Examining Conflict Escalation within the Civilizations Context

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Abstract: Samuel Huntington's article and book on the clash of civilizations has created a great deal of controversy and interest. The focus of this is in his assertion that in the post-Cold War era, there will be significant conflict between states from Western civilization and states from Islamic civilization. This assertion has been the subject of a number of systematic empirical studies (Henderson, 1997, 1998; Henderson and Tucker, 2001; Russett, Oneal and Cox, 2000; Chiozza, 2002). These studies share two things in common. First, they all use the dyad year as the case and predict to the onset of conflict. Second, none found any support for Huntington's thesis. In our paper, we ask a different question: Given the engagement of a dyad in militarized interstate dispute (MIDs), is there a relationship between the civilizational status of the dyad and the chances of the dispute escalating to war? Using the MID data, we conduct a two-stage estimation to identify the mixed civilization effect on the probability of dispute and then on the probability of the escalation to war. In the pre-Cold war era, there is a greater probability for mixed civilization dyads and for Islamic-Western dyads to engage in disputes and for these disputes to escalate to war. These findings contradict Huntington's argument that the clash of civilization thesis applies only to the post-Cold War era. The post-Cold War era does not offer complete empirical support Huntington's expectations either. Mixed civilization dyads do not appear to be as likely to engage in dispute or escalate to war. Islamic-Western dyads do appear to be more apt to engage in dispute during this period, but not to escalate.

Introduction

In 1993, Samuel Huntington published his famous "clash of civilizations" article (Huntington, 1993), followed by a book of the same title in 1996. As is well known, Huntington's thesis is that in the post-Cold War era, we should see extensive conflict between the countries of the West and countries of the Muslim World. Recent events seem to support this assertion. But despite this, systematic empirical studies have so far failed to find any support for Huntington's thesis.

A commonality of systematic empirical studies to date is that they all deal with the question of whether dyads of certain civilization types are more likely to experience serious conflict than other dyads. This type of study is certainly consistent with the arguments of Huntington. We propose her to undertake a different type of empirical study. We are interested in whether there is a relationship between the civilizational status of a dyad engaged in militarized interstate dispute (MIDs), and chances of the dispute escalating to war. To study this relationship, we treat conflict as a two-stage process. In the first stage, the dyad may or may not engage in a dispute (MID). In the seconds stage, they dyad engaged in the dispute may or may not escalate that dispute to war. While controlling for a variety of factors, we will focus on the impact of the civilizational status of the dyad on its chances of experiencing conflict.

Clash of Civilizations: Huntington's Thesis[1]

The Sources of Conflict. Huntington asserts that:

> …the fundamental source of conflict in this new [post-Cold War] world will not be primarily ideological or primarily economic. The great divisions among humankind and the dominating source of conflict will be cultural…the principle conflicts of global politics will occur between nations and groups of different civilizations. The fault lines between civilizations will be the battle lines of the future (Huntington, 1993, 22).

Huntington believes that the underlying causes of conflict have varied through time. From the Treaties of Westphalia in 1648 to the late 1700s, conflicts were among princes; monarchs trying to expand their bureaucracies, armies, economic strength, and (most importantly) territories. From the time of the French Revolution until the end of World War I, conflicts were between peoples. Individuals identified themselves with their country (nationalism) and were willing to fight to defend (or expand) their country versus other countries. Finally, from the end of World War I to the end of the Cold War, conflicts were between ideologies. In all three of these time periods, the conflicts were within Western civilization. But that has changed. The unique feature of conflict in the post-Cold War era is that conflict will be between civilizations.

What is a Civilization? For Huntington (1993, 23-24), a civilization is "the highest cultural grouping of people and the broadest level of cultural identity people have short of that which distinguishes humans from other species." A civilization is defined by common objective elements. These common elements can include language, history, religion, customs, institutions, and/or the subjective self-identification of people. Huntington believes there are seven (or

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[1] The discussion of this section is based on our reading and interpretation of Huntington 1993, 1996.

possibly eight) civilizations: Western, Latin American, African, Islamic, Sinic, Hindu, Orthodox, Buddhist, and Japanese (Huntington, 1996: 27-28).

Why is Civilization a Cause of Conflict in the Post-Cold War World?

Huntington gives six reasons why the most important conflicts of the current era will occur between civilizations (Huntington 1993, 25-27):
1. Civilization differences are real and basic, and will not soon disappear;
2. The world is becoming a smaller place and the interactions between civilizations are increasing. These interactions increase "civilization consciousness;" i.e., the awareness of differences. This, in turn, leads to animosities;
3. Economic modernization and social change are separating people from longstanding local identities. This weakens the nation state as source of identity. When this happens, religion often "moves in" to fill this gap. Often the religion is a fundamentalist movement;
4. The growth of civilization-consciousness is enhanced by the role of West. On the one hand, the West is at the peak of power. This is a reason for envy. At the same time, there is a "return to roots" movement in countries led by new elites who were not educated in the West. This movement sees the ideas of the West (socialism, nationalism) as failures;
5. Cultural characteristics and differences are less mutable and less easy to compromise and resolve than political and economic ones. Huntington believes that the most critical aspect of how a person defines their "membership" in a civilization is her or his religion. He provides the following to illustrate why differences of civilization, as embodied in religion, are difficult to overcome. Ask people to identify their national or ethnic background. While some people will answer with a single identification ("I'm German," for example), others will respond with multiple identities ("I'm half French and half Irish"). But if instead people are asked to indicate their religion, it is hard to imagine anyone responding with more than a single identification;
6. Economic regionalism is increasing. This will serve to reinforce civilization-consciousness.

