration, reconciliation and trust-related outcomes

I examine three self-reported outcome measures associated with this dimension: (i) forgive and forget (i.e. attitudes of forgiveness for and reconciliation over abuses committed during the war; (ii) community acceptance (i.e. perceptions that one self, returnees and/or former combatants are associated in socioeconomic life of the community); and (iii) ethnic saliency measured by various aspects of ethnic tolerance, prejudices and exclusionism. In OLS estimations, none of these measures is associated with INGO activities. Remarkably, however, 2SLS estimation suggest strong INGO effect on three of the self-reported measures at the conventional .95 confidence interval and on the fourth measure at the .90 confidence interval. This dimension also included a behavioral measure of inter-personal trust in which respondents were offered a token for participating in the study, but asked whether they would accept that the money be left in the hands of their neighbor since the enumerator didn't have an exact change. Neither OLS nor 2SLS suggests an INGO effect on this outcome measure.

b. Effects on outcomes related to the presence of institutions to manage and resolve social disputes

I examined five self-reported outcome measures associated with this dimension: (i) the number of committees to manage issues; (ii) memberships in civil society and community-based groups; (iii) the extent of trust in the local chief; (iv) number of land disputes brought before the local chief within the last 12 months; and (v) number of other social disputes (e.g., conflict between individuals or families) brought before the chief within the last 12 months. I added a sixth outcome, local insecurity, which is conceptually part of a separate dimension (enabling environment). The results are mixed. First, OLS suggests no positive association between INGOs, on the one hand, and disputes management committees and involvement in community associations, but 2SLS suggest a strong INGO effect on both outcome measures. Second, with

respect to the number of disputes (both land and others) brought before the chief, OLS suggests a positive association between both measures and INGOs (though the latter is significant only at the .10 level). However, 2SLS suggests a positive INGO effect only on the number of land disputes brought to the chief's court. Other types of social disputes don't seem to be impacted by INGOs. Third, both OLS and 2SLS suggest a positive INGO effect on levels of trust toward local chiefs. At first glance, the positive INGO effect on land disputes seems strange. But it needs not be if put in the context of results on other outcomes associated with this dimension, especially the effect on trust in local chiefs and on the number of disputes management mechanisms. In other words, it could be that these institutions perform fairly well that people prefer to go through peaceful disputes resolution mechanisms, rather than taking matters in their own hands. The result on other types of social disputes is also not surprising, given that they these issues are not as salient as land issues in postwar Liberia (NRC report; UNMIL-CAS). Finally, neither OLS nor 2SLS suggest INGOs have an effect on local insecurity, which is not surprising given that INGOs are not expected to have an effect on this dimension. I provide a detailed discussion of these results in the next section.

VI. Treatment effect heterogeneity

The results presented in the previous section are (local) average treatment effects of INGOs in measures of social cohesion and assumes these effects are homogenous across different groups and settings. Yet, given the diversity of local communities, this assumption is not warranted. There many dimensions along which treatment effect heterogeneity can be assessed. This paper focuses on: (i) ex-combatant status; (ii) gender; (iii) age groups; (iv) levels of education; (v) levels of conflict exposure; (vi) extent of isolation from major road networks; and (vii) levels of affluence. As a first cut toward investigating possible heterogeneous effects of INGOs across these factors, I split the samples along meaningful categories and ran the same estimations as in the main analysis (i.e. 2SLS, using the same instrument and control variables). The main findings here are that INGO effects on some outcomes such as perceptions of community acceptance of different categories of people, the presence of disputes management institutions and self-reported measures of interpersonal trust remain consistent across different

subsamples. However, effects on other outcomes such as membership in voluntary associations or perceptions of ethnic saliency display far more heterogeneity.[42] These results are summarized in Table 5 (Appendix A) presented below.

a. Ex-combatants vs. civilians

The sample was split into: (i) an ex-combatant subsample made up of individuals who participated as fighters in armed factions during the civil war (N=450); and (ii) a civilian subsample composed of individuals who never joined armed groups (N=1050). One rationale for analyzing INGO effects separately for ex-combatants and civilians is that these two groups may respond differently to INGO interventions due to their different background and wartime experiences. Separate analysis suggests there may be some truth to this intuition. With respect to the outcomes associated with the capacity-building and collective action dimension, INGO effects on meeting attendance seem to be stronger for ex-combatants than for non-combatants (.22 and .13 respectively), whereas for public works the effect is stronger among civilians (.26 and .18 respectively).

As for the outcomes associated with the reconciliation and trust dimension, the effects of INGOs on perceptions community acceptance continue to hold in both civilian and ex-combatant subsamples. However, INGO effects on ethnic saliency and self-reported measures of trust seem hold only on the civilian subsample (i.e. no effect in the ex-combatant sample). The effect on attitudes of forgiveness is not statistically significant at the conventional level in either subsample, though it only achieves significance at the .10 level in the ex-combatant subsample. Likewise, INGO effects are heterogeneous with respect to outcomes related to disputes management and resolution mechanisms, with the INGO effects found in the main analysis remaining consistent in the civilian sample, but not in the ex-combatant sample. In the latter, only INGO effects on the number of disputes management committees and number of land disputes brought to the chief continue to hold; the effects on membership in voluntary associations disappear altogether, while the effects on trust in the local chief drop below the 0.5 conventional level.

