Post-Cold War Complex Humanitarian Emergencies: Introducing A New Dataset

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Abstract

This article introduces an original dataset of post-Cold War complex humanitarian emergencies. The dataset identifies recent instances of war, atrocity crimes, one-sided violence, and communal conflict with the most disruptive consequences for civilians. In doing so, it complements a growing body of research and data on civilians' experiences in war and other forms of violent conflict. While much recent research examines the causes of intentional violence against civilians, however, this data is likely to be especially useful for investigating questions that require comparison between conflicts on the basis of their human consequences, whether intended or not. Notably, this includes research into the politics of humanitarian action. The article lays out the motivation behind the project, discusses the criteria for identifying complex emergencies and the data collection process, provides a brief overview of the data, and offers some ideas for possible applications. As an example of how the data might be employed, it uses them to demonstrate the importance of humanitarian needs over U.S. political interests in the allocation of U.S. disaster assistance during conflict situations.

Keywords
Complex humanitarian emergencies, human security, humanitarian action, humanitarian aid, civilians

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Data Accessibility
The complex emergencies dataset, replication files for the analyses conducted, and the supplementary appendix can all be accessed at www.andreaeverett.com.

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Introduction

To what extent is humanitarian aid allocated to conflicts on the basis of need, or on the basis of more political considerations? To what extent do different humanitarian NGOs and IOs respond to the conflicts where their assistance is most required? How do they decide when to send or withdraw their personnel from dangerous conflict zones? Why does the international community sometimes protect civilians from severe violence, but at other times fail to do so?

Each of these questions concerns the responses of international actors to the needs of civilians threatened by severe forms of political violence. Yet despite an explosion of research into how civilians fare in war and into the logic of crimes such as genocide and ethnic cleansing, data limitations continue to impede scholarly investigation on related questions about the politics of humanitarian action. In particular, such questions are most pertinent in the context of the most devastating and disruptive conflicts, those that create both the greatest need and the toughest challenges for providing humanitarian relief and civilian protection. Yet these conflicts vary greatly in their causes and characteristics. They include not only civil and inter-state wars, but also one-sided violence against civilians and communal violence committed outside of traditional warfare. Civilians may be the targets of violence, but they may also be threatened by the unintended or indirect consequences of belligerents' military strategies. Because existing data on different types of conflict and atrocity crimes are quite fragmented, however, they do not easily lend themselves to investigating general questions about international responses to the gravest humanitarian needs.

To fill this gap, this article introduces and describes a new dataset of post-Cold War complex humanitarian emergencies (or, simply, complex emergencies). This concept is already in wide use by policymakers and the international humanitarian community, and is also prominent in the literature on public health and conflict.[1] It identifies the worst and most devastating conflicts for civilians –

[1] Some in the humanitarian community prefer the shorter 'complex emergency' to avoid emphasizing the humanitarian consequences of these events at the expense of their political origins. Because they emerge

those of greatest concern to the UN, government agencies, and relief organizations. Typically these conflicts involve a multi-faceted set of challenges, which may include the direct effects of violence as well as disease, forced population movements, and economic decline. For scholars interested in questions such as those laid out above, the concept of complex emergencies offers a promising way to distinguish the many conflicts that generate significant hardship for civilians from those that are truly catastrophic, without restricting their political origins.

Still, while the concept of complex emergencies promises to be useful for scholars, existing lists of these events have important limitations. Most were created by and for the international humanitarian community and they often reflect political considerations, lack consistent identifying criteria, or have a very narrow timeframe. This article thus develops a new set of benchmarks for identifying complex emergencies and introduces a list of 61 unique conflicts that meet them and that were ongoing between 1989 and 2009. I begin by highlighting the need for this data and introducing the operational criteria and data collection procedures. I then describe the resulting list and offer some comparisons with existing conflict datasets. The final section discusses possible uses for the data and offers an extended example of how it can be used to improve our understanding of the allocation of humanitarian aid. Contrary to several similar investigations of emergency aid during natural disasters, I find that in responding to complex emergencies the U.S. Office of Foreign Disaster Assistance reacts strongly to several indicators of humanitarian need, but not to various measures of U.S. political interests.

Why complex emergencies, and why a new dataset?

Over the last decade, a burgeoning literature has made great progress in understanding the connections between large-scale violence and the experiences of civilians. Much of this research has

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from such varied political contexts but share such devastating human impacts, however, I prefer to use both terms interchangeably.

sought to improve our knowledge of the consequences of war for civilians and of why some wars are so much worse for them than others. Scholars have examined questions such as how war affects public health (Ghobarah et al. 2003; Iqbal 2010) and why armed actors kill large numbers of civilians or commit crimes like mass killing and genocide, both during and outside of war (Valentino 2004; Valentino et al. 2004; Valentino et al. 2006; Harff 2003; Downes 2006, 2007; Easterly et al. 2006).

In the process, they have collected a wealth of data that reflect civilians' experiences during war and other forms of large-scale political violence. Benjamin Valentino (2004; Valentino et al. 2004), for example, collected data on instances of mass killing, defined as the intentional killing of 50,000 or more noncombatants over five or fewer years. The Political Instability Task Force (PITF) has produced a well-known list of genocides and politicides (Marshall et al. 2011). Both Valentino et al. (2006) and Alexander Downes (2007) have collected data on the number of civilians that individual belligerents killed in inter-state wars. Meanwhile, the Uppsala Conflict Data Program (UCDP) records data on one-sided violence against civilians by governments and other formally organized armed groups (Eck and Hultman 2007). Finally, several other datasets on conflict-related deaths include but are not limited to civilian casualties: Lacina and Gleditsch (2005) collected data on total combatant and civilian battle deaths in civil and inter-state wars, and UCDP's Non-State Conflict Dataset (Sundberg et al. 2012) includes civilian deaths caused by inter-communal violence.

With these data, scholars have made great strides in describing trends and patterns in various types of conflict and in uncovering the causes of large-scale violence against civilians. At the same time, the questions they are designed to answer are quite different from those about the allocation of emergency relief and civilian protection introduced above. In particular, such questions tend to rely on certain assumptions about a conflict's political characteristics, focusing exclusively on wars, for example, or on incidents of mass killing. In contrast, questions about humanitarian action require comparison among conflicts mainly on the basis of their human consequences, and independent of

such specific political circumstances. As a result, these existing data sources are not well suited to answer such questions about humanitarian action, for at least two reasons.

First, the datasets described above record only those deaths that are direct, intentional, or both. They thus exclude a great deal of the suffering that modern conflict creates, especially that which is simultaneously indirect and unintended.[2] In particular, in many conflicts most civilian mortality reflects indirect causes like starvation and disease, rather than direct ones like violence or battle (e.g., Ghobarah et al. 2003). These indirect effects result from the destruction of infrastructure that is critical to public health – such as hospitals, clinics, electricity grids, and sewage treatment plants – and from the forced displacement of people as they flee ongoing violence.

Sometimes indirect deaths are intentional, as the above-mentioned datasets on genocide and mass killing recognize. Still, many are not clearly attributable to the intentions of a specific belligerent. For example, in the Democratic Republic of Congo (DRC), over a decade of war and crimes against humanity beginning in the 1990s cost millions of lives. Yet *despite* the intentional targeting of civilians, the vast majority of civilian deaths were caused by disease or malnourishment associated with civilian flight from warring militias. Indeed, as of 2006, only about two percent of deaths had been caused by violence directly (Holt and Berkman 2006 p.167). Thus, while direct and/or intentional deaths are a major part of what makes some conflicts much worse for civilians than others, they are not the full story and other sources of civilian suffering and mortality are particularly overlooked in the related data sources.

Second, each of the above sources of data focuses on a single type of violence. Yet in practice, various kinds of conflicts generate severe and large-scale civilian suffering. These include both wars (civil and inter-state) and anti-civilian violence committed outside of war. They can also include inter-communal violence, conflict between social groups usually based on religion or

[2] Because they combine civilian and combatant casualties, the battle deaths and non-state conflict data have the added limitation of including deaths that may have little to do with civilian suffering.

ethnicity in which the state is not a main party. For example, between 1999 and 2002, fierce fighting between Christians and Muslims in the Moluccas Islands and Sulawesi, Indonesia, is estimated to have killed at least 12,500 people directly, while displacing over a million (Internal Displacement Monitoring Center 2008, 2009; United States Committee for Refugees 2003 p.120-21).[3]

In addition, there is considerable variation in civilian suffering *among* wars, *among* cases of one-sided violence against civilians, and *among* inter-communal conflicts. Crimes such as genocide and mass killing can occur in any of these contexts, but are not the norm for any of them. Even absent these crimes, certain wars and instances of inter-communal violence can be utterly devastating for civilians, while others are less so. As a result, sources of data that are limited to any one of these types of conflict or only to the worst atrocity crimes exclude at least some conflicts with comparable humanitarian consequences. Simply combining them all, on the other hand, would yield a set of conflicts with wildly disparate levels of disruption to civilian life.

In contrast to these data, complex humanitarian emergencies represent the worst of a variety of different types of political violence and focus on their consequences for civilians. By incorporating the indirect and unintentional effects of violence, the concept captures not only conflicts that involve many intended civilian deaths, but also those like Somalia, where since the early 1990s direct violence against civilians has generally been low but its indirect effects have often been catastrophic. Complex emergencies, then, are uniquely suited to enable research questions that are agnostic about the causes of conflict, but require comparison based on its humanitarian effects.

While the concept of complex emergencies is not new, however, existing definitions and lists are of limited use to scholars. On the one hand, several of the most prominent definitions reflect the interests of the international humanitarian relief community. Those by both the UN's Office for the Coordination of Humanitarian Assistance (OCHA) and the Complex Emergency Database (CE-

[3] For more information, see the United States Committee for Refugees (USCR)'s World Refugee Survey 1999 p.108; 2000 p.139, 145; 2001 p.133-36; 2002 p.121-123; and 2003 p.119-121.