The clash of civilizations occurs at two levels. At the micro-level, adjacent groups from different civilizations will struggle over territory and to control each other. At the macro-level, states, not groups, are the key units. States from different civilizations compete for relative military and economic power, control of international institutions, and promote their own political and religious values (Huntington 1993: 29).

Islam versus the West. For the moment, let us accept Huntington's general argument. That would certainly imply that the West and Islam would experience some level of conflict. But are there reasons to expect that the West and Islam would experience a great deal of conflict? Huntington believes so. He believes that there is a "continuing and deeply conflictual relation between Islam and Christianity" (Huntington, 1996: 209). He traces this back to the late eleventh century with the launching of the Crusades.

Huntington believes that the reasons for this conflict have little to do with geography, power or other factors associated with political realism. As well, this conflict is not "ancient history;" i.e., that it happened in an earlier era and is not related to the present situation. For Huntington, the

root cause of this conflict is the same today as it was in the eleventh century (Huntington, 1996: 210-211). It stems from two religions that form the core of the identity of the Western and Islamic civilizations. Part of the problem is the difference between the Muslim conception of Islam that unites religion and politics, and the separation of these two concepts in Western Christianity. But Huntington believes that the confrontation between the two civilizations is enhanced—ironically—by their similarities. Both religions are monotheistic and cannot easily assimilate additional deities. Both are universalistic and claim to be the one true faith to which all can (should?) adhere. Finally, both are missionary religions whose adherents believe they have a mission to convert nonbelievers (Huntington, 1996: 210-211).

Beginning in the late twentieth century, Huntington (1996: 211) believes that a particular mix of factors serves to feed the flames and increase the chances of serious and sustained conflict between Islam and the West:
1. Population growth in the Muslim world has created a great mass of unemployed and disaffected young people. This provides fertile ground for recruits to the Muslim cause;
2. The Islamic resurgence has given Muslims a greater confidence in the distinctiveness of, and worth of, their civilization, particularly in comparison to the West;
3. Muslim resentment is high because of the West's efforts to simultaneously universalize its values, maintain its global dominance, and intervene in the Muslim world;
4. The disappearance of Communism removed a common enemy of Islam and the West and enhanced the perception that the two civilizations were threats to one another;
5. Increasing global interdependence resulted in increasing contacts between the two civilizations. In turn, these contacts served to reinforce the sense of identity of each civilization, and consequently, the difference between them.

Systemic Empirical Work on the Clash of Civilizations: A Brief Review

Huntington's thesis generated a great deal of interest. It was both provocative and responsive to important events in the real world. The editors of *Foreign Affairs* claimed that the original article generated more discussion in three years than any article they published since the 1940s (Chiozza, 2002: 711). A series of responses to Huntington's article appeared in the next issue of *Foreign Affairs*. In addition, a number of scholars who practice empirical work conducted studies to systematically assess his thesis. Before describing our own efforts, we will briefly review these other studies.

Because of the provocative nature of Huntington's thesis and its apparent relevance to events today, it should be subjected to a number of different empirical examinations. Ideally, multiple studies should contain enough common elements and consistent findings to build cumulative knowledge. This is a goal to which we all aspire, but most of us would admit that in practice we often fall short of it. The systematic empirical studies on Huntington's thesis are an exception. We do have a series of studies that overlap in significant ways and ultimately all reach the same conclusion.

The relevant studies that have been published to date (Henderson, 1997, 1998; Henderson and Tucker, 2001; Russett, Oneal and Cox, 2000; Chiozza, 2002) share some common features. They are all dyadic in nature; that is, they focus on pairs of states. They all predict the conditions under

which pairs of states will move from a situation in which they are not involved in conflict, to one in which they are engaged in wars or other serious conflicts (militarized interstate disputes). On a number of important aspects these studies differ. But they share something important in common. None found any systematic support for Huntington's thesis.

Given Huntington's argument that the impact of civilization on conflict should only appear after the end of the Cold War, a logical argument is that not enough time has elapsed to definitively assess his claims. The problem is particularly acute because a number of datasets that are important to this evaluation process currently end in the early 1990s. There is certainly merit to this argument and whatever we conclude today, it should be reexamined at later points in time. But there are several reasons to conduct these studies now. One is that we should care about the world we live in and, in particular, try to understand the causes and serious conflict. Given the apparent match between his thesis and current events, it is useful (even vital) to assess the validity of Huntington today. As well, Huntington himself even in his 1993 article asserted not only that the clash of civilizations would occur, but that it was already occurring. If he felt comfortable asserting that there was evidence that his ideas already applied then we should certainly be able to conduct systematic empirical studies.[2]

A Shift in Focus: The Clash of Civilizations and Dispute Escalation

As noted above, previous systematic empirical studies have examined dyads of countries, investigating whether the civilization membership of the pair is associated with the onset of serious conflict. While there is certainly additional work that can be done on this topic, here we shift the focus a bit. Our interest is in the impact of the clash of civilizations on the propensity of disputes (militarized interstate disputes; see Jones, Bremer, and Singer, 1996) to escalate war.