[42] These results are only suggestive as some subsamples have relatively few observations to perform analysis with sufficient power.

b. Gender (male vs. female)

Empirical studies have established the existence of a gender gap in social and political participation, especially in post-conflict settings (Lorentzen and Turpin 1998), with women typically participating less than male.[43] These different experiences might also lead to different responses to INGO programing. In view of this, I investigate possible heterogeneous effects with respect to gender. The sample included 595 female and 912 male (the male subsample is larger because it includes former combatants who were almost entirely male).The results reveal little heterogeneity than one might expect. With respect to the four outcomes associated with the capacity-building and collective action dimension, separate analyses reveal very little gender differences in INGOs effects. As for the four measures of social acceptance and reconciliation dimension, the effects in the male sample seem larger and stronger on all, the self-reported measure of interpersonal trust where the female sample does a little better. Finally, separate results on four of the five outcomes related to the presence of dispute management institutions dimension are virtually similar to the main results. Effects on membership in voluntary associations seem to be heterogeneous, with the female subsample showing positive effects, but none in the male subsample. This heterogeneity is likely due to the predominance of former combatants in the male subsample and we know from previous results that INGOs had no influence on ex-combatants likelihood to voluntary associations.

c. Age groups

Part of INGO programing is based on some theory of change that often brings new norms and ideas. It is generally presumed that older people tend to resist such new norms and ideas while younger people are generally believed to be more open to them (Archibald and Richards 2002). To assess this hypothesis, I divided my sample in three cohorts and ran 2SLS estimations from the main analysis separately on each subsample: younger (18 to 29 years, N=624); middle-aged (30 to 39, N=427) and older (over 40 years, N=368). The results suggest differences in INGO effects across age groups. For instance, there appears to be a “middle-aged” problem with respect to outcomes associated with the capacity-building and collective action (i.e. meeting attendance or contribution to public goods) as well as the presence of disputes management

[43] One reason is that women typically face more socioeconomic barriers (e.g., poverty or lack of education) or gender roles to which men and women.

institutions dimensions. More specifically, INGO effects obtained in the main analysis continue to hold for the younger and older cohorts, but disappear for the middle-aged cohort. In addition, these results seem to be stronger for the younger cohort. This middle-aged problem improves somewhat when it comes to outcomes associated with acceptance and reconciliation dimension: the results obtained in the main analysis continue to hold for the middle-aged category, but barely hold for the younger and older cohorts.

d. Educational attainment

The vast majority of Liberians are illiterate (about 70%). With that in mind, I investigate whether INGO effects on social cohesion might be different depending on the level of education attainment. I split my sample in three categories: no formal schooling (N=382); some elementary school (N=604); and some high school (N=463). Separate 2SLS estimations suggest some heterogeneity with respect to outcomes in the capacity-building and collective action dimension: INGOs influenced non-schooled respondents to participate in community meetings and public works at higher rates, but it does appear that they exerted somewhat weaker influence on respondents who had some elementary schooling and none at all on respondents who had some high schooling. Heterogeneity is also observed with respect to the outcomes associated with the social integration and reconciliation dimension: INGO effects on perceptions of acceptance in community continue to hold across all three subsamples. The effects on predispositions for forgiveness of past abuses hold only for respondents in the elementary school category, while effects on ethnic saliency hold only for respondents in the high school category. The effects on trust hold only for the no schooling sample. As for outcomes associated with the presence of disputes management institutions, the strongest INGO effects appear to be on people in the elementary school category and somewhat weaker for the respondents in the non-schooled and high schooled categories.

e. Conflict exposure

There is a small, but growing micro-level literature that provides systematic empirical evidence for the links between civil war and positive social outcomes in its aftermath. For instance, Voors et al. (2010) and Gilligan et al. (2010) find positive effects of exposure to violence on a wide range of social outcomes, including contribution to collective action and interpersonal trust in

Burundi and Nepal, respectively. Yet, INGO interventions are at least in part a function of previous levels of conflict exposure and this suggests that there may be some interaction between INGO interventions and exposure to conflict and violence. To investigate this potential heterogeneity, I divided the sample in three categories of exposure to violence: low exposure (N=500); moderate exposure (N=664); and high exposure (N=337). Separate 2SLS analysis reveals some heterogeneity indeed. For the most part, INGO effects found in the main analysis continuing to hold only on subsamples with people who had lower and moderate levels of conflict exposure, but virtually disappear in the subsample of people with higher levels of conflict exposure. Specifically, with respects to the outcomes in the capacity-building and collective action dimension, INGOs have strong influence on rates of meeting attendance and of contribution to public goods for people who had low and moderate levels of conflict exposure, but they do not appear to have influence on rates of participation for people who had higher levels of conflict exposure. It also seems that these effects are stronger for the lower exposure category. Turning to outcomes associated with the reconciliation and trust dimension, effects on perceptions of community acceptance continue to hold across all three subsamples, while effects on ethnic saliency hold only for the subsample of people who had moderate levels of conflict exposure. The effects on trust are concentrated in the sample of respondents with low conflict exposure. As for outcomes associated with the presence of disputes management institutions, effects on the number of management committees continue to hold across all three subsamples, while effects on association membership, propensity to bring land disputes the local chief and trust in the local chief continue to hold only for respondents in the low and moderate levels of conflict exposure subsamples, but not for the subsample of respondents who had higher levels of conflict exposure.

