Family Feud:

How Cultural Similarity Causes Hostility and Wars

(word count: 11892)

Abstract

Does cultural proximity *cause* wars? This paper argues that it does. A dictator, in fear of losing his position, seeks to eliminate any culturally-similar democracy, or at least its influence. The dictator's aim is to prevent social learning between the democracy and the dictator's citizens. Thus, when considering culture and institutions together, the most war-prone and the most hostile country pairs will be those which are culturally close (e.g. same religion, civilization), but institutionally apart (e.g. one democracy, one dictatorship), such as North and South Korea. Using the Correlates of War dataset of all the wars over the last two centuries, I find that the data agrees.

1   Introduction

Reading about the belligerence of North Korea toward South Korea is becoming so commonplace that we are likely to overlook an underlying puzzle: North and South Korea are culturally very similar countries. Does cultural similarity (such as sharing the same religion or civilization) actually make two countries more likely to wage war? In this paper I argue and show that it does, whenever there is institutional difference. The argument involves two culturally-similar countries that have different political institutions - for instance, one is a dictatorship and the other a democracy. In such a case, the dictator will seek to eliminate the democracy, so that the dictator's citizens do not learn democratic ideals from their brothers. Thus cultural similarity, coupled with institutional differences should lead to more conflict. The argument can be extended to two dictatorships based on non-overlapping selectorates,[1] like the Iran-Iraq War of 1980-88. In this paper I use the terminology 'institutional difference' and 'dictatorship-democracy' interchangeably. Using the Correlates of War data, I show not only that cultural similarity leads to war in the presence of institutional difference (proxied by democracy/dictatorship measures), but also that this is the most war-prone of all possible dyads.

Beyond a new explanation for dyadic democractic peace and contributing to the literature on identity and war, the main theoretical innovation of the paper is that it considers similarity along two identity dimensions (culture and institutions) *simultaneously*.[2] This idea allows us to separate the interests of the elite from that of the citizens. Not only do the citizens lose from a war started by the elite, but the elite starts the war exactly because the citizens benefit from the democracy next door - as long as it is culturally similar so that social learning is possible. Nevertheless, as they are out of power, the citizens cannot overthrow the elite to prevent this war.[3]

As Table 1 shows, my theory predicts those dyads to be the most war prone which share

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[1]For selectorates, see for instance, Bueno de Mesquita et al. 1999, although in contrast we do not assume that war is a public good.

[2] In contrast, the rest of the literature argues that countries which are similar in their domestic characteristics are less likely to fight each other. For instance, two democracies are less likely to fight each other (e.g. Doyle 1986, Maoz and Russett 1993, Oneal and Russett 1997, Doyle 2005), as are two countries with similar degrees of financial openness (Gartzke 2007), or human rights records (e.g. Peterson and Graham 2011), or voting patterns in the United National General Assembly (Gartzke 1998). Huntington (1996) derived a clash of culturally different countries because he failed to consider culture as separate from less malleable institutions, unlike Geertz 1973, who distinguished culture (as a pattern of meanings embedded in symbols) from social structure and thus institutions.

[3]Debs and Goemans 2010 indeed find that autocrats are more likely to lose power after defeat in a war, while less likely after a victory. On the other hand, democratic leaders' tenure is found to be unaffected.

some culture[4] but differ in political institutions. Culture is different from identity (e.g. Abdelal et al. 2006) in this paper, as culture is assumed to be difficult to change, while ingroup-outgroup formations can be triggered by rationally-thought-out actions of politicians.[5] The theory's predictions are contrary to the expectations of structural realists (no pattern),[6] evolutionists (all 'ethnically close' dyads should be equally likely to go to war as they may have more issues to fight over),[7] liberal similarists or republican liberals (all 'regime different' should be equally likely to go to war),[8] constructivist similarists (all 'ethnically distant' should be more likely to go to war)[9] and clash-of-civilizationists (who expect 'ethnic distant' (and 'regime different') to go to war).[10] The theory in this paper can be said to be of 'constructive realist' flavor as realist-minded elites reconstruct identity rationally using hard power.[11]

<center>TABLE 1 ABOUT HERE</center>

I assume that having a culturally-similar democratic neighbor next door enhances the bargaining power, and thus the share of the pie, of the dictator's opposition. The main mechanism is through social learning, and what is often called inspiration or soft power.[12] The model assumes policy-seeking rather than rent-seeking political parties. The key assumption is that a culturally-similar democracy emboldens the citizens of a dictator in power. This can be purely

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[4]When I talk about cultural similarity, I will mean similarity in religion, value and belief systems and/or traditions. I assume these make economic and social policies have similar outcomes, lead to a desire for the same type of public good and/or enhances communication. Religious similarity is a good example or Huntington's civilizational similarity. Ethnic and linguistic similarity should also capture some effects. For more precision use Geertz 1973's definition: culture is "a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and their attitudes toward life" (p.89). Furthermore, the particular subtype of culture I concentrate on is *political culture*, which provides views on the "nature of the political game played, on proper modes of conduct, and on goals and strategies." (Elkins and Simeon 1979, p.132). Johnston 1995, reviewing different definitions of culture, finds that the way culture affects behavior is by "presenting limited options and by affecting how members of these cultures learn from interaction with the environment." (p.35).

[5]An illustration of how unchanging culture can be is Johnston 1996, who argues that strategic culture, internalized by leaders, is very persistent in Chinese history up to modern days.

[6]For instance, Waltz 1979, Walt 1987 Mearsheimer 2001.

[7]For this approach see Spolaore and Wacziarg 2012

[8]For instance, Moravcsik 1997.

[9]In political economy, Tabellini 2008, Bisin and Verdier 2001 also fall into this category. In international relations constructivism is difficult to categorize here, but Wendt 1999 argues that states can see each other as enemies, rivals, and friends. The theory here can be thought of adding microfoundations to this claim.

[10]Huntington 1993, and (1996) are the most famous citations here.

[11]It is interesting to compare this 'constructive realist' approach to Johnston (1995) 'cultural realism'. In cultural realism, realist thinking has deep unchanging cultural origins. In 'constructive realism' an unchanging cultural basis is taken as given by rational leaders, who realize that they can rally followers around different aspects of culture. Therefore 'constructive realism' goes beyond 'cultural realism' in assuming that rationally-calculating actors realize they can exploit deep-seated cultural factors.

[12]For soft power, see Nye 1990 and Nye 2004. This paper shows how soft power can be a soft problem rather that leads to wars.

rational: the citizens know they can learn from B_C about which policies to choose to achieve growth under a democracy with a given culture. This knowledge makes them more likely to rise up to take power and thus the autocratic elite needs to offer bigger transfers to appease them. So in this case, the elite may find it more beneficial to start a war rather than appease its citizens at a high cost. This is especially true if repressing the citizens is costly.

The theory describes both war-proneness and hostility-seeking. The outcome variable is roughly war or peace, or more precisely enmity ('clash') or peaceful coexistence. Elites will sometimes try to choose enmity without a physical war for the rally-around-the-national-flag effect (e.g. Mueller 1973). North Korea tried a hot war in 1950 as Kim Il-sung felt to be an 'incomplete dictator' without the South (Halberstam 2007, p.48). Since then its provocations (e.g. Cheonan sinking in 2010) are probably not aimed at starting a real war, just at keeping a cold-war atmosphere. Yet enmity can be a slippery slope as nationalism may spiral out of control and lead to a real war.[13] The mechanism should be particularly applicable when different institutions compete in a region along one another, each with the potential to outperform the other. A good current is how China reacted to the gradual opening in Myanmar. When Myanmar abolished its central propaganda authority, the Chinese authorities attempted to censor the news of this. But no such attempt can succeed fully. Chinese citizens who grabbed hold of the information expressed envy, but also debated whether China was ready for a similar step.[14] Other internet users criticized the Chinese government for not acting similarly.[15] No doubt Myanmar's political path will be monitored closely.

TABLE 2 ABOUT HERE

TABLE 3 ABOUT HERE

A simple look at the data seems to confirm that the culturally-similar but institutionally-different dyads are the most war-prone. Tables (2) and (3) show this and also the fact that cultural similarity has a larger positive impact on war when it is coupled with institutional difference.[16] At first blush, these results could be due to omitted variable bias. Thus in my regressions, I control extensively for usual variables and geography (distance, contiguity (land

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[13]See Jervis 1976 for a spiral of hostility and Baliga and Sjostrom 2012 for how even cheap talk can co-ordinate actors on mutual hostility.

