# Evaluating "Ripeness" and "Hurting Stalemate" in Mediated International Conflicts:

## An Event Data Study of the Middle East, Balkans, and West Africa

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The data sets, and software discussed in this paper, as well as a pdf version of the paper with color graphics, can be downloaded from the KEDS project web site: http://www.ku.edu/~keds

## Abstract

"The contemporary literature on international mediation places a great deal of emphasis on the concept of a conflict being "ripe" for mediation, This in turn is determined in part by the parties being in a "hurting stalemate." While these concepts are attractive as metaphors, it is less than obvious whether they can be operationalized in a manner that enables either to be clearly determined ex ante (that is, prior to the success of a mediation). After reviewing the existing literature on ripeness and hurting stalemates, we examine the Israel-Lebanon, Israel-Palestine, former Yugoslavia, and the civil wars in Liberia, and Sierra Leone for empirical regularities prior to negotiation that differentiates whether parties will undertake negotiation , and whether the negotiation succeeds. Our analysis uses a new event data coding scheme called CAMEO (Conflict and Mediation Events Observations), which is optimized for the study of mediation behavior." We find that while “ripeness” can be measured using indicators of the level of conflict, “hurting stalemate” is more effectively measured as the long-term change in the amount of conflict measured across a number of months than in the levels of conflict. This measure of “hurting stalemate” correlates both with the onset of negotiation among the antagonists in the conflict, and significantly declines following negotiation. The Israel-Palestine case behaves differently than the remaining three, with much longer lag times for both the onset and effect of negotiation. The analysis shows potentially counter-intuitive results on the effects of negotiation on changes in cooperation, although it is likely that these are explained at least in part by inconsistencies in media coverage over time.

## Introduction

In an ideal world, mediators would be able to facilitate negotiations and get antagonists to settle their differences away from the battlefield through peaceful means anytime they choose to intervene. This is clearly not the case in reality. Once violence takes over parties tend to exhaust other means designed to secure unilateral victories before they engage in bilateral or mediated negotiations and agree to settle their dispute. Is there a certain time or phase in the life of a conflict when it is more amenable to mediation and peaceful settlement? This has emerged as one of the more extensively examined questions in the field of mediation and conflict resolution. The contemporary literature places a great deal on emphasis specifically on the concept of "conflict ripeness," which refers to a set of conditions that makes conflict resolution possible (Coleman 2000; Haass 1990; Stedman 1991; Stover 2002; Zartman 1985/1989, 1986, 2000; Touval and Zartman 1985). This approach is different from a number of other studies that focus on the issue as a concept of calendar timing (i.e. the length of time—days, months, years—it takes a conflict to mature into peaceful resolution) (Bercovitch 1984, 1986; Edmead 1971; Northedge and Donelan 1971; Ott 1972; Pruitt 1981; Regan and Stam 2000).[1] While this latter line of theories on the timing of third party initiatives has been subject to empirical tests and analyses, "ripeness" still suffers from the lack of precise definition and satisfactory operationalization.[2]

A ripe moment is one at which "the parties' motivation to settle the conflict is at its highest" (Zartman 2000: 228). This moment is not necessarily a function of the duration of the conflict. Rather it is characterized with "circumstances conducive for negotiated progress or even solution" (Haass 1990: 6). "In this notion, time matters in the sequencing of events that must take place over the life of a conflict. According to ripeness scholars, disputes cannot end until certain stages of conflict development have been passed through" (Regan and Stam 2000: 243). In other words, parties are most likely to accept mediation and cooperate for a peaceful resolution only after certain conditions are met: "when the parties find themselves locked in a conflict from which they cannot escalate to [unilateral] victory and this deadlock is painful to both of them (although not necessarily in equal degrees or for the same reasons), they seek a way out" (Zartman 2000: 228). This refers to the famous concept of "mutually hurting stalemate" (Zartman 1985/1989; Touval and Zartman 1985). The dynamics of the conflict change in a way that results in the transformation of antagonists' cost-benefit calculations and/or goals, and the strategies they choose to pursue.

Perhaps owing to its attractiveness as an easy to understand metaphor, scholars and practitioners alike have widely used "ripeness" as tool for explaining in retrospect why third parties could manage some conflicts more successfully than others. As Stedman Stephan expresses, however, "to improve the usefulness of the concepts, we need to bring more precision to it, so that ripeness becomes more than a tautology and subject to more rigorous definition" (1991: 240). This is crucial if our objective is to assess *ex-ante* conditions that render a conflict conducive to mediated-resolution and to predict when parties are most likely to accept mediation. In order to be used as a prescriptive tool, third parties should be able to identify these conditions as they develop, if not before. Otherwise, the notion of ripeness is not any different from that of

[1] Duration analysis in Schrodt et al. (2001) followed a similar approach.

[2] Some recent attempts to better identify and examine at least some components of this concept include Greig (2001), Mooradian and Druckman (1999), and Assal et al. (2002).

pornography as Justice Potter Stewart described it: “I know it when I see it” (cited in Stedman 1991: 240).

The way ripeness has typically been used reduces the concept to a mere tautology, and theories that relate to it end up being unfalsifiable claims. It is hard to differentiate the concept from parties’ consent to mediation and successful mediation outcomes. Ripeness is a necessary, if not sufficient, factor for initiation and success of negotiations (Zartman 2000: 226). If mediation was successfully initiated or finalized, in other words, the moment had to be ripe. Unsuccessful attempts, on the other hand, are results of “timing errors” (Kriesberg 1991). As a result, “a ripe moment exists, by definition, when efforts at de-escalation are successful!” (Rubin 1991; also see Kleiboer 1994).

Recognizing these problems surrounding the concept, Zartman affirms that conflict ripeness is not tautological:

> It has its own identifying characteristics that can be found through research independent of the possible subsequent resolution or of efforts toward it. It also follows that ripeness theory is not predictive in the sense that it can tell when a ripe moment will appear in a given situation. It is predictive, however, in identifying the elements necessary (even if not sufficient) for the productive inauguration of negotiations (Zartman 2000, 228).

Regardless of whether the object is to predict when a ripe moment will occur or to recognize components of ripeness as they come about, it is imperative that we clearly identify those components, operationalize them, and examine how—if at all—they affect the initiation and outcome of mediated negotiations.

Zartman identifies three main elements of ripeness: a mutually hurting stalemate; an impending, recently experienced, or recently avoided catastrophe; and an alternative way out (1985; 2000). A hurting stalemate is essentially a painful deadlock, while an imminent catastrophe resembles a deadline, which the parties would be afraid to miss as they fear that their situation might further deteriorate.

> The point when conflict is ripe for resolution is associated with two different sorts of intensity—called here plateaus and the precipice—which produce different sorts of pressure—called respectively deadlocks and deadlines. A plateau and its deadlock begin when one side is unable to achieve its aims, to resolve the problem, or to win the conflict by itself, and they are completed when the other side arrives at a similar perception. Each party must begin to feel uncomfortable in the costly dead-end into which it has gotten itself. A plateau must be perceived by both not as a momentary resting ground, but as a hurting stalemate, a flat, unpleasant terrain stretching into the future providing no later possibilities for decisive escalation or for graceful escape (Zartman 1989: 267).

While he does invoke the notion of ripeness specifically, Bercovitch and Houston’s explanation for when mediation is most likely to occur resonates with Zartman’s approach:

> (1) a conflict has gone for some time, (2) the efforts of the individuals or actors involved have reached an impasse, (3) neither actor is prepared to countenance further costs or escalation of the dispute, and (4) both parties welcome some form of mediation and are ready to engage in direct or indirect dialogue (1996: 12).