f. Levels of wealth

As I mentioned earlier, for many readers, the use of rainfall as an instrument brings to mind the oft-cited Miguel et.al (2007) paper, which used it to instrument for economic growth and obviously this raises concerns about satisfying the exclusion restriction requirement. I attempted to alleviate such concerns by showing that wealth—among other observables—tended to be uncorrelated with rainfall within Liberia (see Table 3). However, it is still possible

that INGO effects might be filtered through the levels of affluence in the targeted community. One hypothesis is that wealthier individuals may have higher opportunity costs, which may make them less receptive to INGO activities. To assess this claim, I split my sample in three subsamples of different levels of affluence (measured by household assets): low levels of wealth (N=791); (relatively) moderate levels of wealth (N=555); (relatively) higher levels of wealth (N=165). I ran separate 2SLS analysis on each subsample. INGO effects found in the main analysis hold only in subsamples with people who had lower and moderate levels of wealth, at least as measured in this paper, and these effects seem to be stronger for individuals in the lower levels of wealth group. INGO effects disappear in subsample of people with higher levels of wealth, though this could well be an artifact of the relatively small sample size.

g. Isolation from major road networks

Finally, I investigated possible heterogeneity with respect to relative isolation of communities from major road networks. Obviously isolation is likely to lead to less INGO presence. But an argument can be made that isolated communities that do manage to get INGOs would probably take full advantage of this and respond positively, whereas those that are conveniently located near major road networks may take INGO presence for granted. I split the sample between communities that have greater access to road networks (i.e. those above the mean value) and communities that have lesser access and run estimations on separately. (Most communities in my sample—about 74%--fit in the latter category). Interestingly, empirical results confirm this intention: except for the self-reported measure of strut, all other INGO effects established in the main analysis continue to hold in the subsample of communities with lesser access to road networks, but completely disappear in the subsample of communities with greater access. This, obviously, is a puzzling result and needs more investigation.

VII. Discussion

[TO BE INSERTED HERE]

VIII. Conclusion

This paper presented many results worthy of a detailed discussion. This will be forthcoming in future drafts (I would like to first get people's reactions on the instrument and thoughts on

these preliminary results). Here I provide a few thoughts on the way forward. The results presented in this paper suggest that INGO interventions work and positively affect a host of outcome measures that the literature tends to associate with social cohesion. From a practical standpoint, this is good news for INGOs. From an academic standpoint, however, there are still many issues to address. First, I need to work on robustness checks, trying out different measures of the instrument (e.g., rainfall in 2004, which was the peak of INGOs); testing alternative channels (e.g., maybe rainfall works through conflict or some other variables—rather than INGOs?); and testing for possible interactions more rigorously. I will have something to say about all of these issues in future drafts of the paper. Second, the discrepancy between self-reported and behavioral measures is puzzling and this is something that has come in mine and co-authors' other papers as well. I think this either says something about reliability of survey responses in exposed communities (i.e. respondents may have learned to provide answers that people want to hear) or about implementation of these games (i.e. protocol violations that we don't always learn about), which I think is less likely. I am not sure this is a debate I want to get it to in this paper, but at the same time, I am wondering whether it makes sense to just focus on self-reported data and leave the behavioral data out altogether. Any thoughts and feedback will be appreciated.

Furthermore, given that focus in this paper was to investigate the effects of INGOs on measures of social cohesion, I did not present the results on nor discuss other factors that may also matter for social cohesion (even those that I controlled for in my analysis). I think the question of how INGOs interact with other international programs (e.g., peacekeeping) or other contextual factors is an important one. But I'm just not sure whether it makes sense to discuss these in a framework of a single paper or threat them separately. Finally, in the theory section I discussed potential mechanisms through which INGO effects might be channeled. In the empirical section, however, I did not attempt to test those mechanisms, in part because the paper is already very heavy, but also I am not sure observational data are the best way to test these mechanisms. Given these constraints, any thoughts on how I may be able to link the theory part and the empirical part would be appreciated.

IX. References

Alesina, A. and Ferrara, E. L. 2000. "Participation in Heterogeneous Communities", *Quarterly Journal of Economics*, 115(3): 847–904.

Alesina, A. and Ferrara, E. L. 2002. "Who Trusts Others?" *Journal of Public Economics*, 85(2): 207–34.

Archibald, Steven and Richards. 2002. "Converts to Human Rights? Popular Debate About Justice in Rural Central Sierra Leone." *Africa*: 72(3): 339-367.

Burns, P. and Gimpel, J. G. 2000. 'Economic Insecurity, Prejudicial Stereotypes, and Public Opinion on Immigration Policy', *Political Science Quarterly*, **11**5 (2), 201–25.

Boix, Charles and Posner, Dan. 1998. 'Social Capital: Explaining Its Origins and Effects on Governmental Performance', *British Journal of Political Science*, 29 (4), 686–93.

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

Putnam, Robert. 2000. *Bowling Alone. The Collapse and Revival of American Community*. New York: Simon and Schuster.

Sawyer, Amos. 2005. Beyond Plunder: *Toward Democratic Governance in Liberia.* Lynne Rienner

Angrist, Joshua D. and Alan B. Krueger. 2001. "Instrumental Variables and the Search for Identification: From Supply and Demand to Natural Experiments." *Journal of Economic Perspectives,* 15(4): 69-85

Bakke, Kristin, O'Loughlin, John and Ward, Michael.2009. Reconciliation in Conflict-Affected Societies: Multilevel Modeling of Individual and Contextual Factors in the North Caucasus of Russia. Working paper. University of Colorado.