DAT) project at the Centre for Research on the Epidemiology of Disasters, for example, include references to the need for a particular kind of international response to these conflicts.[4] For scholars interested in studying such responses, however, this conflates the dependent variable with the unit of analysis. What is more, these and other definitions refer to multiple highly specific causes and consequences of complex emergencies, such as war, displacement, disease, deterioration of political authority, and ethnic conflict.[5] In doing so, they implicitly exclude other equally devastating events that lack one or more of these attributes.

In addition, in creating their own lists of complex emergencies, these organizations have failed to develop and consistently apply a clear set of criteria for inclusion. CE-DAT's list, for example, includes events that do not meet its own definition but that are of interest to partner organizations and relief groups, such as fragile states that *may* experience a humanitarian crisis and states that host large refugee populations. It is also limited to conflicts for which CE-DAT has been able to collect health and mortality data, which represents a source of potential bias since such data is most difficult to collect in the worst security environments.[6] Similarly, OCHA's process for recognizing complex emergencies reflects the needs and interests of its humanitarian partners. It generally includes emergencies covered by a UN Consolidated Appeal for relief funding and designated by the Inter-Agency Standing Committee (IASC), the UN body responsible for the inter-agency coordination of humanitarian assistance. The introduction of a UN Consolidated Appeal, however, depends in part on where aid organizations wish to devote their time and resources.[7]

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[4] OCHA, for example, notes that a complex emergency "requires an international response that goes beyond the mandate or capacity of any single agency and/or the ongoing United Nations country program" (1999).

[5] In addition to OCHA see e.g., Centre for Research on the Epidemiology of Disasters, Andrew Natsios (1995 p.9), and Raimo Väyrynen (1996 p.37).

[6] David Hargitt, CE-DAT Data Manager at the Centre for Research on the Epidemiology of Disasters, Université catholique de Louvain. Personal communication by email.

[7] Shuichi Odaka, ReliefWeb (OCHA). Personal communication by email.

Finally, more scholarly efforts to identify complex emergencies are subject to their own limitations. The most promising list, by Juha Auvinen and Wayne Nafziger (1999), does identify complex emergencies using clear and consistent criteria based on a conflict's human consequences, including battle deaths, refugee flows, malnutrition, and disease. Still, it only covers the period from 1980 – 1994, and uses data taken at the national level even though many conflicts are sub-national.

Definition and Criteria

Despite their limitations, existing definitions and sources of data on complex emergencies point to three key aspects of these events that serve as guidelines for the dataset introduced here. Each is a necessary condition and thus receives equal weight; together they are mutually sufficient (Goertz 2006). First, a complex emergency is generated by ongoing political violence (not a natural disaster). It may reflect various types of political events, and civilians may or may not be the intended victims of a targeted campaign of abuse. Second, a complex emergency involves large-scale and intense civilian suffering, which may occur either directly – when civilians are killed violently – or indirectly, due to starvation, disease, or exposure caused by social upheaval and displacement. Third, this suffering occurs at least in part because local authorities demonstrate that they either will not or cannot meet the population's needs (alone or with help from relief organizations). As a result, civilian suffering is greater than it would otherwise be. Drawing on these ideas, I define a complex humanitarian emergency as *an episode of political violence that severely and extensively disrupts civilian life, and in which the government responsible for public welfare is unable or unwilling to effectively shield the population (or facilitate outside efforts to do so).*

To operationalize this concept I employ a combination of quantitative thresholds of civilian deaths and displacement along with various additional qualitative indicators of disruption to civilian life and of government ability and willingness to respond to it. The remainder of this section discusses the key operational criteria and the following section describes the data collection process.

First, to assess disruption to civilian life I rely on two primary quantitative indicators. Where available, the number of civilian deaths is the most obvious indicator of the suffering a conflict generates. Yet often there are no reliable figures on civilian fatalities, especially on an annual basis. Alternatively, therefore, I use the scale of population displacement as another strong indicator of the number of people exposed to many of the most serious conflict-related threats. This makes sense for a number of reasons. On the one hand, forcible displacement tends have various harrowing and often life-threatening consequences. The displaced can be especially vulnerable to traumas such as sexual abuse and forced recruitment into military service. They are also highly susceptible to numerous indirect consequences of violence. Indeed, according to Frederick Burkle, in most complex emergencies it is displacement-related issues such as "the migration of populations, separation from food supplies, and destruction of the public health infrastructure—that eventually [cause] the greatest mortality and morbidity," because fleeing populations "suffer almost immediate food, shelter, fuel, water, sanitation, and basic healthcare insecurities" (2006 p.91). Especially among populations already compromised by mediocre health, large numbers of displaced people can also contribute to the spread of disease and complicate delivery of emergency relief (Burkle 2006 p.91). At the same time, and just as importantly, information about forced displacement may sometimes be more available or reliable than information about civilian casualties. Civilians forcibly displaced by conflict may include refugees and asylum seekers (both of whom have crossed international borders), as well as internally displaced persons (IDPs).[8] Especially when countries cut off their territory to journalists or aid workers, civilians who reach neighboring countries can serve as the primary, if not the only, source of evidence for the outside world about what is going on at home.

Given the relevance of civilian death and displacement as indicators of conflict-related suffering and the paucity of data for some conflicts, I develop separate thresholds for each and

[8] See the 1967 Protocol to the UN's 1951 *Convention Relating to the Status of Refugees*, available from the Office of the UN High Commissioner for Refugees at http://www.unhcr.org/3b66c2aa10.html.

require that a complex emergency should meet one or the other. Specifically, a complex emergency *either* kills at least 20,000 or displaces at least 500,000 civilians during a period of five or fewer years. As with all such thresholds there is necessarily some arbitrariness in these numbers, but they are intended to strike a balance between the twin goals of clarity and inclusiveness. On the one hand, following Valentino's definition of mass killing as at least 50,000 intentional deaths within five or fewer years (2004 p.10-12; Valentino et al. 2004), these thresholds aim to set a high bar for civilian suffering in order to avoid debate and encourage agreement that the cases I identify as complex emergencies are truly both extensive and severe. This is in keeping with the idea that they represent the very worst conflicts for civilians. At the same time, these thresholds necessarily exclude some serious but smaller conflicts, such as the political violence in Haiti in 1994 and the Nepalese civil war. As Nicholas Sambanis (2004) points out in the context of civil war, this runs the particular risk of discounting devastating conflicts in small societies. In order to limit this problem and include more conflicts that most reasonable people would likely recognize as severely disruptive to civilian life, I use the lower fatality threshold of 20,000 in the same 5-year period. Finally, since relatively small portions of people who are displaced typically die as a result, the threshold for displacement must be substantially higher than that for deaths. Comparing the two is complicated, however, not least because there is both inter- and intra-conflict variation in the conditions displaced people face and in the portion who die. Drawing loosely on guidelines used by international organizations and relief agencies for identifying humanitarian emergencies, I use the figure of 500,000, which also seems likely to meet with broad acceptance as extensive disruption to civilian life.[9]

[9] The World Health Organization and various humanitarian groups define a crude mortality rate of 1 per 10,000 of the affected population per day as the threshold for an emergency. Assuming a stable displaced population (aside from these deaths), this would equate to a death rate of nearly 4% for an emergency that lasted a year. In practice, of course, displacement varies over time as people are newly displaced or go home, and so it would be unrealistic to extrapolate further for a multi-year period. Still, recognizing that thousands of people are typically displaced each year in a complex emergency, the 4% ratio of 20,000 civilian deaths to

Next, in addition to these overall thresholds, smaller annual minimums determine when a complex emergency begins and how long it lasts. Specifically, to initiate a complex emergency a single year of conflict should produce at least 10% of the overall threshold (thus, 2,000 deaths or 50,000 displaced persons). All subsequent years should then reach at least a majority of this (thus, 6% of the total) in order to count as part of the same complex emergency. These requirements aim to ensure that in addition to its overall severity a single complex emergency is also characterized by persistent, sustained violence, while allowing for significant ups and downs in intensity over time.[10]

In theory these quantitative thresholds offer the clearest way to identify the beginning and end of each complex emergency. In practice, however, sometimes estimates of both civilian deaths and displacement are unavailable, especially on an annual basis. In these circumstances a variety of mostly qualitative supplemental indicators may provide additional information about prevailing conditions. Such indicators can offer either confirming evidence of significant disruption to civilian life, or mitigating evidence that such disruption may not be as dire as it looks. For example, an outbreak of infectious disease, deteriorating health and nutrition statistics, poor sanitation conditions at displaced-person camps, or a shortage of basic necessities such as food, health care, or shelter, can provide confirming evidence of a serious threat to civilian life. Alternatively, evidence that most displacement is temporary may mitigate an impression of otherwise severe disruption to civilian life, since short-term displacement is less likely to lead to outbreaks of disease or disrupt the food supply.

500,000 displaced seems broadly consistent with the standards the humanitarian community uses to recognize humanitarian emergencies.

[10] Thus, consider a conflict in which 50,000 people were displaced in the first year and 30,000 were displaced in each of the next four years. Although each year meets the minimum annual threshold, this is not a complex emergency because it falls below the overall minimum of 500,000 within a five-year period (assuming 20,000 civilians do not die). By contrast, consider a conflict in which 50,000 are displaced in the first year, 140,000 in each of the next three years, and 30,000 in the fifth year. This would qualify as a complex emergency during each of these five years, and in any immediately ensuing years that displace over 30,000 people or in which more than 1,200 civilians are killed.

Next, as noted above, an unable or unwilling government is an integral aspect of a complex emergency, and can be inferred from observing a government's involvement in and reactions to the disruption caused by a severe conflict. To assess a government's ability and willingness to shield civilians from large-scale violence, therefore, I also rely on a series of qualitative indicators that focus on the actions it takes, or fails to take. Again, they may provide either confirming or mitigating evidence concerning the presence of a complex emergency.

Two key forms of confirming evidence may signify either inability or unwillingness, depending on the circumstances. On one hand, government actions that cause active harm to civilians can provide clear and direct evidence of unwillingness to protect the population. On the other, actions to assist threatened citizens that a government does *not* take or pursues incompetently can provide indirect evidence of either inability or unwillingness. If we assume that a government not targeting its own civilians will assist and protect them if it can, then a failure to do so suggests a lack of capacity. Still, it is also possible that such failures could reflect insufficient will by a government that *could* provide effectively for civilians' needs if it wished to. Either way, although we cannot know for certain whether failed or ineffective actions reflect incapacity or callous indifference, the distinction is unimportant since only one of the two is necessary.