Mutually hurting stalemates, which arguably provide the necessary incentives for parties to move their struggle from the battlefield to the negotiation table, are in short characterized by lengthy periods of violence, from which neither of the fighting parties are likely to get out of through a unilateral victory. They are military stalemates,[3] typified with persistent levels of conflictual behavior between the parties, and as such it should be possible to operationalize these either in terms of the levels of violence or the duration of persistently violent phases. We can similarly examine the effects of catastrophes by analyzing the change in parties' behavior following a significant hike in the level of conflict and/or casualties. Moordian and Druckman (1999) follow this approach and find that in the case of the conflict over Nagorno-Karabakh, mediation attempts became effective only after the 11-month period of high-casualty fighting which started in 1993 between Armenians and Azerbaijanis.

The presence of willing and resourceful mediators, who possible bring to the table concrete plans for getting out of the status quo situation, fulfills the condition which Zartman calls "a way out." This alternative path, however, can be created by internal actors as well; Karen Rasler (2000) found that "policy entrepreneurship" of such actors, coupled with shocks—internal or external, both of which serve to disrupt the routinized expectations and strategies of adversaries—and third-party pressure, could play a role in the de-escalation of protracted conflicts. Stedman (1991) also emphasizes that internal political changes could expose strategies and ways out of the situation, which might have been overlooked or ignored by the previous leadership.

The literature also emphasizes the role that mediators can play in facilitating the maturation of conflicts to make them ripe for mediation and resolution (Haass 1990; Rubin 1991; Stover 2002; Zartman 2000; Zartman and Aurik 1991): "Only time resolves conflict but time needs some help" (Zartman 1985: 256). Although this might initially seem to be counter-intuitive (i.e. in order for parties to accept the services of a mediator, mediation must first create the conditions that would make the parties likely to accept mediation), it actually is not so. What is argued is that mediators can use leverage (in form of carrots, sticks, or other tools of persuasion) to either change the objective conditions on the field or the perceptions of the parties before they push for a negotiated resolution. The absence of this first step could explain the failure to implement negotiated agreements, the 1993 Oslo agreements for instance. The trick is to use manipulative strategies in a way that makes the situation painful, and unilateral victory unlikely, for *all* parties involved in the conflict. This idea is supported by our prior work, where we found that conflictual interaction—use of sticks—between the mediator on the one hand, and both the powerful and the weaker antagonist on the other hand, was usually followed by reduced levels of conflict between the antagonists (Schrodt et al. 2001).

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[3] Zartman further asserts that these painful stalemates occur at the presence of rough power parity between the parties: "… upper hand slips and the lower hand rises, both parties moving toward equality, with both movements carrying pain for the parties" (Zartman 2000: 228). This is not necessarily so, as Zartman himself recognizes even on the very same page that "… this deadlock is painful to both of them (*although not necessarily in equal degrees or for the same reasons*)… ." This could be interpreted as the case in the Israel-Palestinian conflict today: while the Palestinians are definitely not anywhere close to Israel in terms of military power, the second Intifada has clearly brought high casualties—albeit in unequal degrees and due to different forms of violence.

Finally, a component of ripeness that is emphasized by many in the field is the subjective element: the objective condition of a violent stalemate has to be accompanied by perception among parties that they are unlikely to unilaterally escape from the painful status quo without worsening their own positions (Cohen 1991; Haass 1990; Kleiboer 1994; Stedman 1991; Zartman 1985/1989, 1986, 2000). Furthermore, they both need to perceive that the situation *is* a painful impasse, continuation of which would only bring more pain and no desirable change. It is conceivable that in some instances leaders persistently pursue unilateral victories even after objective and measurable costs mount to seemingly unbearable levels; they may identify every additional cost or casualty as a new investment in the cause that cannot be relinquished; growing costs, in other words, become reasons to continue fighting rather than settle for an agreement that falls short of whatever they perceive to be a complete victory (Edmead 1971; Teger 1980).

While *ex-ante* identification and analysis of such psychological elements is not feasible, measurable and observable objective components constitute a reasonable basis in general for identifying and testing ripeness, as long as we do not seek out deterministic conclusions. In this paper, we will test a number of possible formulations of these measures that are based on international event data. We disagree in this regard with Zartman as he argues that because of the role of perceptions, "while the theory indicates than an MHS [mutually hurting stalemate] is a necessary and identifiable element, nothing (other than tautological definitions) indicates when it will occur" (Zartman 2000, 238).

## Event Data Sets

Table 1 shows the coverage of the four data sets we will be analyzing. The source texts were from the Reuters files on the NEXIS data service prior to 10 June 1997, Reuters Business Briefing for 11 June 1997 to 31 May 1999, and *Agence France Presse* (AFP) on the NEXIS data service after 1 June 1999.[4] The listed states in each data set correspond to the terms used in the NEXIS (or Reuters) search to find the texts to be coded. Data were coded with version 0.4.04B2of TABARI, an open source automated coding program that we have developed. The coding program, data sets, and the dictionaries used to code them, are available at http://www.ukans.edu/~keds/data.html. .

[4] The Balkans and West Africa data sets are the same those analyzed in Gerner et al 2002. The Israel-Palestine and Israel-Lebanon data are taken from a data set covering the Levant that we have been updating quarterly with funding from the Swiss Peace Foundation FAST project. For this analysis, the Israel-Palestine set was terminated at December 1998 due to a clear discontinuity at the splice between the Reuters and AFP data that was affecting the time series analysis. While there the Reuters-AFP splice may also be causing some problems in the remaining sets, the problems do not appear severe—in other words, results without the AFP data look similar to those that include the AFP data.

**Table 1. Data Sets**

| Case | Antagonists | Mediators |
|---|---|---|
| **Balkans** | | |
| Apr-89 to Feb-02<br>N=154 | Bosnia, Croatia, Kosovo, Serbia | EU, France, Germany, Italy<br>NATO, UK, UN, USA |
| **Israel-Palestine** | | |
| Apr-79 to Dec-98<br>N=236 | Israel, Palestine | EU, France, Germany, Italy<br>UK, UN, USA |
| **Israel-Lebanon** | | |
| Apr-79 to Dec-02<br>N=284 | Israel, Lebanon | EU, France, Germany, Italy<br>UK, UN, USA |
| **West Africa** | | |
| Jan-89 to Feb-02<br>N=157 | Liberia, Sierra Leone, Nigeria[5] | ECOWAS, France, OAU, UK,<br>UN, USA |

Events are coded using the Conflict and Mediation Event Observations (CAMEO) coding scheme, which is discussed in detail in Gerner et al. 2002; the full coding framework is presented in the Appendix. The main distinguishing feature of CAMEO is its incorporation of mediation related event codes. The extended Consult (02) category includes specific codes for events that are identified as mediation and negotiation. "Engage in mediation" (025) is used when a party meets with others explicitly to play the role of a mediator. "Engage in negotiation" (026) is used when parties come together to negotiate, potentially to arrive at a settlement on particular issue(s). Rather than assuming that all visits and meetings constitute negotiation or mediation events, or trying somehow to infer from codes of visits and meetings when events of mediation occur—as we did in Schrodt et al 2001 and Schrodt & Gerner 2001— CAMEO enables a precise distinction between mere visits and meetings and those that represent cases of mediation or negotiation when this is made explicit in the news lead.

