



Assisting Uncertainty: How Humanitarian Aid can Inadvertently Prolong Civil War

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Humanitarian aid has rapidly emerged as a core component of modern peacebuilding and post-conflict reconstruction. However, some practitioners and policymakers claim that humanitarian assistance may actually prolong conflict. The current debate about the effect of humanitarian aid on conflict underspecifies causal mechanisms and takes place largely through case studies. I use a bargaining framework to argue that aid can inadvertently increase each combatant's uncertainty about the other side's relative strength, thereby prolonging civil war. I test my argument using panel data on cross-national humanitarian aid expenditures. From 1989 to 2008, increased levels of humanitarian assistance lengthen civil wars, particularly those involving rebels on the outskirts of a state. This result suggests that policymakers need to carefully consider whether the specific benefits provided by humanitarian aid outweigh the risk of prolonging civil conflicts, and to look for methods of disbursement that reduce that risk.

Humanitarian relief has rapidly become a core component of modern peacebuilding and post-conflict reconstruction. In the two decades since the end of the Cold War, the amount of international humanitarian aid reported through the Organization for Economic Cooperation and Development (OECD) has increased nearly 1,400% in real terms, from \$796 million USD in 1989 to well over \$11 billion USD in 2008 (Figure 1). The overwhelming majority of these resources have been allocated across conflict areas to provide basic resources such as food, shelter, and medical supplies to victims of conflict. In the 1990s, for example, the international community provided billions of dollars in relief to assist refugees and internally displaced persons in places like Rwanda and Bosnia. Since 2001, this strategy has continued more intensively in places like Afghanistan, Iraq, and sub-Saharan Africa (Berman, Shapiro, and Felter 2011). By one estimate, up to 80% of all current social services in Afghanistan are provided through contracts with international aid organizations (Cohen, Kupcu, and Khanna 2008).

Despite the appeal of increasing humanitarian assistance to conflict areas, there is growing controversy over the unintended consequences of aid. Among the most popular critiques is that humanitarian assistance can inadvertently prolong conflict. For example, during the 1994 Rwandan Civil War, Western journalists joined the Rwandan government in accusing the United Nations High Commissioner for Refugees (UNHCR) and its aid contractors of indirectly fueling the conflict by assisting Hutu war criminals in competition with the state (Gourevitch 1999). Several years later in Bosnia, aid workers and international observers argued that the safe zones created to provide relief services actually prolonged fighting and resulted in the death of nearly 20,000 people

around the aid enclaves (Woodward 1995). Similar claims have been made about the role of humanitarian assistance in Tajikistan, Somalia, Chechnya, Afghanistan, and Cambodia among others (Anderson 1999; Luttwak 1999; Terry 2002; Polman 2010).

Although analysts of these conflicts have been quick to establish a direct link between humanitarian assistance and the duration of war, many aid workers and policy experts remain skeptical of such claims. One reason is the inability to draw consistent conclusions. Humanitarian assistance has been sent to many ongoing conflicts, and not all of them appear to have lasted as long as they did in Bosnia or Rwanda (Shearer 2000). John Borton, of the Humanitarian Policy Group, is one of several analysts to have criticized the emphasis on humanitarian aid as a significant factor in conflict:

Whilst there have been many instances where humanitarian aid has been hijacked and diverted to the benefit of warring factions, the empirical evidence is simply not available to warrant a focus upon humanitarian aid. In most, if not all, conflicts the role of humanitarian aid as a source of support for warring factions has probably been slight (Borton 1998:21).

And indeed, existing research has failed to determine how robust the empirical relationship between humanitarian assistance and the duration of war really is, or to specify a coherent theoretical mechanism that might explain variation in the effect across cases. Instead, analysts have generally drawn inferences from cases that selected on the dependent variable. This is surprising given that the empirical relationship is the biggest issue at stake for policymakers and practitioners debating whether humanitarian assistance is an effective peacebuilding strategy.

Does the provision of humanitarian assistance inadvertently prolong war? And, if it does, why do analysts appear to observe this tendency during some wars but not others? In this article, I make two main contributions and seek to answer these questions. First, I propose a theory of humanitarian aid and conflict duration based

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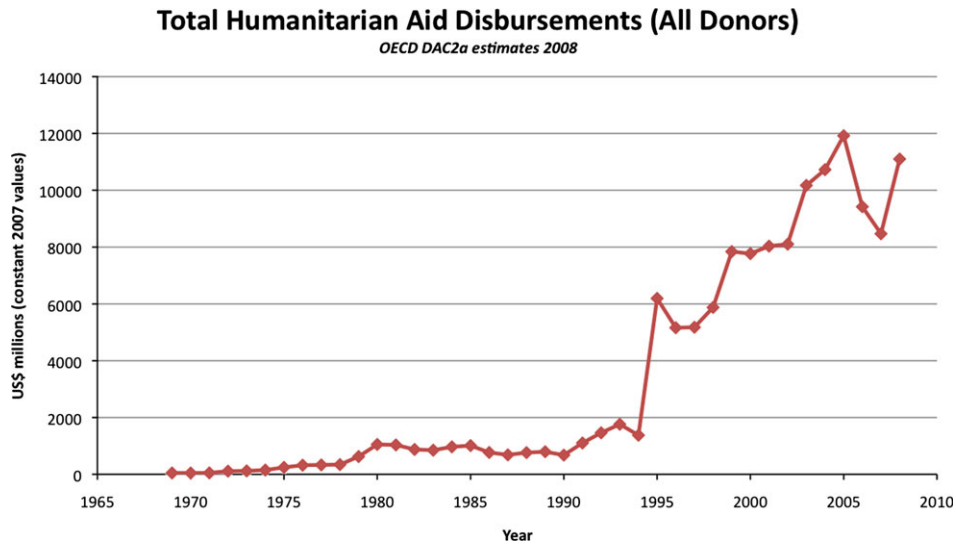


FIG. 1. Organization for Economic Cooperation and Development DAC Estimates of Global Humanitarian Assistance Disbursed to Recipient States by Year

on existing bargaining models of war termination. The theory implies that making war less costly by providing humanitarian assistance can inadvertently prolong fighting by slowing down the accrual of information that allows opponents to converge on more congruent estimates of relative strength. Lack of this information prevents opponents from coordinating expectations about what each is prepared to accept in a settlement. Second, I test the empirical expectations of the theory using panel data on humanitarian aid administered cross-nationally from 1969 to 2008. After controlling for factors that may be correlated with both the duration of civil war and the aid organizations' decision to treat crises more or less intensively, I find evidence that aid can inadvertently prolong ongoing civil wars. Consistent with an informational mechanism, I show that the degree to which aid adds uncertainty to the crisis bargaining process largely mediates. The tendency for aid to prolong war appears to be much more acute under conditions where the allocation of aid is itself uncertain.

The remainder of this article proceeds in five principal sections. First, I review the existing literature on humanitarian aid and conflict in order to highlight popular mechanisms through which aid is thought to prolong war. Second, I outline the bargaining framework I use to explore the interaction between humanitarian assistance and conflict. Third, I derive an informational theory of humanitarian assistance and war termination from which I generate testable hypotheses about how aid will affect the duration of civil war. In the fourth section, I outline a research design and test the hypotheses empirically. Finally, I conclude in the fifth and sixth sections with a discussion of the results and their implications for international peacebuilding.