First, then, evidence that civilians are the intended targets of a large-scale campaign of abuses is the best confirming indicator of a government's unwillingness or inability. In such cases, the government may be the perpetrator, in which case the issue is clearly unwillingness. Similarly, a government might also pursue other actions that gravely endanger civilian welfare. For instance, a government that initiates large-scale hostilities in densely populated areas without trying to remove or protect the population directly signals its lack of concern for civilian welfare. Alternately, widespread abuse of a civilian population by another actor provides evidence of a government's failure – and thus, indirect confirmation of its inability or unwillingness – to protect the victims.

Second, further confirming evidence of both inability and unwillingness often relates to problems with emergency relief. As OCHA (1999) notes, complex emergencies tend to involve "the hindrance or prevention of humanitarian assistance by political and military constraints" and "significant risks to humanitarian relief workers in at least some areas." Relief organizations typically play a vital role in ministering to the needs of conflict-affected populations. Thus, active efforts to hinder these groups suggest a government is unwilling to help ensure that civilians' basic needs are met. For example, direct evidence may include official denial of access to external relief organizations. On the other hand, a failure to effectively protect emergency relief *without* direct efforts to thwart it is still suggestive of inadequate capacity to do so, or potentially of apathy toward civilians' plight. Indirect evidence of inadequate governmental protections for emergency relief may include evidence of attacks against aid workers or the inability to deliver aid due to insecurity.[11]

In contrast, the opposite of such confirming indicators of inability and unwillingness is mitigating evidence that a government *is* able and willing to respond to a conflict-affected population's needs. Because these conditions are jointly necessary, a variety of direct indicators can provide simultaneous evidence of both. They may include international praise for a government's humanitarian efforts, swift and successful government-led efforts to end a large outbreak of communal violence, or indications that most displaced persons are adequately cared for.

Finally, given the challenges of data availability and this wide range of qualitative and quantitative indicators, two additional coding schemas reflect my confidence in the extent to which each conflict I identify as a complex emergency (a 3-level scale), and each 'emergency-year' thereof (a 5-level scale), fully reflects the definition outlined above. Coding for these schemas integrates both the death and displacement thresholds and the number of confirming and mitigating qualitative

[11] While obstruction of aid workers is not a necessary condition for a complex emergency given other types of evidence of government inability/unwillingness, users interested in studying aid worker security might wish to use the coding notes to determine where this type of evidence helped identify given complex emergencies.

indicators for which there is supporting evidence. Unclear or inadequate quantitative evidence about whether a conflict – or year thereof – meets the relevant thresholds, as well as a larger number of mitigating qualitative indicators, results in less certainty that it qualifies as a complex emergency. In contrast, reliable information that it exceeds at least one of the quantitative thresholds and evidence of a larger number of confirming qualitative indicators each add to the level of certainty.[12] In light of the limitations of this type of data, this seems an appropriate way to acknowledge the unavoidable uncertainty that remains. Fully 84% of complex emergencies meet the highest (level 3) standard, but there is greater uncertainty at the annual level due to the added difficulty of obtaining yearly death and displacement estimates and the need to account for conflicting information among different sources. So that interested readers may judge for themselves, the supplementary online appendix contains the full set of operational guidelines as well as detailed coding notes that present the certainty coding for each emergency and emergency-year and detail the evidence used to code each decision, including by highlighting ambiguous cases and missing or contradictory information.[13]

Data Collection

Compiling the list of post-Cold War complex emergencies was a two-stage process. First, I used a number of datasets that provide evidence of substantial ongoing violence or disruption to civilian life to generate a list of possible cases. Next, more detailed reports on these conflicts helped determine which ones meet the full set of operational criteria laid out above, and in which years.

As noted above, complex emergencies may arise out of various types of conflict. For civil and inter-state wars I used several lists and data sources to identify potential complex emergencies,

[12] Above the thresholds, actual estimates of new deaths and displacement do not affect the certainty coding. Thus, an estimate of 100,000 people newly displaced is treated the same as an estimate of 200,000.

[13] See parts II and III of the online appendix for the guidelines and coding notes, respectively. In addition to the issues described here, the former also draw on rules used by scholars of civil war (Sambanis 2004; Fearon and Laitin 2003) to describe how I distinguish one complex emergency from another when there is a break in violence, a change in belligerents, or multiple concurrent conflicts in the same country.

including version 4 of the Correlates of War project (Sarkees and Wayman 2010), version 4-2012 of the UCDP/PRIO Armed Conflict Dataset (Gleditsch et al. 2002), and civil war datasets from Fearon and Laitin (2003) and Sambanis (2004). Similarly, for atrocity crimes and violence aimed primarily at civilians I referred to PITF's Genocide and Politicide Problem Set (Marshall et al. 2011) and lists of mass killings by Valentino (2004) and Easterly et al (2006).[14] Except for UCDP/PRIO, for each of these datasets I treated each conflict-year identified as a potential complex emergency.[15]

Finally, as an additional check on these data sources and to identify cases of communal violence excluded by them, I also referred to the Forcibly Displaced Populations (FDP) dataset (2009).[16] These data are based primarily on information compiled in the United States Committee for Refugees and Immigrants' (USCRI) annual World Refugee Survey (WRS) series. Since 1965 this series has reported various information on populations of refugees, asylum-seekers, and IDPs who have been forcibly displaced by political conflict, including the total number originating from a given country by year. They exclude migrant populations whose movement is prompted purely by unrelated economic or climatological conditions.[17] Because the FDP dataset records stocks rather

[14] I also examined UCDP's One-Sided Violence dataset (Eck and Hultman 2007), but was limited by the fact that it identifies violence against civilians only according to the perpetrator and not the conflict or victims. As a result, when an actor (usually a government) kills civilians in multiple distinct conflicts in the same year, one cannot determine how many deaths are part of which conflict. Still, by highlighting actors that committed extensive one-sided violence this data provides added confidence that I did not miss any large-scale atrocities.

[15] In the UCDP/PRIO data events are identified either as minor conflicts (25 to 1,000 battle-related deaths in a year) or wars (at least 1,000 battle-related deaths). From this dataset I further examined only conflict-years that reached the 'war' threshold (and those immediately before or after), unless another data source also identified them as a potential complex emergency.

[16] As noted earlier, UCDP's Non-State Conflict Dataset (Sundberg et al. 2012) records civilian deaths due to communal conflict but does not separate them from combatant deaths. I thus found the FDP dataset more useful for uncovering cases of large-scale communal violence.

[17] One cause of conflict-related forced migration, of course, is a livelihood lost or threatened by ongoing violence. In certain conflicts, moreover, violence and climatological conditions such as drought become intertwined and mutually reinforcing. People displaced under these conditions *are* included in the USCRI,

than flows, it does not reflect the amount of new displacement generated in a given year.[18] Still, when a country is identified as the source of many forcibly displaced people, this is generally a strong indicator that violence probably either *is* or recently *was* occurring. I investigated all country-years that produced 15,000 or more forcibly displaced (and those immediately before and after) as potential complex emergencies. These overlapped considerably but not entirely with the other datasets, and the wide range of sources used provides grounds for confidence that this process identified all events that meet the definition and quantitative thresholds for a complex emergency.

Next, for each conflict identified by any of the above sources as going on between 1989 and 2009, I sought additional evidence about its impact on civilians and governmental willingness and ability to shield the population. Although I focus on the post-Cold War years, some of this period's worst conflicts began beforehand. To capture these, I examined the full length of all conflicts that qualified as complex emergencies and were ongoing in 1989 or later, even if they started earlier.

A wide variety of sources helped provide this in-depth information. I relied heavily on the WRS yearly country summaries, which compile information from both USCRI's own investigations as well as from outside sources such as the U.S. State Department, the UN, and various local and international human rights groups. As a result, these reports typically provide a wealth of detailed

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and hence the FDP dataset, numbers. Finally, none of this excludes the possibility that the FDPs identified by the dataset were influenced about where to relocate by other economic or political conditions (see, e.g., Moore and Shellman 2006; Moore and Shellman 2007). Still, this should not matter here since what is important for assessing the scope of disruption to civilian life at home is the total conflict-displaced population including both IDPs and refugees, which is exactly what the FDP dataset records.

[18] Data on stocks of forcibly displaced persons are also available from the UN High Commissioner for Refugees (UNHCR). I relied on the FDP dataset because USCRI covers more countries and supplements UNHCR data with a variety of other sources, including assessments made during the frequent visits of USCRI staff to conflict areas. Moreover, since 1981, USCRI editors have made concerted efforts to distinguish between refugees and asylum seekers in need of a permanent home and those who have been successfully resettled (UNHCR does not). USCRI also weighs the credibility of the various sources of information available to it in making its estimates.

information on annual estimates of civilian deaths and new displacement, the conditions of life for displaced persons, and evidence of government efforts (or lack thereof) to provide for civilians' basic needs. Where the WRS reports proved unclear or insufficient, however, I also examined reports from the Internal Displacement Monitoring Center (IDMC), U.S. State Department, human rights groups, truth and reconciliation commissions, and academic case studies. When different sources give conflicting information on whether an overall or annual threshold for death or displacement is met, the relevant 'certainty' coding is consistent with the lower estimate.[19]

Overview and Trends

The dataset includes 61 complex emergencies that began after or were already ongoing in 1989. Several countries experienced multiple concurrent complex emergencies caused by politically and geographically distinct conflicts. For instance, in 1999 Indonesia experienced no less than three, involving different actors and political issues in different parts of the country: East Timor, Aceh, and the Moluccas/Sulawesi. Thus, the unit of analysis at the annual level is the emergency-year, rather than the country-year. There are a total of 495 emergency-years (of which Indonesia in 1999 accounts for 3). Of the complex emergencies, 43 (70%) started in 1989 or later, and 394 (80%) of the total emergency-years were in 1989 or later. The earliest complex emergencies started in 1975 in Angola and Lebanon (both ended in 1991). Nine complex emergencies (15%) were ongoing at the end of 2009. Figure 1 shows the trend in the number of these conflicts by year since 1989.[20] The

[19] Sources for all information used for each complex emergency are listed in the coding notes (Supplementary Appendix Part III). Beginning in the mid-2000s IDMC reports became my primary sources as the IDMC became the most comprehensive provider of information about displacement while USCRI shifted focus toward nations' refugee policies.