Following the lead of the IDEA coding scheme being developed by Bond et al (1997), we initially started creation of CAMEO just as an extension of the widely used World Events Interaction Survey (WEIS; McClelland 1976) coding scheme. The first phase of CAMEO's development involved the addition of cue and sub-categories that we found theoretically necessary for the study of mediation and conflict, while keeping most of the WEIS cue categories intact. The next phase involved looking for example leads and writing definitions for the codebook. A thorough examination of a large number of leads with the new framework in mind enabled us to see how some of the distinctions we would have liked to make theoretically were not possible to make given the nature of the news leads. A "Promise" (WEIS 07), for example, is

[5] Nigeria was included for two reasons. First, Nigerian troops are involved in most ECOWAS military actions in Liberal and Sierra Leone and so this will pick up most of the ECOWAS intervention. Second, the data set contains quite a few reports of ethnic conflict within Nigeria. The difference in the start of the coverage of the Balkans and West Africa data is due to the separate national groups in the former Yugoslavia not appearing in news report leads until April 1989.

almost indistinguishable from an "Agree" (WEIS 08) unless the word 'promise' is used in the lead. Therefore, we eventually ended up merging the two into an "Agree" cue category, which includes codes representing all forms of future commitments. In addition, an examination of the conceptual difference between "Propose" and "Request" has brought to light the practical difficulty of distinguishing these two concepts from each other. Verbs such as 'call or ask for,' 'propose,' 'appeal,' 'petition,' 'suggest,' 'offer,' and 'urge' are used interchangeably in news leads to refer to similar if not the same activities. Hence comes the decision to combine "Propose" and "Request" in one cue category. Similar decisions have been made in regard to other WEIS cue categories such as "Grant" and "Reward," "Deny" and "Reject," and "Warn" and "Threaten."

While developing CAMEO, we also paid significant attention to achieving consistency in our new additions and/or combination of older WEIS categories. In other words, having an "Approve" cue category required the addition of a new "Disapprove" cue category. The new CAMEO "Disapprove" category incorporated the older WEIS "Accuse" cue category and included a new "Official protest" subcategory. WEIS's "Reduce Relations" also directed us to create CAMEO's "Cooperate" (04) under which grants of diplomatic recognition, apologies, and forgiveness are coded. Furthermore, CAMEO is highly consistent in regard to the order of its main cue categories. Unlike WEIS and IDEA, we started with the most neutral/cooperative category "Comment" and moved gradually from cooperation to conflict categories. While the initial coding category in WEIS and IDEA is "Yield," CAMEO starts with "Comment" and locates "Yield" between "Provide Aid" (07) and "Investigate" (09). Technically, all three of these systems provide only nominal categories, and the placement of each category is arbitrary, but in fact the categories are often treated as ordinal or even interval variables. To the extent that one wishes to do that, CAMEO's categories have an ordinal increase in cooperation as one goes from category 01 to 09, and an ordinal increase in conflict as one goes from 10 to 20.

Our analysis uses monthly event counts aggregated according to the event categories listed in Table 2. Almost all of our analysis looks at the total number of events in these categories involving any of the actors listed in the "antagonist" column in Table 1. In other words, we are looking at the total activity in the conflict, not the behavior of individual dyads.[6] Our actors dictionaries code for a number of internal actors—notably ethnic groups in the Balkans and various rebel factions in West Africa—but the aggregations look only at the 3-character national code.[7] So, for example, conflict between government and rebel groups in Liberia will have a LBR code as both source and target and therefore will be counted in the conflict set.

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[6] Aggregation was done using a short C program that is available from the authors. The decision to look at events in the total system was made in part because the number of dyadic combinations in the Balkans system is difficult, and in West Africa it is nearly impossible. Note that in contrast to much of our earlier work, we are using event *counts* as the measure, not scaled totals.

[7] In our dictionaries, internal actors are coded using a three-character state code followed by a three-character code identifying the internal actor. For example, "Liberian government" is coded LBRGOV whereas armed Liberian rebels not identified with a specific group are coded LBRREB. These identifications are particularly complicated in the Balkans, where one gets SERBS_WITHIN_BOSNIA [BFRSER], BOSNIAN_CROATS_AND_SERB [BFRSER/BFRCRO] and BOSNIA'S_WARRING_PARTIES [BFRMOS/BFRCRO/BFRSER]. Because we are using machine coding, the actors dictionaries are, in effect, the codebook for determining how various actors were identified.

**Table 2. Event category aggregations**

| Category | CAMEO Events |
|---|---|
| Verbal cooperation | Cue categories 01, 02, 03, 04, 05 |
| Material cooperation | Cue categories 06, 07, 08 |
| Verbal conflict | Cue categories 09, 10, 11, 12, 13 |
| Material conflict | Cue categories 14, 15, 16, 17, 18, 19, 20 |
| Mediation and negotiation | 025, 026, 056, 057, 058, 059, 065, 066, 068, 105, 108 |

Our analytical method is cross-correlation, which is useful in determining if a behavior has a long-term effect when the likely timing of that effect is not specified by the theory. The technique is not a widely used technique in political science but is similar—but not identical—to computing the Pearson product moment "r" between $x_t$ and $y_{\pm k}$ for various values of k; both statistics have the form

$$r = \frac{Cov(x,y)}{\sqrt{Var(x)Var(y)}}$$

In a cross-correlation, Var(x) and Var(y) are estimated from the entire sample, whereas in a Pearson product moment these variances are computed only on the cases that were used to compute the covariance.. Note that the "cross-correlograms" are *not* a time series giving the effect of a single mediation on subsequent behavior; they are a correlation of the negotiation with prior and future behavior for the entire time period. For additional information on cross-correlation, see Kendall 1973: 129; Chatfield 1989: 136; and Gottman 1981: 318. Unless otherwise noted, all statistical calculations were done using Stata 6.0.

Under the assumption that the two series have neither trend nor autocorrelation (see Chatfield 1989: 137-140), the approximate critical value of the cross-correlation coefficient at the 5% two-tailed significance level is $\pm 2/\sqrt{N}$ , which is roughly 0.13 for the Levant cases and 0.18 for the Balkans and West Africa cases. While the series we are studying do not have significant trend, they are highly autocorrelated, so these standard approximations will underestimate the true critical values. As an alternative, we established the critical values numerically using Monte Carlo simulation for two series that were uncorrelated but had approximately the same autocorrelation structure as observed in the data as estimated from the using OLS regression

$$X_t = b_1 X_{t-1} + b_2 X_{t-2} + b_3 X_{t-3} + c$$

Table 3 gives the critical values for a two-tailed significance test at the 5% and 10% levels for the series analyzed in Figure 4. Because the critical values can differ substantially depending on the autocorrelation, and we only computed the Monte Carlo estimates for these figure, the cross correlation statistics should be interpreted as primarily descriptive rather than inferential.

**Table 3. Critical values of two-tailed significance for cross-correlation of mediation and seasonal difference in conflict**

| Case | p = 5% | | | p =10% | | |
|---|---|---|---|---|---|---|
| lag/lead | ±20 | ±10 | 0 | ±20 | ±10 | 0 |
| **Balkans** N=154 | 0.279 | 0.286 | 0.296 | 0.238 | 0.243 | 0.296 |
| **Israel-Palestine** N=236 | 0.204 | 0.215 | 0.221 | 0.172 | 0.183 | 0.186 |
| **Israel-Lebanon** N=284 | 0.160 | 0.162 | 0.169 | 0.135 | 0.136 | 0.142 |
| **West Africa** N=157 | 0.218 | 0.233 | 0.236 | 0.187 | 0.198 | 0.200 |

In the cross-correlation diagram, the values to the left of zero (the center of the graph) are the correlations with negotiation activity and conflict between the antagonists *prior* to the negotiation; the values to the right of zero are the correlations with negotiation activity and conflict *following* the mediation. If the presence of a "hurting stalemate" leads to negotiation , and that negotiation in turn leads to a reduction in the conflict that is causing the stalemate to hurt, we would expect to see a *positive* correlation between negotiation events at time t and conflict at time t-k, followed by a *negative* correlation between negotiation events at time t and conflict at time t+k in these figures.