Previous Literature: Humanitarian Aid and the Duration of Conflict

How can well-intentioned humanitarian assistance prolong conflict? Aid workers and analysts often identify this tendency as the core "paradox of humanitarian action." In aiming to alleviate suffering, humanitarian aid appears to sustain conflict and inadvertently prolong suffering (Anderson 1999; Terry 2002). To date, the most common

explanations for this tendency focus on how aid fuels war by supplying resources to competing parties. However, while resource theories of conflict are intuitively appealing, they often fail to address the underlying incentive for parties to avoid the costs of war altogether.

The existing literature proposes four mechanisms linking humanitarian aid to the duration of conflict. First, humanitarian aid can prolong conflict by directly or indirectly providing the material resources needed to finance an insurgency. Although international law obliges combatants to distinguish themselves, non-uniformed insurgents routinely intermingle with civilians (Terry 2002:28). As a result, humanitarian agencies find it difficult to distinguish between civilians and combatants and often directly supply insurgents with food, shelter, and medical supplies. For example, in the aftermath of the Rwandan Civil War, aid organizations discovered that Hutu forces fighting for relief camps made direct use of relief supplies (Gourevitch 1999; Cooley and Ron 2002).

More indirectly, theft has proven to be an effective strategy to utilize humanitarian assistance. By one account, more than half of the aid in the former Yugoslavia was diverted to feeding and supplying soldiers (Woodward 1995:319). Similarly, more than \$5 million USD worth of material was stolen from aid organizations in Liberia in 1994, including more than 120 vehicles, communication equipment, and thousands of tons of food (Terry 2002:39). This was eclipsed in Liberia's capital Monrovia in 1996, when factions stole \$20 million USD worth of equipment from the United Nations and non-governmental organizations (NGOs) (Atkinson 1997:21). Over time, warring factions have grown increasingly sophisticated. Some have even created local NGOs to control the distribution process (Prendergast and Scott 1996). In Somalia, where the quantity of food stolen ranges from 20% to 80%, bandits registered fake villages and coerced real villages to sign for food that never arrived (de Waal 1994:146).

Second, aid can prolong war by creating protected spaces for combatants to launch attacks with relative immunity. For decades, groups have used protected camps and aid enclaves as safe havens for rest, recuperation, and recruitment (Terry 2002). During the Bosnian War, for example, analysts argued that the humanitarian safe zones prolonged fighting and protected Bosnian

forces (Boyd 1995; Landgren 1995; Woodward 1995:320–321). More recent empirical research offers broader support by demonstrating a systematic relationship between protected refugees and the continuation of civil war (Salehyan 2007, 2008).

Third, humanitarian assistance can prolong conflict by relieving parties of the political burden of sustaining a war. High levels of aid can often fill a sufficiently large proportion of civilian needs such that local resources can be reallocated towards the war effort (Duffield 1994a,b; Anderson and Duffield 1998). For example, one interpretation of Israel's periodic blockades of UN convoys into Gaza is that international assistance has effectively insulated the Hamas leadership from the domestic costs of waging a protracted war. Were it not for international relief, Hamas might be forced to redirect resources away from fighting and towards public goods (Luttwak 1999).

Fourth, humanitarian assistance can prolong conflict when aid organizations create or participate in a local war economy with interests tied to the continuation of conflict. When relief arrives from abroad, government or militia leaders can profit from visas, import duties, airport and port charges, and other administrative fees (Human Maier 1992). For example, Liberian leader Charles Taylor demanded 15% of aid entering his territory to be paid as an import tax (Terry 2002:39). Once aid is delivered, organizations are often forced to hire guards from local militias operating security rackets (Sommer 1994:14, 85, 104). Relief agencies also hire local staff that requires hotel rooms and offices. From delivery to distribution, the entire process creates local industries with interests tied to the continuation of war.

In sum, these mechanisms suggest that humanitarian aid can prolong conflict by reducing the costs of fighting in four ways: (i) directly or indirectly financing the material resources needed by an insurgency, (ii) creating protected spaces that shield combatants from costly attacks, (iii) insulating combatants from the political burden of sustaining a costly war, and (iv) creating new economic interests tied to the continuation of conflict.

Although it is certainly plausible that these factors could contribute to the continuation of war, they do not explain why rival groups cannot do better by negotiating a deal (Fearon 1995, 2004). The fundamental challenge for any theory of war duration is to explain why—if fighting is extremely costly and risky—opponents ever have the incentive to delay settlement in favor of fighting. Structured this way, the idea that aid prolongs war by simply supplying resources seems incomplete because the total amount of aid is always less than the total costs incurred by the parties involved. Even in conflicts that receive high levels of aid, war remains sufficiently costly that sides should seek an immediate settlement. Analysts linking humanitarian aid to conflict must therefore demonstrate how increasing levels of aid can independently shift the incentives of competing parties such that they would elect to pay the costs of an additional period of war rather than accept a bargained solution.¹

In the next section, I review a class of dynamic bargaining models that provide a useful framework for analyzing

the interaction between humanitarian aid and war termination. In these models, fighting—while costly—can occur in equilibrium because it resolves uncertainty in a less manipulable forum than the bargaining table (Wagner 2000). Fighting ends when opponents learn enough about their prospects in war to decide that its continuation is unprofitable. The costs of war, therefore, serve an informational purpose because they resolve the uncertainty that marks protracted conflicts. It follows that making war less costly—as humanitarian relief is explicitly designed to do—may paradoxically prolong war by slowing down the accrual of information that allows opponents to converge on more congruent estimates of relative strength and thereby coordinate expectations about what each side is prepared to accept in a settlement.

A Framework: Bargaining Theory and Models of War Termination

Scholars of international relations generally regard the occurrence, conduct, and termination of war as a bargaining process. Fearon (1995) proposed what is generally regarded as the standard bargaining model for the occurrence of war. In the model, two sides have divergent preferences over the division of some issue space. Supposing they elect to fight a war over the issues at stake, each can expect to pay some costs associated with fighting. These costs open a range of bargained solutions that both sides should strictly prefer to war. Structured this way, the puzzle of war becomes why sides ever fail to identify a settlement within this range *ex ante*, knowing that war is always inefficient *ex post*.

Fearon suggests that coherent rationalist explanations for war will fall into one of two categories: Sides can fail to find a settlement because they have private information with incentives to misrepresent, or because they are unable to credibly commit to the agreement. According to the first explanation, sides have asymmetric information about their own capabilities and resolve; thus, they have an incentive to misrepresent their ability on these dimensions to secure a better settlement. As a result, while the costs of fighting open a range of settlements both sides should prefer to war, sides also have the incentive to bluff in order to shift the bargaining range in their favor. The second explanation is that sides may prefer to fight now if their opponent is unlikely to honor a settlement in the future (Walter 1997, 2009).

An important critique of this model is that in formalizing war as a game-ending move, or “outside option,” it assumes away any strategic behavior within wars and makes it impossible to ask questions about war termination (Wagner 2000; Powell 2004). The model effectively limits the analysis of war to its origins. However, given that many wars end short of military collapse, broadening the model to a dynamic process is useful in exploring the factors that lead some wars to last longer than others. For example, if war results from private information or commitment problems, certain events within a conflict must somehow resolve these issues for sides to ultimately stop fighting (Schelling 1966; Blainey 1988; Clausewitz, Howard, Paret, and Heuser 2007).

