Military Intervention and Settlement Durability in Civil Conflicts

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ABSTRACT

Military interventions in civil conflicts have been studied extensively as they relate to conflict duration and outcome. Less is known about whether and how the presence of foreign forces impacts the long-term prospects for peace following the cessation of hostilities. Drawing upon the conflict termination literature in international relations, I argue that negotiated settlements reached in the presence of third party interveners will only be tenable so long as that third party continues to exert leverage on the former disputants. Once the degree of this leverage fluctuates (most likely due to waning commitment over time) the former disputants will have an incentive to renegotiate the terms of the agreement, and conflict is likely to recur. For this reason, negotiated settlements reached in conflicts featuring military interveners are expected to be less durable than those that arise naturally between the disputants, which are expected to be highly stable. I test this expectation on a data set of civil conflict recurrence from 1946 to 2010. The empirical results strongly support my theoretical predictions.

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How does military intervention in civil conflicts affect the long-term prospects for peace? The presence of foreign troops fighting alongside domestic combatants has become an increasingly frequent occurrence in civil conflicts. Conflicts of this nature are more common, both in frequency and in proportion of total armed conflict, than they have ever been since 1945.\(^1\) With ongoing wars in places like Afghanistan, Iraq, and Ukraine, it seems unlikely that this trend will be curbed any time in the near future. Nevertheless, resolving these conflicts and preventing their recurrence has become a primary, yet elusive, goal of the international community.

Despite the importance of this issue, extant literature does not provide a direct/complete answer to the question at hand. Existing research on military interventions has focused primarily on its short-term effects on the duration and outcome of ongoing conflicts (Collier, Hoeffler & Söderbom 2004, Regan 2002, Lemke & Regan 2008, Cunningham 2010, Balch-Lindsay, Enterline & Joyce 2008, Gent 2008). Work that has studied the impact of third parties on the peace process, on the other hand, generally focuses on the role of non-combatant forces, such as peacekeeping missions and the role of non-combatant guarantors that intervene after hostilities have ended (Walter 1997, Fortna 2004a, Doyle & Sambanis 2000, Diehl 1994, Diehl 2008). Comparatively little is known about how the presence of foreign troops in an ongoing conflict affects the peace that follows.

I address this and argue that, while military support of combatants in civil conflict may propel a given side toward a stronger position at the negotiating table, any agreement that is reached is likely to be tenuous and prone to failure. The success or failure of any negotiated settlement will depend critically on the degree to which it accurately reflects the current and future balance of capabilities among combatants. The presence of a third party fighting alongside these combatants will alter this balance of capabilities, making the terms of the settlement contingent on the military leverage exerted by the third party. Over time, the degree of leverage exerted by the third party will likely fluctuate, as the third party’s power and interests change. When this happens, the real or perceived balance of capabilities among the former disputants will also fluctuate, heightening uncertainty about each side’s relative strength and resolve. While some former disputants may well be able to renegotiate the details of their peace agreement to reflect the new balance of power, others may feel that they can secure a more favorable settlement through a resumption of hostilities.

\(^1\)This is determined using the Armed Conflict Data (Gleditsch et al. 2002). An inspection of the data also reveals that four of the five years with the most internationalized civil conflicts have occurred since 2010.
Because of this, peace agreements in the presence of third party intervention are less durable than peace agreements reached in the absence of third party intervention.

I test these claims using data on civil conflict termination and recurrence from 1946-2012 obtained via the Armed Conflict Dataset (ACD) (Gleditsch et al. 2002). I expect that military interventions will undermine settlement durability when a conflict ends in some form of negotiated settlement.\(^2\) In accordance with expectations, I find settlements reached in conflicts with military interveners present experience a shorter duration of peace compared to those that are reached without. Contrary to conventional wisdom, I also find that indigenous negotiated settlements produce a peace that is as stable as that attained through military victories. This evidence strongly supports the notion that military interventions inhibit the peaceful and permeant settlement of civil conflicts.

**Military Interventions and Post-Conflict Bargaining Processes**

In all civil conflicts, government and rebel forces hold competing claims over some underlying issue, and how that issue is resolved or divided among the parties is influenced by the balance of military capabilities among the domestic combatants as well as any third parties that have become involved in the conflict. As fighting progresses, government and rebel forces constantly evaluate what they might obtain through a compromise, versus what they might obtain through continued conflict. For these conflicts to be resolved peacefully through a negotiated settlement, two conditions must be met. First, each side must come to a basic agreement about how well they would perform in continued hostilities and instead identify mutually acceptable terms upon which the dispute can be ended. Reaching such a conclusion therefore necessitates that information asymmetries about the balance of military capabilities and resolve are sufficiently ameliorated among combatants. Second, the parties must overcome credible commitment problems – each side must be expected to abide by the terms of an agreement well into the future. While overcoming these issues may bring conflict to a provisional end, this is no guarantee against recurrence. For this to be the case, negotiated settlements must be durable – their terms must be tenable both at the time of the agreement and

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\(^2\)The terms "third party intervention" and "military intervention" will be used interchangeably in this article to refer to situations where an outside country sends troops to a civil conflict in support of either government or rebel forces. Note that the use of this terminology does not extend to diplomatic interventions or interventions dedicated to enforcing the terms of a peace agreement after a negotiated settlement has been reached.
well into the future.

Conflicts recur for the same reasons that brought fighting about in the first place, with former disputants no longer agreeing about what they would get if they restarted the conflict or when one side can no longer credibly commit to the terms of the previous settlement (Fearon 1995). The literature on settlement durability in civil conflicts has given the resolution of credible commitment problems pride of place in explaining the failure of negotiated agreements (Walter 1997, Walter 2002). Increasingly, however, scholars explore how information asymmetries function as a barrier to conflict settlement and cause of conflict recurrence (Lake & Rothchild 1996, Regan & Aydin 2006). When examining negotiated settlements, for example, Mattes and Savun find that settlements last longer when they contain provisions dedicated to the transfer of information between former combatants regarding each side’s military capabilities and observance of peace-building regulations (Mattes & Savun 2010). Similarly, when Mukherjee (2006) finds that power sharing agreements that arise from stalemates between the government and rebels are particularly likely to fail because information regarding each side’s military capabilities is not fully revealed. These findings demonstrate that information asymmetries not only exist in domestic conflicts, but are a primary determinant of whether a negotiated agreement will secure a permanent end to hostilities.