Bates, Robert. 2008. "States Failure," *Annual Review of Political Science*, 11, 1-12.

Beamon, B.M and Kotleba, S.A. 2006. Inventory modeling for complex emergencies in humanitarian relief operations. *Int. J. Logist: Res.* and Appl. 9(1): 1-18

Boutros-Ghalis, Boutros. 1995. *An Agenda for Peace*. New York, NY: United Nations

Bowles, Samuel and Gintis, Herbert.2004. "Persistent parochialism: trust and exclusion in ethnic networks. *Journal of Economic Behavior and Organ*ization 55(1): 1–23

Caparini, Marina. 2005. Enabling Civil Society in Security Sector reconstruction. Chapter 4 in A. Bryden and H. Hanggi, eds. Security Governance in Post-conflict Peace-building. Geneva: Centre for the Democratic Control of Armed Forces.

Casey, Katherine, Glennerster, Rachel and Miguel Edwards. 2011. "Reshaping Institutions: Evidence on External Aid and Local Collective Action." NBR Working Paper 17012.

Charnowitz, Steve. 1997. "Two Centuries of Participation: NGOs and International Governance." Michigan Journal of International Law, 18: 183-286.

Chesterman, Simon, 2004. *You, The People: The United Nations, Transitional Administration, and State-Building*. Oxford: Oxford University Press.

Colletta, N.J. and Cullen, M.L., 2000. Violent conflict and the transformation of social cap-ital: lessons from Cambodia, Rwanda, Guatemala, and Somalia. Washington, DC: The World Bank.

Collier, Paul. 2002. "Social capital and poverty: a microeconomic perspective." In Grootaert, Christiaan and Thierry Van Bastelaer. 2006. *The role of social capital in development: an empirical assessment*. New York: Cabridge University Press.

Crowther, Sarah. 2001. "The Role of NGOs, Local and International, in Postwar Peacebuilding." *CCTS Newsletter* 15 Winter.

Doyle, Michale and Sambanis, Nicholas. 2006. Making War and Building Peace: United Nations Peace Operations. Princeton, NJ: Princeton University Press

Duffield, Mark. 1994. "Complex emergencies and the crisis of developmentalism. *IDS Bulletin: Linking Relief and Development*, 25(3), October.

Duflo, Esther and Michael Kremer. 2003. "Use of Randomization in the Evaluation of Development Effectiveness." Paper prepared for the World Bank Operations Evaluation Department (OED) Conference on Evaluation and Development Effectiveness in Washington, D.C. 15-16 July.

Easterly, W., Ritzan, J. and Woolcock, M., 2006. Social cohesion, institutions, and growth. Economics and politics, 18 (2), 103–120.

Edwards, Michael and David Hulme (eds). 1998. *Too Close for Comfort? The Impact of Official Aid on Non-Governmental Organizations.* New York: St. Martin's Press.

Fearon, James and David Laitin. 1996. "Explaining Interethnic Cooperation." *American Political Science Review*, 90(4): 715-35.

Fearon, James and David Laitin 2004. "Neotrusteeship and the Problem of Weak States*." International Security*, 28(4): 5-43

Fearon, James, Humphreys, Macartan and Weinstein, Jeremy. 2008. "Can Development Aid Contribute to Social Cohesion After Civil War? Evidence from a Field Experiment in Post-Conflict Liberia," Working Paper. Columbia University and Stanford University

Fearon, James, Humphreys, Macartan and Weinstein, Jeremy. 2009. "Democratic institutions and collective action capacity: results from a field experiment in post-conflict Liberia. "Typescript, Stanford University and Columbia University.

Ferme, Mariane. 2001. *The Underneath of Things: Violence, History and the Everyday in Sierra Leone.* Berkeley, CA: University of California Press

Fortna, Page. 2008. *Does Peacekeeping Work? Shaping Belligerents' Choices after Civil War.* Princeton, NJ: Princeton University Press

Friedkin, Noah. 2004. "Social Cohesion." *Annual Review of Sociology*, 30: 409-25.

Gelman, Andrew and Jenifer Hill. 2007. *Data Analysis Using Regression and Multilevel/Hierarchical Models.* New York: Cambridge University Press

Gibson, James and Amanda Gouws. 2001. "Making Tolerance Judgments: The Effects of Context, Local and National." The Journal of Politics, 63(4): 278 –92.

Gilligan Michael, Stedman, Stephen. 2003. Where do the peacekeepers go? *International Studies Review* 5(4):37–54

Gilligan, Michael and Sergenti, Ernest. 2008. "Do UN Interventions Cause Peace? Using Matching to Improve Causal Inference," *Quarterly Journal of Political Science*, vol. 3: 89–122

Gilligan, Michael, Benjamin Pasquale and Cyrus Samii. 2011. "Civil War and Social Capital: Behavioral-Game Evidence from Nepal." Working Paper. New York University.

Glasser, Edward, David Laibson, Jose Sheinkman and Christine Souter. 2000. "Measuring Trust." *Quarterly Journal of Economics* 115(3): 811-46.

Good hand, Jonathan. 2006. *Aiding Peace? The Role of NGOs in Armed Conflict*. Boulder, CO: Rienner Publisher

Gugerty Kay and Michael Kremer M. 2008. Outside funding and the dynamics of participation in community associations. *American Journal of Political Science* 52: 585-602

Hooghe, M. and Stolle, D., eds, 2003. Generating socialcapital: civil society and institutions in comparative perspective. New York: Palgrave.