[14]http://www.bbc.co.uk/zhongwen/simp/world/2013/01/130125_burma_censorship_dissolve.shtml, retrieved: 1/25/2013.

[15]http://www.chinese.rfi.fr/%E4%B8%AD%E5%9B%BD/20130126

[16]The tables use 'war' (defined as a hostility level of 4 or above, i.e. involving use of force), as a measure against religion and civilization. Using the hostility measure or other cultural measures yields very similar results.

and/or sea), colonial contiguity, same region), and the effect of cultural similarity is unchanged. I perform a number of robustness checks, by changing dependent and independent variables, specifications, fixed/random effects, lags/no lags and endogeneity, and the results remain the same.

On the theoretical side, Walt (1996) and Owen (2010) are related,[17] although there are a number of differences. Walt is less general (he only considers the aftermath of revolutions) and argues that diffusion is much less of a phenomenon than my model assumes (pp.41-2), while he does emphasize that actors overestimate its importance. I argue that diffusion may occur rarely exactly because actors realize its possibility and may try to avoid it (by starting hostility/a war). Owen shows how what he calls the clash of different 'ideas' (e.g. communism, fascism, liberalism) helps explain a multitude of wars over the last five centuries.[18] In contrast, in my theory, the source of conflict in Owen is forcible regime promotion rather than fear of peaceful diffusion. Finally, I apply game theory and bargaining to clarify the circular logic of transnational regime contest leading to transnational ideological polarization, which in turn leads to transnational regime contest (p.71); and test the ideas with statistical regressions rather than case studies or simple correlations. Interestingly, even though Owen observes that most 'forcible regime promotions' occur in a country's backyard, I find that in fact his inference is wrong because this is only due to culturally-close dyads being clustered together.[19]

This paper consists of two parts: a simple bargaining model and statistical analysis. In the model, I will describe the mechanism that shows how increased domestic pressure can be lessened by a war or hostility. Afterwards, statistical evidence is presented using data on all the wars over the last two hundred years (COW MID data). I show that cultural similarity causes wars in the presence of institutional difference, using five different measures of cultural similarity (based on racial proximity, religion and civilization). I also show that in fact the dyads with cultural similarity and institutional difference are the most war-prone out of all possible dyads.

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[17]Also related are Saideman 2001 and Saideman and Ayres 2008, which shows how domestic political incentives played a role in irredentism with ethnic groups divided by borders.

[18]Owen's mechanism is similar to mine, but he argues the conflict is triggered by a revolution that can have demonstration effects (pp.38-9) abroad and is therefore attacked, rather than the country with 'regime crisis' attacking.

[19]Nevertheless, it is worth noting that Owen builds a striking dataset of 209 cases over the last five centuries where forcible regime promotion played a part, suggesting that connecting diffusion networks and war is an important idea. Furthermore, by definition, Owen's 'forcible regime promotion' could not include wars where the objective was annihilation.

2 Theory

We define two countries, A and B, with three actors altogether: elite of A (A_E), citizens of A (A_C), and citizens of B (B_C). Each is assumed to be a representative actor of their respective groups. B_C is in power in B but in A it is still the old elite A_E that rules, although A_C has some bargaining power, which means A_E needs to share some of the resource with them.

I assume that there is some policy difference between A_C and A_E,[20] which I model as bargaining over a unit-sized resource (thus we normalize the size of the resource in A to 1). Unlike in Bueno de Mesquita et al. 1999 and Debs and Goemans 2010, parties cannot commit to platforms, so each agent is expected to act according to its preferences in power.[21] A_E holds the whole unit at the start of the game and can make domestic transfers τ_d to A_C. The (relative) size of B is S_B, which goes to B_C at the start of the game, although B_C can make international transfers τ_i to A_E. Utilities are thus perfectly transferable: $V_{A_E} = 1 + \tau_i - \tau_d, V_{A_C} = \tau_d, V_{B_C} = S_B - \tau_i$, with $\tau_i, \tau_d \geq 0$. I assume risk-neutrality.

International-level decisions are made first, then domestic-level decisions occur.[22] Due to the logic of backward induction this means international decisions have domestic reasons. First, there is an international stage, where wars are going to take place if the bargaining range is empty. Then domestic allocative decisions in countries alive are made, followed by a potential revolt. Thus the timing of the game is as follows:

1. B_C can make any non-negative transfer τ_i to A_E to avoid war.[23]

2. The elite A_E can accept the offer or attack B_C.

3. A_E can transfer resources τ_d to A_C.

4. The representative agents of the citizens A_C decides whether to revolt or not.

In case of an interstate war the distribution of material power is equal to relative sizes 1 and S_B, so that the war leads to the victory of A with probability $\frac{1}{1+S_B}$ and to that of B with probability $\frac{S_B}{1+S_B}$. The winner takes over all $1 + S_B$ resources, as is standard in the literature.

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[20]This difference can be over tax policy (e.g. Romer 1975, Meltzer and Richard 1981, Acemoglu and Robinson 2006), or over public goods (e.g. Alesina and Spolaore 1997, Alesina, Baqir and Easterly 1999).

[21]This assumption is similar to a citizen-candidate (Besley and Coate 1997) assumption, and mirrors Acemoglu and Robinson 2006.

[22]This setup is similar to Bueno de Mesquita et al. 1999, although here we have bargaining between citizens and the elite, not re(s)election.

[23] The exact bargaining protocol is unimportant here. If an efficient Coasian bargaining solution exists, it will occur. This stage builds on ideas of Schelling 1960, Fearon 1995 and Powell 1999.

However war is costly: A_E needs to pay c_A and B_C needs to pay c_B in a war regardless of outcome ($c_A, c_B > 0$).

I assume that the bargaining power of A_C is μ without B_C present and $\mu + \gamma$ with B_C present. I assume μ captures the domestic opposition's (citizens') ability to organize collective action. This bargaining power arises from the fact that citizens can revolt at the end of the game, in which case they would get $(1 - \mu)1$ of the resource of A, so μ is exactly the payoff A_E needs to give up of its unit resource to avoid a revolt, without B_C present. γ measures the increase in A_C's bargaining power due to a neighbor B_C (γ is increasing in cultural similarity).

FIGURE 1 ABOUT HERE

What are the microfoundations for γ? There are three big mechanisms to think about. The most profound is social learning. If the unmodelled success of country A in terms of income generation depends on policy choices that need to fit the particular culture of A, then a culturally-close B_C reveals more information to A_C than a culturally-distant B_C would. For instance, a country with a Confucian system achieving high growth under a given policy (e.g. Lee's Singapore) may reveal more to Deng Xiaoping about what a similar policy would achieve in China than to Fidel Castro in Cuba. Furthermore, the process of social learning is more laborious with cultural distance: Deng Xiaoping could send tens of thousands of Chinese to learn Lee Kuan Yew's policy but the Venezuelans may have to learn Chinese first.[24]

There are two other mechanisms that complement social learning. The first is altruism, so that B_C derives an intrinsic benefit from transmitting resources to A_C, and A_C cannot credibly commit to prevent this. For instance, South Korean citizens release balloons over the border into North Korea describing the truth about the North Korean regime to their co-ethnics. Second, able citizens of A may leave A_C to live a better life in B. However, if B is culturally-distant these citizens might not want to give up their cultural habits or learn a new language.[25] Physical barriers such as the Berlin Wall may hold up some of the escaping citizens, but they are costly and imperfect.

How does war cut down γ from the opposition's de facto bargaining power? The simplest interpretation of the model is that the elite in one country eliminates the other one physically in a war. Austria-Hungary started the First World War by attacking Serbia as Vienna was

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[24]Indeed, (Simmons, Dobbin and Garrett, 2006) find that social learning is an important channel of diffusion, this arises endogenously in our model.

[25]As long as these citizens decrease income in A by more than the domestic pressure on A_E, A_E will attempt to stem this flow. Hirschman 1970 is the classic on the 'exit' option.

afraid of Serbia inspiring the Austro-Hungarian domestic Slavic opposition (Keegan 1999, p.51, Joll and Martel 2007 pp. 154-5). A second interpretation is just hostility seeking. A lot of research in social psychology[26] suggest people are social creatures and are prone to promptly set up in-group and out-group categories.[27] So A_E should simply seek to portray B_C as the enemy to A_C.