Several models relax the game-ending, costly-lottery assumption and model war as a costly *process* that occurs simultaneously with bargaining (Wagner 2000; Filson and Werner 2002, 2007; Slantchev 2003, 2004; Powell 2004; Smith and Stam 2004). These models generally take

¹ One previous attempt to link humanitarian assistance to war was outlined by Narang (2014). However, that study focused on when and why aid might undermine peace in the aftermath of civil war using a model of war initiation. By contrast, this study investigates how humanitarian aid might prolong war when administered during an ongoing civil conflict using a dynamic bargaining model of war termination.

informational asymmetries as their starting point and treat war as an “inside option” that sides utilize to reduce uncertainty. The basic idea is that competing sides have the incentive to misrepresent their willingness and ability to fight. Therefore, the bargaining table becomes a relatively unreliable source of information on which to base settlements. The battlefield, in contrast, offers a clearer source of information. It is simply more difficult to bluff about battlefield outcomes. Thus, assuming sides value the future sufficiently, they have the incentive to delay settlement in favor of fighting in order to accrue enough information to formulate reliable beliefs about their opponent’s strength and avoid settling prematurely on worst terms (Slantchev 2004). In this way, war can be thought of as a costly learning process whereby opponents signal their ability to both endure and impose costs in an attempt to converge on common beliefs about relative strength. War eventually terminates when sides have accrued enough information that fighting loses its informational content.

The goal in the next section is to leverage this framework to move from popular anecdotes about how humanitarian aid can prolong conflict to theoretically grounded propositions. I do this by outlining a mechanism through which exogenous assistance, in the form of humanitarian aid, can prolong the duration of civil war by increasing opponents’ uncertainty in the intrawar period. The mechanism holds regardless of the level of aid, which addresses the critique that traditional resource theories are insufficient to explain prolonged fighting. Despite the fact that the amount of humanitarian aid administered during a conflict is never so large as to make war completely costless, the effect of mitigating the costs of war is to reduce the informational value of fighting and increase the number of battles needed to converge on reliable estimates of opponents’ strength.

An Informational Theory: Learning while Fighting, Humanitarian Aid, and the Duration of Conflict

Following Powell (2004), consider the bargaining dynamics between a government, G , and rebel group, R , over the division of some issue space. G begins by making a take-it-or-leave-it offer to R , which can either accept immediately or reject the offer in favor of fighting. Under complete information, the optimal strategy is for G to offer exactly $p+c_R$ (the probability of R winning a fight to the finish minus its expected costs of war) and for R to accept immediately since it can do no better by fighting. However, given that G is uncertain about R ’s cost of fighting, G must formulate its initial offer based on imperfect beliefs. In this situation, G faces a “risk-return trade-off” between obtaining a more favorable settlement and a higher probability of fighting. If G underestimates how costly war will be for R , it begins with offers that are too high and guarantees worst terms for itself but a lower probability of fighting. If, on the other hand, G overestimates how costly war will be for R , it begins with offers that are too low and effectively provokes fighting. As Powell notes, the equilibrium dynamic is that G makes a series of increasing concessions that “screen” R by type. If R is weak and thus faces higher costs from fighting and a greater risk of collapse, it accepts earlier offers. If R is strong, it fights longer until G eventually makes a more favorable offer.

Now, consider the role of humanitarian assistance in relation to this model. Rebel groups must maintain orga-

nizational integrity long enough to signal strength and extract concessions from a stronger opponent. In doing so, they require substantial resources to finance a military campaign, recruit fighters, and generate support from civilians who can supply food, shelter, and intelligence (Weinstein 2008:7). Without access to a sufficient supply of resources, an insurgency can expect to collapse relatively quickly. They will find it difficult to provide the private incentives necessary to maintain a fighting force and the public goods needed to maintain political support among the local population.

As described above, humanitarian relief can provide a relatively straightforward solution to these challenges. First, by providing easy access to food, shelter, and medical care, humanitarian aid can directly or indirectly finance the costs of fighting. Second, by providing protected spaces that shield combatants from military attacks, humanitarian assistance can limit the government’s power to impose costs. Third, by providing public goods to the local community, aid insulates a rebel group from the mounting political costs of fighting a rebellion.² Finally, by creating new economic interests tied to the continuation of war, aid can reduce the opportunity costs of participating in a rebellion.

These factors, in turn, affect the bargaining dynamics between a rebel group and the government.³ The more aid a rebel group receives, the lower its costs of fighting appear to be and the less likely it is to collapse. In the screening logic outlined above, this added resilience forces the government to make a greater number of offers and fight longer as it gradually updates its beliefs about its opponent and finally offers enough concessions to leave the rebel group indifferent between continuing to fight and accepting a settlement. When aid enters mid-conflict—after the government has begun to converge on a more accurate estimate—the government will become less certain of its beliefs formed in the prior period. It must then fight additional periods in order to re-estimate its opponent’s strength in light of the advantage gained from external assistance. This suggests the following hypothesis:

Hypothesis 1: *The greater the level of humanitarian aid administered during a civil conflict, the longer that conflict will appear to last.*

This expectation notwithstanding, the government always has the incentive to avoid the costs of war under complete information. If the government could directly observe the degree to which aid mitigated its opponent’s costs of fighting, it would do better to factor this

² Insurgencies create costly externalities. Economic conditions are likely to suffer (Collier and Hoeffler 2003; Murdoch and Sandler 2002), government provisions decrease (Lai and Thyne 2008), and the direct toll in casualties can be high (Ghobarah et al. 2003, 2004). Counterinsurgency tactics can also be invasive for civilians that cohabitate with rebels (Lyal 2009). In order for a rebel group’s home population to withstand these costs and still provide support, they must receive some level of services and protection.

³ Note that, although the discussion here focuses on how humanitarian aid can make war less costly for a rebel group, neither the theoretical mechanism nor the observable implications depend on who the recipients of aid are. Making war less costly for either rebels or the government can prolong fighting, as both parties’ costs of war serve an equally important informational purpose in reaching settlement. For simplicity, the model here follows the convention in the crisis bargaining literature by illustrating how humanitarian aid can add uncertainty to a government’s beliefs. However, in reality, the uncertainty is not one sided: Both parties are simultaneously learning while fighting.

into the settlement offers over time and arrive at an agreement just as quickly as if no relief was provided. This point is critical because, if the informational mechanism here is correct, a unique implication is that the tendency for aid to prolong war will be mediated by the degree to which it adds uncertainty to the bargaining process. If the exact amount of aid is observable, or if future resources can be easily anticipated, parties should immediately factor any advantage into an updated assessment of relative strength and arrive at a settlement without delay. Conversely, if assistance is not directly observable, sides not only have incomplete information about their opponent's capabilities and resolve, they now have to estimate (or re-estimate) these values by fighting additional periods to resolve the added uncertainty introduced by the exogenous provision of humanitarian aid.⁴

Note that the uncertainty introduced by aid is compounded by the same problem of asymmetric information that characterizes estimates of capabilities and resolve. Each side has private information about the amount of aid they and their constituency received, as well as the degree to which it actually increased their ability to fight. They also have an incentive to overrepresent this advantage to extract greater concessions.