[20] Although the first complex emergencies in the dataset started earlier, I show the period starting in 1989 because it is only after this that the dataset includes all ongoing complex emergencies. Beforehand, it only includes those that subsequently lasted to at least 1989, even though *other* complex emergencies were undoubtedly occurring between 1975 and 1988.

peak was 26 in 1992, with another slightly smaller peak of 24 in 1999. The next decade saw a steady decline, so that by the second half of the 2000s there were between 11 and 14 complex emergencies each year. For the most part this is consistent with trends in armed conflicts reported by UCDP for these years, but the latter half of the 2000s are an exception. Whereas the number of ongoing complex emergencies kept falling after 2004, the number of wars remained approximately constant and the number of minor conflicts increased 25% by 2009 (Harbom and Wallensteen 2010, p.502-3).

[**Figure 1 About Here**]

Complex emergencies occurred in 39 countries, and ranged in length from one to 25 years (with several of the longest still ongoing at the end of 2009).[21] Average length was 8.1 years (7.2 among complex emergencies that ended before 2010). This, however, masks significant differences between those that started before 1989 (13.3 years) and those that started after (6 years).[22]

While most complex emergencies affected an entire country, a number were limited to a sub-national region such as a province or island, as in Indian-controlled Kashmir or the three complex emergencies in Indonesia. Figure 2 highlights each country that experienced at least one. Regional differences in the concentration of these conflicts are striking. Africa and Asia experienced 27 and 15 complex emergencies respectively, while Europe had 9, the Middle East 7, and Latin America 3.

[Figure 2 About Here]

In addition, some countries have been far more affected than others. Not just Indonesia, but also Iraq, Afghanistan, Sudan, Angola, and the DRC (formerly Zaire) each experienced at least 3 complex emergencies. As some were very long, however, several other countries also experienced numerous emergency-years. Those with the most are Afghanistan (33), Sudan (32), Colombia (25),

[21] This is based on treating Russia and the USSR as separate countries.

[22] This difference is also similar among the complex emergencies that ended before 2010.

Angola (24), Sri Lanka (23), and Burma (22). Indeed, the top 11 countries account for over half (264) of all emergency-years.

Since complex emergencies can emerge in various ways, I also divided them into five main types, both overall and annually. Although some emergencies involved multiple types of violence or the primary fault-lines changed over time, I identified the one that seemed most representative of each complex emergency as a whole. Similarly, for each year, although there were sometimes multiple concurrent types of violence, I identified the one that best reflected the conflict at the time.

First, *International Conflict* involves either inter-state war or a dispute between two actors in different states in which at least one is not a government. *Internal Conflict* involves the state and at least one organized opposition group without external intervention. In *Internationalized Internal Conflict*, the conflict is based in one state, but there is international intervention on one or both sides. A complex emergency is primarily *One-sided Violence* against civilians if it occurs without sustained concurrent hostilities between at least two organized parties. Finally, *Communal Violence* identifies conflicts where the primary fault line reflects inter-communal tension. Here, 1) government is not a primary party to the violence, 2) victims are chosen based on their perceived membership in a religious, ethnic, or kinship group, and 3) members of at least two communities participate.[23]

[23] These distinctions draw on the variable '*Type*' in UCDP/PRIO's Armed Conflict Dataset (Gleditsch et al. 2002), but with some important changes. First, International Conflict combines UCDP/PRIO's Interstate and Extrasystemic categories (I pool these because the latter mainly identifies colonial and imperial wars and is thus rarely relevant in the period covered here). I also add categories for One-sided and Communal violence. While not all complex emergencies are in the Armed Conflict Dataset, where relevant and sensible I use UCDP/PRIO's coding for specific years. It is also worth noting that my definition of one-sided violence differs from that in UCDP's One-Sided Violence dataset (Eck and Hultman 2007). Whereas UCDP refers to any killings of civilians by an organized armed group as one-sided violence, I define a complex emergency (or year) as One-sided Violence only if the killing of civilians is the most salient aspect of the event. This justifies coding One-sided Violence only when there are not also sustained hostilities between organized parties. For more information on emergency type, see the supplementary appendix (Part I).

The appendix lists all of the complex emergencies, along with their primary type. I code 35 (57%) as Internal Conflict, and a further 13 (21%) as Internationalized Internal Conflict. Another 7 (11%) were primarily Communal, and 3 each (5%) were International Conflict or One-Sided Violence. Still, while a clear majority of complex emergencies involved full-blown war, the explicit focus on the experiences of civilians paints a distinct picture of which conflicts are most severe. A number of scholars have used Lacina and Gleditsch's (2005) battle deaths data to reflect war severity (e.g., Lacina 2006; Lujala 2009). Yet of the 60 wars with the highest annual average battle deaths between 1989 and 2009, only 41 make the list of complex emergencies. Meanwhile, complex emergencies involving mainly communal or one-sided violence – as in Indonesia (Moluccas), South Africa, Kenya, East Timor, Nigeria, and Zimbabwe – are either absent or underrepresented.

Applications

As noted above, these data are especially well suited for examining patterns in international responses to the most severe humanitarian and civilian protection crises. As such, their utility lies less in up-ending existing findings than in opening up new avenues for research into important questions about human security and insecurity, and the politics of humanitarian action. In this section I demonstrate how they can enhance our understanding of aid donors' decisions to allocate humanitarian relief in conflict situations, and then discuss a number of other possible applications.

An Example: Allocating U.S. Disaster Assistance

An extensive body of research on foreign aid has sought to understand the relative roles of donors' political interests and recipient states' needs in aid allocation decisions. This literature has focused mainly on military and development assistance, and has often suggested that politics matter more than need (e.g., Alesina and Dollar 2000; Kuziemko and Werker 2006). In recent years, however, some scholars have turned their attention to humanitarian aid. According to the Creditor Reporting System (CRS) of the OECD's Development Assistance Committee (DAC), which reports

foreign aid allocations by major bilateral and multilateral donors, humanitarian aid is assistance that is "designed to save lives, alleviate suffering and maintain and protect human dignity during and in the aftermath of emergencies."[24] These emergencies may involve either natural disasters or political crises, including complex emergencies, and humanitarian aid is typically comprised of funding appropriated specifically to respond to them. Thus, by its very definition, this aid is intended to address a specific need for immediate life-saving assistance.

Nevertheless, several recent studies have found evidence that – like other types of aid – emergency assistance is given in ways that largely reflect political calculations within donor states, even while need plays some role (Drury et al. 2005; Fink and Redaelli 2011; Strömberg 2007). Importantly, though, each of these studies focuses exclusively on donors' responses to natural disasters, for which a well-regarded and detailed dataset is available from the EM-DAT project at the Université Catholique de Louvain. This is a significant limitation because in recent years the vast majority of humanitarian assistance has been spent in response to man-made conflicts and complex emergencies.[25] As a result, findings based exclusively on natural disasters may not be representative of this aid as a whole. More recently, one study examined the effects of both conflict and natural disasters on U.S. humanitarian aid and concluded that need generally played a greater role than political self-interest (Kevlihan et al. 2014). Yet this project examined country-year aid allocations for a large sample of developing countries, rather than responses to specific emergencies, and lacked data on potentially relevant emergency-level characteristics. What is more, none of the above literature has considered potential ways that political calculations by potential recipient governments – and not just donors – could influence aid allocation patterns.

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[24] See p.23 of "The List of CRS Purpose Codes," available at http://www.oecd.org/dac/stats/purposecodessectorclassification.htm

[25] See, for instance, Figure 1 in Fink and Redaelli 2011, p.744.

To show how the complex emergency dataset presented here can contribute to such debates, I investigate responses to these conflicts by the Office of Foreign Disaster Assistance (OFDA) in the United States Agency for International Development (USAID). OFDA is the main agency responsible for coordinating emergency assistance by the U.S. Government. While other programs within USAID and the government often spend more total money on humanitarian aid than OFDA, OFDA is typically the first on the ground in response to a disaster and has considerable autonomy to allocate money quickly in response to changing needs. It is also the focus of both the above-mentioned studies that look just at U.S. aid-giving (Drury et al. 2005; Kevlihan et al. 2014).

Each year, OFDA responds to only a subset of the natural and man-made emergencies that occur around the world. The process begins with a disaster declaration by the U.S. Ambassador or Chief of Mission in the affected country. To qualify, an emergency must meet three key criteria: 1) the scale of the event is too large for the country to cope with on its own, 2) the country requests or will accept assistance, and 3) such assistance is in U.S. interests (see e.g., Office of U.S. Foreign Disaster Assistance 2010, p.13). This designation allows for spending up to $50,000 immediately ($25,000 prior to 2002), and potentially more depending on the scale of the disaster. Once an in-country official has declared a disaster, Washington-based OFDA staff decide how much aid to provide, sometimes dispatching a team to assess needs and develop funding proposals. For disasters that last multiple years, continued funding depends on annual renewal of the disaster declaration.

Based on these procedures and in line with the above-mentioned studies, we can think about OFDA funding for complex emergencies as a two-stage decision process. While Stage 1 determines whether a particular complex emergency receives funding in a given year, Stage 2 determines how much is allocated. Accordingly, I used the OFDA's annual reports from 1989-2009 to determine which of the 394 emergency-years during this period were designated as disasters by the OFDA, and how much money was allocated to them. A total of 57% (225) of these emergency-years were designated, either during the calendar year itself or the U.S. fiscal year that applied to it (which starts

the previous October 1). Of these, I was able to code the amount of funding given for 85% (192) of cases.[26] The mean amount was $14.8 million in constant 2005 dollars. Coding the data in this way, by complex emergency rather than as total OFDA flows to recipient states, has an important advantage. Namely, in some cases funding that is explicitly intended to address the needs of refugees from a particular complex emergency is allocated for use in neighboring states. By recording OFDA funding by complex emergency, it is possible to include this money and thus to more fully capture the extent of OFDA's responses to these conflicts.