This growing body of work notwithstanding, recent civil conflict research overlooks how third parties fighting alongside government and rebel forces may affect information asymmetries and the durability of negotiated settlements. This omission is curious, given the breadth of work in interstate conflict and mediation that finds third party involvement as a primary cause of time-inconsistent agreements and conflict recurrence. To this end, Werner & Yuen (2005) argue that third parties in international conflicts may utilize diplomatic pressure to bring disputants to negotiated settlements despite the persistence of considerable disagreement over how well each side would perform if conflict were to continue. The settlement is therefore argued to become contingent on the continued application of third party leverage, and once the willingness or ability to exert this leverage wanes, the agreement will no longer be tenable. Because of this, negotiated settlements that are produced with third party involvement are more likely to fail than those that arise more naturally. Beardsley (2008, 2011) builds upon this work in arguing that heavy-handed mediators who exert leverage on disputants will be likely to bring these parties to a settlement that they would not agree to in the absence of third party pressure. When the influence third party wanes, these agreements become likely
to fail. In other words, time inconsistency becomes an issue; these agreements are tenable over short time horizons, but likely to ultimately fail due to the changing preferences of the third party.\textsuperscript{3}

Like these interventions in international conflicts, the presence of foreign troops fighting alongside forces in civil conflicts can be expected to produce negotiated agreements plagued by time inconsistency problems. Third parties often intervene militarily in civil conflicts in an attempt to enable a preferred side to reach a favorable outcome. While interveners often face an uphill battle in doing so (Gent 2008), they are sometimes successful and achieve a decisive military victory. When this is the case, third party interventions may produce durable settlements, since one side’s war-fighting ability is effectively dismantled. At other times, however these interventions produce negotiated settlements that are likely to bring hostilities to a provisional, but impermanent end. Like international agreements reached in the presence of interveners, these agreements will reflect the distribution of capabilities among both the combatants and the leverage exerted by the third party intervener. As a result, they will remain tenable only to the extent to which the distribution of capabilities remains unchanged and apparent to the former disputants.

This is problematic given the ephemeral nature of third party interest and support. Third party leverage is likely to diminish over long time horizons for two reasons. First, the third party may simply have less interest in continuously spending time and resources enforcing an agreement between two or more outside states. To this end, Beardsley (2008, 728) argues "states typically have little incentive to pay the costs of others’ security, and all third parties face budget constraints and multiple commitments." In other words, the third party’s willingness to intervene may fluctuate due to changing national security interests. Second, willingness aside, a third party may simply lose the ability to exert sufficient leverage over former combatants. Few states have the capacity to station military forces in conflict-prone environments over long periods of time. Moreover, there is not strong evidence that doing so will necessarily prevent the resumption of hostilities. In a study of imposed polities, for example, Enterline & Greig (2008) find that even the most

\textsuperscript{3}These studies evaluate the impact of third parties very differently from much of the civil conflict literature. In the latter, third party involvement is typically examined after the initial cessation of hostilities. In these cases, scholars typically evaluate how outside states can issue security guarantees to combatants to facilitate peaceful disarmament processes and overcome credible commitment problems (Walter 1997). This contrasts with Werner & Yuen (2005) and Beardsley (2008, 2011), who examine the effect of intervention when third parties are actively trying to more directly reshape the incentives of combatants. Put differently, Walter (1997) is concerned with third parties that attempt to aid in the enforcement of an agreement, while these studies are analyzing third parties that actively try to reshape the substantive terms of any particular settlement. Werner & Yuen (2005) make this point explicit in their discussion of ceasefire durability, stating “Third parties that attempt to ‘keep peace’ can help to secure agreements that might otherwise be at risk. Third parties that attempt to ‘make peace’ can create ‘false’ ceasefires that are prone to fail.” In this way, these two depictions of third party involvement in civil conflict are not necessarily incompatible.
capable of states lack the ability to prevent conflict from recurring in unstable environments. In short, few states have the capacity or willpower to exert leverage on former disputants over long time horizons. Once the real or perceived source of third party leverage has waned, former combatants are likely to disagree over the revised distribution of capabilities and whether the terms of the negotiated settlement should revised.

While Werner & Yuen (2005) and Beardsley (2008, 2011) operate under an assumption that third party support necessarily wanes over time, it is also conceivable that third parties may remain committed, perhaps increasingly so, to a particular state or rebel organization. Even in these cases, however, third party support perpetuates uncertainty among former combatants. In particular, after an agreement has been reached in a civil conflict, third parties will often begin to withdrawal the bulk of their combat forces. Should conflict resume, the third party must once again decide whether to commit additional troops. When deciding whether to abide by the terms of an agreement, then, each side must calculate the expected probability a third party will return, and the extent to which it will commit itself to the renewed conflict. If the supported side believes third party commitment has increased, it may renege on a previous agreement in order to receive additional military support and eliminate opposing forces once and for all. The uncertainty over whether the commitment of the former intervener has waxed or waned over time will likely be a source of lingering information asymmetries among former combatants, and this uncertainty is likely to lead one or both sides to seek renege on the terms of their previous agreement.

Of course, even if a negotiated settlement becomes untenable, it is possible that disputants may be able to successfully renegotiate the terms of agreements without having to resort to hostilities. Doing so, however, will be particularly difficult in cases where the preceding settlement featured a third party. To this end, the eventual withdrawal of third party leverage will narrow the range of acceptable agreements between the former disputants, and make future peaceful negotiations more difficult (Werner & Yuen 2005). More specifically, the withdrawal of third party leverage shifts the bargaining power of each of the disputants. When this shift is mild, an agreement may remain tenable with only minor modifications to its terms. When this shift is large, however, the withdraw of the third party is likely to precipitate major fluctuations in the bargaining power and capabilities of former combatants. Since military interventions are likely the most extreme form of leverage that can be exerted by a third party, it is reasonable to assume that withdrawal or

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4See Werner (1999), Debs & Monterio (2014), and Powell (2012) for the theoretical and empirical links between shifting power, uncertainty, and the onset of conflict in an international context.
fluctuation of support will lead to the most dramatic shift in bargaining power among the former disputants, causing these cases to be particularly difficult to settle through peaceful renegotiation.