A related question is why A_C believes that B_C is the enemy if the elite A_E starts a (maybe propaganda) war. The answer is that fear can be rational as long as there is some probability that B_C may indeed be a danger (de Figueiredo and Weingast 1999, Glaeser 2005). The mechanism described in the paper should therefore be stronger if there was a history of A on B conflict especially with past horrors for which B_C did not apologize (van Evera 2001) so that elites find it easier to alienate A_C and B_C. Similarly, it is easier given the lack of 'truth squads': a strong free press and free universities which regards mythbusting as a mission (van Evera 2001) or when the 'marketplace of ideas' can be easily captured (Snyder and Ballentine 2001). Furthermore, a war against an outside enemy could make it more acceptable to round up individuals who may sympathize with the outside country thereby shifting the median citizen (Downs 1957).

Proposition 1. *In the unique Subgame Perfect Equilibrium of the game, war occurs if and only if:*

$$c_A + c_B \leq \gamma + \mu \frac{S_B}{1 + S_B}. \tag{1}$$

For readability purposes, the proof of this proposition is relegated to the appendix. In words, the proposition simply says the benefits of war are greater than its costs. The benefits (to A_E) are that the domestic pressure is decreased by γ (A_E expects to keep more of the domestic resource in case of victory), while the cost is c_A combined with the opportunity cost of C_B, which is the maximum size of the transfer B_C would be willing to make to keep the peace. In addition, higher domestic pressure or higher relative size of B_C leads to more war. The reason is that since war is fought before A_E needs to give up resources to A_C, A_E can use A_C as an 'army' but not share the spoils S_B with them. Thus the bigger this army is or the bigger the relative spoils are, the more appealing war becomes.

We could make the model richer by adding the possibility of repression. Assume that lowering γ of the domestic pressure is achievable by repression rather than a war. But repression is costly

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[26]Seminal studies include Sherif et al. 1961 and Tajfel and Turner 1979.

[27] For ideas that conflict with an outside group solidifies ingroup cohesion see Coser 1956, Simmel 1955, Gilligan, Pasquale and Samii (2011), Bellows and Miguel 2009 and Blattman 2009. Related arguments that rational elites provoke nationalism to strengthen their position are in Gellner 1983 Snyder 2000 and de Figueiredo and Weingast 1999.

too, it destroys κ share of the resource (Acemoglu and Robinson 2006). Straightforward logic implies that repression and war are substitutes and war will be chosen when in addition to (1), it is also the case that repression is too expensive:

$$\kappa \geq c_A + c_B. \tag{2}$$

Thus costly repression makes war more likely. Acemoglu and Robinson 2006 argue that repression destroys a larger share of the capital than of the land stock (Chapter 9), so capitalist elites should be more war-mongering than land-holding ones. This sheds new light on why late industrializers where a big industrialist elite has outsized power are aggressive (Snyder 1991).

To sum up, solving the model has thus led us to our main result. Increasing cultural proximity γ will eventually lead to war. Using an Acemoglu-Robinson framework (2006), you could see that the benefit from wars is even greater when domestic pressure is very high, since in that case, the alternative is not transfers but democratization.[28]

3 Statistical Analysis

Next I test the two hypotheses implied by my theory. The main hypothesis is that in the presence of institutional difference, cultural similarity makes a country pair more hostile and more war-prone. The second hypothesis is a stronger version of this: that social learning from a culturally-close democracy is a primary channel through which identity matters, so dyads characterized by institutional difference and cultural similarity are the *most* hostile and *most* war-prone out of all possible dyads. I will find substantive evidence for both hypotheses. Nevertheless, the standard caveats apply as in any paper using dyadic war regressions.

3.1 Data Description

I use the COW MID data for conflict incidence,[29] as is standard in the literature. The unit of observation is a country-pair in any given year (between 1816-2009) and I do not restrict attention to politically-relevant dyads[30] since geography is a main factor that I want to distinguish.

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[28]The argument that dictators will start a war when they would lose office without the war is compatible with the empirical finding of Debs and Goemans 2010 that dictators are more likely to lose office after defeat in a war, while stay in office after a victory; and democratic leaders' tenure is unaffected by war.

[29]For the Correlates of War project, see: www.correlatesofwar.org

[30]A politically-relevant dyad is one in which the two countries are either contiguous or one of them is defined to be a major power.

This means that the base dataset has 1,891,886 observations.[31] For data collection, the paper uses EUGene.[32][33]

The main dependent variable is hostility level, which ranges from 0 (no conflict) to 5 (war with at least 1000 battle deaths). This is because the theory predicts clashes as well as wars, assuming that once a government seeks enmity in rhetoric, hostility might lead to war. Thus the primary dependent variable is hostility, and a second dependent variable is a binary measure whether there is use of force (4 to 5 on hostility level). War is a rare event, only 0.7% of the (all) dyad-years experience a hostility level of 4 or 5.

I use five different measures for the cultural distance variable. The first two are based on a genetic distance variable from Spolaore and Wacziarg (2012), who define such a variable between two populations (frequency of allele differences), and show that genetically more related populations are more likely to fight (yet they have no hypothesis over an institutional interaction).[34] This variable is naturally a little difficult to interpret, but it has been shown to capture cultural similarity in attributes such as trust (e.g. Desmet et al. 2007), and fortunately at the 200-year horizon, this variable is largely invariant, so we need not worry about reverse causation. Spolaore and Wacziarg (2009 and 2012) calculate four measures of genetic distance.[35] The main measure captures the time which two populations have spent apart (since splitting).[36] I use the measure $F_{ST} - weighted$, which takes all groups into account in the two countries and creates a distance weighted by population share. Cavalli-Sforza, Menozzi and Piazza 1994 also provide a slightly different measure of distance, Nei's distance, $Nei - weighted$ is calculated the same way and we can use it as a different proxy. I construct two proximity measures out of the genetic distance measure: I divide 1 by the distance or alternatively I multiply the distance measure by minus one.

The third measure is a binary indicator whether the two countries share the same religion. The measure is from Jonathan Fox's *Religion and State Project*[37] with levels 'Christian', 'Muslim' and 'other'. Although the variable does not parse out other religions, Christianity and

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[31]I am thankful for the help I received with setting up a research account on Odyssey at Harvard Research Computing.

[32]Bennett, D. Scott, and Allan Stam. 2000. 'EUGene: A Conceptual Manual.' International Interactions 26:179-204. Website: http://eugenesoftware.org

[33]Tables are generated using the StarGazer package by Marek Hlavac.

[34]http://sites.tufts.edu/enricospolaore/files/2012/08/War-and-Relatedness.pdf

[35]They use a genetic distance measure of 42 populations, which they match to almost all of the 1,120 ethnic groups in Alesina et al. 2003 listed for countries.

[36]The longer this time, the more random mutations there are, so the greater is the genetic distance. The variable is 0 if and only if the allele distribution in the two populations is the same.

[37]http://www.religionandstate.org/, Fox 2008, version 1.2.2, EMAJREL variable

Islam are the two biggest religions in the world, Huntington's clash of civilizations (1996) in the post-Cold War world is widely thought to be manifested by Christian-Muslim wars, and the civilizational variable below has more categories.

A fourth cultural measure is also religious proximity. However in order to have more variation than in the binary measure, I constructed something similar to a fractionalization index but between countries. Taking Jonathan Fox's data on religions I calculated the probability of a random draw of two individuals belonging to the same big religion. The religions I work with are again Christianity and Islam. Therefore if one country is 75% Christian and 25% Muslim, while another one is 100% Other, the variable takes up 0. If both are 75% Christian and 25% Muslim, then the variable takes up $0.75^2 + 0.25^2 = 0.625$. This measure is therefore more fine-grained and continuous than the previous one.

The fifth cultural measure is whether the main groups in the two countries belong to the same civilization. I code this variable based on the nine civilizations according to Huntington 1996, Map 1.3.[38] When a country is ambiguous ('cleft countries', like Kenya and Nigeria between Islamic and African), the major civilization is coded, and a separate minor civilization is also coded. A separate variable is created which captures all country pairs with the property that the minor civilization in one of them is the same as the major civilization in the other (therefore at least one of the countries is required to be a cleft country for this variable to take on 1).