Imbens, Guido and Joshua D. Angrist. "Identification and Estimation of Local Average Treatment Effects." *Econometrica*, 62(2): 467-475.

Jackson, Robert and Carl Rosberg.1989. "Why Africa's Weak States Persist: The Empirical and Juridical in Statehood." *World Politics* 35: 10

Jenson, Jane. 2010. "Defining and Measuring Social Cohesion: Social Policies in Small States." United Nations Research Institute for Social Development (UNRISD). Series, No. 1

Kaufman. Chaim. 1996. "Possible and Impossible Solutions to Ethnic Civil Wars*." International Security*, 20(4): 136-175

Keck, Margaret and Sikkink, Kathryn. 1999. "Transnational advocacy networks in international and regional politics," *International Social Science Journal*, 51(1): 89–101.

King, Elisabeth, Samii, Cyrus and Snilstveit, Birte. 2010. "Interventions to promote social cohesion in sub-Saharan Africa." Journal of Development Effectiveness, 2 (3) : 336–370

Krasner, Stephen. 2004 . "Sharing Sovereignty *Stephen D. Krasner* New Institutions for Collapsed and Failing States." *International Security,* 29,(2) 85–120

Kumar, Krishna (ed). 1998. *Rebuilding Societies After Civil War: Critical Roles for International Assistance.* Boulder, CO: Lynne Rienner.

Kumar, Krishna (ed). 1999. *Postconflict Elections, Democratization and International Assistance.* Boulder: Lynne Rienner Publishers

Kumar, Krishna. 1999b. "Promoting Social Reconciliation in Postconflict Societies: Selected Lessons From USAID's Experience. Assessment Report No. 24.

Labonne, J. and Chase, R.S., 2008. "Do community-driven development projects enhance social capital? Evidence from the Philippines. Washington, DC: The World Bank, Social Development Department.

Lake, David. 2006. "Building Legitimate States After Civil Wars: Order, Authority, and Institutions." Working Paper. University of California, San Diego.

Lake, David and Donald Rothchild.1996. "Containing Fear: The Origins and Management of Ethnic Conflict." *International Security,* 21(2): 41-75

Large, Judith. 2001. "The Interplay of Domestic, Regional and International Forces in Peacebuilding." *CCTS Newsletter* 13 Summer.

Lederach, John Paul.1997*. Building peace : sustainable reconciliation in divided societies.* Washington, D.C. : United States Institute of Peace Press,

Letki, Natalia. 2008. "Does Diversity Erode Social Cohesion? Social Capital and Race in British Neighbourhoods." 56(1): 99-125

Paluck, Elizabeth. 2009. "Reducing intergroup prejudice and conflict using the media: A field experiment in Rwanda." *Journal of Personality and Social Psychology*, 96: 574-587.

Lorentzen, Lois Ann and Jennifer Turpin (eds). 1998. *The Women and War Reader.* New York University Press.

Lewis, David and Nazneen Kanji. 2009. *Non-governmental organizations and development.* New York: Routledge

Lipset, Seymour. 1981. *Political Man: The Social Bases of Politics. Washington, DC. The* Johns Hopkins University Press

Loewen, John, Daniel Rubenson and Leonard Wantchekon. 2011. "Conducting Field Experiments with Political Elites." Working Paper. New York University.

Lorentzen, Lois Ann and Jennifer Turpin (eds). 1998. *The Women and War Reader.* New York University Press.

Mansuri, Ghazala, and Vijayendra Rao. 2004. "Community-Based and -Driven Development: A Critical Review." World Bank Research Observer, 19(1): 1–39.

Martens, Kerstin. 2002. "Mission Impossible? Defining Nongovernmental Organizations" *Voluntas: International Journal of Voluntary and Nonprofit Organisations*, 13(3): 271-285

Maynard, K.A. 1997. "Rebuilding Community: Psychosocial Healing, Reintegration, and Reconciliation at the Grassroots Level*." In Rebuilding Societies After Civil War: Critical Roles for International Assistance*. Kumar, Krishna. 1998 (ed). Boulder: Lynnw Rienne.

McClelland, Donald. 2000. "Complex Humanitarian Emergencies And USAID's Humanitarian Response. Center for Development Information and Evaluation: U.S. Agency for International Development. Washington, DC.

McGovern, Mike. 2008, 'Liberia: "The Risks of Rebuilding a Shadow State" in *Building States to Build. Peace.* Call, C. with Wyeth, V. eds, Boulder: Lynne Rienner.

Miguel, Edwards, Shanker Satyanath and Ernest Sergenti. 2007. "Economic Shocks and Civil Conflict: An Instrumental Variables Approach." *Journal of Political Economy,* 112 *(4):* 725-754*.*

Muntaner, C and J. Lynch1999. "Income inequality, social cohesion, and class relations: a critique of Wilkinson's neo-Durkheimian research program." *Int J Health Serv*. 29(3):525-43

Muriuki, David. 2005. "Contributions of NGOs in Complex Emergencies." Paper presented at World Health Organization Conference on Health Aspects of Tsunami Disaster in Asia, Phuket, Thailand: 4-6 May, 2005.

Mvukiyehe, Eric and Cyrus Samii. 2010. "Quantitative Impact Evaluation of the United Nations Mission in Liberia: Final Report." Report for an Evaluation commissioned by the United Nations' Office of Internal Oversight Services.