By examining this question, we assign the clash of civilizations a different role in the development of conflict. Prior studies have assumed that certain aspects of civilization membership (in particular, civilization differences within a pair of countries) act to create the conditions of conflict. Here, we assume that pairs of countries can engage in militarized conflicts for any number of different reasons, but that once they are involved in a militarized conflict, aspects of civilization membership play a significant role in whether that conflict escalates to war or not.

To model the impact of the clash of civilizations, we conceive of conflict as a two-stage process. In the first stage, we see a pair of states with either no conflict, or an extremely low level of conflict. The question is under what circumstances this dyad will engage in a militarized interstate dispute; that is, will their conflict escalate to a situation in which military force is threatened or used. In the second stage, the question is whether the dyad will move from a situation in which military force is used to the outbreak of war. We believe that wars do not rise "out of the blue;" there is a period of direct military confrontation that precedes the continuous combat of a war.

Our primary focus is on the second stage, the escalation from dispute to war, and the role played by the civilization status of the dyad in this process. But in order to ascertain relationships in the

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[2] Henderson and Tucker (2001: 328-329) offer the same rational for their empirical examination.

dispute to war phase, it is necessary to model the first stage as well. It is likely that dyads that engage in MIDs represent a non-random sample of all dyads from the first stage. A failure to take the two-stage process and non-random selection into the second stage into account (by only modeling the second stage) may result in misleading results. Consequently, we need to model this as a selection process (Heckman, 1979).

In addition to modeling a two-step conflict process, we will consider two variants of Huntington's clash of civilizations thesis. The first variant focuses on whether a dyad in which the two states are members of different civilizations is more likely to experience conflict. Most of the previous empirical work on Huntington has taken this approach (Chiozza 2002; Henderson 1997; Henderson 1998; Henderson and Tucker 2001). But we also want to explore a second variant, whether Western-Islamic dyads are more likely to experience conflict. This variant (among others) was tested by Russett, Oneal, and Cox (2000). Since we are interested only in these two variants, we do not test whether particular civilizations are more or less likely to become involved in conflict. That is, we investigate Huntington's dyadic civilization argument and do not examine whether individual types of civilizations are more or less likely to engage in conflict.

We explore the first variant because it is the most general statement of Huntington's thesis. We explore the second variant not only because Huntington explicitly mentions it (it is probably the most oft-repeated statement about Huntington's work), but because it is of significant interest in the post-9/11 world. This will involve two separated analyses, one for each variant. For each analysis, we will also include a series of factors that have generally been shown to predict to the escalation of conflict, and determine whether any of these factors, the civilization status of the dyad is associated with an increased chance of conflict.

The specific details of index construction for the civilization variables will be discussed later. But we want to note some of the main considerations involved in operationalizing Huntington's thesis. As noted above, we will examine two variants: (1) whether a dyad of states, each a member of a different civilization, is more likely to experience conflict; and (2) whether an Islamic-Western dyad of states, is more likely to experience conflict. However, examining Huntington is a bit more complicated than that. Huntington notes that the "clash of civilizations thesis…deals with the post-Cold War period" (Huntington 2000, 609), and that "[t]he fault lines between civilizations are replacing the political and ideological boundaries of the Cold War as the flash points for crisis and bloodshed" (Huntington 1993, 29). So the post-Cold War time period (we will consider the Cold War to have ended in 1989) is the one in which Huntington expects the civilizational status of the dyad to play an important role in determining its conflict experience.

But given our ability to extend our study back to 1816, should we consider the entire time prior to the end of the Cold War as a single time period? We think not. While Huntington is not as clear on this as we would like, he does make a number of statements which suggest that the Cold War period was different (with respect to the influence of civilizational status on conflict0 than the pre-Cold War period. He notes that "[c]onflict along the fault line between Western and Islamic civilizations has been going on for 3000 years" (Huntington 1993, 31), and "[t]he relations between Islam and Christianity, both Orthodox and Western, have often been stormy.

Each has been the other's Other." (Huntington 1996,209) These comments suggest that there has been significant conflict between the West and Islam throughout history. But Huntington also repeatedly mentions the Cold War period as a distinct period. Consequently, we will examine the impact of civilizational differences in three different time periods: pre-Cold War (1916-1945), Cold War (1946-1989), and post-Cold War (1990-1992).

A final consideration is whether (or to what extent) we should include additional variables in the analysis. We are sympathetic to the arguments of Ray (2002); one should exercise caution about including variables without a firm theoretical foundation and guard against relying on superficial or incomplete reasoning for those that are selected for inclusion in a study. Nevertheless, for two reasons we are loath to ignore the impact of other variables on the chances of conflict. First, there is nothing in Huntington's work that would suggest that the civilizational status of the dyad is the only factor in whether or not it engages in conflict. Second, a large body of recent research has explored the conditions under which a dyad will become involved in conflict and has demonstrated the importance of a number of variables in predicting the outbreak of conflict. These studies encompass the large number of works on the democratic peace, and the more recent efforts to ascertain the additional impact of economic interdependence on the chances of conflict. Russett and Oneal (2001) provide a book-length study that covers much of the literature on this topic and extends it. We will use the findings from this body of literature to provide a set of variables to be included in the equation along with those variables that will represent the impact of the clash of civilizations.