This unique proposition suggests that the general tendency for humanitarian aid to prolong war will be more acute under conditions in which the provision of aid is itself uncertain. For example, humanitarian aid may be especially prone to prolonging war in conflicts with weak central governments that lack the capability to observe where insurgents operate. Such conditions make it difficult to directly observe the advantage gained by aid and adjust settlement offers. This suggests the following hypothesis:

Hypothesis 2: *The tendency for humanitarian assistance to prolong conflict will appear stronger under conditions where the level of humanitarian aid is more difficult to observe and weaker under conditions in which it is easier to observe.*

In the empirical tests, I operationalize the government's uncertainty over the level of aid by interacting it with a dummy variable for whether the civil war was a *peripheral insurgency* involving rebels on the outskirts of a state (Fearon 2004). Such conflicts have received considerable attention because they tend to last longer than other types of civil wars. One reason for this—suggested in the previous literature—is that rebellions fought at the periphery complicate bargaining by exacerbating informational problems, because external resources (like humanitarian aid) are difficult to observe (Salehyan 2007). To be precise, while organizing at the periphery allows rebels to more easily mobilize a sufficient threat to extract a deal, this advantage is common knowledge and thus it should not itself prolong war because parties in the conflict should simply update their beliefs and adjust demands accordingly. Instead, rebellions at the periphery last longer, as Salehyan (2007) argues, because they can introduce uncertainty over factors such as the degree of external support, thus creating divergent expectations about

relative strength and the likely outcome of war (Byman 2005:70).

This makes peripheral insurgencies a good measure for the structural conditions in which aid is likely to add uncertainty to the bargaining process. My expectation is that *peripheral insurgency* will have a strong mediating effect on the tendency for humanitarian aid to prolong conflict: appearing more acute when rebels operate on the outskirts where aid provisions are more difficult to observe, and less acute when rebels operate in the core of the state. To this end, I limit the analysis of Hypothesis 2 to treated cases in order to show that the effect of aid is contingent on the level of uncertainty.

Before proceeding, it is instructive to consider an illustrative example of the hypothesized mechanism in the case of the Rwandan Civil War, where billions of dollars in humanitarian aid was disbursed following the Rwandan Genocide. Before relief arrived, there was already considerable uncertainty over the capabilities of the ex-FAR (Forces Armees Rwandaises), who fled alongside Hutu civilians fearing retribution. While internal camp documents revealed armed forces of 22,000 soldiers, external estimates at the time varied between 10,000 and 50,000 soldiers (Terry 2002:191). Similarly, estimates of financial resources available to the FAR varied from \$30 to 40 million USD. And finally, despite a government effort to confiscate weapons that many perceived to be successful, camp documents later revealed significant access to weaponry during the war.

Aid provisions only added to this uncertainty. As agencies rushed to provide relief, military leaders quietly “manipulated the aid structure to increase their political and military power” by inflating population numbers, stealing supplies, and taxing relief workers (Terry 2002:191). Their ability to do so, however, varied considerably. For example, military leaders deliberately stoked uncertainty over census numbers to divert extra aid for 120,000 non-existent victims in one camp, 50,000 in another, and 460,000 in a third (Terry 2002:186–188). It quickly became clear that aid recipients “were the crucial bargaining chips in the former regime’s plan to start negotiations with Kigali” (Terry 2002:213).

However, the incentive to misrepresent an advantage from humanitarian assistance presented a significant obstacle to the resolution of the crisis, for it was within this uncertainty that the government struggled to negotiate an end to ex-FAR hostilities who sought a return to power (Terry 2002:165–169). Vice President Kigame, the general leading the Rwandan Patriotic Army, directly blamed humanitarian organizations for the ongoing war. He stated, “I think we should start accusing these people who actually supported these camps—spent one million dollars per day in these camps, gave support to these groups to rebuild themselves into a force...and when, in the end, they are caught up in the fighting and they die, I think it has more do with these people than Rwanda...” (Gourevitch 1997:55).⁵

Indeed, the government warned on several occasions that it would act to break up the relief camps at the periphery, eventually initiating military campaigns against hundreds of camps in October 1996 (Terry 2002:2). Aid diversions triggered these attacks, which ultimately forced branches of MSF (Médecins Sans Frontière) and CARE

⁴ This makes the informational theory here unique compared to previous work, which posits that common knowledge over aid shocks generates a commitment problem that causes war initiation (Steinwand 2010; Nielsen, Findley, Davis, Candland and Nielson 2011).

⁵ Note that the claim here is that the provision of humanitarian aid was a significant barrier to negotiating a resolution of the crisis, not the only barrier or main barrier.

(Cooperative for Assistance and Relief Everywhere) to withdraw for moral and security reasons. In the end, the relief provisions were evidently so important that a threatened withdrawal of 15 more NGOs led rebels to reduce diversions (Terry 2002:177). Meanwhile, and consistent with the theory, attacks against the 91 internal displacement camps in the “Turquoise Zone” near the capital of Rwanda were comparatively rare.

Research Design and Data

This section examines the systematic impact of humanitarian aid on the duration of civil war. Data used to define the population of civil wars are taken from Cunningham (2006), which is based on the Armed Conflict Dataset (ACD).⁶ Because the ACD counts all conflicts within a country over separate territories as distinct and all conflicts within a country over control of the government as one civil war, it does not easily lend itself to duration analysis. For example, two wars punctuated by a 20-year period of peace are counted as the same conflict in the ACD data. To correct for this, Cunningham counts any conflict occurring after a 24-month break in fighting as a new war. This rule produces 288 separate civil wars since 1945.

To test the effect of humanitarian assistance on the duration of war, I employ Cox proportional hazards models to estimate the effect of humanitarian aid—a time varying covariate—on the instantaneous likelihood of war ending in any year. The models estimate the likelihood a war will end at time t based on a set of covariates and given it survived until t , without making assumptions about the underlying shape of the hazard function.⁷ The unit of observation is thus the conflict “spell,” defined annually from the year in which a war initiates to the year it terminates. Data on start and end dates are drawn from Gates and Strand (2004). I split each of the 288 civil wars into calendar years over which the level of aid can vary to produce 1689 unique civil war years under observation. Setting the data for survival analysis, and dropping wars that started and ended in the same year, leaves 193 conflicts and 1308 observations. This last step is useful in limiting the analysis to a comparison of similar conflicts that were eligible to receive intrawar assistance, as aid organizations can react only after observing sufficient costs from a war.

Following previous work (Narang 2014), I estimate the amount of humanitarian aid disbursed in each conflict-year using the OECD data on Official Development Assistance (ODA).⁸ To be classified as humanitarian, aid must be designed to save lives and alleviate suffering during and in the aftermath of emergencies, while it must also be consistent with the humanitarian principles of humanity, impartiality, neutrality, and independence. This includes relief coordination, protection, support services, and material assistance like food, water, and medical supplies. The data include (i) bilateral disbursements

from DAC members,⁹ (ii) aggregated non-DAC member disbursements, and (iii) activities financed through multilateral institutions and NGOs.¹⁰ In this study, I aggregate these disbursements for a total estimate of humanitarian assistance in each recipient in each year of an ongoing civil war.¹¹ I also adjust for inflation and changes between the recipient currency and the US dollar by recording disbursements in constant 2007 prices and exchange rates. Finally, I follow previous research by log-transforming these values because the variances are not homogeneous. The transformation yields a more normal distribution closer to the assumptions of parametric statistical tests.