## Results

Because of the ambiguity in the theoretical literature about exactly what constitutes "ripeness" and "hurting stalemate," we first experimented with a number of different indicators that might capture these concepts. We used the Israel-Palestine case to test these, and then did spot-checks on the other data sets to confirm that the behaviors found in that case were generally true of the other cases.

Figure 1 shows the cross-correlations involving a variety of indicator of the *level* of conflict intensity. We experimented with the following operationalizations: the event counts for verbal conflict, material conflict, the minimum and maximum level of material conflict over a six-month period, the total level of material conflict over a six-month period, and the total level of verbal and material conflict over a six-month period.

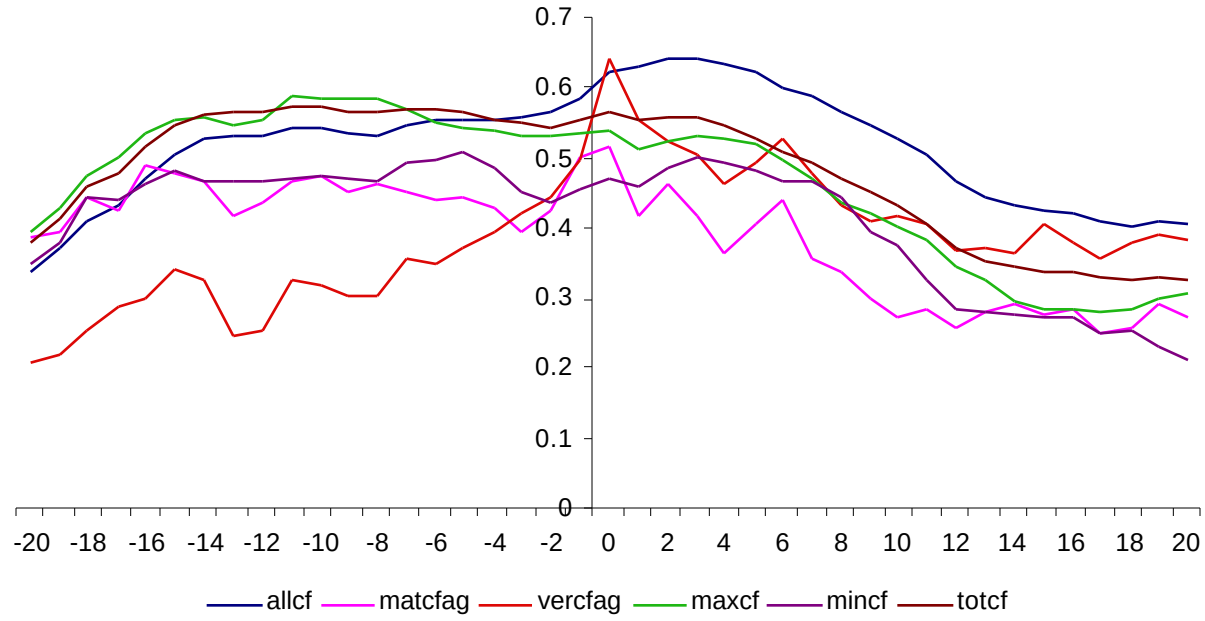
The cross-correlations of all of these measures are quite high—well above the 5% critical values for cross-correlation, even accounting for the autocorrelation in the series—and all of the measures show generally similar patterns. Given that the most common argument with ripeness is that parties begin to negotiate after a conflict is ripe, the results in Figure 1 support this for a variety of indicators.

However, none of these indicators show the pattern we expected for a symmetric "ripeness" indicator based on the resolution of the "hurting stalemate": positive correlations of

the indicator prior to negotiation, and negative indicators sometime after it. The indicators tend to correlate more highly prior to negotiation , but they remain high following it as well. Operationalizations of "hurting stalemate: based on absolute levels of violence—whether contemporaneous or persistent, at least out to six months[8], do not seem to work.

(The cross-correlations in Figure 1 and all subsequent figures used negotiation between the antagonists as the dependent variable. We ran several spot-checks using mediation between the mediating groups listed in Table 1 and the antagonists, and the patterns of cross-correlation were similar. Experiments with the various indicators of conflict intensity showed similar patterns for the Israel-Lebanon and Balkans cases, and only a very weak pattern (probably not significant for most lags) for West Africa.)

**Figure 1. Cross-correlation of antagonist negotiation with indicators of conflict intensity, Israel-Palestine**




Indicators:

| | |
|---|---|
| allcf | Sum of verbal and material conflict in [t, t-5] |
| matcfag | Material conflict at t |
| vercfag | Verbal conflict at t |
| maxcf | Maximum material conflict in [t, t-5] |
| mincf | Minimum material conflict in [t, t-5] |
| totcf | Sum of material conflict in [t, t-5] |

[8] Using totals over three months provides results similar to six months; we have not experimented with periods longer than six months.

While the measurement of levels does not work, other literature suggested that the *change* in the amount of conflict was the critical indicator for ripeness. We operationalized this by looking at the seasonal difference in the sum of verbal and material conflict in two six month periods separated by an interval k:

$$\Delta_k S_t = \sum_{i=0}^{5} X_{t-i} - \sum_{i=0}^{5} X_{t-i-k}$$

In other words, this is a measure of the overall level of change in conflict—it would have a large positive value if conflict had been escalating, and a large negative value if conflict had been declining.[9]

The cross-correlations of these conflict indicators are shown in Figures 2 and 3 for various values of k for the two Levant cases. In contrast to the level indicators, the conflict indicator is generally giving the desired behavior, but with a relatively long lag time. In both cases, the maximum strength of the correlation increases with the increasing length as the seasonal differencing lag k is increased from 2 months to 10 months, although the curves are similar where the correlations are near zero (we have not examined differencing lags of k > 10). The theoretical literature suggests that the effects of mediation and negotiation could facilitate the creation of "ripeness," which would then pave the way for cooperation. In some cases at least, we see that correlations remain high—if not grow further—after negotiation, which could be interpreted as further ripening. These results are also generally consistent with the results of Moordian and Druckman (1999) who found that in the case of the conflict over Nagorno-Karabakh there was an 11-month lag between the high levels of conflict and mediation

In both of these cases, the maximum effects of the negotiation on the conflict indicators occur several months following the negotiation activity: this interval is about 12 to 14 months for the Israel-Palestine case and 8 to 12 months in the Lebanon case. The two cases differ substantially, however, in the extent to which the conflict change leads the onset of the negotiation. In the Israel-Palestine case, the lead time is very long, around 14 to 12 months. In the Israel-Lebanon case, the strongest correlation is contemporaneous: negotiation is most likely to occur at the same time that the level of conflict has increased from the level observed k months earlier.

Figure 4 shows the cross-correlations of the k=8 measure for all four cases, which shows that the extended interval seen in Israel-Palestine case between “ripeness” as measured by the difference in conflict and the level of negotiation appears to be the exception. The Balkans case shows a pattern very similar to that found in the Israel-Lebanon cases. In the West Africa case, the positive peak in the correlation between negotiation and the difference in conflict level actually occurs *after* the mediation, meaning that in general negotiation would make the conflict level somewhat worse. This result is consistent with Huxtable’s (1997) finding—which used an entirely different data set—that international intervention in the West Africa had the effect of increasing conflict in the short term. However, in all four cases there is a significant reduction in

[9] We are using total conflict as a measure. One could as easily use a moving average—this would simply divide the total by a constant and therefore would make no difference in the cross-correlation pattern.