The institutional variable is proxied by the Polity score,[39] which measures the extent to which a country in a given year is judged to be democratic, and ranges between -10 and 10. I use two variants of this score. First, I take the absolute value of the difference in the Polity IV scores of the two countries. Second, I define democracies as having a Polity score of 7 or higher, as is standard in the literature, and construct a binary variable for institutional difference that captures whether there is exactly one democracy in the country pair. The results are robust to changing this threshold to 9.

Focusing on only the democracy-dictatorship relationship should mean a tougher test for the theory, which is a general theory of differences in political institutions. This is because many dictatorship-dictatorship wars will be regarded as having the same regimes even though they might be different. For instance, the Iraq-Iran war (1980-88) or the Ethiopian-Somali war (2006-09) should be covered by the theory as a competition between a religious institutional

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[38] The nine levels are: Western, Latin American, African, Islamic, Sinic, Hindu, Orthodox, Buddhist and Japanese.

[39] http://www.systemicpeace.org/polity/polity4.htm

setup with Islamic law and a secular dictatorship, yet would not show up in the empirical results as correctly predicted conflicts.

I am controlling for a number of usual variables: I include a time trend, the peace years since the last war, major power status for both countries, bilateral exports between the two countries separately, and whether they have an alliance (entente)[40]. It is particularly important to control for geographic variables accurately so that we do not confuse culture with physical distance. I constructed a variable capturing whether the two countries are in the same big physical region (5 levels), I included physical distance (between capitals), contiguity on land, as well as colonial contiguity from the COW dataset.

Summary statistics can be seen in the tables below. You might be worried that there are few dyads which are culturally similar but institutionally different and therefore my results might be driven by outliers. This is not the case however. Institutionally similar countries seem to cluster among culturally close ones but not too strongly. In fact, there are 119,860 country-pair years with institutional difference (defined by *justone*) in the closest quartile, 120,392 in the next quartile, 125,604 in the second-to-bottom and 124,140 in the least similar ones. Therefore there appears to be a negative relationship between cultural similarity and institutional difference as suspected, but the tendency is not overwhelming.

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3.2 Data Analysis

As a first look at the data, let us see how cultural similarity, institutional difference and war incidence are distributed. For this, the four quartiles of the $F_{ST} - dominant$ distance are calculated[41] (so that we have a fourth of the closest-related dyads, for instance). From Table (8), you can see that indeed more related populations have more wars: the furthest quartile's dyads have a war incidence of 0.09%, while the closest quartile's dyads have one of 1.92%.

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[40]Coded 3 in the MID database, the closest alliance type.
[41]The quartiles based on the $F_{st} - dominant$ variable are: 244.85; 699.96; 1118.16.

Similarly average hostility level rises gradually from 0.005 to 0.097 as we move toward the most culturally-similar quartile. The institutional difference variable shows a stable, or if anything, a roughly opposite pattern: a genetically most distant dyads are likely to experience regime difference (exactly one democracy as measured by Polity IV) 41.43% of the time on average, while the closest dyads do so only 39.61% of the time. Nevertheless the average war years for countries with a regime mismatch rise from 0.03% for the distant quartile through 0.79% and 0.80% to 2.42% for the closest quartile.[42] Therefore even though dyads in the closest quartile are a little less likely to have a regime mismatch, close-quartile dyads still experience regime-mismatch wars about 100 times more. Also note that when we restrict attention to dyads with regime mismatch, mean war incidence *falls* from 0.09% to 0.03% for distant countries and *rises* from 1.92% to 2.42% for close countries. Therefore it seems that regime mismatch wars indeed are more likely if and only if the dyad is culturally close.

Results are similar for the other variables (e.g. recall tables (2) and (3)). For instance, sharing a civilization means an average of 0.121 hostility when there is exactly one democracy, while not sharing means an average of 0.048 (the grand average of hostility is 0.043). For the dyads where there is not exactly one democracy (no democracy or two democracies), same civilization means an average of 0.07 (< 0.121) and different civilization means an average of 0.039 (< 0.043), the difference thereby being half as large. The most hostile indeed seem to be the institutionally-different and culturally-close dyads. The religion measure yields the exact same results qualitatively.

<center>TABLE 8 ABOUT HERE</center>

After this preliminary analysis, let us run regressions and ascertain that it is not omitted variables that drive these results. The first specification that I run is:

$$W_{ijt} = g(\beta X_{ijt} + \beta_C C_{ij} + \beta_I I_{ijt} + \beta_{CI} C_{ij} I_{ijt} + \eta_{ijt}).$$

The default regression is when the dependent variable is hostility level with OLS ($g(x) = x$). In the second case it is war with $g(\cdot)$ being the logit link. X_{ijt} includes time invariant controls, I_{ijt} is institutional distance C_{ij} is the (time invariant) cultural proximity and η_{ijt} is the error term. Because of the importance of geographic and cultural proximity, which are both time invariant, I cannot cleanly run fixed-effects regressions, although some modified versions are

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[42]Similarly average hostility level rises from 0.001 to 0.107.

explored below. I can however use random effects, by clustering on country-pairs, which I will do after the OLS regressions.

First I check whether introducing the institutional difference variable and then the cultural proximity variable leads to a statistically better model, through a nested ANOVA test, using the Fst-distance-weighted variable. The models are logit random effects models with war being the dependent variable, errors are clustered on dyads. Introducing institutional difference leads to a Chi-squared value of 612.09, the F-test is significant at 0.001, introducing cultural proximity gives a Chi-squared of 10415, again significant at 0.001. This means that introducing interactions of my additional variables makes them jointly significant.

The first regressions (Table 11) are simple OLS regressions where the dependent variable is maximum hostility level in the dyad in a given year. I run five specifications, one for each cultural variable. You can see that the interaction of absolute democratic difference interacted with cultural proximity is positive for all values and highly significant as expected, although standard errors in these kinds of tests may be deflated. It is also notable that the both-democratic dyad variable is not significant in two cases (civilization, shared religion) and even has a positive sign once (shared religion). Since I am working with interactions, it is also important to emphasize that cultural proximity by itself is usually negative, although the effect is small. This means that when two countries have the same polity score, cultural proximity usually decreases war-proneness slightly, although not for minus genetic distance, and generally t-values on the single term are lower (and not significant for same religion) than on the interaction term.

My main hypothesis holds true. It predicts that cultural similarity causes wars when there is institutional difference. This means that there is an overall significant positive effect of cultural similarity (i.e. $\beta_C + \beta_{CI}I_{ijt}$ is positive) when evaluated at high values of institutional difference I_{ijt}. We can see that in all five specifications evaluating the impact of increasing cultural proximity at high levels of absolute polity difference (15-20) always yields a positive coefficient. For instance, changing the religion to the same religion with polity difference at (20) adds on average 0.017 points of hostility.

How much is this effect (0.017 for religion) substantively? It is quite large as average hostility is 0.043. And larger than 'democratic peace' as 'both democracy' has an impact of lowering hostility by 0.011 on average.[43]

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[43]Actually when we leave out cultural similarity and institutional difference, the impact of 'both democratic' is much larger -0.068. This means that the three variables (cultural similarity, institutional difference and their interaction) explain much of the democratic peace results.

The second hypothesis also holds up. It says that the most war-prone out of all possible dyad types is the one that combines cultural similarity with institutional difference. You have seen that a culturally-similar but institutionally-different dyad is more hostile than a culturally as well as institutionally different one. I only need to show that it is also more hostile than an institutionally as well as culturally similar one. This result holds up for all five cultural measures. The second hypothesis is thereby confirmed. For instance, changing religion when the two dyads share institutions decreases hostility by 0.003. But changing institutions (+20 difference) with the same religions increases hostility by 0.06. Changing institutions (+20 difference) with religious difference adds only 0.04, and changing religion to 'same' at high institutional difference (first hypothesis) adds 0.017.

Next I change the dependent variable to War (Table 13), defined as a hostility level of at least 4 (use of force) and estimate a logit model. I consider two specifications. The first is a simple model, in the second I include a lagged dependent variable to try to make sure that we are not picking up war length but rather new wars. The positive impact of cultural proximity impact at high democratic difference levels holds up again,[44] and the second hypothesis is again confirmed as well.