In short, post-conflict shifts in the balance of capabilities are likely to be most acute in civil conflicts featuring third parties compared to those fought predominately by domestic combatants. Because of this, it will be particularly difficult to peacefully renegotiate the terms of a previous settlement. Negotiated settlements reached in the presence of military interveners are therefore expected to be time-inconsistent due to long-term fluctuations in the extent of leverage exerted by the third party and the difficulties former disputants will face in peaceful negotiations.\(^5\)

Note that this expectation does not suggest that all negotiated settlements produced in the presence of third party interveners will necessarily fail. It is possible, for example, that rebel forces in a civil conflict will successfully demilitarize and integrate themselves within properly functioning political institutions by the commitment of the military intervener has substantially fluctuated. Rather, military interventions are simply expected to make a durable peace more difficult, but not impossible, to secure. In this way, military interventions place a time constraint on successfully resolving a conflict; former disputants must successfully oversee the disarmament process and form durable political institutions by the time third party commitment waxes or, more likely, wanes.

Thus far, attention has been centered on conflicts ending with a negotiated settlement. When conflicts end in other ways, however, third party involvement is unlikely to have a strong bearing on whether a conflict recurs. Consider, for example, civil conflicts that are settled decisively and one side attains a clear military victory. When this is the case, conflict is unlikely to recur regardless of whether a third party was involved, since in either case either government or rebel forces are effectively eliminated as both military and political organizations. Similarly, intervention is unlikely to have an effect in conflicts that end with indeterminate outcomes. In these cases, conflicts can end or peter out for a myriad of reasons, including the non-compulsory disbanding of a rebel organization. Unless the of third party leverage is used to enforce some form of agreement that would not be acceptable in the absence of such pressure, there is little reason to suspect military interventions will have a strong, systematic impact on peace duration. Interventions are,

\(^5\)This differs from (Cetinyan 2002), who assumes that potential intervention by third parties is unrelated to information asymmetries between would-be combatants. By contrast, the logic outlined here is that disagreement over a third party’s willingness and ability to intervene is itself a fundamental source of information asymmetries.
therefore only expected to have a pernicious effect on the peace process when a conflict ends through a negotiated settlement. This conditional expectation is expressed in the Intervention Hypothesis.

*Intervention Hypothesis:* Military interventions decrease peace duration when civil conflicts end in a negotiated settlements, but have no effect otherwise.

Like any theory that generates expectations about interactive relationships, the logic outlined here also has symmetric implications about the effect of negotiated settlements in the presence and absence of intervention (Berry, Golder & Milton 2012). In other words, the effect negotiated settlements have on peace duration depends on whether or a military intervention has taken place. In the absence of intervention, negotiated settlements are expected to increase the duration of peace relative to conflicts that end in indeterminate outcomes. This is because these written agreements provide a basis for former combatants to coordinate information and expectations, as well as alter the incentives of reneging on the terms of settlement (Fortna 2003, Fortna 2004b). This is not to say that all peace agreements are expected to prevent conflict recurrence or perform equally well, as has been shown not to be the case.\(^6\) Even so, when military interveners are absent, peace agreements will be far less likely to be plagued by time-inconsistency problems, and will therefore be more effective in coordinating information and resolving commitment problems among former combatants. Put differently, negotiated settlements are conducive to the peace process when they are reached indigenously, but this relationship will be dampened when military interveners are present. The positive effects negotiated settlements have on peace duration is therefore expected to be nullified when a third party military intervener is present (i.e., negotiated settlements are expected to have no effect on peace duration when third party interveners are present). This expectation is expressed in the Agreement Duration Hypothesis.

*Agreement Duration Hypothesis:* Relative to indeterminate outcomes, negotiated settlements will increase the duration of peace when a civil conflict ends in the absence of third party interveners, but have no effect otherwise.

Note that while the Agreement Duration Hypothesis predicts that negotiated settlements will prove more stable than civil conflicts with indeterminate outcomes, it does not necessarily predict that they will

be the most durable settlement type. This distinction is typically reserved for military victories, which effectively resolve information asymmetries and commitment problems through the forced dismantling of either government or rebel forces (Licklider 1995, Luttwak 1999, Fortna 2004a). Nevertheless, the conventional wisdom that military victories are the most stable settlement type is typically predicated on a comparison of military victories to all negotiated settlements, with no distinction being made between those with and without military interveners. If the Agreement Duration Hypothesis is correct, this means that victories are compared to two distinct categories of negotiated settlements, one that is recurrence inducing, and the other, which is not. Additional support for the logic underlying this hypothesis would therefore be uncovered if negotiated settlements without interveners prove as stable as military victories.

**Empirics**

I test the preceding hypotheses using survival modeling techniques with the Armed Conflict Dataset (ACD), which records information on all observed civil conflicts after 1945. Within the ACD, an armed conflict is defined as "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths" (Gleditsch et al. 2002, 618-619). From these data, I obtain information on civil conflict termination and the time until recurrence. A conflict is coded as terminating after one year in which this death threshold is not met (i.e. fewer than 25 battle-related deaths occur). A conflict recurs on the next date in which this threshold is met as a result of armed conflict between a similar set of combatants over a similar set of issues.  

The dependent variable is *Peace duration*, which is measured in days following the termination of a civil conflict. Since the ACD data require a year of peace for a conflict to be considered to have terminated, the peace spell begins 365 days after the initial conclusion of hostilities. This omits cases such as the Paris Peace Accords of 1973, where fighting did end for a sufficient period of time for the conflict to be considered to have ended. This inclusion criterion is necessary so that termination is coded identically across conflicts ending in negotiated settlements and other types of outcomes.