Stage One: Dyad-Year to Dispute

In the first stage of our analysis we explore the impact of the civilization status of the dyad on the chances that it will move from experiencing no conflict (or extremely low levels of conflict) to experiencing a significant level of conflict. The dependent variable for this stage is a dichotomous variable, indicating whether or not the dyad began a militarized interstate dispute (MID) in that year (Jones, Bremer, and Singer, 1996), or not. A MID is a serious conflict, since military force is explicitly threatened or used. But the level of combat is not high or continuous, making it a distinctly lower level of conflict than a war. Note that less than 5 percent of MIDs escalate to war (calculated from the MID v3.01 dataset; Ghosen and Palmer, 2003).

Civilization Status Variables. As noted above, the main variables of interest are those that tap the clash of civilizations thesis. To fully explore this thesis, we need to code a number of variables. We need to code the civilizational status of the dyad, the time period (pre-Cold War, Cold War, post-Cold War), and the interaction between these two variables.

The basic parameters are drawn from the Clash of Civilizations Data Project (Henderson and Tucker, 1999). In turn, they based their coding on Huntington, 1996.[3] Ten different civilizations

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[3] In many cases, it is a simple decision to code this variable. The basic coding is done using Huntington's Map 1.3 on pages 26-27 of his book (1996). But Henderson and Tucker (2001: 325) note several difficulties with Huntington's (1996) description of which countries are to be considered members of which civilization. They note that Huntington is "ambivalent as to whether there is an African civilization…At times he [Huntington] suggests that Buddhism is a civilization…while in other places he suggests that it is not" (Henderson and Tucker, 2001: 325). They also note some other country classifications by Huntington that appear curious. Finally, they note that Huntington

are identified: Sinic, Japanese, Hindu, Islamic, Buddhist, Western, Orthodox, Latin American, African, and other. We begin by coding two dummy variables. One reflects whether the states in the dyad are members of different civilizations (coded one) or not (coded zero). Given Huntington's focus on the Islamic-Western relationship, a specific Islam-West dummy variable is also created (coded one if one state in the dyad is a member of Islamic civilization, and the other is a member of Western civilization; and zero otherwise).

As noted, we see the need for three different time periods to evaluate Huntington's thesis. This can be handled by coding two dummy variables. We omit the Cold War time period, and code dummy variables for the pre-Cold War (1816-1945), and the post-Cold War (1990-1992). We then create separate different civilization and Islam-West variables for each time period. That is, we interact each of the two dummies with the civilization variables. Consequently, testing the impact of different civilizations involves five variables: a dummy for the Cold War era, a dummy for the post-Cold War era, a dummy for members of the dyad from different civilizations, and the interaction of each of time dummies with the different civilizations dummy. To test the impact of Islam-West civilization status involves the analogous set of five variables. Following the assertions of Huntington, the civilization variables are expected to be associated with an increased chance of a dispute (in stage one) and war (in stage two), except during the Cold War.

Other factors having an impact on escalation. We include a number of other factors in the equation that have been shown to be relevant to the onset of a MID. The rationale for each factor is discussed below. The operationalizations are shown in Table 1.

Capability ratio. While at the theoretical level, arguments made both ways (parity to conflict, disparity to conflict), the empirical evidence is very strong that dyads with parity in capabilities are more likely to experience conflict than dyads with a disparity in capabilities. In this situation, decision makers on both sides are likely to calculate that they have a chance to win and will be encouraged to escalate.

Major power status. Although his conclusion was based on a state-level study, Bremer's (1980) comment was correct: the powerful are warprone. Major power dyads are more likely to engage in conflict than mixed (major-minor) dyads or minor-minor dyads.

Democratic dyad. One of the strongest findings to emerge from the systematic empirical literature is that democracies do not engage in war against other democracies. As well, recent studies have extended this finding to the chances of a democratic dyad engaging in a dispute. There are two basic arguments for this relationship. One is that in a democratic system, conflict is settled without resort to violence; if democracies have issues between one another, they will try to settle them in the same way—without violence. The second argument is that serous decisions in democracies require the consent of the governed. So democratic governments must seek approval to engage in violence conflict from their legislative bodies and must also develop a

excludes Judaism from his list of civilizations. As well, it is not possible to unambiguously determine the coding of Israel form looking at Map 1.3 (the size of the map is such that Israel is virtually invisible). Henderson and Tucker code the civilization status of Israel as "other," which is clearly the best choice, given Huntington's assertions. The result of this decision is that all Arab-Israeli conflicts are "clashes of civilizations," because they are coded as being from different civilizations (but these conflicts are not coded as Islam-West conflicts).

degree of popular support. This is a difficult process, and since both democracies must be successful in this process, this slows down and inhibits the democracies from engaging in violent conflict.

Allied. If members of a dyad have a formal alliance with one another, this is a sign that they share important common interests (important because they are willing to sign a document that could involve the states in armed conflict in support of one another).

Rivals. A series of studies (see the recent reviews of this literature in Goertz and Diehl, 2000 and Wayman, 2000) have established that some pairs of states are much more conflict prone than others. Although the number of pairs of states that engage in enduring rivalries is relatively small, they account for a great proportion of all disputes. All else being equal, dyads that are engaged in enduring rivalries, are more likely to become involved in disputes.