Controls

The allocation of humanitarian relief across ongoing civil wars is not random. Aid organizations are likely to allocate resources where they are most needed or where they are likely to be most effective (Chauvet 2003). This raises important concerns over endogeneity and selection bias. However, because the amount of relief provided in any conflict-year must be determined prior to observing if and when a conflict actually ends, I follow previous research by focusing on the risk of selection bias over endogeneity bias (Narang 2014). The ideal test should thus include any variables that are correlated with the amount of aid in any conflict-year and the risk of war continuing past that year.¹²

Several factors may be associated with the intensity of the humanitarian response and the likelihood of conflict ending. First, there is some evidence that more costly wars, in terms of lives lost, tend to last longer (Sambanis and Doyle 2000; Fortna 2004; Cunningham 2006). This could be because deadlier wars indicate more intractable disputes, or because sides find it harder to reconcile as they lose more friends and family. In either case, the number of casualties is likely to be associated with the amount of relief provided and should thus be included as a control. Because organizations tend to make budget appeals retrospectively after observing the level of need, I use lagged values of yearly battle-deaths estimated by Lacina and Gleditsch (2005).

Second, the amount of suffering targeted by aid organizations is likely to grow in proportion to the population of a state in conflict. Because higher population states are also more likely to reach the 25-battle deaths cutoff

⁹ For the 24 members of the DAC during the study period see: www.oecd.org/dac/dacmembers.htm.

¹⁰ The data include outflows from the World Bank, regional development banks and several UN agencies, including UNHCR, UNAID, UNDP, UNICEF, World Food Program, and several others. The list also includes 50 of the largest NGOs. See <http://www.oecd.org/dataoecd/36/16/31724727.pdf>.

¹¹ A recipient government need not execute bilateral or multilateral humanitarian outflows. Substantial portions of bilateral aid disbursements are projects channeled through multilateral institutions or NGOs. The word “bilateral” refers to whether a donor controls where the funds are used, without implying the type of actor disbursing the funds in the recipient. See <http://www.oecd.org/dac/stats/crsguide.htm>.

¹² This empirical strategy does not address unobserved heterogeneity. However, even if the true effect of humanitarian aid is not perfectly identified, the goal here is to present evidence consistent with the direction of causation outlined by the theory, along with evidence that the effect is mediated in a way that is consistent with the proposed mechanism. Nevertheless, Appendix S6 implements an instrumental variable approach using out of region natural disasters (Ramsay 2011; Narang 2014). Note the direction of the coefficients on humanitarian aid and the interaction term are both consistent with expectations of the theory.

⁶ ACD defines a civil war as “a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths”. See codebook at: http://www.pcr.uu.se/digitalAssets/167/167198_codebook_ucdp_prio-armed-conflict-dataset-v4_2013.pdf.

⁷ The baseline hazard rate may be constant, decreasing, increasing, or varying as war continues over time.

⁸ For the OECD definition of ODA and how it is measured, see: <http://www.oecd.org/dac/stats/officialdevelopmentassistance/definitionandcoverage.htm>.

to enter the sample, I include the natural log of a country's population in each conflict year (Gleditsch 2002).

Third, recent research indicates that geographic conditions can affect the duration of civil war. Rough mountainous terrain and heavy forestation appear to make conditions ripe for protracted insurgency (Fearon and Laitin 2003). Because rough terrain also represents an operational constraint for aid organizations, I include a measure for the percentage of a conflict zone that is mountainous or forested (Buhaug and Lujala 2005).

Fourth, recent research has found a strong relationship between per-capita GDP and the initiation and duration of civil war (Fearon and Laitin 2003). One explanation for this is that low GDP per-capita indicates weak government capacity to resist challenges. A second is that low GDP per-capita indicates poor economic conditions, which result in lower opportunity costs for rebellion. Regardless of the mechanism, it is reasonable to expect that relief will target economically weak states lacking the resources to provide for basic needs. For this reason, I include a measure of GDP per-capita (Gleditsch 2002).

Fifth, I include a measure for the level of democracy from the Polity project, as there is some evidence that regime type affects civil war duration and international interventions in a nonlinear way (Hegre, Ellingsen, Gates, and Gleditsch 2001). Both full democracies and full autocracies appear to be less susceptible to civil war onset and longer civil wars, while transitioning states with middling values of democracy appear more likely to experience civil conflict. There is also some evidence that foreign assistance is disproportionately allocated to more democratic countries to "reward" good policy (Collier and Hoeffler 2004).

Sixth, previous research has demonstrated a strong relationship between civil war duration and the presence of international guarantees to enforce a settlement (Walter 1997, 2002; Fortna 2003, 2008). The logic holds that third-party guarantees solve commitment problems endemic to civil conflicts and thus make wars less likely to continue. Because humanitarian aid is likely to be correlated with the broader peacebuilding response, I include a variable for international enforcement to isolate the independent effect of aid (Walter 2002).

Finally, several studies find that access to "lootable" resources can fuel conflict (Collier and Hoeffler 2000,

2002; Elbadawi and Sambanis 2000; Sambanis and Doyle 2000; Ross 2004; Lujala, Gleditsch and Gilmore 2005). If the presence of these resources is uncorrelated with the level of aid, it may be unnecessary to include. However, it may be instructive to include these variables as controls because Borton (1998) argues that the impact of aid is slight compared to other sources of support. To this end, I use the Buhaug and Gates (2002) indicator for whether lootable resources were present. Summary statistics for all variables can be found in Appendix S1, along with a correlation matrix in Appendix S2.

Results

Table 1 shows the results for Hypothesis 1. I report hazard ratios rather than coefficient estimates from standard linear or logistic regressions. Hazard ratios are interpreted relative to 1, where ratios greater than 1 indicate variables that increase the likelihood of war ending and ratios less than 1 indicate variables that decrease the likelihood of war ending. For example, if a dummy variable has a hazard ratio of 0.5, that variable decreases the likelihood of war ending by 50%, *meaning it tends to prolong civil war*. Conversely, if a variable has a hazard ratio of 2, it doubles the likelihood of war ending, *meaning it tends to shorten war*. As per the theory above, I expect the hazard ratio to decrease as the level of humanitarian aid increases.

Model 1 reports the results in the full population of 193 civil conflicts, of which 159 eventually terminated while the remainder are censored. The sample includes 1308 observations—or years of civil war—under risk of potentially ending in the study. Here, the results indicate that increasing humanitarian aid is associated with a roughly 8.7% lower instantaneous likelihood of war ending, holding all covariates at their mean. In other words, controlling for the selection of aid into harder or easier cases—where the underlying conditions are more or less prone for prolonged conflict—greater levels of aid appear to independently increase the likelihood of a war continuing. The result holds even after controlling for access to lootable resources, a factor thought to mitigate the effect of humanitarian aid (Borton 1998). While conflicts with access to other funding sources, such as drug production and diamond deposits, are approximately