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7 In order to determine whether two conflicts are fought over the same issue by the same primary actors, I rely upon the ACD conflict ID indicator (e.g. if two successive conflicts share the same conflict ID number, then the second conflict is considered to be a reoccurrence of the first conflict).
A common issue in duration analyses is that data are right censored, meaning that a particular observation exits the dataset for reasons other than the failure type of interest. In this case, observations exit the data set prior to peace failure for one of two reasons – either because peace was ongoing in 2012 or because a state exited the international system through some means other than the resumption of civil conflict.\footnote{South Vietnam is an example of the latter form of censoring, as the state was recorded as exiting the international system in 1975 as the result of the war with North Vietnam, which was classified as an interstate conflict.} After accounting for missing data, there are 316 observations of civil conflict termination, 189 of which were not right-censored and ended in civil conflict recurrence.\footnote{There are two sources of missing data. The first is that information on how a civil conflict is terminated is limited to 1945-2009. Thus, while conflict recurrence can be observed through 2012, any conflicts terminating after 2009 are not included in this data set. Second, two observations were dropped due to missingness on the rebel strength indicator, to be discussed later in this section.}

To test the Intervention and Agreement Duration hypotheses, I generate indicators of whether a terminated civil conflict featured a third party intervener and whether the conflict ended in a peace agreement or ceasefire. Third party intervention is a dichotomous variable that is equal to one if either side is supported by foreign troops during the year of conflict termination, and zero if there were no interveners present. This information is recorded from the ACD. Note that the indicator only pertains to intervention in the final year of the conflict, as this increases the probability that the intervention actively played a role in shaping the terms of the agreement. If a third party is not present at the time the disputants come to a settlement, then the terms of that agreement are more likely to simply reflect the balance of capabilities between the government and rebel forces. Put differently, if the third party was not present in the final year of the conflict, it is not clear whether its presence fundamentally altered the bargain ultimately struck between the government and opposition forces.\footnote{Note that the operationalization of intervention employed here does not include diplomatic or economic interventions by third parties or instances of military support short of "boots on the ground intervention." Tests have also been conducted to determine whether the relationships uncovered here also extend to lower-level interventions such indirect military support. Interestingly, this type of intervention does not exert similar effects of peace duration. This is likely because these forms of interventions do not lead to rapid fluctuations in relative capabilities once a conflict has ended – the arms transferred to a conflict environment typically stay there once the conflict has concluded. In this respect, these results are consistent with the theory outlined here, which focuses only on interventions capable of producing large fluctuations in relative capability.}

To determine whether a civil conflict ended in a negotiated settlement, I utilize a variable generated from the Uppsala Conflict Data Program (UCDP) Conflict Termination Dataset, which records how each ACD conflict episode is terminated\cite{Kreutz2010}. Negotiated Settlement is a dichotomous variable that is equal to one if a conflict ends in a peace agreement or ceasefire and zero otherwise. A civil conflict is coded as ending in a peace agreement when the disputants have reached a written settlement dedicated to resolving...
the underlying cause of the conflict (Kreutz 2010, 245). Ceasefires, on the other hand, do not seek to resolve the underlying issue of a dispute, but end ongoing mutual military engagements and include some form of conflict regulation provisions (Kreutz 2010, 245).

I control for several factors thought to influence the duration of post civil war peace. Military victory is a dichotomous indicator equal to one if either side in the conflict achieved a military victory and zero otherwise (Kreutz 2010). This variable is included because third-party military support for a given side in a conflict has been shown to increase that side’s likelihood of achieving a decisive victory (Balch-Lindsay, Enterline & Joyce 2008, Gent 2008).11 As previously stated, others have found that civil wars ending in a decisive military victory, particularly when on the side of the government, are unlikely to recur (Licklider 1995, Luttwak 1999, Fortna 2004a). If interventions do increase the likelihood of conflict recurrence, then omitting the military victory indicators will lead to bias in estimating the effect of the interventions and negotiated settlements. When the Military victory, Negotiated Settlement variables are all equal to zero, this indicates that a conflict has ended either through low activity (i.e. fewer than 25 battle-related deaths were reached in a particular year without a conflict ending through a military victory or negotiated settlement). In other words, indeterminate outcomes function as the reference category among these three variables.

Rebel strength index is a composite index of rebel group strength obtained from the Non-State Actor (NSA) data set (Cunningham, Gleditsch & Salehyan 2013).12 This records the degree to which rebel organizations can effectively combat government forces in conventional warfare. Rebel organizations are classified into one of the five following categories: much weaker; weaker; parity; stronger; much stronger. These categories correspond to values ranging from one to five, with one indicating rebels are much weaker than the government, and five indicating they are much stronger. This factor is included because it has been shown to affect both the likelihood that a group receives outside support and how civil conflicts end (Gent 2008, Cunningham, Gleditsch & Salehyan 2009, Salehyan, Gleditsch & Cunningham 2011). Furthermore, the strength and structure of rebel organizations is likely to impact how appealing a return to

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11 Specifically, interventions on behalf of rebels have been found to increase the likelihood of rebel military victory. The findings with respect to interventions on behalf of the government and government military victory, on the other hand, have thus far been indeterminate (Gent 2008, Licht 2011).

12 NSA codes data in a dyadic format. As a result, if a conflict is fought between the government and several organizations, it will produce several observations in NSA, each of which contains a distinct value for relative rebel group strength. When this is the case, the highest recorded value for a particular year is recorded. While an imperfect solution, this is preferable to adding the component index values, which were not constructed with such transformations in mind.
conflict is for government and rebel forces.\textsuperscript{13} Thus, rebel strength can be expected to correlate with both the likelihood of intervention and conflict recurrence.

\textit{Previous conflict duration} is recorded from the ACD and is a measure of the number of years a conflict lasts prior to termination. The duration of a particular conflict, prior to its termination may affect both the probability a conflict will end in a particular settlement type and the potential for conflict recurrence. More specifically, several scholars have found that particular conflict outcomes, such as military victory by one side, changes drastically as a civil war progresses (Balch-Lindsay, Enterline & Joyce 2008, Gent 2008, Licht 2011). The amount of time spent fighting may also facilitate information flows regarding each side’s relative capabilities and resolve. This, in turn, may reduce uncertainty among combatants, leading to more stable conflict settlements.

\textit{Civil War} codes whether a conflict produced at least one thousand battle-related deaths in at least one year of its duration (Gleditsch et al. 2002). Empirical evidence has shown that third party interventions may be less likely in conflicts that have produced a large number of fatalities (Regan 1998). Increasing fatalities may also reduce both the likelihood that a civil conflict will end in a negotiated settlement (Balch-Lindsay, Enterline & Joyce 2008). Like conflict duration, fatalities may also function to disseminate information between combatants, which then reduces uncertainty and increases settlement durability. For these reasons, an indicator of whether a conflict episode resulted in a civil war is also included.