Contiguity. Throughout history, geography has played an important role in the outbreak of conflict. Dyads that border one another or which are in close proximity are much more likely to engage in conflict. Some feel that the reason for this association is that most countries cannot deploy military force at any distance beyond their borders (imagine a war between Brazil and Burma, for example). Others (Vasquez, 1993; Vasquez and Henehan, 2001) feel that contiguity is surrogate for a territorial issue between the parties and that a disagreement over territory is critical issue that states would be willing to engage in armed conflict to solve.

Distance. This is a more refined way to deal with contiguity. If countries are large then even if they are directly contiguous, it will be costly and time-consuming to move large military forces to the territory of an opponent. The problem becomes more serious as the distance increases. In terms of the military reachability between the states of the dyad, the great circle intercapital distance provides a better measure.

Years without dispute. While states engage in enduring rivalries are likely to become involved in MIDs, there are pairs of states that have no history of conflict. As time goes on, net of the other factors noted, states that have not engaged in serious conflict against one another are unlikely to engage in a dispute.

Stage Two: Dispute to War

In stage two, our analysis is confined to those dyads that are engaged in a dispute. We explore the impact of the civilizational status of the dyad (net of other factors) on the chances of this dyad escalating from dispute to war. The phrase "this dyad" is important. Disputes can involve more than one distinct dyad. But if the dispute escalates to war, it is not necessarily the case that all of the dyads involved in the dispute fight in the war. We emphasize that our dependent variable is coded based on whether the specific dyad of interest escalates from dispute to war.[4]

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[4] While over 2800 dyads became involved in disputes from 1816 to 1992, only about 10 percent of the dyads (293-2876) escalate to war. Note as well that there are 516,718 dyad years in our dataset, so the 2,876 dyads that become involved in disputes represent just over one-half percent of our cases.

Other variables. In stage two, we use the same set of clash of civilization variables we used in stage one. As well, we will also use the following variables that were included in the first stage analysis: capability ratio, major power status, joint democracy, alliance status, rivalry, and distance. Our rationale for the impact of these variables in this stage is the same as for the first stage. We also include an additional variable. Building on the work of Vasquez (Vasquez, 1993; Vasquez and Henehan, 2001; Senese and Vasquez, 2003), we believe that disputes in which the issue of territory is involved are more likely to escalate to war. So we include a variable to tap the presence of a territorial issue in the dispute.

Data Set

Our dataset begins with all dyad-years from 1816 through 1992. Since the unit of analysis is the dyad, we also use the dyadic militarized interstate disputes dataset (Maoz, 1999). This dataset contains only the dyads in each Correlates of War Project militarized interstate dispute (Jones, Bremer, and Singer, 1996) that actually engaged in actions against one another.[5] Merging these two datasets together (the dyad years, along with all the variables except for the territorial issue variable,[6] and the rivalry variable[7] were constructed using EUGene 2.40 (Bennett and Stam, 2000) creates a dataset that is "not quite" a dyad-year dataset of the traditional type. If a dyad engages in zero or one dispute in a year, there is a single record in our dataset for that dyad year. But it is possible for a dyad to engage in more than one dispute in a single year. If that occurs, our dataset contains one dyad year record per dispute involvement for that dyad. The dataset contains 516,718 cases.

Analysis Technique. We treat the two stages of conflict as a sample selection problem. In the more typical situation, the first stage of sample selection has a dichotomous variable that indicates whether the case is selected for the second stage, and in the second stage, the dependent variable is continuous. This is not the case here. The dependent variables in both stages are dichotomies. Our solution is use the same technique as Reed (2000): maximum likelihood prohibit with sample selection.[8]

Results

The results of both analyses are displayed in Table 2. Below we will note the impact of the non-civilizational variables. But since our main interest is the evaluation of Huntington's thesis, we

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[5] Note that the dyadic militarized interstate dispute dataset is derived from version 2.1 of the MID dataset. That version of the MID dataset ended in 1992, which accounts for the time frame of our study. We anticipate that a version of the dyadic militarized interstate dispute dataset will be created from the version 3.01 of the MID dataset, which would allow us to extend our study further into the post-Cold War era. There are a number of ways in which creating all possible dyads from the list of participants on both sides of the dispute can produce incorrect cases. Maoz (1999) has a discussion of the possibilities. To illustrate one possibility, consider Japan and Bulgaria in World War I. They are on opposite sides, but they never engaged in action against one another. Maoz's dyadic dataset would not contain this dyad in the World War I dispute.

[6] The information on whether the dyad in the dispute was involved in a territorial issue is taken from Maoz's dyadic militarized interstate disputes dataset.

[7] The rivalry variable was coded from the list of rivalries in Bennett (1998).

[8] Estimation was done in Stata8.1 SE, with the executable and the .ado files updated to July 1, 2003.

will begin with a discussion of these variables, and then turn only briefly to the impact of the other variables in the equation.

Coefficients relevant to the Clash of Civilizations. We will focus our discussion on the variables that are used to assess the clash of civilizations thesis. We begin by noting the significance and signs of the coefficients. However, because (a) an evaluation of the thesis requires us to combine coefficients, and (b) there is a non-linear relationship between the coefficients and the dependent variable of the equation, more is needed to illuminate the results. Consequently, we will also present predicated probabilities for appropriate sets of variables.