Figure 3 shows the pattern of OFDA disaster designations over this period, which saw significant variation both over time and across countries. As illustrated, for most of the first post-Cold War decade only around 50-55% of ongoing emergencies were designated, but this increased over the following decade. By the late 2000s, in particular, 64-85% were designated. Similarly, some complex emergencies were never designated while others were designated every year, and still others were designated in some but not all years. What is more, civil wars in Colombia, Algeria, Burma, Russia, and India were never designated, although natural disasters in each of these countries *were* designated and targeted for U.S. emergency assistance.

[Figure 3 About Here]

There was also significant variation both over time and across countries in the amount of aid OFDA gave. Figure 4 shows the mean amount among the complex emergencies that received funding, by year. It ranges from less than $5 million per emergency in 1990 to over $40 million in

[26] There were two reasons I could not code all 225. First, where OFDA responded to multiple complex emergencies in the same state in the same year it was not always possible to determine how much money was allocated to which emergency. Second, occasionally OFDA designated an emergency late in the calendar year, so that any money allocated was reported in the following fiscal year. For instance, OFDA declared a disaster related to the complex emergency that began in 1993 in Burundi on November 1 of that year. I record this as designating the complex emergency, but treat funding for the year as missing because any money that was dispersed at the end of 1993 was reported by OFDA for fiscal year 1994.

2009, in constant 2005 dollars. While there is considerable up and down from year to year, on average complex emergencies do appear to be receiving more money over time. On an individual basis, however, funding for particular complex emergencies may go either up or down from year to year. For instance, while funding for the complex emergency in the DRC increased from just over $6 million in 1998 to nearly $34 million in 2003, assistance to help address the effects of civil war in Sudan fell from over $60 million in 1993 to less than $22 million in 1996.

[Figure 4 About Here]

To explore these patterns quantitatively I use the selection model developed by Heckman (1976, 1979) to account for the two-stage nature of the decision process. In the initial selection stage the model uses maximum likelihood to estimate the effect of a series of independent variables on a binary dependent variable: whether an emergency-year was designated ('selected') as a disaster. In the second stage, it uses a corrected form of OLS to assess the impact of a similar set of independent variables on the amount of money allocated. I measure this dependent variable as the natural log of (one plus) the amount of OFDA funding, again in constant 2005 dollars.

The independent variables draw on those employed by the above-discussed studies to measure donor political interests and humanitarian need, and I also add some new ones as well. They fall into four distinct groups. First, several variables aim to capture political considerations that might incline OFDA to provide emergency relief. Mainly they focus on the closeness of the political ties between the U.S. government and the state experiencing a complex emergency, and a significant positive effect for these variables will provide evidence of the importance of such ties in OFDA decision-making. Using data from the Correlates of War (COW) project (most recently, Gibler 2009), I record whether the country experiencing the complex emergency shares an *Alliance* with the U.S. As another measure of a state's strategic importance, I include the log of (one plus) the amount of *Military Aid* it receives from the U.S. government. I also include an indicator for whether the complex emergency began before the end of the Cold War (*Cold War Complex*

Emergency). If global political concerns influence OFDA decision-making, these emergencies may have received greater attention as the U.S. sought to help end major Cold War conflicts and alleviate potential sources of continuing East-West tensions during the 1990s. Next, I use a new measure of *Political Affinity* based on a spatial model developed by Bailey, Strezhnev, and Voeten (2013). The measure reflects the overall position (or 'ideal point') of a state's government toward the U.S.-led liberal order as reflected in its UN votes, and improves on a well-known and similar existing measure (Gartzke 2010).[27] Similarly, I include a measure of *Democracy* in the state experiencing the complex emergency. If OFDA prefers to allocate humanitarian assistance to like-minded states, more democratic nations may be more likely to receive aid (and more of it). Here I use Freedom House's *Freedom in the World* series, taking the average of the country's scores from 1 to 7 on political rights and civil liberties and then inverting the scale so that a higher score is more democratic.[28]

A second set of variables aims to account for political considerations in the state experiencing the complex emergency. Although ignored in previous studies, this is an important issue since OFDA states that it depends on the acquiescence of recipient countries. In particular, some governments, even if they are manifestly failing to address a conflict-affected population's needs, may object to outside assistance and to the implication that they are not up to the job of caring for their own citizens. I expect such sentiments to be most likely in larger and more powerful countries, and I use two variables to proxy for them. *Population* is the log of the population in the state where the complex emergency occurs, and *Army* is the log of (one plus) the size of the national

[27] As a robustness check I also tried Voeten's updated version of Gartzke's affinity score. The results were nearly identical and do not change the substantive conclusions discussed below.

[28] Sources for the data used for these variables are as follows. The COW data (version 4.1) are available at http://www.correlatesofwar.org/COW2%20Data/Alliances/alliance.htm. Data on U.S. military aid (in constant dollars) comes from the USAID Greenbook at https://eads.usaid.gov/gbk/data/prepared.cfm. The UN ideal points and affinity data are available from Erik Voeten at http://hdl.handle.net/1902.1/12379. The Freedom House data are available at http://www.freedomhouse.org/.

army.[29] I expect higher values of these variables to reduce the chance that OFDA gives aid to a state at all, but not to affect how much it offers. That is, if a state with a large population or army *does* accept U.S. help, these attributes should have no influence on the amount OFDA gives. Accordingly, I include these variables only in the stage 1 (selection) equation. This also helps identify the model, since proper identification in the Heckman framework requires at least one variable in stage 1 that is not in stage 2.

A third group of variables focus on the need for humanitarian assistance. Although all complex emergencies create significant needs, nevertheless some are more severe than others and there can also be significant over-time variation in the intensity of the violence and the size of the population in need of assistance. To account for this I use two variables. First, *Forcibly Displaced Persons* reflects the scale of conflict-induced displacement from the FDP dataset discussed above. It is the log of (one plus) the stock of IDPs and refugees originating in the state where the complex emergency occurs, as recorded at the end of each calendar year (through 2008). This is in line with the studies discussed above, which use various measures of the people killed or affected by natural disasters and wars to indicate the need for humanitarian assistance. Here, although not all people in need of aid are displaced, for most complex emergencies the scale of displacement is a good proxy for the size of the affected population. Unfortunately, though, the FDP dataset records displacement figures at the national level only. As a result, for the few cases where a state experiences multiple concurrent conflicts, the FDP data combine the displaced from each of these. In these cases the displacement figures represent the scope of the challenges the state and its neighbors face in caring for its entire conflict-affected population. Although they are thus not a perfect indicator of the needs create by these specific complex emergencies, it still seems reasonable to infer that if the OFDA is responding to humanitarian need, it would be more likely to allocate aid

[29] Data come, respectively, from the World Bank's *World Development Indicators* and from the International Institute for Strategic Studies' *The Military Balance* (various years).

(and to give more) when the total burden of a state's conflict-affected population is greater. Second, I include a dummy for whether an emergency-year involved an ongoing genocide or politicide (where victims are targeted for their political affiliation rather than ethnicity), as coded by Marshall et al. (2011). Because of the large-scale targeting of civilians, these complex emergencies tend to involve more violent civilian deaths and may thus create perceptions of greater need.

It is important to note that my use of both the FDP and the genocide/politicide data in creating the list of complex emergencies, as discussed above, should not create any inference problems here. Because I only used these datasets to identify potential complex emergencies but relied on other sources and indicators to assess ongoing violence and disruption to civilian life, the emergency-years in my dataset vary substantially on both measures: 13% are coded as genocide or politicide, and the number of forcibly displaced persons ranges from 0 to over 8.6 million.[30]

Next, I also follow the above-mentioned studies in using two measures of economic development to help capture humanitarian needs. *Infant Mortality* reflects the quality of a population's overall health. As noted above, populations in worse health to begin with tend to be more susceptible to the ravages of conflict, making them more likely to spread disease (Burkle 2006). This, in turn, can broaden and worsen a complex emergency, heightening the need for humanitarian assistance. In addition, several scholars have suggested that *GDP Per Capita* may signal a government's ability to care for its conflict-affected population, and that poorer states require greater external humanitarian assistance to do so. Here, of course, a key aspect of complex emergencies is that the responsible government fails to adequately address civilians' needs. Still, this may be for reasons related to either will or ability, and it seems plausible that OFDA officials might perceive wealthier states as having less need for assistance during a complex emergency than poorer ones. Because data on GDP per capita are unavailable for 20% of emergency-years, however, and

[30] The couple of 0s are perplexing, but appear to reflect cases in which USCRI did not yet have clear estimates of displacement early in a complex emergency.

because they may be systematically missing in countries whose economies are most disrupted by conflict, I use this measure in only one model, as a supplement to and check on the others.[31]

Finally, I include a fourth group of control variables. Since the type of emergency might affect either the propensity to give aid or how much OFDA chooses to give, I include dummies for *International Conflict*, *Internationalized Civil Conflict*, *Communal Conflict*, and *One-Sided Violence*, leaving *Civil Conflict* as the omitted category since it is the most common. In most models I also include the *Year*, since Figures 3-4 appeared to suggest a trend toward more frequent and larger OFDA responses to complex emergencies over time. Although *Year* does not measure humanitarian needs directly, it seems reasonable to interpret a positive effect of *Year* as indicating growing responsiveness to these needs. Because complex emergencies are so uniquely devastating and thus tend to create greater humanitarian needs than other conflicts, a move to respond to more of them would suggest stronger OFDA emphasis on these needs, relative to other factors that affect its aid-giving decisions.

Table 1 presents the summary statistics for all variables. Table 2 presents a series of four Heckman models. The results for the stage 1 decision of whether to give aid are at the top and the results for the stage 2 decision about how much to allocate are at the bottom. Models 1 and 2 are identical except that Model 2 includes *Year* while Model 1 does not. Model 3 uses *GDP Per Capita* rather than *Infant Mortality*, but loses dozens of observations as a result. In addition, although OFDA has the ability to allocate new funds rapidly in response to changing events and should thus be able to account for current conditions, it is still possible that there is some delay in this process. Thus, Model 4 lags all independent variables by one year, except for *Cold War Complex Emergency*, *Genocide/Politicide*, and *Year*. As a result, it also loses over 30 observations. Finally, because of these losses, in Models 3-4 there is very little information to estimate the effects of *International Conflict*:

[31] Genocide/politicide data are available at http://www.systemicpeace.org/inscrdata.html. Infant mortality and GDP per capita data come from the World Bank's *World Development Indicators*.

only a few observations remained and all were designated as disasters. Thus, for these models I drop these observations and the *International Conflict* dummy.