\textit{Democracy} identifies whether states hold a score of 6 or higher on the Polity democracy-autocracy scale at the time of conflict termination.\textsuperscript{14} It is possible that democracies are more likely to receive military support from the international community than are non-democracies. Salehyan, Gleditsch & Cunningham (2011) find modest evidence suggesting that rebels are less likely to receive support if they operate against democratic regimes instead of autocratic regimes. Democracies may also be less likely to feature conflict

\textsuperscript{13}It is plausible that relative rebel strength has an effect on conflict recurrence, since weak rebels can actually be particularly difficult to defeat militarily due to their use of irregular warfare and guerrilla tactics (Cunningham, Gleditsch & Salehyan 2009). These groups may therefore be likely to engage in periods of low-activity following government offensives, only to reemerge at a later date. As a result, conflicts fought against these “weak” rebels may actually be particularly likely to recur.

\textsuperscript{14}Note that the score is only coded at the time of conflict termination to avoid controlling for factors that may result from the primary independent variables. In this case, peace agreements may lead to democracies as they often contain promises of democratic institution building. This would be akin to controlling for post-treatment effects, and could potentially bias coefficient estimates (Ho et al. 2007).
recurrence if these regimes are indeed better able to attain the consent of their constituent populations.¹⁵

**Model Choice and Specification**

I estimate a proportional hazards model to test the preceding hypotheses (Box-Steffensmeier & Jones 2004). Survival analysis is built around the concept of a hazard rate \( h(t) \), which captures how the risk of a particular event occurring changes over time. More specifically, this is the rate of failure (here conflict recurrence) at time \( t \), conditional on an observation surviving up to time \( t \). In a proportional hazards model, the hazard rate is estimated both with respect to a baseline hazard, \( h_0(t) \), which reflects the rate of failure among units when all covariates are equal to zero, and with respect to how the failure rate varies systematically with a set of covariates, \( X \). The hazard rate, therefore takes the form

\[
h(t, x) = h_0(t) \exp(X \beta),
\]

where \( h(t, x) \) is the hazard rate, and \( h_0(t) \) is the baseline hazard function, which is shifted up or down proportionally depending on the values of the covariates in the systematic portion of the model \( X \beta \). One option in estimating a proportional hazards model is to impose a structure onto the baseline hazard or to assume a particular distribution to the failure times by estimating a parametric model (e.g. Weibull, exponential, Gompertz models). This can be problematic, however, if the incorrect functional form of the baseline hazard is chosen. In order to avoid this issue, I estimate a Cox proportional hazards model, which does not make any parametric assumptions about the shape of the baseline hazard.

The systematic portion of the model, \( X \beta \), is specified as:

\[
X \beta = \beta_1 \text{Intervention} + \beta_2 \text{Negotiated Settlement} + \\
\beta_3 \text{Intervention} \times \text{Negotiated Settlement} + \beta_4 \text{Controls}
\]

Note that \( \beta_1 \) pertains to the effect of third party intervention when a civil conflict does not end in negotiated settlement (i.e. the conflict ended in either a military victory or an indeterminate outcome), while \( \beta_2 \) pertains to the effect of negotiated settlements when there are no third party interveners present. The *Intervention* and *Agreement Duration* hypotheses make predictions about the values of each of the coefficients listed above.

¹⁵The role of regime type and civil conflict onset has been the subject of scholarly debate. Hegre et al. (2001), for example, argue that regime type impacts the probability of civil conflict onset, with highly consolidated democracies and autocracies being least prone to civil conflict and anocracies being the most. Vreeland (2008), however, criticizes the empirical test of this conjecture, as political violence is endogenous to the Polity measure of anocracy. A polity-derived measure is nevertheless included here, as this variable is used to protect against omitted variable bias and not to draw inference about the regime type-conflict relationship.
While the hypotheses presented here are stated in terms of peace duration, any factor that increases the hazard of conflict recurrence can also be understood to reduce the duration of peace. Thus, the Intervention Hypothesis produces the expectation that interventions will increase the hazard of conflict recurrence (i.e. reduce peace duration) only when a civil conflict ends in a negotiated settlement. $\beta_1$ is therefore expected to be equal to zero meaning that interventions have no effect on the duration of peace in the absence of a negotiated settlement. Furthermore, $\beta_1 + \beta_3$ is expected to be positive, indicating that interventions increase the hazard of conflict recurrence when a negotiated settlement had been reached.

The Agreement Duration Hypothesis produces the expectation that negotiated settlements will reduce the hazard of conflict recurrence (increase peace duration) when reached naturally between disputants, but that this effect will be nullified when third party combatants are present. This predicts that $\beta_2$ will be negative, indicating that negotiated settlements reduce the hazard of conflict recurrence when interveners are not present. $\beta_2 + \beta_3$, on the other hand, is the effect of negotiated settlements when a military intervener is present, which is expected to have no effect on the hazard of conflict recurrence. This value is therefore expected to be equal to zero.

Whenever employing a Cox model, it is crucial to evaluate the validity of the proportional hazards assumption (Box-Steffensmeier & Jones 2004, 131). A covariate violates this assumption if the proportional effect of the variable changes over time (e.g. military victories reduce peace duration shortly after a conflict has ended, but have increasingly muted effects thereafter). The constitutive term Negotiated Settlement was found to violate the proportional hazards assumption, along with Military Victory, and Civil War. To address this, I interacted these covariates with the natural log of time (Box Steffensmeier & Zorn 2001). When interpreting the effect of these covariates, I therefore also adjust for these interactions with time (Licht 2011). Note also that the model utilizes robust standard errors, clustered by state as a means of addressing the non-independence of observations. The Efron method is used to deal with tied observations, or peace agreements that each ended after the same number of days.(Hosmer & Lemeshow 1999)107

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16To test for different violations of the proportional hazards assumption, I regressed the Schoenfeld residuals obtained from the above on logged and squared failure time values (Box-Steppensmeier & Jones 2004, 133-137).

17Testing and correcting for violations of the proportional hazards assumption using the squared value of time produces substantively similar results with respect to the substantive variables of interest.
Analysis of Survival Functions

Before proceeding to the proportional hazards model, I briefly examine the effects of intervention and negotiated settlements before conditioning on other covariates. This is done by examining the Kaplan-Meier estimator of the survivor function, which gives the probability of a unit surviving past a particular point in time. One advantage of the Kaplan-Meier is that it is a non-parametric estimator; it does not make any assumptions about the distribution of failure times or how an independent variable or variables change survival experiences. Conducting this analysis serves primarily as descriptive investigation of the data, providing information on censoring and failure times across cases with and without negotiated settlements and military interventions.