We begin by examining the pre- and post- Cold War dummies. In the Islam-West equations, the results are consistent across both equations. All else being equal, the probability of conflict was highest in the pre-Cold War era and the lowest in the post-Cold War eras. All four coefficients are statistically significant. In the different civilization equations, the pre-Cold War era coefficients are also positive and statistically significant. But the post-Cold War era coefficients are not statistically significant. Note that the implication of these coefficients is that the chances of conflict in the post-Cold War era are not higher (and when we look to the Islam-West analysis are actually lower) than in the Cold War era.

We next look at the simple effect of the civilization status of the dyad on the chances of conflict. The results differ across two sets of equations. All else being equal, Islam-West dyads are more likely to experience MIDs. But once a MID breaks out, the chances of a war are no different for these dyads (the coefficient in the MID to war equation is not statistically significant). The results for different civilization dyads point to an alternative conclusion. Dyads from different civilizations are no different from other dyads in the chances that they will engage in a MID (the coefficient is not statistically significant), but once they engage in a MID, they are more likely to escalate to war than other dyads.

Finally we examine the coefficients for the interaction between era and civilizational status. There are differences between the two civilizational status variables. For dyads from different civilizations, the post-Cold War era coefficients are statistically insignificant. But the coefficients for the pre-Cold War era are statistically significant and suggest that, in that era, different civilization dyads were more likely to become engaged in a dispute but less likely to escalate that dispute to war. For Islam-West dyads, the pre-Cold War interaction coefficient is insignificant in both equations. This suggests that the conflict propensity of Islam-West dyads was the same both prior to, and during, the Cold War. On the other hand, the post-Cold War interaction coefficient is positive and significant in both equations. This suggests that Islam-West dyads were both more likely to become involved in disputes and more likely to have those disputes escalate to war in the post-Cold War period. This is consistent with Huntington's assertions.

Because multiple coefficients are necessary to assess Huntington's thesis, it is difficult to grasp the overall picture from an examination of the individual coefficients. To clarify the impact of the type of dyad and the time period, we will present some estimated probabilities. Our goal is to get a better understanding of the impact of the civilizational status of the dyad in each of the

three time periods we have studied. To generate the predicted probabilities, we use the following procedure:

1. Set the value of all other variables (the variables in the equation that were not directly used to investigate Huntington's thesis) to their mean values;[9]
2. Assign values of zero and one to the time period, civilizational status, and interaction terms to estimate the appropriate predicted probabilities.

Table 3 displays four sets of predicted probabilities. For the different civilization analysis, there is one set predicting MID onset, and a second set predicting escalation from MID to war, and the two analogous sets of probabilities for the Islam-West analysis. We discuss each in turn.

Different civilizations, MID onset. In pre-Cold War era, different civilization dyads have a greater probability of becoming involved in a dispute than other dyads. This is consistent with Huntington. During the Cold War, the chances of MID onset decrease, and the difference between the two types of civilization dyad narrow. After the Cold War, there is little (if any) difference between the two types of dyad. This is inconsistent with Huntington's thesis.

Different civilizations, escalation to war. In the pre-Cold War period, the chances for escalation to war are a bit lower for different dyads than for the other dyads. This is inconsistent with Huntington. During the Cold War, the probabilities for escalation drop, although it should be noted that the different civilization dyads have a much higher chance of escalation (over ten times higher) than other dyads. In the post-Cold War era, different civilization dyads have a much higher chance of escalation, which is consistent with Huntington's thesis.

Islam-West dyads, MID onset. In pre-Cold War era, Islam-West dyads have a slightly higher chance of engaging in a MID. The difference between the two types of dyads grows during the Cold War, with Islam-West dyads having about twice the chance of engaging in a MID, compared to other dyads. In the post-Cold War era, Islam-West dyads have a much higher probability of engaging in a MID. This is consistent with Huntington.

Islam-West dyads, escalation to war. In the pre-Cold War era, Islam-West dyads have a slightly lower chance of escalation than other dyads. This is inconsistent with Huntington. During the Cold War, the chances of escalation for both types of dyads dramatically decreases for both types of dyad, and there is a great difference between the two types of dyad, with Islam-West dyads having a far lower probability of escalation than other dyads. In the post-Cold War era, Islam-West dyads have a much greater chance of escalating to war than other dyads.

The impact of other variables: MID outbreak. We deal only briefly with the impact of the other variables in the equations. A quick look at the table of results will demonstrate that the

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[9] We realize that a number of these variables are dichotomous (for example, contiguity), and the mean value is not one that is actually coded for any case in the data. However, we are only interested in comparing probabilities for various time and civilization combinations (for example, comparing the predicted probability of the onset of a dispute in the post-Cold War era for Islam-West dyads, versus the predicted probability in that era for all other types of dyad). Using the mean value is the simplest way to look at the relative differences of interest to us. Note as well that generating these probabilities will involve including variables whose coefficients were not statistically significant.

impact of these other variables is very similar in both the different civilization and Islam-West analysis. With the exception of the allied variable, all independent variables carry the expected signs and are statistically significant. Since the findings for these independent variables are (with one exception) as expected, and consistent with other published work on this topic, we will only note these results.

- Disparity is associated with the outbreak of a dispute.
- Major power dyads are more likely to become involved in a dispute.
- Democratic dyads are less likely to engage in disputes.
- Dyads that are engaged in an enduring rivalry are more likely to engage in disputes.
- Dyads that are physically proximate (as measured either by the dummy variable for contiguity or the log of the distance between their capitals) are more likely to engage in a dispute.
- The longer the history of peace (i.e., no disputes) of the dyad, the less likely it is to experience a dispute.