TABLE 1. Humanitarian Aid Level and the Risk of Civil War Termination

Variables	(1) ALL Conflicts 1949-2004	(2) Post-Cold War Conflicts 1989-2004	(3) Cold War Conflicts 1945-1988
	Hazard Ratio	Hazard Ratio	Hazard Ratio
Log Humanitarian Aid	0.9165 (0.0344)**	0.889 (0.045)**	0.9675 (0.0526)
Lag battle deaths	0.9999 (1.47e-05)	0.999 (2.65e-05)	0.9999 (1.75e-05)
Log Population	0.9312 (0.0580)	0.9105 (0.07321)	0.9605 (0.1024)
GDP Per-Capita	1.0000 (3.63e-05)	0.9999 (4.60e-05)	1.000127 (7.45e-05)*
Polity2 Score	0.9668 (0.0154)**	0.9639 (0.0238)	0.9624 (0.0214)*
Diamonds	0.3868 (0.1907)*	0.40473 (0.2516)	0.4746 (0.4122)
Drugs	0.3257 (0.1683)**	0.4802 (0.3177)	0.19866 (0.1666)*
Resources	1.9415 (1.087)	2.451 (1.7548)	1.0845 (1.0979)
Guarantee	1.7150 (0.8175)**	1.575 (0.8294)	16.5388 (14.8366)***
Mountains	1.0018 (0.00307)	1.0050 (0.00386)	0.9992 (0.0052)
Forests	1.0041 (0.00296)	1.0032 (0.00396)	1.0118 (0.0048)**
Observations	1308	498	810
Number of Subjects	193	119	104
Number of Failures	159	89	70

(Notes. Standard errors in parentheses. *** $p < .01$, ** $p < .05$, * $p < .10$.)

65% less likely to end at any moment in the analysis, access to humanitarian aid remains strongly associated with the continuation of war.

Figure 2 plots the Nelson–Aalen cumulative hazard rate, which is the rate of conflict ending over time. It covers three different groups. The solid plot is all civil wars that received zero humanitarian aid (the control cases), the dashed plot is all civil wars that received some positive amount of humanitarian aid (treatment group), and the dotted plot is the subset of those conflicts that were major recipients (90th percentile of aid). Analysis time is reported in days since war initiation. Notice that the control cases that received no relief are uniformly more likely to terminate at any given moment than the treated cases that received some positive amount of aid and that the treated cases are uniformly more likely to terminate at any given moment compared to the major recipients of aid. Also clear is that the hazard rates across groups begin to diverge significantly at the end of the Cold War, when there is an explosion in the amount of humanitarian assistance.

Models 2 and 3 further investigate the role of the Cold War. As Terry observes, there is a growing and unsubstantiated assertion that only recently “aid is becoming a major factor in the continuation of conflict” (Terry 2002:10–13). A common assumption in the aid community is that the post-Cold War environment is uniquely complicated compared to the past due to the changing nature of warfare (Duffield 1994a,b; Anderson 1999; Munslow and Brown 1999:221). And yet, Terry argues “that the dilemmas confronting aid organizations today are essentially the same as in the past,” and that these dilemmas have been widespread for the last fifty years (Terry 2002:5). Rather, it is the international response that has grown more “complex,” as a proliferation in number and types of organizations providing humanitarian relief has exasperated certain dilemmas.

I take this supposition seriously. Whether it is the nature of war or the nature of the humanitarian response that has changed, recent empirical research has indeed shown that the end of the Cold War represents a major structural break in the data generating processes for both the dynamics of civil war (Fearon 2004) and international interventions (Gilligan and Sergenti 2008). This is particularly true for the dramatic growth in the provision of humanitarian aid. As a result, comparing cases before 1989 to cases afterward may be inappropriate because the treatment was qualitatively and quantitatively different between the two periods. For this reason, I disaggregate the full population of civil wars from Model 1 into two subsamples—a subset of Cold War civil conflicts between 1945 and 1988 in Model 2 and a subset of post-Cold War civil conflicts initiated after 1988 in Model 3—with the goal of determining whether the tendency for aid to prolong conflict appears to be systematic across time as Terry suggests, or a new and emerging phenomenon.

Model 2 reports results for the same estimation in only the 119 post-Cold War cases initiated after 1988. Of these, 89 terminated while the remainder are censored. During this period, the results indicate that humanitarian assistance is even more prone to prolonging war. A 1-unit increase in the logged value of aid is associated with an 11.1% drop in the likelihood of war terminating at any moment. Figure 3 plots the Nelson–Aalen cumulative hazard rates comparing the treated and untreated conflicts in the post-Cold War period, along with the 95% confidence intervals. The plot illustrates that the negative relationship between humanitarian aid and the likelihood of war ending is significant at all points in time.

When compared to the results of Model 3, which reports hazard rates for the 104 Cold War conflicts that began before 1988, the difference is telling. Humanitarian relief does not appear to affect the likelihood of war

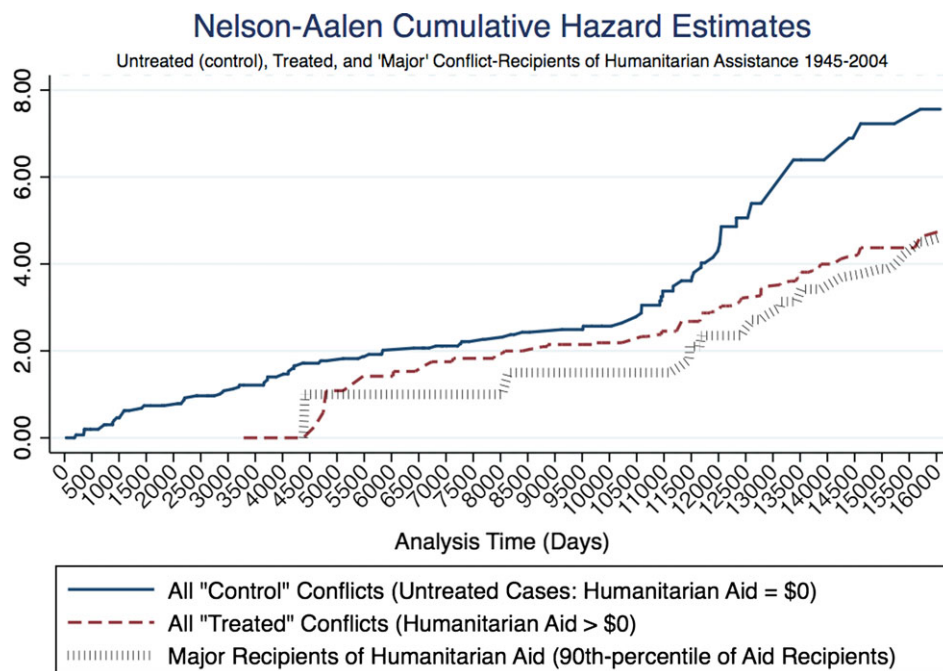


FIG. 2. Estimated Risk of Civil War Termination for *Untreated*, *Treated*, and *Major* Conflict Recipients of Humanitarian Assistance (Notes. Analysis time reported in days since civil war initiation. The earliest observations in the sample begin in 1945. Observations treated with humanitarian assistance begin in 1969, when the OECD began collecting data on the humanitarian component of Official Development Assistance. The amount of humanitarian assistance allocated to conflict areas in early observations is small, so the baseline hazard rate is unchanged.)