**Figure 2. Cross-correlation of antagonist negotiation with lagged difference in summed material conflict, Israel-Palestine**

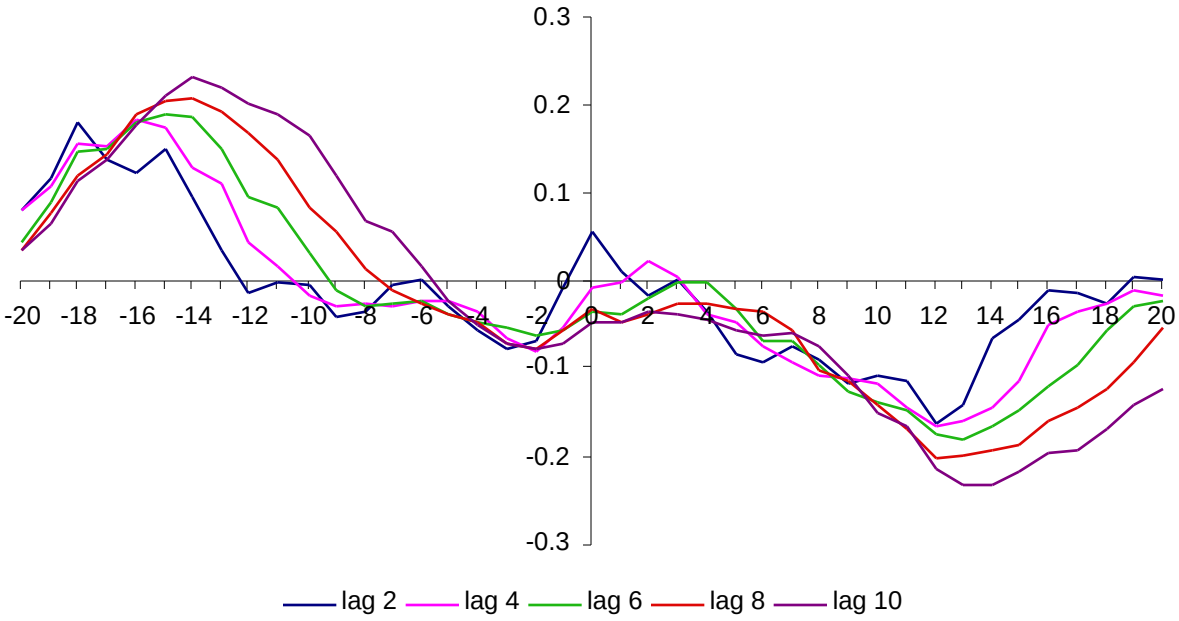
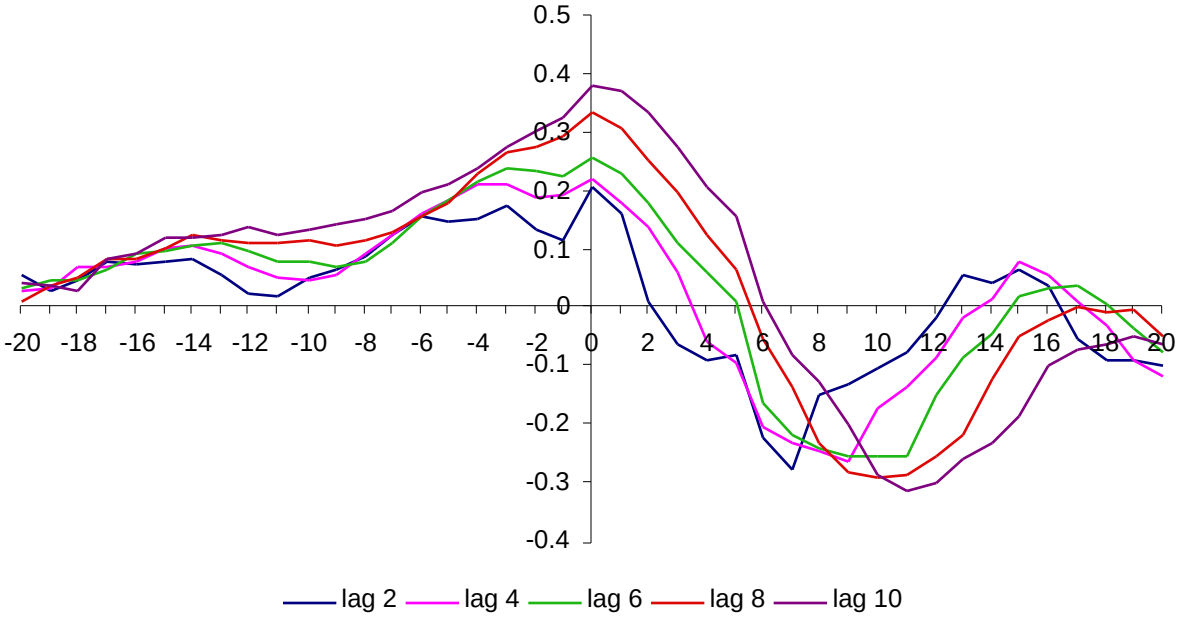



**Figure 3. Cross-correlation of antagonist mediation with lagged difference in summed material conflict, Israel-Lebanon**



the relative level of conflict in an interval following the mediation: this is consistently 8 to 12 months in the Balkan, Lebanon, and West Africa cases; and the aforementioned 12 to 16 months in the Palestine case.[10]

At this point we seem to have a reasonably good indicator. However, as a check on the robustness of this result—and mindful of the general problem that event data tend to measure overall activity in an international subsystem rather than cleanly differentiating conflict from cooperation—we also computed the same seasonal difference (k = 8) on the total of verbal and material cooperation over a six-month period. Figure 5 shows these cross-correlations for the four cases; Figures 6 and 7 show a direct comparison between the conflict and cooperation measures for Israel-Palestine and the Balkans. Note in particular that the cross-correlation patterns following mediation are almost identical for the Israel-Palestine, Israel-Lebanon and Balkans cases.

The Israel-Palestine case (Figure 6) shows a clear distinction between the conflict and cooperation measures. There is a very low correlation for cooperation in the months prior to mediation[11], and then as expected this peaks contemporaneously with mediation. The change in the level of cooperation also declines following negotiation—more rapidly than the decline in conflict—and this is not what one would expect in a situation where negotiation was actually leading to conflict resolution in the sense of increasing cooperation as well as reducing conflict.

The coincidence of the two cross-correlation patterns from the Balkans case, shown in Figure 7, is even more problematic, and this similarity is also found in the Lebanon and West Africa cases. In all three of these, the cross-correlation of negotiation with the change in cooperation is generally the same as the cross-correlation of negotiation with the change in conflict, though there remain a few differences—of a month or two—in timing. In all cases, the change in cooperation shows a negative correlation with negotiation that is substantially higher than the change in conflict.

There are two possible explanations for this. Based on our prior experience with event data, our immediate suspicion is that this is an artifact of "media fatigue"—the tendency of the international media to pay attention to events in an area only when there is blood in the streets (Gerner and Schrodt 1998). As the level of conflict declines, the level of *media coverage* declines, and consequently the measured level of cooperation *appears* to decline, even though in fact cooperation, probably at a relatively low level, has actually increased. Two features of the event data sets would support this explanation. First, there is a strong negative correlation between the event counts and the conflict measures: the correlations (r) between total event count and the material event count by month are Israel-Palestine 0.758; Israel-Lebanon 0.877; Balkans

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[10] The choice of k = 8 was somewhat arbitrary, since the k = 10 pattern actually has stronger correlations, and even higher correlations might be found for k>10. The choice of k = 8 was based in part on a chance remark that journalist Robert Kaplan made at a recent talk at the University of Kansas, noting "Diplomacy doesn't have an immediate effect; diplomacy takes around 8 months to work." We originally used this to establish the differencing lag—that is, assume that diplomacy will kick in when the situation has been deteriorating for eight months—but in fact it is best reflected in the lag between mediation and the reduction in conflict. In three of the four cases, Kaplan's rule of thumb appears quite accurate.