The one statistically insignificant coefficient is the allied variable, which is positively signed but completely insignificant in both first stage equations. This seems curious, given the centrality of alliances to the study of international relations, particularly the importance that is ascribed to alliances in the realist literature. But note that Reed (2000) reports the same finding for his first stage analysis, although he used a different measure for alliances,[10] and that Senese and Vasquez, who use the same measure of alliances as we do, also fail to find a significant coefficient for the impact of a shared alliance (2003: 289).

We believe that the problem is the gap between our rather crude measure of allied and the nature of the specific alliance bond between a dyad. Recent work (Leeds, Long. And Mitchell, 2000) argues persuasively that the traditional way in which we have viewed alliances, as representing a general obligation or tie between states, is inadequate. Instead, they explore the specific conditions and obligations of an alliance. For example, suppose that states A and B have an alliance, but that the agreement stipulates that in the event that either A or B became involved in a conflict with C, then A and B would consult with one another. Is it reasonable to expect that this alliance obligation would significantly reduce the chances of A becoming involved in a conflict with B? We feel that the lack of a significant coefficient for allied might be remedied if we had a better measure of the alliance relationship in the dyad.

The impact of other variables: escalation to war. With one exception (the capability ratio), the signs of the coefficients of the independent variables are the same in the second stage equation as they were in the first stage. But overall, fewer of the variables reach statistical significance. Part of this difference may be due to the extremely large number of cases (over 480,000) in the first stage, versus the much smaller number in the second stage (a bit over 1,600).

But while the exceptionally large number of cases may partially account for large number of statistically significant coefficients in the first stage, there are over 1,600 cases in the second stage. This should be more than enough to avoid the problems of obtaining statistical significance in a small sample. The simple fact is this: the set of variables that we (and others)

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[10] Reed also uses a dummy variable, but he codes it one if the dyad shares a common defense pact.

use to successfully predict the onset of disputes is not identical to set of variables that will successfully predict the escalation of disputes to war.

Nevertheless, three of the coefficients (the same three) are significant in both equations predicting escalation to war. If the members of the dyad are both democracies, there is less of a chance of escalation to war. Geographic distance also reduces the probability of escalation. Finally, the presence of a territorial issue greatly increases the chances of escalation to war.

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Discussion

Unlike previous empirical work, our study finds some support for Huntington's clash of civilization thesis. But upon closer examination, there is perhaps a little less here than meets the eye. Table 4 displays all the cases of dyadic MIDs in the post-Cold War era, examining the simple bivariate relationship between whether the dyad is Islam-West, and the escalation to war. We believe that this is the most important aspect of Huntington's thesis: Are Islam-West dyads more likely to engage in war?

There appears to be quite a strong "clash of civilizations" effect in the post-Cold War era, with Islam-West dispute dyads almost four and one-half times more likely to escalate to war than other dyads. But if the actual cases are examined, all five war escalation dyads involve a Western country versus Iraq (i.e., all dyads are from the dispute that escalated to the first Gulf War). Thus, with a data set ending in 1992, we cannot determine whether there is an Islam-West effect,

or an Iraq effect.[11] Clearly, a more definitive study of Huntington's thesis can only be conducted when more dyadic post-Cold War conflict data are available.[12]

Conclusion

Recent events in Afghanistan and Iraq support the intuition behind Huntington's clash of civilizations argument. In both cases, not only did disputes occur, but they escalated to interstate war. While these incidents continue to make this clash approach an attractive one, previous empirical studies paint a different picture. As highlighted above, empirical results offer little support for increasing conflict between civilizations in the post-1989 period.

In this study, we took a different tack by not only assessing the impact of civilizational differences on the likelihood of a dispute but also examining the relationship between civilizational differences and the escalation of disputes to war. The use of a two-stage model of the conflict process is one of the main distinctions between our work and the previous empirical studies of Huntington. We think this is an important distinction. The results demonstrate that the set of factors that predict to dispute onset are not identical to the set of factors that predict to the escalation of dyadic disputes to war. Although this was not the main focus of our work, we believe it is something that should be followed up. There have been numerous studies using the dyad-year as a case for analysis. In fact, this type of study has produced some of the strongest and most consistent findings about the onset of conflict. But we believe it is important that researchers also explore the escalation of conflict to war.

As for Huntington's assertion that the post-Cold War era will feature extensive conflict between Islam and the West, our analysis offers some support for this. But a closer examination of the actual cases of escalation casts some doubt on the generalizability of this finding. All instances of dyad Islam-West escalation to war are part of the first Gulf War.

At this point we feel that our results offer neither strong support nor definitive rejection for Huntington's "clash of civilizations" thesis. And given the apparent relevance of this thesis to today's world, we think it is important that this research question be pursued through additional systematic empirical work. We hope our study has pointed to a reasonable way to examine Huntington's assertions. We look forward to extending our work when additional data become available.

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[11] We certainly acknowledge that by any reasonable criteria, Iraq in the 1990s was an Islamic country. But we feel compelled to point out that its leadership was clearly secular. Given the dictatorial nature of the Iraqi regime under Saddam Hussein, we wonder to what extent Iraq's conflict behavior against Western states can be attributed to its classification as an Islamic country.