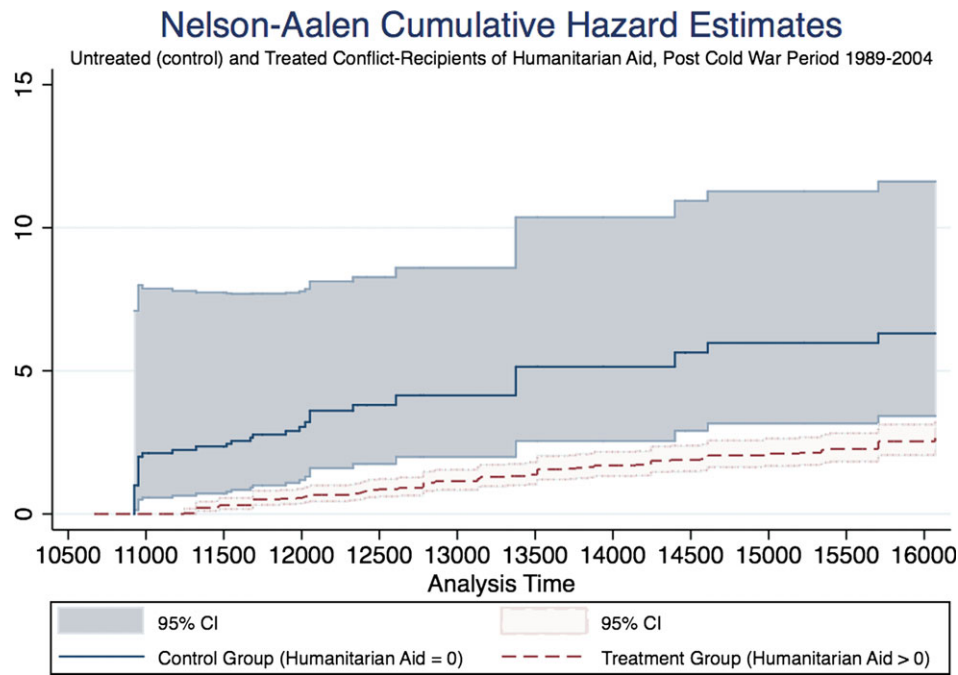


FIG. 3. Estimated Risk of Civil War Termination for *Untreated* (dark solid) and *Treated* (light dashed) Conflict Recipients of Humanitarian Aid post-Cold War

ending before 1989. This suggests that the overall relationship in the full population is largely driven by conflicts treated in the post-Cold War period, as several authors have suspected (Anderson 1999; Munslow and Brown 1999:221). Again, this period is also when aid provisions rose most rapidly. This could suggest that there are other important factors unique to the post-Cold War period that were omitted or that the mechanism works only at relatively high levels of aid.

Table 2 shows the results for Hypothesis 2. Recall that Hypothesis 2 focuses the analysis on the treated cases in order to test whether the tendency for aid to prolong civil war is mediated by the degree to which it adds uncertainty to the bargaining process. An additional advantage of subsampling on the treated cases is that it reduces some risk of selection bias, as much of the unmodeled heterogeneity may be accounted for by the fact that each case received some level of aid. In this way, the analysis estimates a dose-response among only conflicts that expressed sufficient need to qualify for assistance.

Model 1 reports the results for the full analysis of 124 treated conflicts. Of these, 91 eventually ended while the remaining conflicts are censored. The sample includes 720 observations. The key variable of interest is the interaction between the level of aid and whether the civil war was a peripheral insurgency in which the rebel group and its base of support were on the outskirts of a state. The variable is coded 1 if the war was a peripheral insurgency and 0 if it was fought in the center of the state.

The results support the theory. When the level of humanitarian aid is interacted with whether the primary recipients operate as a peripheral insurgency, aid is associated with a roughly 50% lower likelihood of war ending at any moment in the crisis. The result only barely misses the 5% significant level ($p = .06$). Perhaps the most interesting finding is that the independent effect of increasing aid when controlling for this interaction is insignificant. Aid has no effect on the duration of civil war when its dis-

tribution is easier to observe. This is consistent with the idea that, among conflicts that receive some amount of humanitarian relief, the level of government uncertainty over aid mediates its tendency to prolong war.

Model 2 reports results for the same estimation in the 99 post-Cold War cases of civil wars, of which 70 eventually terminated. Here, the results of the interaction are much stronger. When the level of humanitarian aid is interacted with whether or not the primary recipients operate as a peripheral insurgency, aid *decreases* the likelihood of war ending by roughly 65%. Interestingly, the results of this model suggest that increasing aid provisions is actually correlated with a 50% *greater* likelihood of war ending at any moment after controlling for the ability to observe aid. These findings are consistent with the theory above and with the observation by practitioners that humanitarian aid can often reduce grievances and shorten conflict. As was the case with Hypothesis 1, the results of Model 3 show no evidence of humanitarian aid prolonging conflict in Cold War conflicts before 1988. This could be because the amount of humanitarian aid provided by the international community was relatively small. Models 4 and 5 broaden the analysis to include conflicts that lasted less than one year and conflicts that received no aid to show that the results are robust to the different samples.

The estimates on the control variables are generally in line with the previous literature, with perhaps one exception: The hazard ratio on peripheral insurgency is large, positive, and occasionally significant. Yet we know that peripheral insurgencies generally last longer than other civil wars on average.¹³ In making sense of this result, note that the insignificant effects for each component of the interaction term in Model 1 and Model 3 are entirely

¹³ Of the 288 wars in the data ranging in duration from 1 to 659 months, the average length of the 25 peripheral insurgencies is 92.8 months, while the average length of nonperipheral insurgencies is 60.7 months.

TABLE 2. Humanitarian Aid Level and the Risk of Civil War Termination under conditions of uncertainty

Variables	(1) ALL Conflicts 1949-2004	(2) Post-Cold War Conflicts 1989-2004	(3) Cold War Conflicts 1945-1989	(4) Post-Cold War Conflicts 1989-2004	(5) Cold War Conflicts 1945-1989
	Hazard Ratio	Hazard Ratio	Hazard Ratio	Hazard Ratio	Hazard Ratio
Log Humanitarian Aid × Peripheral Insurgency	0.4877 (0.1892)*	0.3640 (0.1604)**	1.6938 (2.1874)	0.530 (0.209)*	0.954 (0.142)
Log Humanitarian Aid	1.3054 (0.2265)	1.4636 (0.3138)*	0.9308 (0.2754)	0.897 (0.0458)**	0.971 (0.0530)
Lag Battle Deaths	0.9999 (3.61e-05)*	0.9999 (3.18e-05)	0.9994 (2.98e-04)*	1.000 (2.60e-05)	1.000 (1.73e-05)
Log Population	0.8511 (0.0703)*	0.8338 (0.0781)*	0.8658 (0.1849)	0.924 (0.0751)	1.045 (0.117)
GDP Per-Capita	1.0003 (6.36e-05)	1.0000 (7.02e-05)	1.0004 (2.66e-04)*	1.000 (4.61e-05)	1.000 (7.40e-05)
Polity2 Score	0.9825 (0.0240)	0.9699 (0.0289)	1.0275 (0.05839)	0.959 (0.0241)*	0.965 (0.0217)
Diamonds	0.4682 (0.1907)	0.4059 (0.3316)	0.4856 (0.5493)	0.395 (0.246)	0.412 (0.367)
Drugs	0.5082 (0.4099)	0.3759 (0.3113)	0.2334 (0.3086)*	0.470 (0.303)	0.178 (0.149)**
Resources	2.2659 (1.9669)	4.3513 (3.9169)	—	2.497 (1.771)	1.118 (1.069)
Guarantee	1.4039 (0.6215)	1.4463 (0.7019)	42.3126 (125.1699)	1.566 (0.712)	16.94 (15.32)***
Mountains	1.0001 (0.0039)	1.005 (0.0044)	0.9803 (0.0105)*	1.005 (0.00390)	0.998 (0.00519)
Forests	1.0033 (0.0042)	1.0016 (0.0045)	1.0166 (0.0092)*	1.004 (0.00410)	1.014 (0.00485)***
Peripheral Insurgency	119.9369 (319.8238)*	1404.39 (4286.321)**	0.0086 (0.0748)	72.68 (196.3)	0.426 (0.291)
Observations	720	441	279	498	810
Number of Subjects	124	99	48	119	104
Number of Failures	91	70	21	89	70

(Notes. Standard errors in parentheses. *** $p < .01$, ** $p < .05$, * $p < .10$.)

consistent with the theory. Although organizing at the periphery allows rebels to mobilize a sufficient threat, this advantage is common knowledge and thus should not alone prolong war. Rather, it is the interaction between rebellions at the periphery and the degree of external support that introduces uncertainty and causes them to last longer.