[11] There is a peak at a very long lag of –20 months. We have not looked at cross-correlations beyond 20 months and this might be worth further exploration, as it could reflect a cyclical pattern of mediation efforts at a period of two years.

0.840 and West Africa 0.686. Second, we know that the Israel-Palestine case is the most intensely and consistently covered of the four cases, and it is the one showing the greatest differentiation, at least in the period prior to conflict.

**Figure 4. Cross-correlation of negotiation with 8-month difference in conflict**

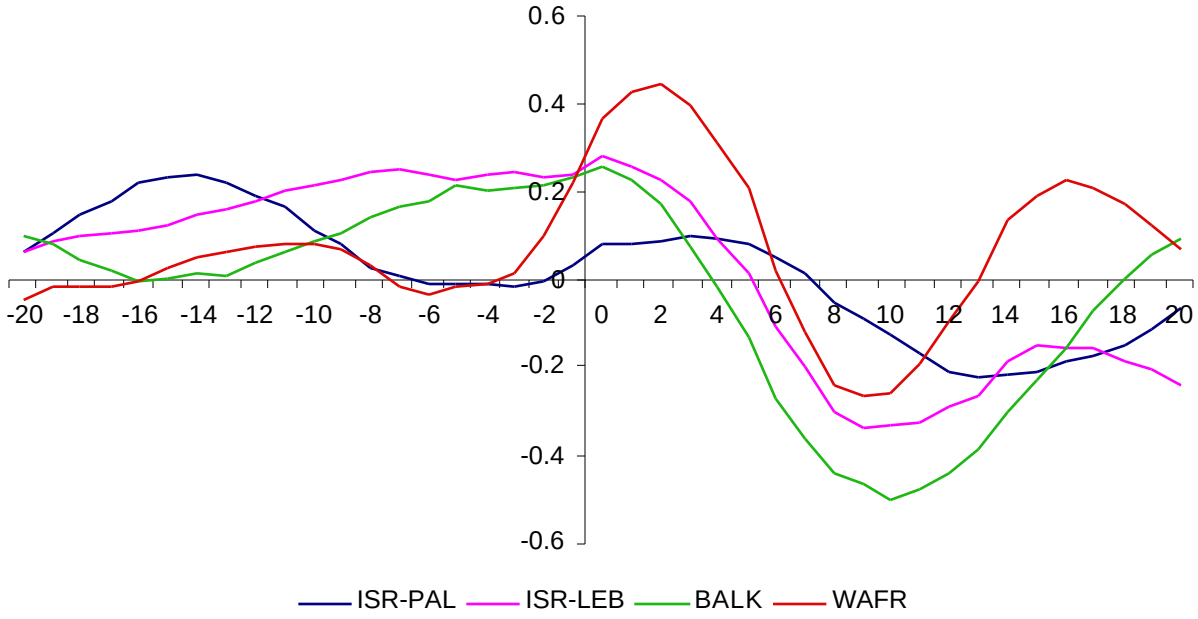



**Figure 5. Cross-correlation of negotiation with 8-month difference in cooperation**

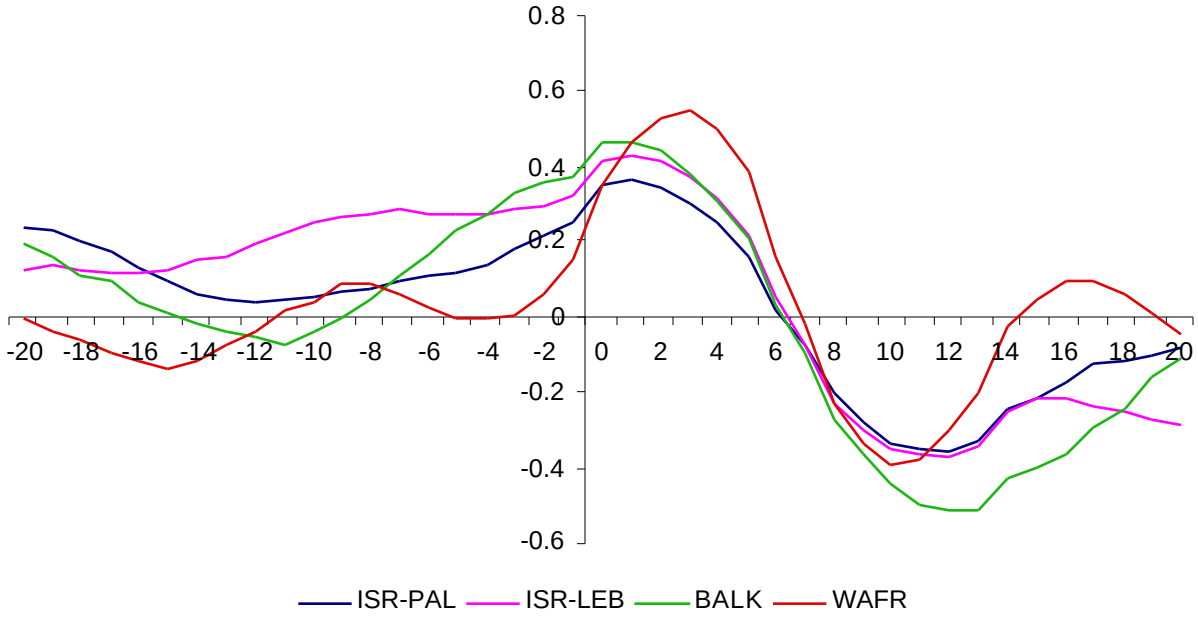


**Figure 6. Cross-correlation of negotiation with 8-month difference in cooperation and conflict, Israel-Palestine**

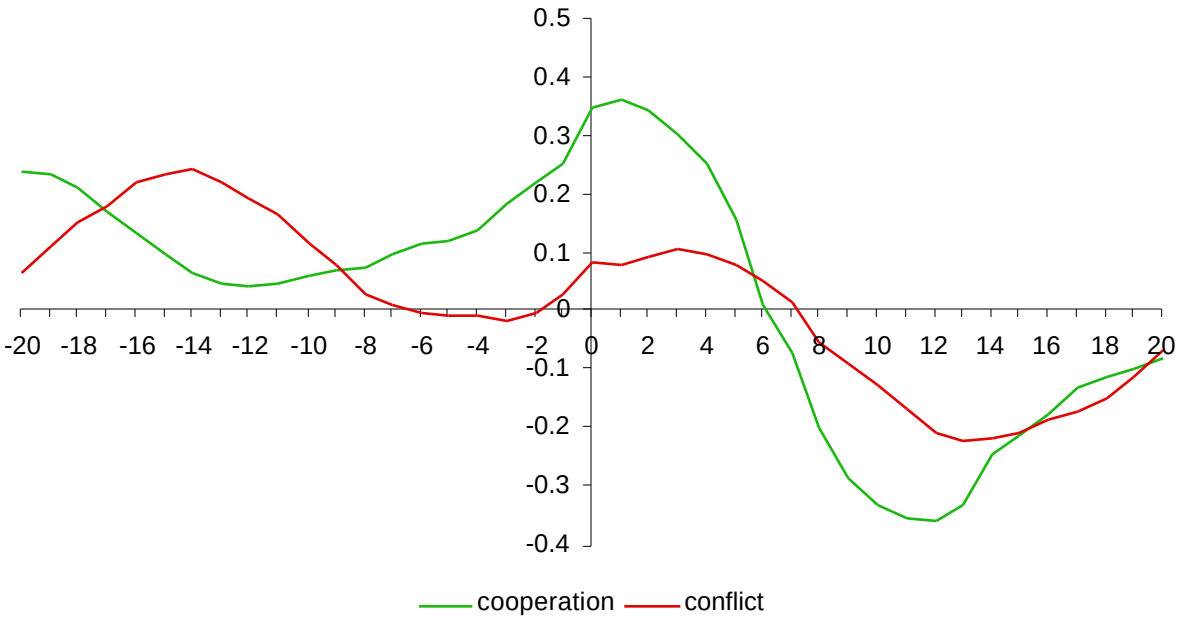
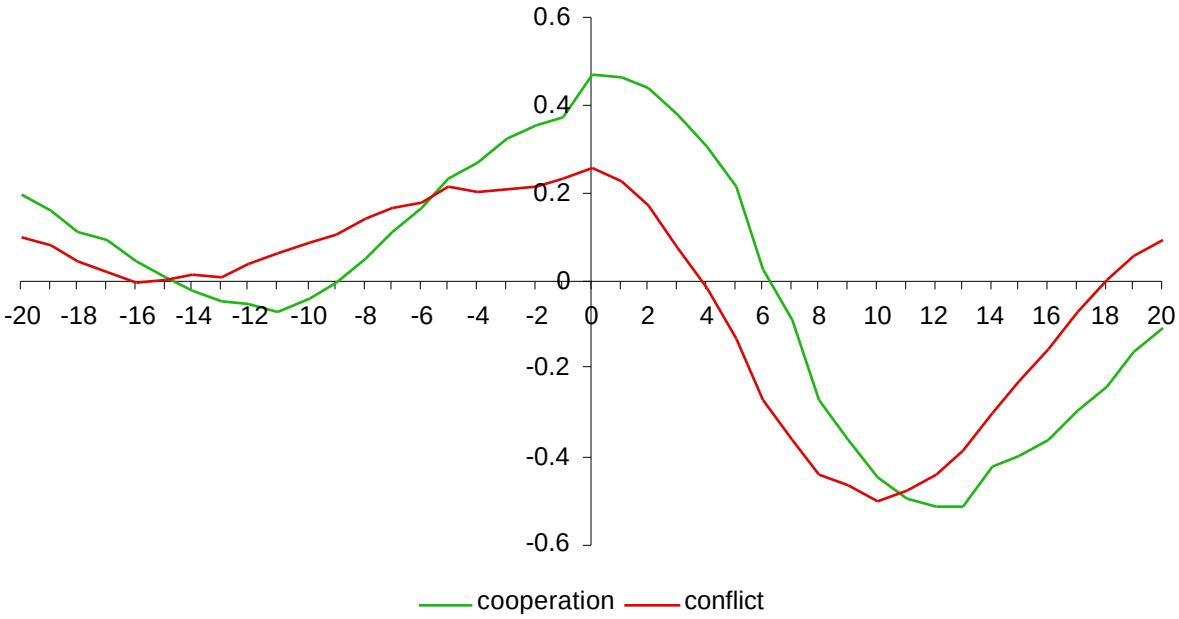



**Figure 7. Cross-correlation of antagonist negotiation with 8-month difference in cooperation and conflict, Balkans**



The second explanation would note that the change in the level of cooperation may not be the relevant indicator. The leading cross-correlation with the *level* of cooperation is positive in all of the cases. In the three non-African cases the pattern is similar to the slightly convex curves significant for the entire –20 month to +20 month interval seen in Figure 1, while for West Africa the significant positive correlations occur only in the interval of zero to +7 months. In no instances are there significant negative correlations at any lag. Negotiation is therefore not actually correlating with a decline the absolute level of cooperation, despite the negative correlation with the relative level.

## Conclusion

Given the centrality of the "ripeness" and "hurting stalemate" concepts in the literature on international mediation, the objective of this paper has been to determine whether we could actually detect these phenomena using an international event data set that has been specifically designed for the analysis of mediation. This would move these concepts from being either post-hoc tautologies or hopelessly subjective "I know it when I see it" to a level where they could be studied using objective measures derived from news reports.[12] We regard the efforts presented in this paper as a mixed success.

First, there is it seems quite clear that while a measure of "ripeness" could be based on the level of conflict, measures of a "hurting stalemate" that is resolved by negotiation need to be based on the change, rather than the level, of conflict. Both formulations have been suggested in the theoretical literature; the empirical evidence clearly points to change as the more effective measure. Alternatively, one might see this distinction between levels and differences (change) as empirically differentiating "ripeness" from "hurting stalemate." The seasonal difference measure that we studied here is not the only possible measure—and it might also be usefully studied at longer lags than we studied—but it works fairly. The various measures of conflict levels, in contrast, only show a simple positive concave contemporaneous response pattern.