Natsios, Andrews. 1995. NGOs and the UN system in complex emergencies: onflict or cooperation? *Third World Quarterly*, 16(3): 405-420

Newman, Edwards, Roland Paris and Oliver Richmond. 2009. *New perspectives on liberal*

peacebuilding. New York: United Nations University Press.
Olken, Benjamin. 2010. "Direct Democracy and Local Public Goods: Evidence from a Field Experiment in Indonesia." American Political Science review, 104(2): 243-266.
Paris, Roland. 2004. *At War's End: Building Peace After Civil Conflict.* New York, NY: Cambridge University Press.
Posen, Barry. 1993. "The Security Dilemma and Ethnic Conflict." Survival 35(1): 27-47.
Posner, Daniel. 2004. "Civil Society and the Reconstruction of Failed States" in Robert Rotberg, ed., *When States Fail: Causes and Consequences* (Princeton: Princeton University Press, 2004).
Pouligny, Beatrice. 2005. "Promoting Democratic Institutions in Post-Conflict Societies: Giving Diversity a Chance," *International Peacekeeping*, 7(3): 17-3.
Pouligny, Beatrice. 2006. *Peace Operations Seen From Below: UN Missions and Local People*. Bloomfield, CT: Kumarian
Putnam, Robert, Robert Leonardi and Raffaella Nanetti. 1993. *Making Democracy Work: Civic Traditions in Modern Italy.* Princeton, NJ : Princeton University Press
Putnam, Robert. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York, NY: Simon and Schuster
Risse, Thomas, Ropp, Stephen and Sikkink, Kathryn. 1999. *The Power of Human Rights: International Norms and Domestic Change.* New York: Cambridge University Press.
Roeder, Philip and Rothchild, Donald. 2005. *Sustainable Peace: Power and Democracy after Civil Wars.* Ithaca, NY: Cornell University Press
Rotenberg, Robert (ed.) 2004. "When States Fail: Causes and Consequences." Princeton: Princeton University press.
Russett, Bruce and John Oneal. 2001. *Triangulating Peace: Democracy, Interdependence, and International Organizations.* New York, NY: W.W. Norton
Sambanis, Nicholas. 2002. "Partition as a Solution to Ethnic War: An Empirical Critique of the Theoretical Literature." *Word Politics 52(4): 437-483*
Slim, Hugo. 1996. Planning between danger and opportunity: NGO situation analysis in conflict related emergencies." Working paper. Oxford Brookes University
Spiro, Peter. 2002. "*Accounting for NGOs***."** *Chicago Journal of International Law*.
Staub, Ervin, laurie Pearlman, Alexandra Gubin and Athanase Hagengimana. 2005. "Healing, reconciliation, forgiving and the prevention of violence after genocide." *Journal of social and clinical psychology*, 24 (3), 297–334.
United Nations Development Program (UNDP). 2010. Support to the Department of Peace-Building and Social Cohesion in Timor-Leste. Project document.
United Nations Mission in Liberia (UNMIL)-Civil Affairs Section (CAS). 2009. "Dealing with conflict creatively: consultative fora on reconciliation, peacebuilding and conflict resolution."
Uvin, Peter and Thomas Weiss.1998. "The United Nations and NGOs: Global civil society and institutional change. In: Glassner, M. I. (ed.), *The United Nations at Work,* Praeger: Westport, pp. 213-238.
Varshney, Ashutosh. 2001. "Ethnic Conflict and Civil Society: India and Beyond." *World Politics* 53(3): 362–98.
Voors, Maarten, Eleonora Nillesen, Philip Verwimp, Erwin Bulte, Robert Lensink and Daan van Soest. 2009. \Does Conict a_ect Preferences? Results from Field Experiments in Burundi." Microcon Research Working Paper.
Weiss, Thomas. 1999. International NGOs, Global Governance, and Social Policy in the UN System. Occasional Paper on Global Social Policy, Globalism and Social Policy Program (GASPP).
Werker, Eric and Ahmed Faisal. 2007. "What Do Non-Governmental Organizations Do?" Working Paper. Harvard Business School.
Whitt, Sam and Wilson, rick. 2007. "The Dictator Game, Fairness and Ethnicity in Postwar Bosnia." *American Journal of Political Science*, 51(3): 655-668.
Woolcock, M. and Narayan, D., 1999. Social capital: implications for development theory, research, and policy. Available from: http://www.csae.ox.ac.uk/conferences/2000-OiA/pdfpapers/woolcock.PDF
World Bank, 2005. Empowering people by transforming institutions: social development in World Bank operations. Washington, DC: International Bank for Reconstruction and Development/World Bank.
Wood, Elisabeth. 2008. "The Social Processes of Civil War: Transformation of Social Networks." *Annual Review of Political Science*, 11: 539-561