Substantively the logistic regressions give the following quantities. Using the religion variable we get that changing religion to the same one when there is an absolute Polity Score difference of 20 has an impact of an increase of about 7% (exp(0.167-0.1)) of the probability of war. The genetic distance's impact is even bigger. Increasing genetic proximity (div) by a standard deviation (0.05) increases the probability of war by 11% (exp((2.94-0.86)*0.05)). Using the alternative (minus) genetic distance gives an estimate of as much as 80% (exp((1.6+1.5)*0.19)).

3.3   Robustness

Since dyadic country-regressions have numerous statistical deficiencies, I will show now how my results are robust to different specifications, variables and other concerns.

In a probably less adequate specification I include country fixed effects to make sure it is not country-specific characteristics that drive our results. The problem with this is that any time-invariant feature needs to be excluded to avoid perfect multi-collinearity, which means that all geographic distance terms need to be excluded, as well as the culture term on its own - all these are absorbed by the country fixed effects. I include absolute polity difference as well as

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[44]The interaction term with shared religion turns negative but the overall positive effects of cultural similarity and institutional difference remain.

its interaction with cultural proximity (all five measures). All interactions are highly significant and positive.

I also check for running a random effects model. The results remain the same: interaction terms are all significantly positive and at high levels of institutional difference cultural proximity leads to on average more hostility. The institutionally-different culturally-similar dyad is also the most hostile. Also the interaction term mostly has much higher t-values as the non-interacted cultural similarity and institutional difference.

Next I change the institutional variable measure. I take the binary variable that defines 'exactly one democracy'. Again both hypotheses hold up. The results are robust to changing the definition of 'exactly one democracy' to a Polity score cut-point of 6 or 10 (original is 7).

Next I take sub-components of the polity score. Looking at these subscores also helps us see which aspect of democracy seems to be driving our results. It is the case that competitiveness of participation and political competition both yield results that work for four out of the five cultural variables. However, the results hold up perfectly for executive constraints and competitiveness of executive recruitment (in each case we again calculate absolute differences). These little differences should not be surprising and give evidence that the executive in power starts the hostility or the war if they feel that their power is under threat.

To make sure that I am not capturing reverse causation (institutional differentiation as a result of wars, although for some reason only in culturally similar countries), I run the regressions with a positively lagged war (dependent) variable as well (the dependent variable is one period ahead of the independent ones). All results hold up.

In the next specification I change the dependent variable to *Fatal* which captures how many fatalities the two sides have suffered in any given year (if any). Results under all five cultural estimates hold up of the baseline model. The same is true of changing the dependent variable to 'highest action'.

Next I check for non-linearities in the data. Including squared terms for both cultural similarity (tested for all five measures) as well as absolute Polity score difference we get varying significance levels. In particular, sometimes the cultural variable's interaction with the squared Polity difference seems more significant than the interaction of the levels. Therefore I tested the regressions with using the squared versions of cultural similarity and institutional difference (separately), and all baseline results hold up no matter which measure we use. The fact that the squared version of the absolute Polity scores may be more significant could strengthen the theory

in the sense that larger democratic differences lead to proportionally more hostility, rather than small differences driving the results.

You should also be worried about endogeneity issues, which are particularly difficult to handle here. As a first step to deal with the issue we run the regressions without including any of the obviously endogenous explanatory variables: trade flows and ally membership. Both hypotheses hold up.

As a further test on endogeneity, could it be that some particular uncapturable feature of a dyad makes the country-pair more war-prone throughout human history and then war makes for more cultural similarity? To test this I change the dependent variable to 'cultural similarity' and see whether more war-prone dyads over the last 200 years have become more culturally similar. Genetic proximity evolves slowly, however it is easy to think of a few countries that changed religion (e.g. Christianity in South Korea) or civilization (e.g. due to population movements (Germans in Eastern Europe) or genocide, (Armenians in Turkey)). The effect of this should be small over the 2-century frame, however, if it was a problem for my regressions, it should always mean that war should lead to *more* cultural similarity (e.g. through rape, occupation, population transfers). However there is no sign of this. If anything, there is the opposite effect: regressing cultural similarity on geographic variables and war/hostility leads to three negative relationships out of the four significant ones. Only minus genetic similarity shows a significant positive relationship.

A surprising finding in Bueno de Mesquita (1981) was that allies are more likely to fight each other than non-allies. Restricting the sample to allies, we find that both hypotheses hold up. Furthermore, the coefficient on the ally variable in my basic regressions is consistently negative and highly significant. Therefore Bueno de Mesquita could have been capturing the mere fact that culturally-similar countries are more likely to become allies and also to fight more wars.

Next when I restrict the sample to dyads where the minor civilization in one country is the major civilization in the other, the results weaken considerably (in two out of five cases not even the first hypothesis is confirmed and significance levels drop for the rest). This means that the results are not driven by two unrelated cultural groups sharing a country,[45] which then leads to a war of the majority with the mother-civilization of the unrelated minority. Therefore it is indeed culturally-similar groups, not just dyads, that seem to wage war.

Another worry is that given that in dyadic regressions it is easy to find statistically significant

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[45]See Saideman 2001.

relationships, is it not possible we are capturing just noise? The answer to this is that note how consistently the relationship that we are capturing is not just significant but goes in the same direction. As a placebo test, I run the regressions with using other variables to interact cultural similarity with instead of the polity difference, for which I have no immediate predictions: major power, peace years, same region. In no case do I get a consistent direction or significance levels.

A main worry is that cultural similarity is just mismeasured geographic proximity. Despite the proxies, this could be the case. Looking at correlation coefficients we see that cultural variables' correlation varies from -0.13 to -0.46 with distance, from 0.11 to 0.2 with land contiguity and from 0.17 to 0.49 with same region. Generally, the divided genetic distance covaries the least while the minus genetic distance and the same civilization correlate the most.

TABLE 9 ABOUT HERE

To have a closer look at geography, I consider only those country pairs which do *not* share the same region: the results actually strengthen (*p*-values fall). There are five big regions defined in the COW project:[46] Europe, the Middle East, Africa, Asia and the Americas. Compared to the unrestricted sample, *p*-values fall for the interaction term of the baseline specification, with all of them retaining their positive sign. This is robust to changing the dependent variable to wars (and robust to including lags). Similarly, results are stronger for non-contiguous dyads than for contiguous ones.

What does the fact that the results are stronger for dyads not sharing the same region say about geography and culture? It should indeed mean that the positive interaction on cultural similarity and institutional difference should not come from badly measured geographic distance. If cultural similarity was being driven by some residual measure of how easy it is to project power then presumably the mismeasurement should be greater for countries closer around. Instead the results appear to arise from instances such as the US, New Zealand and Australia involved in European wars such as the Second World War. The example of South Africa in 1914 is telling. There was a strong desire to defend Britain, arising from "an ethnic and cultural unity with Great Britain", so much so that and even the Boers rallied (Audoin-Rouzeau and Becker 2002).

One worry might be that if the theory is better at explaining inter-regional conflict, it captures a relatively rare event. There are two reasons why this is not true. First, although the average number of wars occurring among countries belonging to the same region is higher

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[46]The variable we use is 'home region' from the Correlates of War project and Eugene.

(0.021) than among those belonging to different ones (0.004), since there are many more inter-regional dyads, there are still 5109 inter-regional conflictual dyad years, compared to 8185 intra-regional conflictual dyad years. Second, it is not the case that we are *only* explaining non-local conflicts, just explaining them better. And when I run the regressions with *distance* as a third interacting variable, I get negative triple interactions for four out of five cases (the only exception is civilization), so that as I investigate country pairs further apart the impact of the positive interaction term diminishes. This seems to suggest that the theory is best to explain dyads sitting near the edges of regions.

Furthermore even for countries in the same region the results actually still hold up when I restrict attention to subscores of the Polity variable (Competitiveness of Participation, Competitiveness of Executive Recruitment, Regulation of Chief Executive Recruitment, Openness of Executive Recruitment). These subscores should be a better comparison of democratic qualities so that we compare like with like.

Next let us turn to which periods the theory explains the best, again focusing only on the interaction's sign. First, by restricting attention to either the nineteenth or twentieth (and the first eight years of the twenty-first) century means that the results hold up almost perfectly. Similarly, the results hold up almost perfectly for the Post-Cold War period, for which Huntington predicted the clash of civilizations. If I restrict attention to between 1990 and 1996, the Post-Cold War period before Huntington, the results of a clash of brothers hold up perfectly. Furthermore the results do not appear to be driven by simply a Cold-War era domino theory as the main hypothesis actually does not hold up for religion and civilization. Furthermore, one period that is particularly well-explained by the theory is 1849-79, which is interesting since Owen (2010) argues that the Second wave of international polarization ends in 1850. This suggests the theory of social learning is indeed even more general than Owen's research would suggest.