Second, this analysis, like our earlier study in Schrodt et al 2001, seems to indicate that the cases cluster into three categories, but these categories are plausible given what we know about the underlying political situation. The Israel-Lebanon and Balkans cases behave very similarly. These were both situations that involved a combination of civil and interstate war (the interstate component of the Balkans varying depending on who was specifying the "states" involved) and were generally resolved during the periods under study. Israel-Palestine, in contrast, remains an unresolved conflict, and responds much more slowly than the others; it probably also is least affected by media fatigue effects. The fact that we did most of the exploratory analysis on the Israel-Palestine case was, in retrospect, possibly a mistake. Finally, the West Africa case is generally similar to the Israel-Lebanon and Balkans cases, but seems to show the anomalous behavior of an initially positive correlation between negotiation and conflict levels; it is probably also the case most affected by media fatigue.

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[12] Lest this point be misinterpreted, we would reiterate that we are fully aware that the news reports themselves have a subjective component—in fact elements of that subjectivity such as media fatigue cause substantial problems for event data analysis. However, if the news reports are taken a given, the subsequent generation of the event data by fully-automated methods is entirely objective. This is quite different than a human analyst subjectively interpreting those news reports for signs of "ripeness".

In this discussion we have not considered the effects of external mediation activities as either an independent or dependent variable. As would be expected, there is a correlation between these counts and the count events for negotiation between the antagonists themselves—the correlations (r) are Israel-Palestine 0.419; Israel-Lebanon 0.466; Balkans 0.646 and West Africa 0.381. While these are statistically significant, they are sufficiently low that we might expect to see different patterns. Depending on the extent (and consistency) of media coverage of events prior to formal mediation, we might also be able to get some indication, using the CAMEO coding framework, of whether the external mediators are exercising "entrepeneurship" and the extent to which the antagonists are responding favorably to these efforts. This will, however, be substantially more difficult than detecting overt activities such as meetings between mediators and antagonists.

While the primary focus of this paper is on the study of mediation and negotiation rather than on event data analysis, we will conclude with four observations about where this study fits in our ongoing efforts to refine methods of analyzing event data. First, the CAMEO coding scheme appears to be working in the sense of producing credible results. Given the high correlation between CAMEO and WEIS event counts at the high levels of aggregation we are using (Gerner et al 2002), this is not surprising, but nonetheless this work is our first analytical effort with CAMEO. Second, the use of event counts—as distinct from scaled aggregations of events—continues to function reasonably well; continuing the analytical approach we started with Schrodt et al 2001. We regard both of these as positive developments.