Appendix A: Table 5. Treatment Effect Heterogeneity

	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 3c	Model 4a	Model 4b	Model 4c
Dimensions and outcome measures of social cohesion										
Capacity-building/collective action										
Meetings attendance (self-reported)	.226*** (.082)	.136** (.064)	.188** (.091)	.154*** (.056)	.243** (.101)	.144 (.091)	.115** (.059)	.267*** (.108)	.171*** (.052)	.048 (.061)
Participation in public works (self-reported)	.181** (.087)	.268*** (.104)	.271** (.120)	.225*** (.086)	.311*** (.122)	.147 (.919)	.209** (.087)	.472*** (.117)	.141* (.075)	.164 (.111)
Social integration, reconciliation and trust										
Forgive and forget (self-reported)	.111* (.064)	.133 (.110)	.082 (.086)	.152*** (.072)	.092 (.093)	.189* (.103)	.070 (.070)	.120 (.128)	.178** (.082)	.092 (.075)
Social integration (self-reported)	.191** (.084)	.183*** (.064)	.146*** (.055)	.223*** (.078)	.183** (.084)	.239*** (.087)	.134* (.072)	.266*** (.086)	.164** (.067)	.202** (.099)
Ethnic saliency (self-reported)	.040 (.087)	.133** (.066)	-.328 (.420)	.108* (0.62)	.050 (.078)	.190 (.080)	.058 (.085)	.088 (.061)	.058 (.079)	.208** (.093)
Inter-personal trust (self-reported)	.220 (.138)	.148** (.070)	.218** (.102)	.167* (.099)	.191* (.115)	. 154* (.084)	.225** (.225)	.321*** (.082)	.202 (.144)	.095 (.079)
Disputes management and resolution mechanisms										
# of management committees (self-reported)	.680** (.287)	.735*** (.224)	.803*** (.258)	.693*** (.236)	.717*** (.279)	.737*** (.240)	.720*** (.206)	.635*** (.210)	.781*** (.297)	.747*** (.230)
Membership in associations (self-reported)	.083 (.079)	.188** (.093)	.298** (.136)	.095 (.066)	.207*** (.101)	.039 (.072)	.199* (.114)	.176 (.109)	.203** (.090)	.092 (.093)
# of land disputes before chief (self-reported)	.565** (.246)	.518** (.219)	.503** (.234)	.557*** (.219)	.653** (.274)	.577*** (.208)	.351** (.183)	.625*** (.215)	.619** (.282)	.384*** (.175)
Level of trust in local chief (self-reported)	-.111* (.058)	.143*** (.050)	.162*** (.059)	.105*** (.046)	.117** (.060)	.085 (.095)	.249*** (.092)	.187** (.094)	.060 (.079)	.107* (.057)

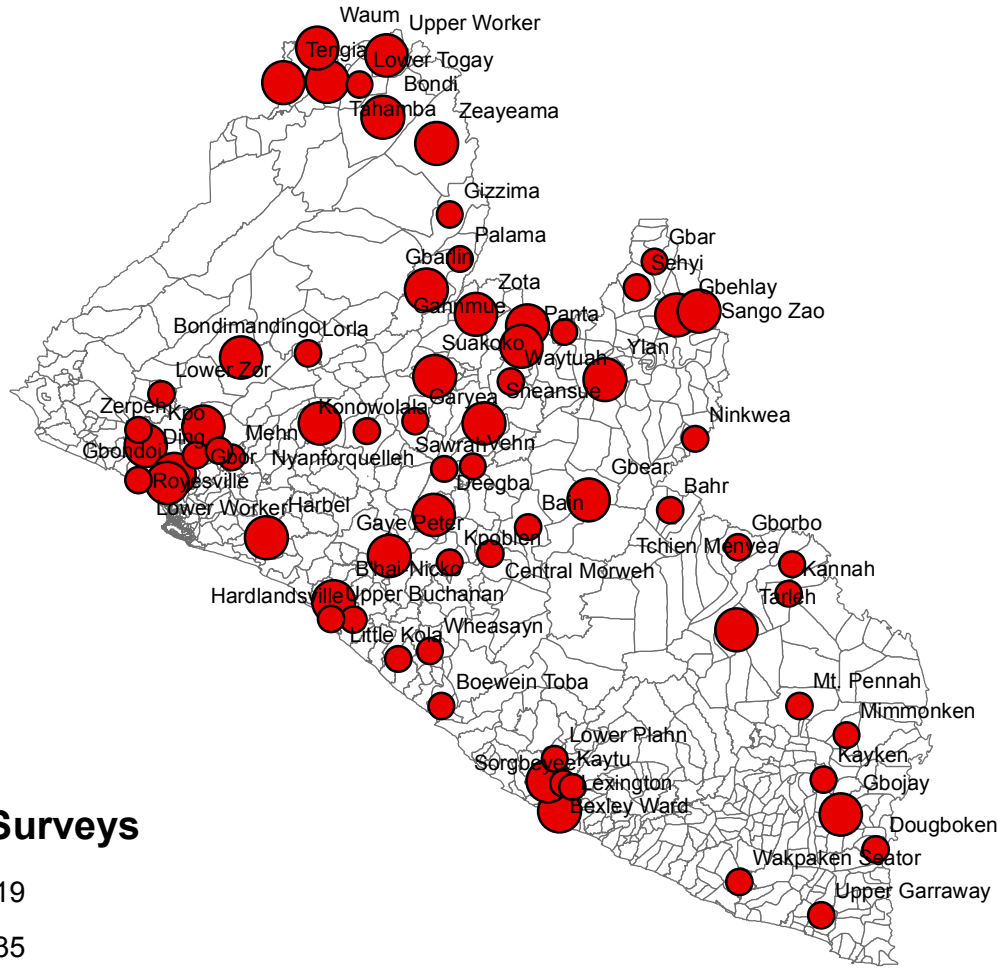
Note: Each cell represents standardized coefficient estimates from a separate 2SLS estimation, with rainfall instrumenting for # of INGOs and same sets of controls as in main analysis. **Model 1**: Combatant status (a=ex-combatant; b=civilian); **Model 2**: Gender (a=female; b=male); **Model 3**: Age groups (a=18-29; b=30-39; c=40+); **Model4**: Education (a=no schooling; b=some elementary schooling; c=some high school.) Robust standard errors in parentheses, clustered by sampling location. *** p<0.01, ** p<0.05, * p<0.1