TABLE 10 ABOUT HERE

3.4   Conclusions

I have argued that cultural similarity actually causes wars and hostility. This is because when coupled with institutional difference, a dictator will want to eliminate a culturally-close democracy to stem social learning. Using a bargaining framework with three agents, I built a rational model to test this idea. Then I turned to statistical analysis, finding evidence not only for cultural similarity increasing war-proneness and hostility when coupled with institutional differ-

ence, but also that the most war-prone dyad is the one with institutional difference and cultural similarity. My results are robust to controlling for geography extensively, changing specifications, variables, and adding non-linearities. The results are somewhat stronger for dyads which are not in the same region or do not share a border. This could be welcome as a main task is to disentangle cultural similarity's impact from geographic variables. Unmeasurable geographic variables are presumably more important in close proximity, so the result that interregional warfare has more robust evidence is encouraging. The theory and the evidence should help policy-makers think differently about wars and in particular realize that soft power (the appealing nature of democracy to a culturally-similar dictatorship's public) can have a darker side as a source of inefficient wars.

References

Abdelal, Rawi, Yoshiko Herrera, Alastair Iain Johnston and Rose McDermott. 2006. "Identity as a Variable." *Perspectives on Politics* 4(4c):pp. 695–711.

Acemoglu, Daron and James Robinson. 2006. *Economic Origins of Dictatorship and Democracy.* Cambridge University Press.

Alesina, A., A. Devleeschauwer, W. Easterly, S. Kurlat and R. Wacziarg. 2003. "Fractionalization." *Journal of Economic Growth* 8:pp.55–194.

Alesina, Alberto and Enrico Spolaore. 1997. "On the Number and Size of Nations." *Quarterly Journal of Economics* pp. pp. 1027–56.

Alesina, Alberto, Reza Baqir and William Easterly. 1999. "Public Goods and Ethnic Divisions." *Quarterly Journal of Economics* 114:pp.1243–84.

Audoin-Rouzeau, Stephane and Annette Becker. 2002. *Understanding the Great War.* Hill and Wang.

Baliga, Sandeep and Tomas Sjostrom. 2012. "The Strategy of Manipulating Conflict." *American Economic Review* Forthcoming. http://www.kellogg.northwestern.edu/faculty/baliga/htm/provocation.pdf.

Bellows, John and Edward Miguel. 2009. "War and Local Collective Action in Sierra Leone." *Journal of Public Economics* 93:pp.1144–57.

Besley, Timothy and Stephen Coate. 1997. "An Economic Model of Representative Democracy." *Quarterly Journal of Economics* 112:pp.85–114.

Bisin, Alberto and Thierry Verdier. 2001. "The Economics of Cultural Transmission and the Dynamics of Preferences." *Journal of Economic Theory* pp. pp.298–319.

Blattman, Christopher. 2009. "From Violence to Voting: War and political participation in Uganda." *American Poltiical Science Review* 103:pp.231–47.

Bueno de Mesquita, Bruce. 1981. *The War Trap.* New Haven: Yale University Press.

Bueno de Mesquita, Bruce, James Morrow, Randolph Siverson and Alastair Smith. 1999. "An Institutional Explanation of the Democratic Peace." *American Political Science Review* 93:pp.791–807.

Cavalli-Sforza, Luigi L., Paolo Menozzi and Alberto Piazza. 1994. *The History and Geography of Human Genes.* Princeton, NJ: Princeton University Press.

Coser, Lewis. 1956. *The Functions of Social Conflict.* Vol. mar New York: The Free Press.

de Figueiredo, Rui and Barry Weingast. 1999. *The Rationality of Fear: Political Opportunism and Ethnic Conflict.* Columbia University Press.

Debs, Alexandre and H. E. Goemans. 2010. "Regime Type, the Fate of Leaders, and War." *American Political Science Review* 104:pp.430–45.

Desmet, Klaus, Michel Le Breton, Ignacio Ortuo-Ortn and Shlomo Weber. 2007. "Stability of Nations and Genetic Diversity." *working paper, Universidad Carlos III* .

Downs, Anthony. 1957. *An Economic Theory of Democracy.* New York: Harper.

Doyle, Michael. 1986. "Liberalism and World Politics." *American Political Science Review* 80:pp.1151–69.

Doyle, Michael. 2005. "Three Pillars of the Liberal Peace." *American Political Science Review* 99:pp.463–66.

Elkins, David and Richard Simeon. 1979. "A Cause in Search of its Effect, or What Does Political Culture Explain." *Comparative Politics* 11:pp.127–45.

Fearon, James D. 1995. "Rationalist Explanations for War." *International Organization* Vol. 49(No. 3):pp. 379–414.

Fox, Jonathan. 2008. *A World Survey of Religion and the State.* Cambridge University Press.

Gartzke, Erik. 1998. "Kant We All Just get Along? Opportunity, Willingness, and the Origins of the Democratic Peace." *American Journal of Political Science* 42:pp.1–27.

Gartzke, Erik. 2007. "The Capitalist Peace." *American Journal of Political Science* 51:pp.166–91.

Geertz, Clifford. 1973. *The Interpretation of Cultures.* New York: Basic Books.

Gellner, Ernest. 1983. *Nations and Nationalism.* Cornell University Press.

Gilligan, Michael J., Benjamin J. Pasquale and Cyrus D. Samii. 2011. "Civil War and Social Capital: Behavioral-Game Evidence from Nepal." *SSRN* August 3. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1911969.

Glaeser, Edward L. 2005. "The Political Economy of Hatred." *Quarterly Journal of Economics* pp. pp.45–86.

Halberstam, David. 2007. *The Coldest Winter: America and the Korean War.* The Amateurs Ltd.

Hirschman, Albert O. 1970. *Exit, Voice, and Loyalty.* Cambridge, MA: Harvard University Press.

Huntington, Samuel. 1993. "The Clash of Civilizations." *Foreign Affairs* Vol. 72(No. 3):pp. 22–49.

Huntington, Samuel P. 1996. *The Clash of Civilizations and the Remaking of the World Order.* Touchstone: Rockefeller Center.

Jervis, Robert. 1976. *Perception and Misperception in International Politics.* Princeton, N.J.: Princeton University Press.

Johnston, Alastair Iain. 1995. *Cultural Realism: Strategic Culture and Grand Strategy in Chinese History.* Princeton University Press.

Johnston, Alastair Iain. 1996. *Cultural realism and strategy in Maoist China.* New York : Columbia University Press, The culture of national security : norms and identity in world politics / edited by Peter J. Katzenstein.

Joll, James and Gordon Martel. 2007. *The Origins of the First World War.* Pearson Longman.

Keegan, John. 1999. *The First World War.* Alfred A. Knopf.

Maoz, Zeev and Bruce Russett. 1993. "Normative and structural causes of democratic peace." *American Political Science Review* 87:pp.624–38.

Mearsheimer, John J. 2001. *The Tragedy of Great Power Politics.* New York: Norton.

Meltzer, A. and S. Richard. 1981. "A Rational Theory of the Size of Government." *Journal of Political Economy* pp. pp.914–27.

Moravcsik, Andrew. 1997. "Taking Preferences Seriously: A Liberal Theory of International Politics." *International Organization* 51(4):pp.513–53.

Mueller, John. 1973. *War, Presidents, and Public Opinion.* New York: Wiley.

Nye, Joseph. 2004. *Soft Power: The Means to Success in World Politics.* New York: Public Affairs.

Nye, Joseph S. 1990. *Bound to Lead: The Changing Nature of American Power.* New York: Basic Books.

Oneal, John R. and Bruce D. Russett. 1997. "The Classic Liberals Were Right: Democracy, Interdependence, and Conflict, 1950-1985." *International Studies Quarterly* 41:pp. 267–294.

Owen, John M. 2010. *The Clash of Ideas in World Politics.* Princeton University Press.

Peterson, Timothy M. and Leah Graham. 2011. "Shared Human Rights Norms and Military Conflict." *Journal of Conflict Resolution* 55(2):pp.248–273.