Figure 1 displays the Kaplan-Meier survival functions for civil conflicts with and without intervention, stratified by Negotiated settlement. Panel (a) in Figure 1 displays the survival curves for civil conflicts ending without a negotiated settlement (i.e. the conflict ends through either military victories or indeterminate outcomes). In these plots, a quickly declining survival curve indicates that a substantial proportion of observations are experiencing censoring or failure at a particular point in time. Thus, when one curve descends more quickly than another, this indicates that units in this group tend to survive for a shorter duration of time. In panel (a), among civil conflicts ending without a negotiated settlement, the survival curve for observations with interveners is actually higher than that for cases without interveners. This suggests that when no negotiated settlement is present, peace actually tends to last longer following conflicts with interveners compared to those without. A log-rank test is conducted to determine whether the difference between these two estimated survival curves is statistically significant. The resulting test statistic is associated with a p-value of 0.104. Though this fails to reach standard thresholds for statistical significance, it nevertheless provides provisional evidence suggesting that military interveners may actually produce relatively stable civil war settlements in the absence of negotiated settlements. While this contradicts Intervention Hypothesis’s prediction that interventions would have no effect on peace duration in the absence of a negotiated settlement, it is nevertheless consistent with the expectation that interventions have less pernicious effects when disputes are not settled through peaceful negotiations.

18The Kaplan-Meier estimator of the survivor function is \( \hat{S}(t) = \prod_{j|t_j \leq t} \left( \frac{n_j - d_j}{n_j} \right) \) where \( n_j \) is the number of cases at risk for failure (i.e. conflict recurrence) at time \( t_j \) and \( d_j \) is the number of cases which experience the event at time \( t_j \) (e.g. Cleves et al. 2010).
Panel (b) in Figure 1 displays the survival curves for observations with and without interventions among cases that did end in a negotiated settlement. Both the Intervention and Agreement Duration hypotheses predict that negotiated settlements with interveners will be more prone to failure than those without. This expectation is born out by the fact that the survival curve pertaining to cases with interveners descends more quickly than that pertaining to cases without interveners. In fact, no negotiated settlements featuring interveners survives past the fifteenth year following conflict termination. Conducting a log-rank test to compare these curves yields a p-value of 0.124, again failing to meet standard thresholds for statistical significance. Nevertheless, given the relatively small sample of negotiated settlements, these results appear
to be consistent with the presented hypotheses.

Figure 2: Kaplan-Meier Plot of Peace Duration Stratified by Intervention

![Figure 2: Kaplan-Meier Plot of Peace Duration Stratified by Intervention](image)

Note: In Panel a, a log-rank test for equality of survivor functions in panel a yields a two-tailed p value of 0.007 for the negotiated settlement and low activity curves, 0.128 for the negotiated settlement and military victory curves, and 0.001 for the military victory and low activity curves. A statistical comparison is not conducted for panel b because each of the survival curves intersect, making a log-rank comparison inappropriate.

Figure 2 displays the Kaplan-Meier results for civil conflicts by outcome type, stratified by intervention. Panel (a) in Figure 2 displays the survival curves pertaining to conflicts ending in low activity, negotiated settlements, and military victories in the absence of third party interveners. As the Agreement Duration Hypothesis predicts, negotiated settlements appear to increase peace duration when military interveners are absent. A log-rank test comparing conflicts that end in low activity to those with negotiated settlements produces a p value of 0.007, suggesting the latter are indeed more durable when interveners are absent. Moreover, the difference between negotiated settlements and military victories is less extreme, at a p value
of 0.128. This provides strong support for the expectation that negotiated settlements are not recurrence enhancing when interveners are absent, and may, in fact, be as good as military victories. Panel (b) in Figure 2 displays the survival curves pertaining to each outcome type when at least one military intervener is present. A statistical comparison among survival curves is not conducted for this figure because each of these curves intersect. In these cases, the values returned by a log-rank test are uninterpretable. Nevertheless, this figure reveals stark difference among each outcome type when interveners are present. Now, conflicts ending in negotiated settlements appear to fail at a similar rate to conflicts ending in low activity. In fact, the survival curve pertaining to negotiated settlements declines more quickly than either of the other outcome types and no observation in this category survives past its fifteenth year. These results strongly coincide with the Agreement Duration Hypothesis – negotiated settlements reached in purely domestic conflicts are quite stable, while those reached in the presence of military interveners appear to enhance the potential for conflict recurrence.

Model Results

The preceding analyses provide some descriptive information about the survival rates among observations stratified by the Intervention and Negotiated settlement indicators and uncovered preliminary support for each of the hypotheses. It does not, however, control for additional factors that may also affect the relationship between intervention, outcome type, and peace duration. To address this issue, I now turn to the results from the Cox model, which are reported in Table 2. Once again, note that Cox models generate estimates based on the order of failure times among units, and not duration time per se. As a result, each of the coefficient estimates are interpreted with respect to their effect on the hazard of conflict recurrence. Specifically, positive coefficient values indicate that a variable is positively associated with the hazard of conflict recurrence and therefore decreases peace duration, while negative coefficient value indicates that a variable is negatively associated with conflict recurrence and increases peace duration.