Appendix A: Table 5. Treatment Effect Heterogeneity (continued…)

	Model 5a	Model 5b	Model 5c	Model 6a	Model 6b	Model 6c	Model 7a	Model 7b
Dimensions and outcome measures of social cohesion								
Capacity-building/collective action								
Meetings attendance (self-reported)	.244*** (.097)	.186** (.087)	.054 (.093)	.218*** (.069)	.113* (.065)	.193 (.186)	-.358 (.946)	.130** (.055)
Participation in public works (self-reported)	.394*** (.105)	.276** (.121)	.015 (.091)	.292*** (.126)	.219*** (.082)	.042 (.150)	.009 (.231)	.254*** (.103)
Social integration, reconciliation and trust								
Forgive and forget (self-reported)	.047 (.080)	.115 (.081)	.218* (.120)	.063 (.089)	.144** (.070)	.191 (.168)	-.865 (2.13)	.072 (.497)
Social integration (self-reported)	.147** (.064)	.217** (.091)	.235** (.107)	.245** (.093)	.190*** (.062)	-.039 (.212)	.389 (.720)	.185*** (.055)
Ethnic saliency (self-reported)	.023 (.068)	.233** (.105)	.043 (.117)	.146** (.067)	.116 (.075)	-.055 (.216)	.177 (.436)	.138*** (.050)
Inter-personal trust (self-reported)	.247*** (.085)	.170 (.123)	.122 (.115)	-.014 (.098)	.215** (.093)	.263* (.148)	-.739 (1.60)	.088 (.074)
Disputes management and resolution mechanisms								
# of management committees (self-reported)	.674*** (.205)	.724*** (.240)	.819** (.411)	.760*** (.246)	.637*** (.191)	1.208 (.949)	-1.974 (3.52)	.821*** (.319)
Membership in associations (self-reported)	.210** (.091)	.207** (.090)	.090 (.121)	.239** (.111)	.073 (.064)	.469 (.437)	-.820 (1.54)	.050 (.539)
# of land disputes before chief (self-reported)	.475*** (.181)	.599*** (.243)	.501* (.286)	.473*** (.177)	.482** (.199)	.1.055 (.836)	-.165 (.479)	.641** (.314)
Level of trust in local chief (self-reported)	.081 (.052)	.213** (.102)	.083 (.090)	.106 (.076)	.156*** (.053)	-.637 (.424)	-.337 (.710)	.101*** (.030)

Note: Each cell represents standardized coefficient estimates from a separate 2SLS estimation, with rainfall instrumenting for # of INGOs and the same sets of controls as in main analysis. **Model 5**: Levels of conflict exposure (a=low; b=moderate; c=high); **Model 6:** Levels of wealth (a=low; b=middle; c=high); **Model 7**: Isolation from major road networks (a=high access to road networks; b=low access to road networks.) Robust standard errors in parentheses, clustered by sampling location. *** p<0.01, ** p<0.05, * p<0.1

Figure 2: Liberia Sample Locations (LIBPBS, December 2009)



Number of Surveys

- 10 - 19
- 20 - 35
- No Sample

This map shows sample locations (LIBPBS). The size of the dot reflects the number of subjects interviewed in a cluster.

APPENDIX B: NUMBER AND DURATION OF INGO INTERVENTIONS BY CLAN (LIBPBS)

Clan Name	Number of INGOs	Duration of INGO Activities (years)
B'hai-Nicko	5	2
Bahr	0	0
Bain	4	4
Bellehyalla	6	4
Bexley Ward	0	0
Boewein Toba	0	0
Bondi	3	6
Bondimandingo	3	3
Central Morweh	6	6
Deegba	0	0
Ding	1	0
Dougboken	2	1
Gahnmue	5	6
Garyea	2	5
Gaye Peter	3	4
Gbar	2	6
Gbarlin	1	2
Gbear	4	3
Gbehlay	5	5
Gbojay	3	5
Gbondoi	1	0
Gbor	2	1
Gborbo	3	6
Gizzima	6	6
Harbel	0	0
Hardlandsville	0	0
Kannah	3	5
Kayken	5	4
Kaytu	2	2
Konowolala	4	3
Kpo	3	4
Kpoblen	0	0
Lexington	1	6
Little Kola	5	7

Lorla	3	6
Lower Mecca	2	1
Lower Plahn	3	3
Lower Togay	2	0
Lower Worker	4	7
Lower Zor	4	5
Mehn	2	1
Mimmonken	4	6
Mt. Pennah	3	1
Ninkwea	3	3
Nyanforquelleh	6	6
Palama	3	6
Panta	5	6
Royesville	0	0
Sango Zao	3	3
Sawrah	4	4
Sehyi	3	4
Sheansue	3	5
Sorgbeyee	1	0
Suakoko	1	0
Tahamba	6	6
Tarleh	2	0
Tchien Menyea	0	0
Tengia	5	6
Upper Buchanan	1	0
Upper Garraway	3	4
Upper Worker	6	7
Vehn	5	6
Wakpaken Seator	3	2
Waum	6	6
Waytuah	2	6
Wheasayn	6	5
Ylan	0	0
Zeayeama	5	6
Zerpeh	2	1
Zota	4	6