The results are striking. First, they confirm my expectation that politics in potential recipient states do influence which complex emergencies the OFDA designates as disasters. Across all four models, complex emergencies in states with larger populations are less likely to receive aid. Although less consistent, there is also some evidence from Model 1 that complex emergencies in nations with larger armies are less like to receive OFDA relief as well.[32]

Second and perhaps more significantly, the variables that deal with U.S. political interests and humanitarian needs paint quite a different picture than the studies focused on natural disasters cited above, and are closer to the findings reported by Kevlihan et al (2014). Notably, not a single one of the variables intended to capture potential political incentives for aid-giving has a positive effect on either the chance of doing so or on how much OFDA allocates, and this holds across all of the models. Indeed, although these variables are insignificant in most cases, in several instances they have significant negative effects. Status as a U.S. ally actually reduces the odds of receiving assistance in Models 1-2, and complex emergencies that began during the Cold War are less likely to be designated disasters in all but Model 3. More democratic countries receive less emergency relief than less democratic ones, although they are not statistically less likely to receive relief at all. *U.S. Military Assistance* and *Political Affinity* are insignificant at both stages in all models.

In contrast, the three key variables intended to indicate humanitarian needs all take positive signs and are each significant in at least some cases, although their consistency varies. The number of forcibly displaced persons has a strongly significant positive impact ($p<.01$ in seven of eight cases) at both stage 1 and stage 2 in all four models. Meanwhile, emergency-years coded as genocide

[32] In all but Model 4, the results for *Population* hold even after dropping the two complex emergencies in India, with by far the largest population of the states in the dataset. Also, including *Population* or *Army* in the stage 2 equation (not shown) yielded insignificant results.

or politicide are more likely to be designated as disasters in Model 3 and to receive more funding in Models 2 – 4, while emergencies in countries with greater infant mortality are more likely to receive aid in Models 2 and 4, and to receive greater amounts in Model 4. In addition, in Model 3 complex emergencies in countries with greater GDP per capita are significantly less likely to be designated as disasters. Poorer countries, then, are more likely to receive assistance.

Finally, among the remaining variables *Year* has a positive and significant effect at both stage 1 and stage 2 in Models 2 and 3, and at stage 2 in Model 4. Thus, even when accounting for the other variables, a complex emergency is more likely to be designated a disaster and receives more aid the more recent it is. There are also a few meaningful effects for the indicators of emergency type. Relative to *Civil Conflict*, *International Conflict* increases the chance of being designated a disaster – in fact, every observation coded as *International Conflict* received assistance. In Models 1 – 3 *Communal Violence* increases the amount of aid received; in Model 3 it also increases the chance of receiving aid. Meanwhile, in Model 3 *One-Sided Violence* increases the chance of receiving aid but reduces the amount received. This, though, appears to be an artifact of the sample used in this model: in all five observations where data on GDP per capita is available, OFDA gave at least some emergency relief.

Table 3 provides a sense of the magnitude of these effects, based on Model 2. For each variable that achieves statistical significance, I estimate the probability of receiving aid (stage 1) and/or the predicted amount of aid allocated, conditional on receiving aid at all (stage 2), at two different values. For dichotomous variables I estimate these figures at 0 and 1, and for continuous ones at their 25th and 75th percentiles. For *Year* I estimate them in 1989 and 2008. All other variables are held at their means (continuous) or medians (dichotomous), and all differences reported are statistically significant at the $p<.10$ level (all but two at the $p<.05$ level).

On the left we can see that each of the significant variables has a sizeable effect on the probability of being designated a complex emergency. Notably, as *Forcibly Displaced Persons* moves from its 25th percentile to its 75th percentile, the chance of receiving aid increases from 57% to 81%.

A comparable increase in *Infant Mortality* has an even larger effect, increasing the chance of receiving aid from 45% to 77%. Meanwhile, the model predicts that in 1989 a complex emergency had only a 40% chance of receiving aid, but by 2008 an otherwise comparable one had an 85% chance. Similarly, the effects for the volume of aid are substantial. For ease of interpretation I list the predicted values in both the log scale used in the regressions and their associated values in constant 2005 U.S. dollars. Here an increase in *Forcibly Displaced Persons* from the 25th to 75th percentile increases aid by the equivalent of over $2 million, one coded as genocide or politicide increases funding by over $3 million, and occurring in 2008 rather than 1989 increases aid by over $4 million.

This extended example shows clearly how the complex emergency dataset can help facilitate research and improve our knowledge about the allocation of humanitarian aid. Unlike several similar investigations of aid to natural disasters, it suggests that humanitarian needs are a more consistent driver of OFDA funding in conflict situations than are U.S. political interests. This finding is significant given that most humanitarian assistance goes to address the effects of conflict rather than natural disasters. It also suggests several ways to make use of the complex emergencies data for further research in this area, including extending this kind of investigation to other donor states and more directly comparing particular donors' responses to conflicts and natural disasters.

Further Uses For the Data

The complex emergency dataset could also be used in a number of other ways, such as studying the behavior of international humanitarian organizations and the correlates of attacks on aid workers. Much as with foreign aid, there is a debate about the extent to which IOs and NGOs that engage in humanitarian action are motivated by principled concerns or material considerations rooted in competition for donor resources, and about how variation in these organizations' missions, contracting relationships, and cultures affect their actions (see e.g., Cooley and Ron 2002; Barnett 2005; Büthe et al. 2012). To date, however, relatively little systematic quantitative research

has been done in this area, and this dataset would enable further work on the comparative politics of humanitarianism, such as investigating the extent to which groups with different characteristics or national origins deploy their personnel and resources to the conflicts where they are most needed.[33]

In addition, as noted above complex emergencies can be especially dangerous places for humanitarian actors. According to data from the Aid Worker Security Database, of nearly 1000 major recorded attacks on aid workers from 1997 to 2009, at least 77% took place during conflicts identified as complex emergencies and an additional 11% occurred in these locations in the years shortly before or after.[34] Yet the nature and timing of these attacks vary greatly: some are lethal while others are not, some target foreign workers while others target local staff, some begin early in a conflict while others start later. What is more, while some emergencies with an international presence experienced few attacks (e.g., Côte d'Ivoire, Kosovo, and Colombia), others experienced dozens within a similar timeframe (e.g., Somalia, Afghanistan post-2001, or Sri Lanka II). To better understand when and why these attacks occur, complex emergencies may be the proper universe of conflicts to examine, since less intense conflicts appear far less likely to produce them at all.

Another class of related research questions focuses on the physical protection of civilians through peace operations or military intervention. As a group, complex emergencies resemble the descriptions of conflicts sometimes identified as possible candidates for military action to protect civilians from grave harm, even without the local government's consent. For example, Michael Walzer argues that humanitarian intervention is "morally necessary whenever cruelty and suffering are extreme and no local forces seem capable of putting an end to them" (1995, p.55).[35] Similarly,

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[33] The Büthe et al. paper is an important exception.

[34] The Aid Worker Security Database is available at https://aidworkersecurity.org/. The uncertainty reflects the fact that there are some attacks for which a precise location is not recorded. Where it is not clear whether an attack took place in the context of a complex emergency I exclude it from the count, and so 77% may actually be an under-estimate.

[35] For a similar argument see Wheeler (2000, p.34).

the International Commission on Intervention and State Sovereignty's *Responsibility to Protect* report argued that non-consensual interventions could be justified to avert or halt large-scale loss of life or ethnic cleansing, actual or apprehended, caused by "deliberate state action, or state neglect or inability to act, or a failed state situation" (2001, p.32). Yet most prominent quantitative investigations of traditional peacekeeping (e.g., Doyle and Sambanis 2000, 2006; Fortna 2004, 2008; Gilligan and Stedman 2003) and of its ability to protect civilians (e.g., Hultman et al. 2013) examine responses only to wars. Meanwhile, qualitative studies of humanitarian intervention and notorious failures to initiate it often focus only on the very worst cases of mass atrocities (e.g., Power 2002; Wheeler 2000; Bass 2008). Such studies thus exclude a number of conflicts that can provide important insights into patterns in civilian protection. By contrast, complex emergencies are well suited to represent those conflicts where military efforts to physically protect vulnerable civilians (either with or without the local government's consent) would seem most plausible on humanitarian grounds, and thus for exploring the sources of variation in these operations.

Conclusion

In conclusion, complex humanitarian emergencies identify the worst and most disruptive conflicts for civilians, without reference to who committed the violence or with what intent, and while accounting for both its direct and indirect effects. In these respects this concept and the Post-Cold War Complex Humanitarian Emergencies data are distinct from most of the recent literature addressing civilians' experiences during violent conflict. As discussed, and as demonstrated through the example of U.S. disaster assistance, they should be especially useful for answering questions about how states, IOs, and NGOs respond to severe humanitarian needs. Still, these ideas are by no means exhaustive. One could also use the dataset to facilitate other inquiries in the field of human security such as updating previous research on the causes of complex emergencies to cover more of the post-Cold War period (see e.g., Auvinen and Nafziger 1999), comparing their origins with those

of other types of violent instability (e.g., Goldstone et al. 2010), or investigating the post-conflict trajectories of communities that experience these uniquely devastating events. Broadly, the data are suited to inquiries that require distinguishing among conflicts mainly on the basis of civilian suffering and identifying the most devastating ones.