The results obtained in the model are consistent with the Intervention Hypothesis. As predicted, there is evidence that the effect of third party intervention depends on whether there has been a negotiated settlement. This is indicated by the positive and statistically significant coefficient on Intervention × Negotiated Settlement. Moreover, intervention appears to have no effect when a civil conflict has ended
Table 1: Cox Model of Post Conflict Peace Duration

<table>
<thead>
<tr>
<th>Regressor</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>-0.440</td>
</tr>
<tr>
<td></td>
<td>(0.403)</td>
</tr>
<tr>
<td>Negotiated settlement</td>
<td>-3.542***</td>
</tr>
<tr>
<td></td>
<td>(1.201)</td>
</tr>
<tr>
<td>Negotiated settlement × ln(time)</td>
<td>0.438**</td>
</tr>
<tr>
<td></td>
<td>(0.175)</td>
</tr>
<tr>
<td>Intervention × Negotiated Settlement</td>
<td>1.102**</td>
</tr>
<tr>
<td></td>
<td>(0.528)</td>
</tr>
<tr>
<td>Military victory</td>
<td>-4.172***</td>
</tr>
<tr>
<td></td>
<td>(0.173)</td>
</tr>
<tr>
<td>Military victory × ln(time)</td>
<td>0.495***</td>
</tr>
<tr>
<td></td>
<td>(0.167)</td>
</tr>
<tr>
<td>Previous conflict duration</td>
<td>0.022*</td>
</tr>
<tr>
<td></td>
<td>(0.011)</td>
</tr>
<tr>
<td>Civil war</td>
<td>1.128</td>
</tr>
<tr>
<td></td>
<td>(0.909)</td>
</tr>
<tr>
<td>Civil war × ln(time)</td>
<td>-0.166</td>
</tr>
<tr>
<td></td>
<td>(0.124)</td>
</tr>
<tr>
<td>Rebel strength index</td>
<td>-0.094</td>
</tr>
<tr>
<td></td>
<td>(0.107)</td>
</tr>
<tr>
<td>Democracy</td>
<td>-0.788</td>
</tr>
<tr>
<td></td>
<td>(0.937)</td>
</tr>
<tr>
<td>Democracy × ln(time)</td>
<td>0.116</td>
</tr>
<tr>
<td></td>
<td>(0.130)</td>
</tr>
<tr>
<td>Observations</td>
<td>316</td>
</tr>
</tbody>
</table>

* p < 0.10 ** p < 0.05, *** p < 0.01 (two-tailed)

Note: Cells show coefficient estimates from a Cox model where ties are dealt with using the efron method. Robust standard errors, clustered by country, are given in parentheses. The dependent variable is time until conflict recurrence (Gleditsch et al. 2002).
without a negotiated settlement, as evidenced by the fact that the Intervention coefficient is not statistically significant. More precisely, intervention has no significant effect on the hazard of conflict recurrence and, by extension, the length of peace duration when civil conflicts end without negotiated settlements. Furthermore, military interventions prior to peace agreements increase the hazard of conflict recurrence. The Intervention coefficient summed with the interaction between the Intervention and Negotiated settlement (\(\beta_{\text{Intervention}} + \beta_{\text{Intervention} \times \text{Negotiated Settlement}}\)) is statistically significant with a value of 0.662, and a two-tailed, 95% confidence interval [0.007, 1.317]. Substantively, these results indicate that civil conflicts that end in negotiated settlements with interveners present are 94% more likely to experience peace failure than conflicts ending in negotiated settlements that do not feature third party interveners. The two-tailed 95% confidence interval around this effect is [0.7%, 273%]. As predicted by the Intervention Hypothesis, intervention decreases peace duration when civil conflicts end in a negotiated settlement.

I turn now to estimates pertaining to the Agreement Duration Hypothesis, which predicted that negotiated settlements would reduce the hazard of conflict recurrence, but that this effect would be nullified when third party interveners are present. In accordance with expectations, the coefficient on Negotiated Settlements is negatively associated with the hazard of conflict and statistically significant. This effect is, however, dampened over time, as indicated by the interaction with the natural log of time. Once again, the positive, statistically significant Intervention \(\times\) Negotiated Settlement value indicates that the negative association between peace agreements and the hazard of conflict recurrence is reduced in the presence of third party interveners.

To better understand this relationship, the effect of negotiated settlements on the hazard of conflict recurrence is displayed in Figure 3. Panel (a) presents this effect when agreements are reached in the absence of military interveners, while Panel (b) presents this effect when interveners are present. The x axis in each plot pertains to the logged value of peace duration in days. For ease of interpretation, these values are labeled at yearly intervals. Each plot also overlays a histogram reporting the percentage of observations that either failed or are censored at a particular time interval. This is provides a sense of how the distribution of failure and censoring times relate to the model estimates.\(^{19}\) The reference category for these plots is comprised of civil conflicts ending in low activity.

\(^{19}\)Note that all observations within the data set survived up to the point indicated by the first bar in the histogram.
Figure 3: Effect of Negotiated Settlements on the Hazard of Conflict Recurrence (a) with and (b) without Military Interveners

In Panel (a), the negative association between negotiated settlements and the hazard of conflict recurrence becomes statistically insignificant after about 2.84 years.\(^{20}\) While the length of time this negative relationship lasts might appear short, it is likely critical to the peace-building process. Among civil conflicts that recur, the median duration of peace is only about 2.6 years. Negotiated settlements of purely domestic conflicts therefore appear to be most effective during the time when peace is most fragile. The same cannot,

\(^{20}\)By contrast, civil conflicts that do not recur have a median peace spell of about 21 years before being censored.
Figure 4: Effect of Military Victory on the Hazard of Conflict Recurrence

Note: This plots illustrates the effect of a conflict ending in military victory on the duration of peace. The vertical axis on the left indicates the magnitude of the effect. The vertical axis on the right pertains to the histogram of failure/censor times for observations in each category. Two-tailed, ninety-five percent confidence intervals are displayed with dashed lines. This effect is should be interpreted with respect to the reference category of civil conflicts that end in low activity.

However, be said of negotiated settlements in civil wars with military interveners. These results are reported in Panel (b) of Figure 3. As predicted by the Agreement Duration Hypothesis, the negative association between negotiated settlements and the risk of conflict recurrence is nullified by the presence of a third party intervener. Across most of the range of observed duration times, the effect of negotiated settlements is statistically insignificant. In fact negotiated settlements reached in the presence of a third party intervener actually become positively associated with conflict recurrence once about 9 years have elapsed. Peace agreements reached in the presence of a third party intervener are indeed considerably less durable than those that arise naturally between the disputants.