Powell, Robert. 1999. *In the Shadow of Power: States and Strategies in International Politics.* Princeton University Press.

Romer, T. 1975. "Individual welfare, majority voting and the properties of a linear income tax." *Journal of Public Economics* pp. pp.163–8.

Saideman, Stephen. 2001. *The Ties That Divide: Ethnic Politics, Foreign Policy, and International Conflict.* Columbia University Press.

Saideman, Stephen M. and R. William Ayres. 2008. *For Kin and Country: Xenophobia, Nationalism and War.* Columbia University Press.

Schelling, Thomas C. 1960. *The Strategy of Conflict.* Harvard University Press.

Sherif, Muzafer, O. J. Harvey, B. Jack White, William R. Hood and Carolyn W. Sherif. 1961. "Intergroup Conflict and Cooperation: The Robbers Cave Experiment." *University of Oklahoma Book Exchange, Norman* .

Simmel, Georg. 1955. *Conflict and the Web of Group Affiliations.* translated by Kurt Wolff and Reinhardt Bendix. Glencoe, IL: The Free Press.

Simmons, Beth, Frank Dobbin and Geoffrey Garrett. 2006. "Introduction: The International Diffusion of Liberalism." *International Organization* 60:pp.781–810.

Snyder, Jack. 1991. *Myths of Empire.* Cornell University Press.

Snyder, Jack. 2000. *From Voting to Violence: Democratization and Nationalist Conflict.* Norton.

Snyder, Jack and Karen Ballentine. 2001. *Nationalism and the Marketplace of Ideas.* in: Nationalism and Ethnic Conflict, MIT Press.

Spolaore, Enrico and Romain Wacziarg. 2009. "The Diffusion of Development." *Quarterly Journal of Economics* 124:pp.469–529. Available at `http://www.nber.org/papers/w15095`.

Spolaore, Enrico and Romain Wacziarg. 2012. "War and Relatedness." *Working Paper* . April 2010 version available at `http://www.anderson.ucla.edu/faculty_pages/romain.wacziarg/downloads/war.pdf`.

Tabellini, Guido. 2008. "The Scope of Cooperation: Values and Incentives." *Quarterly Journal of Economics* 123:pp.905–950.

Tajfel, Henri and John C. Turner. 1979. *An Integrative Theory of Social Conflict.* In: The Social Psychology of Intergroup Relations, Austin WG, Worchel S (eds). Brooks/Cole: Monterey; pp. 33-47.

van Evera, Stephen. 2001. *Hypotheses on Nationalism and War.* in: Nationalism and Ethnic Conflict, MIT Press.

Walt, Stephen. 1996. *Revolution and War.* Cornell University Press.

Walt, Stephen M. 1987. *The Origins of Alliances.* Cornell Studies in Security Affairs.

Waltz, Kenneth. 1979. *Theory of International Politics.* McGraw Hill, New York.

Wendt, Alexander. 1999. *Social Theory of International Politics.* Cambridge University Press.

A Appendix

A.1 Proof of Proposition (1)

Under what conditions does war occur? Using backward induction, you can see that a revolt by the citiznes can always be avoided as A_E can always offer μ or $\mu + \gamma$ to A_C, which is always weakly better for A_E than a revolt. War occurs if A_E redistributes so much less after a successful war that this benefit outweighs the costs of the war. The expected payoff to A_E after a war is:

$$V_{A_E}^w = \frac{1}{1 + S_B}\left(1 + S_B - \mu\right) + \frac{S_B}{1 + S_B}\left(0\right) - c_A, \tag{3}$$

where I used $S_A = 1$. The first term is the probability of victory for A_E multiplied by the payoff from victory: the total resource less the domestic pressure without B_C present. The second term is the payoff in defeat, while the third term is the cost that always needs to be paid. Simplifying yields:

$$V_{A_E}^w = 1 - \frac{1}{1 + S_B}\mu - c_A. \tag{4}$$

How about the payoff from peace? Note that the maximum amount of transfer B_C is willing to make to avoid a war is c_B, so the maximum amount of peace payoff is:

$$V_{A_E}^p = 1 - \mu - \gamma + c_B. \tag{5}$$

This means that in the subgame perfect equilibrium war will occur if and only if $V_{A_E}^p \leq V_{A_E}^w$ or:

$$c_A + c_B \leq \gamma + \mu \frac{S_B}{1 + S_B},$$

(6)

otherwise peace prevails.

A.2 Tables and Figures

	CULTURALLY CLOSE	CULTURALLY DISTANT
REGIME SAME	peace Britain-France	peace Britain-Portugal
REGIME DIFFERENT	war Britain-Germany	peace Britain-Russia

Table 1: The model's predictions cross-sectionally during the First World War.

	SAME CIV	DIFFERENT CIV
REGIME SAME	peace 1.33%	peace 0.76%
REGIME DIFFERENT	war 2.28%	peace 0.92%

Table 2: The model's predictions and empirics with 'same civilization' (binary): average war probabilities, mean war probability: 0.83%

	SAME REL	DIFFERENT REL
REGIME SAME	peace 1.08%	peace 0.73%
REGIME DIFFERENT	war 1.38%	peace 0.82%

Table 3: The model's predictions and empirics with 'same religion' (binary): average war probabilities, mean war probability: 0.83%

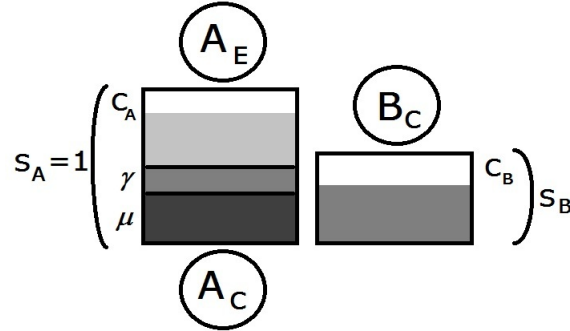
Figure 1: Three actors, A_E, A_C and B_C bargain over a resource worth $1 + S_B$. The benefit of war to A_E is expecting to be able to keep γ more of the (domestic part of the) resource, the cost of war to A_E is c_A destroyed and an international transfer of the size of c_B foregone.

Variable	n	Min	q_1	$\widetilde{x}$	$\bar{x}$	q_3	Max	#NA
hostility	1600718	0	0	0	0.0	0	5	291168
war	1600718	0	0	0	0.0	0	1	291168

Table 4: Summary Statistics

Variable	n	Min	q_1	$\widetilde{x}$	$\bar{x}$	q_3	Max	#NA
absolute polity difference	1412542	0	2	6	7.6	14	20	479344
exactly one democracy	1412542	0	0	0	0.4	1	1	479344
both democratic	1412542	0	0	0	0.1	0	1	479344
abs diff: executive constraint	1417402	0	1	2	8.2	4	6	474484
abs diff: political competition	1413722	0	1	4	9.4	8	9	478164
abs diff: competitiveness of participation	1891886	0	0	2	20.2	4	5	0
abs diff: competitiveness of executive recruitment	1891886	0	0	1	19.6	3	3	0

Table 5: Summary Statistics

Variable	n	Min	q_1	$\widetilde{x}$	$\bar{x}$	q_3	Max	#NA
genetic distance (div)	1346984	0.0	0.0	0.0	0.0	0.0	1.0	544902
genetic distance (minus)	1346984	0.0	0.6	0.7	0.7	0.9	1.0	544902
same religion	1311042	0.0	0.0	0.0	0.5	1.0	1.0	580844
shared religion	732516	0.0	0.1	0.2	0.3	0.5	1.0	1159370
same civilization	1376420	0.0	0.0	0.0	0.2	0.0	1.0	515466

Table 6: Summary Statistics

Variable	n	Min	q_1	$\widetilde{x}$	$\bar{x}$	q_3	Max	#NA
sameregion	1891886	0	0	0	0.2	0	1	0
distance	1891886	0	2223	4381	4515.6	6438	12347	0
contiguity on land	1642080	0	0	0	0.0	0	1	249806
colonial contiguity	1642080	1	6	6	5.9	6	6	249806

Table 7: Summary Statistics

Cultural Proximity	Mean War	Mean Hostility	Mean Regime Mismatch	Mean War when Regime Mismatch	Mean Hostility when Regime Mismatch
1st Quartile	0.09%	0.005	41.43%	0.03%	0.001
2nd Quartile	0.76%	0.038	41.07%	0.79%	0.037
3rd Quartile	0.76%	0.040	39.32%	0.80%	0.041
4th Quartile	1.92%	0.097	39.61%	2.42%	0.107
Grand Total	0.7%	0.037	39.17%	0.94%	0.044