The statically significant effect of peripheral insurgencies during the post-Cold War period in Model 2 is most likely an artifact of the data: There were only a small number of peripheral insurgencies fought in the post-Cold War period (21 out of 288 civil wars), and among these, the ones that received the smallest amounts of humanitarian aid (and other assistance) happened to be relatively short. It is because of these few outlying cases that, after controlling for increases in aid across the subsample, peripheral insurgencies appear to end quickly at lower levels of aid. However, these cases do not hide the overall relationship over the full range of the variable. For similar reasons, the coefficient on peripheral insurgency during the Cold War in Model 3 indicates they are less likely to end. The relationship is estimated from 94 civil war years in 10 peripheral insurgencies that did not end until after the Cold War. This is also consistent with the fact that countries did not provide large amounts of assistance during the Cold War.

Finally, I run a series of diagnostic and robustness checks to determine whether the results are an artifact of the modeling choices. In Appendix S3, I test the proportionality assumption by interacting covariates with time to verify the effects are not different from zero. In Appendix S4, I confirm the results are robust after controlling for un-modeled unit-level heterogeneity by adjusting the standard errors to account for correlation in failures within a country. In Appendix S5, I correct for the possibility that two civil wars terminate at the same time by calculating the conditional probability of tied failures and show that results do not change. In Appendix S7, I confirm that the results are robust to the inclusion of other predictors of civil war duration, including the number of veto players, conflict type, and ethnic homogeneity. And finally, in Appendix S8, I control for other sources of external support to the government and rebels that may simultaneously add uncertainty, including aid from nonstate diasporas and aid from foreign governments.¹⁴ The direction and significance of humanitarian aid and the interaction term are largely unchanged.

Conclusion

Can humanitarian assistance inadvertently prolong civil war? And, if it can, why is it that analysts appear to observe this tendency during some ongoing civil wars but not others? This article proposed a theory linking humanitarian aid and the duration of conflict that offers one explanation. Dynamic bargaining models of conflict treat war as a costly learning process in which opponents fight in order to reduce uncertainty in a less-manipulable forum than the bargaining table. It follows that the less costly war becomes, the longer crises will be marked by uncertainty. Humanitarian assistance is explicitly designed to mitigate the costs of war. This suggests that greater levels of humanitarian aid may cause conflicts to last longer. However, this effect should be mediated by

¹⁴ Data on other sources of external support come from Salehyan, Gleditsch, and Cunningham (2011).

uncertainty over the advantage gained from relief. If sides can directly observe the degree to which aid mitigates the costs of fighting, they should factor this into settlement offers over time and converge on an agreement just as quickly as if no aid was provided.

This article also tests the observable implications of this logic and finds empirical support for the argument that humanitarian assistance can inadvertently prolong war. Statistical analyses of civil wars since 1945 indicate that increasing humanitarian aid is negatively correlated with the likelihood of a civil war ending, meaning wars that receive greater amounts of relief appear to last longer on average than those that receive little or no humanitarian assistance. This article also tests the mediating effect of uncertainty. Consistent with an informational theory, I found that when the level of aid is interacted with whether a conflict is a peripheral insurgency in which the recipients of relief are more difficult to observe, the tendency for humanitarian provisions to prolong war is particularly acute.

The broader policy implications of these findings are far from straightforward. Critics of humanitarian action may be quick to cite these findings as evidence that providing humanitarian aid in conflict areas is categorically bad, as it appears to contradict both the core “humanitarian imperative” to ease human suffering and the principal of “noninterference” (Terry 2002:22). However, this is not an inference that can be sustained from these results alone for at least two reasons. First, the tendency for aid to prolong conflict is far from an absolute empirical law. Given that the short-term consequences of not providing relief are oftentimes more devastatingly predictable than its future influence on the duration of war, the imperative to act quickly to reduce human suffering may prevail. Second, determining whether the provision of relief is—*on balance*—a net positive or negative peacebuilding strategy is an exceedingly complicated question. For even if humanitarian aid can prolong war, it may do so while saving lives and rebuilding failed states along the way. Indeed, moving toward an overall assessment of humanitarian relief in the future will require evaluating numerous benefits against numerous costs.

In contrast to these broader inferences, the policy implications that may be drawn from this article are more modest, though no less important. In general, these results provide further evidence that the negative effects of humanitarian action in conflict areas are neither unavoidable nor random. Instead, this article illustrates how political scientists can derive coherent and testable hypotheses from theoretical models of war to identify mediating conditions *ex ante*. In this case, the theory and empirical results suggest that conflicts in which the provision of aid is likely to add uncertainty to the crisis bargaining process may be poor candidates for treatment if policymakers seek an immediate end to hostilities. Future research may profit from additional theorizing about the “pre-existing conditions” that make conflicts better or worse candidates for other peacebuilding strategies (mediation, peacekeeping, etc.). The key challenge for this research—and an obstacle confronted here—will be to identify causality using observational data.

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Supporting Information

Additional Supporting Information may be found in the online version of this article:

Appendix S1. Summary Statistics of Variables in Regression Models.

Appendix S2. Correlation Matrix of All Independent and Dependent Variables used in Table 1, Table 2, and Appendix.

Appendix S3. Humanitarian Aid and the Risk of Civil War Termination, Testing Proportional Hazard Assumption by interacting covariates with Time: Hypothesis 1 (Columns 1–3) and Hypothesis 2 (Columns 4–6).

Appendix S4. Humanitarian Aid and the Risk of Civil War Termination. Hypothesis 1 (Columns 1–3) and Hypothesis 2 (Columns 4–6), controlling for Unit Level Heterogeneity.

Appendix S5. Humanitarian Aid and the Risk of Civil War Termination, controlling for Tied Failures Hypothesis 1 (Columns 1–3) and Hypothesis 2 (Columns 4–6).

Appendix S6. Instrumental Variable Estimation (natural disasters): Humanitarian Aid and Conflict Termination, Probitestimation in Peripheral Insurgencies (Columns 1–3) versus Non-Peripheral Insurgencies (Columns 4–6).

Appendix S7. Humanitarian Aid and the Risk of Civil War Termination under conditions of uncertainty, controlling for number of veto players, conflict type, and ethnic homogeneity.

Appendix S8. Humanitarian Aid and the Risk of Civil War Termination, controlling for other sources of external support: Hypothesis 1 (Columns 1–3) and Hypothesis 2 (Columns 4–6).