The effect of intervention also has implications for the relationship between negotiated settlements and military victory. Figure 4 displays the relationship between military victories and the hazard of conflict recurrence, with conflicts ending in low activity serving as the baseline category. A cursory analysis suggests that these results are quite similar to those pertaining to indigenous negotiated settlements. Military victories reduce the hazard of conflict recurrence until about five years have passed, after which point their effect becomes insignificant. To explore this issue further, military victories are compared to a baseline category of
Figure 5: Effect of Military Victory Relative to Negotiated Settlements (a) with and (b) without Military Interveners

Note: This plots illustrates the effect of a conflict ending in military victory relative to conflicts ending in negotiated settlements that occurred in the absence (Panel a) or presence (Panel B) of military interveners. Model estimates are only reported for the duration of time for which there are observations in each category. The vertical axis on the left indicates the magnitude of the effect. The vertical axis on the right pertains to the histogram of failure/censor times for observations in each category. Two-tailed, ninety-five percent confidence intervals are displayed with dashed lines. Because negotiated settlements function as the reference category in this plot, negative values indicate military victories reduce the hazard of conflict recurrence more so than do negotiated settlements, and positive values indicate the opposite.

civil conflicts ending in negotiated settlement in Figure 5. Across the entire range of observed duration times, the difference between victories and negotiated settlements without interveners is near zero and statistically insignificant. By contrast, military victories are significantly more stable than negotiated settlements that do feature military interveners over the majority of their duration. More precisely, these two outcomes are indistinguishable from one another until about a year after a conflict has terminated. After this point,
conflicts ending in military victories enjoy a significantly lower hazard of recurrence until about 30 years have passed, after which point the two once again become statistically indistinguishable. Thus, contrary to the conventional wisdom, military victories are not significantly more stable than the bulk of negotiated settlements. Instead, they only prove significantly more durable than settlements where military interveners are present. When this is not the case, however, negotiated settlements appear to be as stable as military victories.\textsuperscript{21}

In sum, considerable support is uncovered for both the \textit{Intervention Hypothesis} and \textit{Agreement Duration Hypothesis}. Interventions increase the risk of conflict recurrence when a conflict is terminated through a negotiated settlement between the government and rebel forces, but have no discernible effect otherwise. Likewise, negotiated settlements increase the duration of peace when a civil conflict is fought exclusively between the government and rebels, but prove relatively unstable when there is a military intervener fighting on one or both sides. The fact that these relationships obtain suggests that military interventions may indeed undermine the peaceful resolution of civil conflicts.\textsuperscript{22}

\textbf{Conclusion}

While existing work has focused primarily on how military interventions in civil conflicts affect conflict duration and outcome, I provide a first analysis of how military interventions during a conflict can affect the durability of the peace that follows. Theoretical expectations regarding third-party intervention and settlement durability were derived from work on international bargaining and mediation and applied to the context of civil conflicts, a domain where they have not been systematically tested. Like the international context, third-party pressure in civil wars is argued to exacerbate information asymmetries between combatants and ensure the balance of capabilities will remain in flux as time endures. To test this dynamic, I examined

\textsuperscript{21}Very few of the remaining control variables have a significant impact on the hazard of conflict recurrence. The lone exception in conflict duration which, interestingly, increases the hazard of recurrence. This implies that combatants do not necessarily converge on mutual estimates of strength and resolve as a conflict progresses. Instead, it appears as though the conflicts that are the most intractable during the time of fighting are also quite difficult to resolve permanently.

\textsuperscript{22}A series of robustness tests are reported in the online appendix. Few observations constitute outliers, and their removal from the data do not lead to large changes in model estimates; nor does the inclusion of a peacekeeping control variable. Additionally, the Non-State Actor (NSA) data is used to generate an alternative indicator for the presence of foreign troops. The results using this indicator suggest that the mutual presence of interveners and a negotiated settlement initially stabilizes a conflict environment, but over time leads to substantial increases in the hazard of conflict recurrence. This is indicative of time-inconsistency and is consistent with the theoretical expectations outlined here. The fact that these findings hold indicate that the conclusions drawn here are the product of robust empirical relationships.
whether interventions produced deleterious effects on the peace process among disputes initially settled through negotiated settlements. The evidence strongly supported my claims and suggests that interventions indeed increase the risk of conflict recurrence in these cases. When these third parties are absent, however, negotiated settlements prove quite stable.

Several implications for our understanding conflict termination follow from this research. First, serious doubt must be cast on the utility of military intervention as an effective policy option. While these actions are often taken in an attempt to permanently and decisively end civil conflicts, they rarely achieve this end without extreme costs. Past studies have found that military interventions often fail to propel a supported side to victory (Gent 2008), forestall negotiated settlements (Balch-Lindsay, Enterline & Joyce 2008), produce long and bloody civil wars (Regan 2002, Lemke & Regan 2008, Cunningham 2010), and inhibit post-war development (Kim 2014). In addition to these wartime costs, this policy now is now known to also increase the risk of conflict recurrence by producing negotiated settlements that are plagued by time-consistency problems. Thus, while civil conflicts themselves produce untold damage in the international system, military intervention only increases these costs and prevents civil conflicts from being settled peacefully or permanently.

Second, there is reason for new optimism regarding the efficacy of negotiated settlements in resolving civil conflicts. Empirical findings commonly suggest that military victories are the most stable outcomes among civil conflicts, and this assumption has become commonplace in civil conflict research. After disaggregating negotiated settlements into those with and without military interveners, however, the latter prove to be as durable as military victories. This suggests a need to further scrutinize the conventional wisdom and policy recommendations built around the belief that negotiated settlements enhance the risk of conflict recurrence.

Third, this work highlights the contrasting roles third parties can play in the settlement process. While third party intervention during ongoing hostilities appear to reduce the long-term prospects for peace, the presence of outside parties is also thought to be crucial in providing security guarantees and conducting peace operations in recent conflict environments (Walter 1997, Fortna 2004a, Doyle & Sambanis 2000, Diehl 1994, Diehl 2008). One explanation this study provides is that military interventions alter the balance of capabilities to a greater extent than diplomatic interventions, making the fluctuation or withdrawal of
third party support all the more hazardous to the peace process. In this way, third parties appear to function as both a primary cause of and solution to conflict recurrence depending on when they intervene and how much leverage they exert.

Fourth, and finally, theories of international relations have again proven adaptable to civil conflict settings. As is the case with interstate negotiations, the presence of third parties fighting in civil conflicts has the potential to produce artificial or time-inconsistent agreements that will ultimately fail when the interests or leverage of third parties fluctuates. This suggests the barriers to peace are much the same in these contexts, and contributes to a promising area of future research suggesting that domestic and interstate conflicts are best studied together and are driven by similar processes (Lemke 2008, Cunningham & Lemke 2013).
References