Tables and Figures

Figure 1: Complex Emergencies by Year, 1989-2009

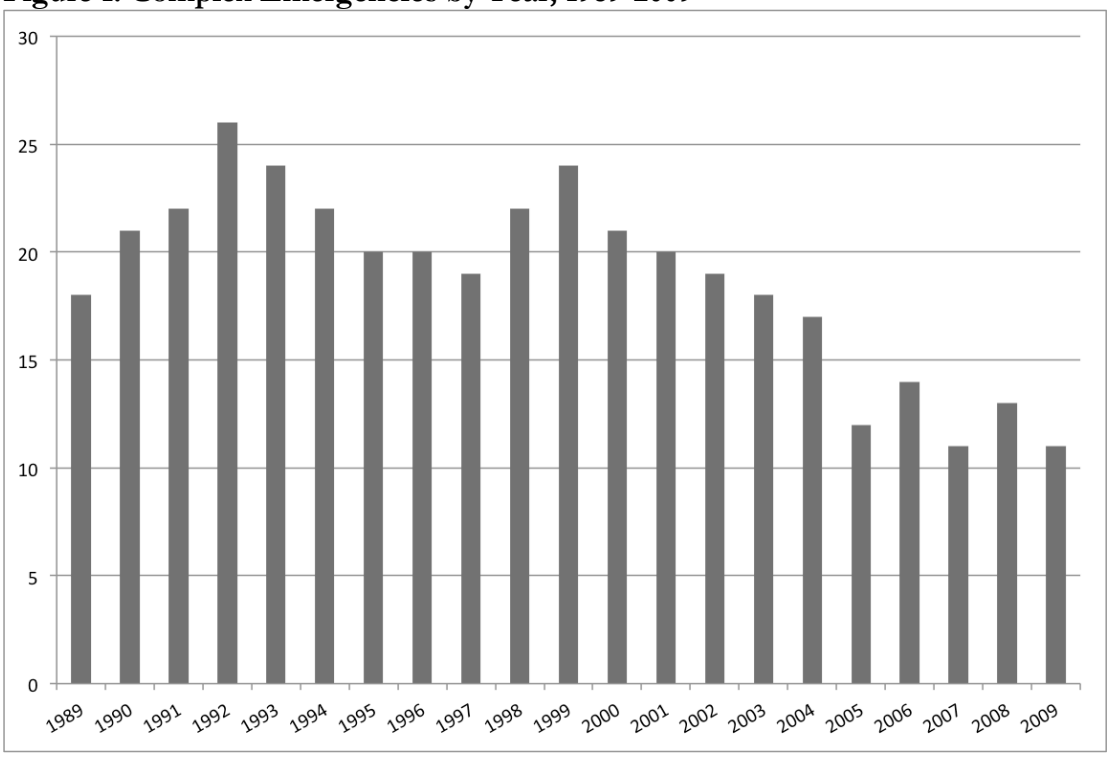

Figure 2: States that Experienced Complex Emergencies, 1989-2009

Figure 3: Complex Emergencies by OFDA Designation, 1989-2009

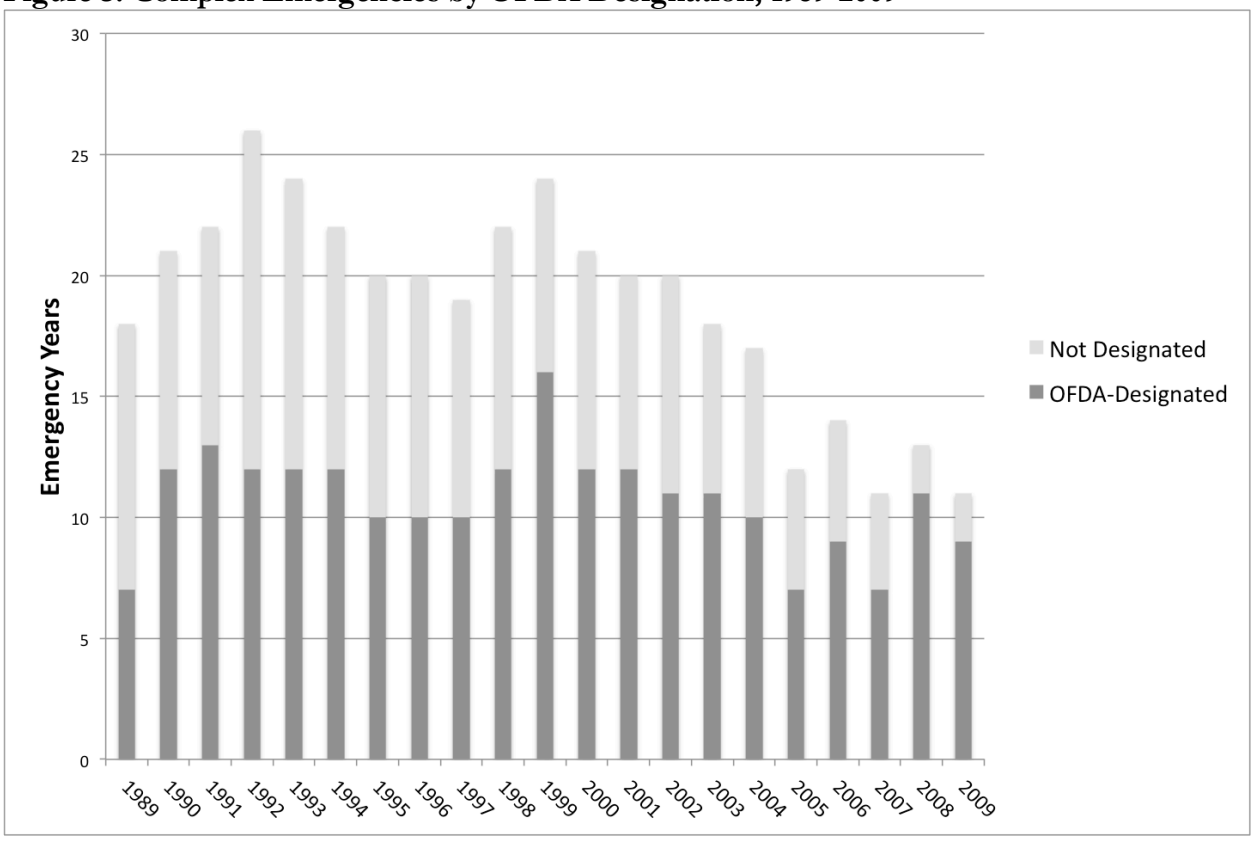

Figure 4: Average OFDA Funding per Complex Emergency, 1989 – 2009

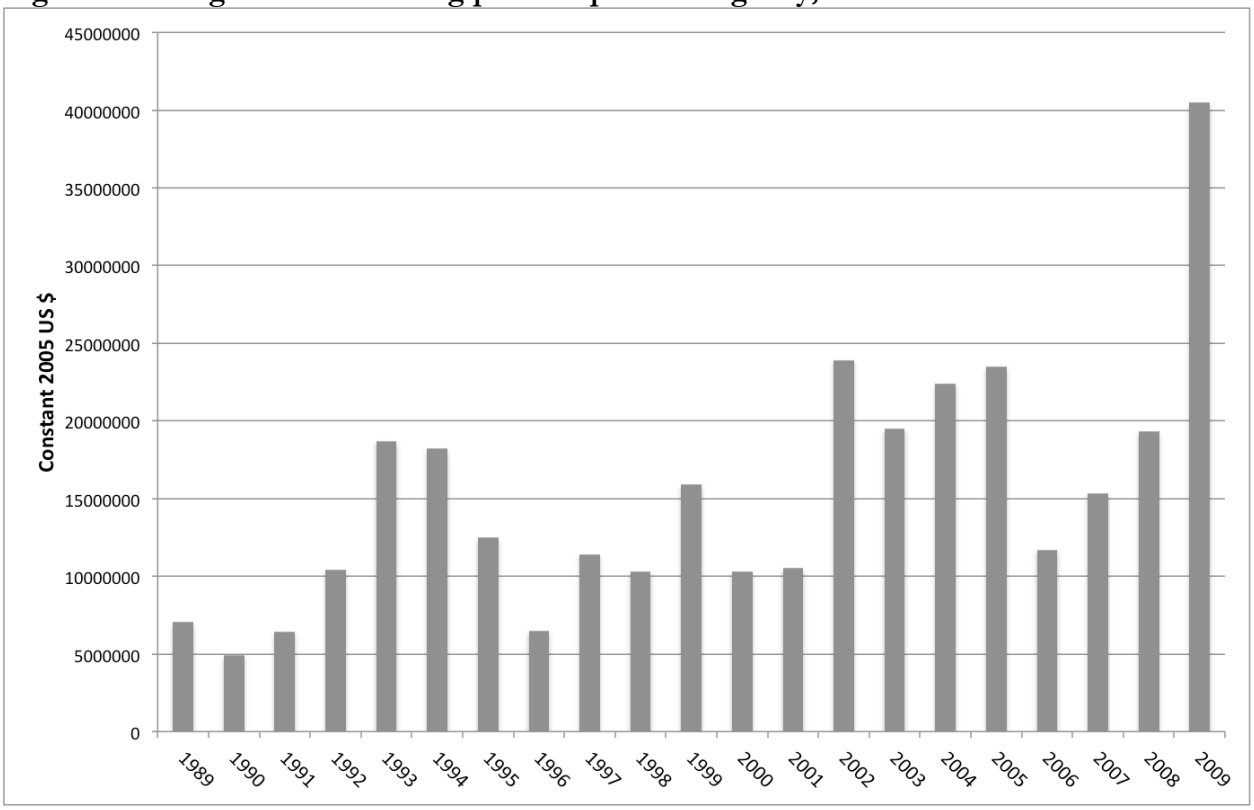

Table 1: Summary Statistics

	Observations	Mean	SD	Minimum	Maximum
Receives Assistance	394	0.571	0.496	0	1
Amount of OFDA Assistance (log)	192	15.47	1.863	9.397	18.71
Army Size (log)	384	10.47	3.366	0	14.28
Population (log)	394	17.10	1.393	13.65	20.83
US Ally	394	0.183	0.387	0	1
Cold War Complex Emergency	394	0.360	0.481	0	1
US Military Assistance (log)	394	8.625	7.977	0	22.61
Political Affinity	362	-0.716	0.512	-1.818	0.980
Democracy	394	2.640	1.461	1	6.500
Forcibly Displaced Persons (log)	378	13.34	2.229	0	15.97
Genocide/Politicide	394	0.132	0.339	0	1
Infant Mortality	394	70.39	39.20	8.700	165.5
GDP Per Capita (log)	316	6.627	1.088	3.913	8.784
Year	394	1998	5.686	1989	2009
International Conflict	394	0.0152	0.123	0	1
Civil Conflict	394	0.721	0.449	0	1
Internationalized Civil Conflict	394	0.142	0.350	0	1
One-sided Violence	394	0.0355	0.185	0	1
Communal Violence	394	0.0863	0.281	0	1