[12] We note that the Islam-West war dyads in previous eras also involved only a few Islam countries. During the Cold War, there are two Islam-West war dyads, both involving Egypt (the 1956 Suez War). There is a bit more variability of Islamic states involved in wars, but nevertheless eight of the twelve Islam-West war dyads involve Turkey (two involve Morocco, one involves Egypt, and one involves Iran).

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Table 1. Operationalization and Source for Non-Civilization Independent Variables

Variable	Operationalization	Source
Capability Ratio	Natural log of Larger CINC score of the dyad, divided by the sum of the CINC scores of the members of the dyad	EUGene
Both Major Powers	Dummy variable, coded 1 if both members of the dyad are major powers, zero otherwise	EUGene
Both Democracies	1. Calculate democracy – autocracy score for each state. 2. Add 10 to the score. 3. Code 1 if both states have scores of 7 or above	EUGene
Allied	Dummy variable, coded 1 if members of the dyad have a formal military alliance with one another.	EUGene
Rivals	Dummy variable, coded 1 if the members of the dyad are engaged in an enduring rivalry that year.	Bennett (1998)
Contiguous	Dummy variable, coded 1 if the members of the dyad are contiguous by land or less than or equal 150 miles by sea.	EUGene
Log of Distance	Log of great circle distance between the capital cities of the members of the dyad.	EUGene
Territorial Issue	Dummy variable, coded 1 if either member of the dispute dyad was seeking a territorial revision.	Maoz (1999)
Years Without Dispute	Number of years since the members of the dyad engaged in a MID against one another.	EUGene

Table 2. Analysis of Impact of Civilization Status on Onset of Dispute and Escalation of Dispute to War, 1816-1992.

	Different Civilizations		Islam-West	
	War	Militarized Interstate Dispute	War	Militarized Interstate Dispute
Capability Ratio	-0.407 (1.42)	0.556 (5.08)**	-0.345 (1.24)	0.560 (5.13)**
Both Major Powers	0.116 (0.40)	1.147 (6.63)**	0.148 (0.54)	1.118 (6.29)**
Both Democracies	-0.278 (2.63)**	-0.107 (3.28)**	-0.277 (2.65)**	-0.111 (3.36)**
Allied	0.077 (0.61)	0.086 (1.30)	0.041 (0.33)	0.126 (1.96)
Rivals	0.164 (0.53)	1.358 (7.23)**	0.177 (0.57)	1.394 (7.52)**
Contiguous	0.081 (0.41)	0.768 (8.02)**	0.023 (0.11)	0.806 (8.17)**
Log of Distance	-0.149 (2.37)*	-0.152 (5.75)**	-0.137 (2.74)**	-0.103 (4.58)**
Territorial Issue	0.705 (6.16)**		0.707 (6.28)**	
Years Without Dispute		-0.006 (5.95)**		-0.006 (6.19)**
Pre-Cold War Era	1.508 (4.95)**	0.185 (2.13)*	0.703 (7.68)**	0.414 (9.87)**
Post-Cold War Era	0.146 (0.27)	-0.095 (0.89)	-0.858 (2.04)*	-0.189 (3.02)**
Different Civilizations	0.858 (2.93)**	-0.002 (0.03)		
Different Civilizations Pre-Cold War	-0.901 (2.74)**	0.272 (2.93)**		
Different Civilizations after Cold War	-0.176 (0.29)	-0.001 (0.01)		
Islam-West			-0.479 (1.50)	0.238 (2.95)**
Islam-West Pre-Cold War			0.354 (1.11)	-0.199 (1.59)
Islam-West after Cold War			1.895 (3.27)**	0.434 (3.26)**
Constant	-2.353 (4.20)**	-1.481 (7.09)**	-1.625 (2.85)**	-1.907 (10.26)**
ρ	.364		.361	
Wald χ²	146.54, 13 df Pr =.00		145.35, 13 df Pr = .00	
Log-likelihood	-9628.94		-9625.319	
Wald test of independent Eqn.	χ² = 1.92, 1df Pr = .166		χ² = 1.97, 1 df Pr = .161	
Observations	1636	481109	1636	481109

Robust z statistics in parentheses
* significant at 5%; ** significant at 1%

Table 3. Predicted Probabilities.

	Different Civilization Analysis		
Time Period	**Civilizations of Dyad**	**Pr(MID)**	**Pr(War)**
Pre-Cold War	Same civilization	0.099	0.753
	Different civilizations	0.155	0.739
Cold War	Same civilization	0.071	0.205
	Different civilizations	0.070	0.513
Post-Cold War	Same civilization	0.059	0.249
	Different civilizations	0.058	0.502

	Islam-West Analysis		
Time Period	**Civilizations of Dyad**	**Pr(MID)**	**Pr(War)**
Pre-Cold War	All other combinations	0.256	0.469
	Islam-West	0.269	0.420
Cold War	All other combinations	0.143	0.218
	Islam-West	0.203	0.104
Post-Cold War	All other combinations	0.104	0.051
	Islam-West	0.279	0.412

Table 4. Islam-West Dyads and the Escalation to War, 1989-1992

		Dyad is Islam-West?		
		No	Yes	Total
MID Escalates to War?	No	72	16	88
		(94.7%)	(76.2%)	(90.7%)
	Yes	4	5	9
		(5.3%)	(23.8%)	(9.3%)
	Total	76	21	97