Table 8: Wars and Hostility with respect to Cultural Proximity (measured through genetic proximity)

	gen dist (div)	gen dist (-)	same rel	shared rel	same civ	distance	land contig	same region
genetic distance (div)	1.00	0.15	0.06	0.06	0.14	-0.13	0.11	0.17
genetic distance (minus)	0.15	1.00	0.20	0.23	0.33	-0.46	0.20	0.49
same religion	0.06	0.20	1.00	0.76	0.35	-0.15	0.13	0.35
shared religion	0.06	0.23	0.76	1.00	0.40	-0.18	0.11	0.29
same civ	0.14	0.33	0.35	0.40	1.00	-0.27	0.19	0.41
distance	-0.13	-0.46	-0.15	-0.18	-0.27	1.00	-0.34	-0.56
land contig	0.11	0.20	0.13	0.11	0.19	-0.34	1.00	0.28
same region	0.17	0.49	0.35	0.29	0.41	-0.56	0.28	1.00

Table 9: Pairwise correlations

Cont	Genetic Dist (div)	Genetic Dist (minus)	Same Religion	Shared Religion	Same Civil
After 1900	0.046814	0.000002	0.000963	0.002045	0.00364
Before 1901	-0.021404	0.000002	0.002485	0.00205	0.001995
After 1989	-0.002562	0.000007	0.010252	0.017594	0.002266
1946-89	0.062819	0.000001	-0.001246	-0.004393	-0.000469
1914-45	0.006561	-0.000004	-0.001819	0.004127	0.013367
1880-1913	-0.065371	0.000002	-0.000635	0.000554	0.004532
1849-79	-0.027228	0.000001	0.003175	0.005678	0.000488
1815-48	-0.036038	0.000007	0.01508	0.003628	-0.001907
After 2000	-0.052626	0.002001	0.001108	0.000291	0.003673
1990-96	0.012882	0.028768	0.010795	0.018113	0.001883
1946-62	0.106995	-0.002776	-0.003917	-0.011171	-0.005791

Table 10: Time Breakdown: coefficient on the interaction term of cultural similarity with institutional difference.

OLS, dependent variable: hostility level

cultural similarity: 1 genetic proximity: F_{ST} divided, 2 genetic proximity: minus F_{ST}, 3 same religion, 4 shared religion, 5 same civilization

	Dependent variable:				
	cwhost				
	(1)	(2)	(3)	(4)	(5)
same region	0.031***	0.025***	0.030***	0.032***	0.040***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
distance	−0.0001	0.001***	−0.00003	−0.0002	−0.0004**
	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0002)
contiguity on land	−0.498***	−0.492***	−0.500***	−0.567***	−0.510***
	(0.007)	(0.007)	(0.008)	(0.010)	(0.007)
colonial contiguity	−0.026***	−0.026***	−0.026***	−0.026***	−0.027***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
contiguity	−0.168***	−0.167***	−0.168***	−0.189***	−0.170***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.001)
both democratic	−0.010***	−0.015***	−0.011***	−0.004	−0.004***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)
cultural similarity	−0.231***	0.010***	−0.003**	−0.033***	−0.048***
	(0.011)	(0.004)	(0.001)	(0.004)	(0.002)
abs polity diff	0.002***	−0.005***	0.002***	0.003***	0.002***
	(0.0001)	(0.0003)	(0.0001)	(0.0002)	(0.0001)
cult sim*abs pol diff	0.047***	0.009***	0.001***	0.003***	0.004***
	(0.002)	(0.0003)	(0.0001)	(0.0004)	(0.0002)
Constant	0.463***	0.257***	0.394***	0.007	0.517***
	(0.026)	(0.027)	(0.027)	(0.044)	(0.025)
Observations	1,140,638	1,140,638	1,109,282	609,396	1,167,588
R^2	0.069	0.069	0.068	0.080	0.068
Adjusted R^2	0.069	0.069	0.068	0.080	0.068

Note:	*p<0.1; **p<0.05; ***p<0.01

Table 11: OLS estimates; controlling for year, peace years, major power 1, major power 2, bilateral imports 1, bilateral imports 2, ally (entente), same region, distance, land contiguity, colonial contiguity, contiguity, both democratic; dependent variable: hostility level

Country fixed effects, dependent variable: hostility level
cultural similarity: 1 genetic proximity: F_{ST} divided, 2 genetic proximity: minus F_{ST}, 3 same religion, 4 shared religion, 5 same civilization

	Dependent variable:				
	cwhost				
	OLS				
	(1)	(2)	(3)	(4)	(5)
both democracy	−0.040***	−0.070***	−0.039***	−0.036***	−0.041***
	(0.002)	(0.004)	(0.002)	(0.002)	(0.002)
democ diff	−0.001***	−0.002***	−0.001***	−0.011***	−0.0001
	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0001)
cultural prox * inst diff	0.007***	0.007***	0.003***	0.00000***	0.056***
	(0.0001)	(0.0003)	(0.0001)	(0.00000)	(0.001)
Constant	−2.058***	−2.636***	−2.015***	−2.063***	−1.959***
	(0.033)	(0.055)	(0.034)	(0.033)	(0.033)
Observations	1,167,588	609,396	1,109,282	1,140,638	1,140,638
R^2	0.049	0.061	0.048	0.050	0.048
Adjusted R^2	0.048	0.060	0.047	0.049	0.048
Note:					*$p<0.10$; **$p<0.05$; ***$p<0.01$

Table 12: controlling for year, peace years, major power 1, major power 2, bilateral imports 1, bilateral imports 2, ally (entente), same region, distance, land contiguity, colonial contiguity, contiguity, both democratic

Logit Regressions, dependent variable: logit war
cultural similarity: 1 genetic proximity: F_{ST} divided, 2 genetic proximity: minus F_{ST}, 3 same religion, 4 shared religion, 5 same civilization

	Dependent variable:				
	logit_war				
	(1)	(2)	(3)	(4)	(5)
same region	0.591***	0.342***	0.536***	0.675***	0.613***
	(0.027)	(0.028)	(0.031)	(0.032)	(0.028)
distance	−0.103***	−0.052***	−0.102***	−0.053***	−0.101***
	(0.007)	(0.007)	(0.007)	(0.008)	(0.007)
contiguity on land	−1.468***	−1.405***	−1.453***	−1.327***	−1.506***
	(0.061)	(0.062)	(0.062)	(0.066)	(0.062)
colonial contiguity	−0.090***	−0.087***	−0.089***	−0.047***	−0.093***
	(0.009)	(0.009)	(0.009)	(0.010)	(0.009)
contiguity	−0.595***	−0.602***	−0.595***	−0.581***	−0.608***
	(0.013)	(0.013)	(0.013)	(0.014)	(0.013)
both democratic	−1.042***	−1.135***	−1.084***	−0.978***	−1.039***
	(0.066)	(0.066)	(0.067)	(0.081)	(0.066)
cultural similarity	−0.855***	1.545***	0.167***	−0.527***	−0.090**
	(0.233)	(0.123)	(0.040)	(0.085)	(0.039)
abs polity diff	0.035***	−0.033***	0.040***	0.037***	0.036***
	(0.002)	(0.009)	(0.003)	(0.003)	(0.002)
cult sim*abs pol diff	0.147***	0.080***	−0.005	0.031***	0.007*
	(0.019)	(0.011)	(0.003)	(0.007)	(0.004)
Constant	−7.786***	−10.857***	−8.405***	−8.394***	−7.595***
	(0.541)	(0.571)	(0.550)	(0.648)	(0.546)
Observations	1,140,638	1,140,638	1,109,282	609,396	1,167,588
Log likelihood	−44,576.250	−44,226.330	−44,234.580	−32,524.040	−45,216.440
Akaike Inf. Crit.	89,186.510	88,486.660	88,503.160	65,082.080	90,466.880

Note:	*p<0.1; **p<0.05; ***p<0.01

Table 13: controlling for year, peace years, major power 1, major power 2, bilateral imports 1, bilateral imports 2, ally (entente), same region, distance, land contiguity, colonial contiguity, contiguity, both democratic