On the negative side, we are seeing continued problems in the inability of event data to clearly differentiate the effects of cooperative and conflictual interaction. In all likelihood this is due to the effects of media fatigue and the disproportionate coverage of violent events: the WIBIL effect—"when it bleeds, it leads." While this cynical statement was originally formulated by journalists to describe the sensationalist crime and accident coverage by local newspapers—a pattern later copied enthusiastically by television news programs—it also appears to apply to much of the international newswire coverage of Reuters and *Agence France Presse*. Finding a means of calibrating event measures to account for this remains, in our opinion, an open question.

Finally, the initial analysis of the Israel-Palestine data highlighted again the problem of the Reuters/AFP splice, at least for this case. Since there is no evidence that Reuters will again become available to the academic community, even when funds are available to purchase the service, we will need to gradually move to multiple NEXIS-based sources (which are also readily accessible and inexpensive at most North American research institutions). If the general problem of splicing could be solved (see, for example, Reuveny & Kang. 1996), it would be possible to get much longer time series than are currently available—for example the NEXIS "Information Bulletin Abstracts" source, based on *The New York Times*, now goes back to 1969, a decade earlier than the start of our Reuters-based data. Multiple-source splicing might also allow for greater incorporation of regional and local news sources, which might significantly reduce the media fatigue problem. However, at present splicing is still an unsolved problem.

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# Appendix: Conflict and Mediation Event Observations (CAMEO)

**01: COMMENT**
- 010: Comment, not specified below
- 011: Decline comment
- 012: Make pessimistic comment
- 013: Make optimistic comment
- 014: Consider policy option
- 015: Acknowledge or claim responsibility
- 016: Make empathetic comment
- 017: Symbolic act
- 018: Announce routine activity

**02: CONSULT**
- 020: Consult, not specified below
- 021: Discuss by telephone
- 022: Make a visit
- 023: Host a visit
- 024: Meet in a "third" location
- 025: Engage in mediation
- 026: Engage in negotiation

**03: APPROVE**
- 030: Approve, not specified below
- 031: Praise or endorse
- 032: Defend policy or action
- 033: Civilian support

**O4: COOPERATE**
- 040:Copperate, not specified below
- 041: Grant diplomatic recognition
- 042: Apologize
- 043: Forgive

**05: REQUEST/PROPOSE**
- 050: Request or propose, not specified below
- 051: Ask for information, investigation
- 052: Ask for policy support
  - 053: Ask for material aid, not specified below
  - 0531: Ask for economic aid
  - 0532: Ask for military aid
  - 0533: Ask for humanitarian aid
- 054: Ask for protection or peacekeeping
- 055: Request mediation
- 056: Request withdrawal or ceasefire
- 057: Request settlement
- 058: Request to meet or negotiate
- 059: Propose to mediate

**06: AGREE**
- 060: Agree, not specified below
- 061: Sign formal agreement
- 062: Agree to policy support
- 063: Agree to provide material support, not specified below
  - 0631: Agree to provide economic support
  - 0632: Agree to provide military support
  - 0633: Agree to provide humanitarian support
- 064: Agree to peacekeeping
- 065: Agree to mediation
- 066: Agree to mediate
- 067: Agree to yield
- 068: Agree to meet or negotiate
- 069: Agree to settlement

**07: PROVIDE AID**
- 070: Provide aid, not specified below
- 071: Provide economic aid
- 072: Provide military aid
- 073: Provide humanitarian aid
- 074:Grant asylum

**08: YIELD**
- 080: Yield, not specified below
- 081: Ease non-force sanctions, not specified below
  - 0811: Ease administrative sanctions
  - 0812: Ease economic boycott or sanctions
  - 0813: Ease civilian boycott or strike
- 082: Ease, stop military blockade
- 083: Return, release, not specified below
  - 0831: Return, release person(s)
  - 0832: Return, release property
- 084: Ceasefire, observe truce
- 085: Demobilize armed forces
- 086: Military retreat or surrender

**09: INVESTIGATE**
- 090: Investigate, not specified below
- 091: Investigate crime, corruption
- 092: Investigate human rights abuses
- 093: Investigate military action or war crimes

**10: DEMAND**
- 100: Demand, not specified below
- 101: Demand information, investigation
- 102: Demand policy support
- 103: Demand aid
- 104: Demand protection, peacekeeping
- 105: Demand mediation
- 106: Demand withdrawal
- 107: Demand ceasefire
- 108: Demand meeting, negotiation
- 109: Demand rights

**11: DISAPPROVE**
- 110: Disapprove, not specified below
- 111: Criticize or denounce
- 112: Accuse
- 113: Official protest

**12: REJECT**
- 120: Reject, not specified below
- 121: Reject proposal, not specified below
  - 1211: Reject ceasefire
  - 1212: Reject peacekeeping
  - 1213: Reject settlement
- 122: Reject request for material aid
- 123: Reject proposal to meet, discuss, negotiate
- 124: Reject mediation
- 125: Defy norms, law
- 126: Reject accusation, deny responsibility
- 127: Veto

**13: THREATEN**
- 130: Threaten, not specified below
- 131: Threaten non-force, not specified below
  - 1311: Threaten to halt negotiations
  - 1312: Threaten to halt mediation
  - 1313: Threaten to reduce or stop aid
  - 1314: Threaten to boycott or embargo
  - 1315: Threaten to reduce or break relations
- 132: Give ultimatum
- 133: Threaten blockade
- 134: Threaten occupation
- 135: Threaten conventional attack
- 136: Threaten unconventional attack
- 137: Threaten massive unconventional attack

**14: CIVILIAN DIRECT ACT**
- 140: Civilian direct action, not specified below
- 141: Demonstration
- 142: Hunger strike
- 143: Strike/boycott
- 144: Physical obstruction
- 145: Violent protest, riot

**15: MILITARY POSTURE**
- 150: Military posturing, not specified below
- 151: Military demonstration, display
- 152: Military alert
- 153: Military mobilization

**16: REDUCE RELATIONS**
- 160: Reduce relations, not specified below
- 161: Reduce or break diplomatic relations
- 162: Reduce or stop aid, not specified below
  - 1621: Reduce or stop economic assistance
  - 1622: Reduce or stop humanitarian assistance
  - 1623: Reduce or stop military assistance
  - 1624: Reduce or stop peacekeeping
- 163: Halt negotiations
- 164: Halt mediation
- 165: Impose embargo, boycott

**17: USE STRUCTURAL VIOLENCE**
- 170: Use of structural violence, not specified below
- 171: Violence against property, not specified below
  - 1711: Confiscate property
  - 1712: Destroy property
- 172: Administrative sanctions, not specified below
  - 1721: Impose curfew
  - 1722: Impose censorship
- 173: Arrest and detention
- 174: Expel, not specified below
  - 1741: Expel diplomat(s)
  - 1742: Expel group(s)

**18: USE UNCONVENTIONAL VIOLENCE**
- 180: Use of unconventional violence, not specified below
- 181: Abduct, hijack
- 182: Non-lethal physical assault, not specified below
  - 1821: Sexual assault
  - 1822: Torture
- 183: Suicide, car, and other bombing
- 184: Murder or political assassination

**19: USE CONVENTIONAL FORCE**
- 190: Use of conventional force, not specified below
- 191: Military closure or blockade
- 192: Military occupation of territory
- 193: Small arms and light weapons attack
- 194: Artillery and tank attack
- 195: Aerial attack

**20: USE MASSIVE UNCONVENTIONAL FORCE**
- 200: Massive unconventional force, not specified below
- 201: CBR attack
- 202: Nuclear attack