Table 2: Heckman Selection Models – Designating Disasters and Allocating Assistance

	Model 1	Model 2	Model 3	Model 4+
Stage 1: Designating Disasters / Granting Emergency Aid				
Army Size (log)	-0.117*	-0.0657	0.0360	-0.256
	(0.0647)	(0.0660)	(0.0721)	(0.258)
Population (log)	-0.588***	-0.683***	-0.690***	-0.558**
	(0.131)	(0.155)	(0.170)	(0.280)
US Ally	-0.727*	-0.650*	0.0950	-0.362
	(0.419)	(0.349)	(0.531)	(0.381)
Cold War Complex Emergency	-1.394***	-1.065**	-0.693	-1.215***
	(0.393)	(0.413)	(0.586)	(0.466)
US Military Assistance (log)	0.0159	0.00335	0.000357	-0.00597
	(0.0167)	(0.0167)	(0.0198)	(0.0213)
Political Affinity	-0.217	-0.0470	0.132	-0.147
	(0.345)	(0.350)	(0.681)	(0.358)
Democracy	0.186	0.218	0.132	0.159
	(0.156)	(0.159)	(0.138)	(0.182)
Forcibly Displaced Persons (log)	0.579***	0.512***	0.587***	0.335**
	(0.174)	(0.171)	(0.225)	(0.151)
Genocide/Politicide	0.656	0.801	8.104**	0.746
	(0.605)	(0.648)	(3.311)	(0.727)
Infant Mortality	0.00916	0.0134**		0.0124*
	(0.00603)	(0.00585)		(0.00706)
GDP Per Capita (log)			-0.967***	
			(0.223)	
Year		0.0669**	0.0835*	0.0553
		(0.0320)	(0.0430)	(0.0349)
International Conflict	4.962***	5.335***		
	(1.337)	(1.156)		
Internationalized Civil Conflict	-0.0549	0.110	1.072	-0.0407
	(0.484)	(0.476)	(0.750)	(0.398)
One-sided Violence	-0.199	0.218	5.855*	-0.439
	(0.805)	(0.879)	(3.430)	(0.658)
Communal Violence	0.258	0.292	1.038*	-0.368
	(0.473)	(0.516)	(0.584)	(0.697)
Constant	2.836	-129.2**	-157.2*	-103.1
	(2.778)	(62.83)	(84.30)	(68.58)
Stage 2: Allocating Emergency Aid				
US Ally	-0.658	-0.396	-0.401	-0.302
	(0.488)	(0.452)	(0.488)	(0.635)
Cold War Complex Emergency	-0.382	0.00365	-0.0371	-0.0839
	(0.432)	(0.317)	(0.385)	(0.310)
US Military Assistance (log)	0.0109	0.00569	-0.0000435	0.0197
	(0.0226)	(0.0215)	(0.0229)	(0.0266)
Political Affinity	0.179	0.257	0.448	0.0463
	(0.492)	(0.479)	(0.482)	(0.443)
Democracy	-0.301*	-0.383**	-0.386**	-0.539***
	(0.163)	(0.149)	(0.180)	(0.188)
Forcibly Displaced Persons (log)	0.681***	0.575***	0.580***	0.474***
	(0.215)	(0.200)	(0.221)	(0.139)
Genocide/Politicide	0.605	0.816*	0.916*	1.247***
	(0.491)	(0.465)	(0.555)	(0.417)
Infant Mortality	0.000405	0.00499		0.0159***
	(0.00620)	(0.00594)		(0.00584)
GDP Per Capita (log)			-0.362	
			(0.343)	
Year		0.0881***	0.0895***	0.127***
		(0.0287)	(0.0273)	(0.0249)
International Conflict	-0.0847	0.275		
	(0.946)	(0.867)		
Internationalized Civil Conflict	-0.00990	-0.0669	0.0497	-0.253
	(0.459)	(0.384)	(0.506)	(0.367)
One-sided Violence	-0.566	-0.623	-0.890*	-0.407
	(0.671)	(0.571)	(0.463)	(1.028)
Communal Violence	0.700*	0.894**	0.712**	0.590
	(0.405)	(0.356)	(0.338)	(0.721)
Constant	6.929**	-168.1***	-168.0***	-245.2***
	(3.226)	(57.83)	(53.57)	(49.53)
Observations	309	309	259	276

Robust standard errors clustered by complex emergency in parentheses. *** p<0.01, ** p<0.05, * p<0.1. +: In Model 4 all variables except Cold War Complex Emergency, Genocide/Politicide, and Year are lagged one year.

Table 3: Substantive Effects (Model 2)

	Predicted Probability of Receiving Aid		Predicted Amount Allocated (Conditional on Receiving Aid)	
	Low	High	Low	High
Population	0.82	0.48	--	--
US Ally	0.63	0.38	--	--
Cold War Complex Emergency	0.63	0.23	--	--
Democracy	--	--	Log scale: 14.45356 Constant 2005$: 1,892,784	Log scale: 13.79445 Constant 2005$: 979,159
Forcibly Displaced Persons	0.57	0.81	Log scale: 13.84979 Constant 2005$: 1,034,873	Log scale: 14.98544 Constant 2005$: 3,221,764
Genocide / Politicide	--	--	Log scale: 14.1241 Constant 2005$: 1,361,502	Log scale: 15.29071 Constant 2005$: 4,371,907
Infant Mortality	0.45	0.77	--	--
Year	0.4	0.85	Log scale: 12.98615 Constant 2005$: 436,327	Log scale: 15.33184 Constant 2005$: 4,555,472
International Conflict	0.63	1	--	--
Communal Violence	--	--	Log scale: 14.1241 Constant 2005$: 1,361,502	Log scale: 15.16648 Constant 2005$: 3,861,166

Low values are calculated at 0 for dichotomous variables and at the 25th percentile for continuous ones. High values are calculated at 0 for dichotomous variables and at the 75th percentile for continuous ones. Values for *Year* are calculated at 1989 (low) and 2008 (high). All other variables are set at their means (continuous) or medians (dichotomous).

Appendix: Post-Cold War Complex Humanitarian Emergencies

CE Name	Start Year	End Year	CE Type	Certainty
Afghanistan I / Soviets	1978	1992	Int'l-Internal	3
Afghanistan II / Civil War	1992	2001	Internal	3
Afghanistan II / OEF & After	2001	Ongoing 2009	Int'l-Internal	3
Cambodia	1979	1990	Int'l-Internal	3
India / Kashmir	1990	2004	Internal	2
India / Northeast	1993	1998	Internal	2
Indonesia / Aceh	1999	2004	Internal	3
Indonesia / East Timor	1999	1999	One-sided	3
Indonesia / Moluccas & Sulawesi	1999	2002	Communal	3
Myanmar / Burma	1988	Ongoing 2009	Internal	3
Pakistan / Govt. vs. Taliban	2004	Ongoing 2009	Internal	3
Philippines I/ Govt. vs. NPA	1986	1992	Internal	3
Philippines II/ Govs vs. Muslim Insurgents	1996	2009	Internal	3
Sri Lanka I	1983	2001	Internal	3
Sri Lanka II	2006	2009	Internal	2
Azerbaijan - Armenia (USSR)	1988	1991	Communal	3
Azerbaijan / Nagorno-Karabakh	1992	1994	Int'l-Internal	3
Bosnia	1992	1995	Internal	3
Croatia	1991	1995	Internal	3
Russia / Chechnya I	1995	1996	Internal	3
Russia / Chechnya II	1999	2004	Internal	3
Tajikistan	1992	1993	Internal	3
Turkey / PKK	1992	1998	Internal	3
Yugoslavia / Kosovo	1998	2000	Int'l-Internal	3
Algeria	1992	2003	Internal	3
Angola I	1975	1991	Int'l-Internal	3
Angola II	1992	1994	Internal	3
Angola III	1998	2002	Int'l-Internal	3
Burundi	1993	2004	Internal	3
Congo-Brazzaville	1997	1999	Int'l-Internal	3
Cote d'Ivoire	2002	2004	Internal	3
DRC (Zaire) I	1992	1996	Communal	3
DRC (Zaire) II	1996	1997	Int'l-Internal	3
DRC (Zaire) III	1998	Ongoing 2009	Int'l-Internal	3
Eritrea / War w/ Ethiopia	1998	2000	International	3
Ethiopia / Civil War	1988	1992	Internal	3
Kenya	2008	2008	Communal	1
Liberia I	1990	1996	Internal	3
Liberia II	1999	2003	Internal	3
Mozambique	1982	1992	Int'l-Internal	3
Nigeria	1997	2006	Communal	3
Rwanda	1990	1999	Internal	3
Sierra Leone	1991	2001	Internal	3
Somalia	1988	Ongoing 2009	Internal	3
South Africa	1986	1995	Communal	2
Sudan I / North-South civil war	1983	2004	Internal	3
Sudan II / Darfur	2002	Ongoing 2009	Internal	3
Sudan III/ Southern violence	2008	Ongoing 2009	Communal	2
Uganda I	1987	1991	Internal	3
Uganda II / LRA	1996	2006	Internal	3
Zimbabwe	2005	2008	One-sided	3
Colombia	1985	Ongoing 2009	Internal	3
El Salvador	1980	1990	Internal	3
Peru	1983	1994	Internal	2
Iraq / Kurds I	1987	1989	Internal	3
Iraq/ Kurds II	1991	1993	Internal	3
Iraq/ Shiites	1991	1998	One-sided	2
Iraq/ US-led coalition	2003	Ongoing 2009	Int'l-Internal	3
Kuwait	1990	1990	International	1
Lebanon I / Civil war	1975	1991	Int'l-Internal	3
Lebanon II / Israeli air attacks	2006	2006	International	1

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