Domestic Political Survival and International Conflict: Is Democracy Good for Peace?

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Abstract

Is democracy good for peace? The median voter wants his leader to coordinate his action with the leader of the opposing country. Hence, if conflict is sufficiently costly to the median voter, full democracies are less aggressive, particularly against other full democracies, than dictatorships where the wishes of the citizens play no role. A political regime where a leader can stay in power when he appeases an aggressive minority or the median citizen is a limited democracy. We show limited democracies are more aggressive than full democracies and dictatorships. The implications are supported by the data, particularly before World War II. Our first empirical finding is that a pair of limited democracies is more likely to be involved in a militarized dispute than any other pair of political regimes. Our second finding is that a pair of full democracies is more peaceful than all other pairs of regime types. Our theoretical results and our statistical study of conflict in the nineteenth and twentieth centuries offer the following answer to our question: *full* democratization advances *peace* but *limited* democratization advances *war*.

1 Introduction

The idea that democracy promotes peace has a long history. In the eighteenth century, Thomas Paine argued that monarchs go to war to enrich themselves, but the population pays the cost: "What inducement has the farmer, while following the plough, to lay aside his peaceful pursuit, and go to war with the farmer of another country?" (Paine [44] p. 169). Immanuel Kant [33] agreed: "if the consent of the citizens is required in order to decide that war should be declared, nothing is more natural than that they would be very cautious in commencing such a poor game." Many expected that a better system of republican government would align the incentives of leaders with the preferences of the population and lead to lasting peace. However, even in the eighteenth century this "democratic peace" hypothesis was controversial, with Alexander Hamilton and others arguing against it (Kissinger [34], p. 33). After all, weren't the Greek city states involved in many wars?

A large body of empirical work has investigated the democratic peace hypothesis. Democracies often fight wars with non-democracies, but not with other democracies (Babst [5], Levy [35] and Maoz and Russett [40]). Levy [35] claims that "This absence of war between democracies comes as close as anything we have to an

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empirical law in international relations." Commentators and politicians of all ideological persuasions have invoked this empirical law. In his 1994 State of the Union address, President Clinton [15] used the democratic peace hypothesis to justify promoting democratization around the world. Currently, the hypothesis is popular among neoconservatives (see Kagan and Kristol [32]). It provides a justification for U.S. policy to "seek and support the growth of democratic movements and institutions in every nation and culture" (President Bush's second inaugural address). But after the breakup of Yugoslavia, democratic reforms were followed by war, not peace. The "realist" school argues that democratic reforms will not lead to peace in the Middle East.[1] Clearly, we need a deeper theoretical and empirical understanding of the relationship between political institutions and war.

If wars are started by greedy leaders without regard for the suffering of their population, then democratization should indeed promote peace. However, there is a different explanation for why wars are fought. Thucydides [54] argued that the Peloponessan War was caused by "the growth of Athenian power and the fear which this caused in Sparta".[2] Sparta went to war not because its leaders were greedy but because they feared Athens. It is often argued that World War I was caused by Britain's and Germany's mutual distrust of each other (Wainstein [55] and Sontag [52]). That mutual fear and distrust can cause wars is *Schelling's dilemma* (Schelling [50]). Schelling's dilemma implies a subtle relationship between democracy and peace. There seems to be no a priori reason why the population should be less fearful that their leader. If the population would suffer greatly from a defensive war fought on their own territory, then they may support a preemptive strike to eliminate the threat. Democratic reforms may not promote peace.

We study the relationship between political institutions and war when *both* greed *and* fear can trigger conflict. There are two countries, each with a heterogeneous population. Whether the leader of a country can stay in power depends on three factors: the preferences of his citizens, the political system, and the interaction between the two countries. At one extreme of the political spectrum, "hawkish" citizens always want their leader to be aggressive. (Aggression may represent all-out conflict, or a less dramatic act such as the firing of a missile.) At the opposite extreme, "dovish" citizens are unconditional pacifists who want their leader to behave peacefully, regardless of how the other country behaves. The distinction between hawks and doves may be ideological - people support or oppose aggression on principle. Or, as emphasized by Kant [33] and Paine [44], it may depend on whether the individual personally expects to gain or lose from a conflict.

By definition, a dove can never support a war, even if his own country is attacked. A natural assumption is that such unconditional pacifists are relatively rare. Under this assumption, our formal model has the property that a leader's probability of staying in power is at a minimum after losing a war (an outcome only the doves find acceptable). Clearly, military defeat or humiliation at the hands of foreigners often has domestic repercussions. During World War I, the German leaders believed a victory would satisfy their population, but a peace agreement would lead to their demise (Craig [16], p. 382). When it became clear than Germany would lose, Kaiser Wilhelm left for permanent exile in the Netherlands, and Ludendorff fled to Sweden (Asprey [4], p. 486-487, and p. 491).

[1] "I don't think in any reasonable time frame the objective of democratizing the Middle East can be successful. If you can do it, fine, but I don't think you can, and in the process if trying to do it, you can make the Middle East a lot worse." (Brent Scowcroft [49]).

[2] A famous passage describes how the Spartans are spurred on by the Corinthians: "You Spartans are the only people in Hellas who wait calmly on events, relying on your defense not on action but on making people think you will act. You alone do nothing in the early stages to prevent an enemy's expansion; you wait till the enemy has doubled his strength. Certainly you used to have the reputation of being safe and sure enough; now one wonders if this reputation was deserved.....The Athenians...live close to you, yet you still do not appear to notice them; instead of going out to meet them, you prefer to stand still and wait till you are attacked, thus hazarding everything by fighting with opponents who have grown far stronger than they were originally" (Thucydides (1972, Book I, 69)). See Russett [48] for a comparison of the political theories of Kant and Thucydides.

We assume the *median* citizen is neither hawkish nor dovish. He is a "normal" type who wants his leader to be aggressive if the foreign leader is aggressive, but peaceful otherwise. Thus, the median citizen may support aggression out of fear, but not out of greed. If both countries coexist peacefully, then the median citizen is happy. This seems to be the intuition behind the "democratic peace" hypothesis, discussed above. However, if the median citizen thinks that the foreign leader is an aggressive hawk, then he wants his own leader to respond in kind, so democratically elected leaders may lose support by being too passive (e.g., Neville Chamberlain resigned after his appeasement of Hitler, but Margaret Thatcher won re-election after the successful Falklands War).

Following de Mesquita et. al. (1999), a political system is characterized by the *critical level of support* the leader needs to survive. Each leader derives a private cost and benefit from a conflict, but he also values staying in power. This model is simple enough to be tractable, but rich enough to generate three kinds of regimes. In a *dictatorship* the leader can never lose power, and the citizens' opinions do not matter. In a *full democracy*, the leader needs the support of the median voter to stay in power. He will lose power if he does not respond aggressively to aggression, but also if he is aggressive without cause. In the third type of regime, the leader can stay in power as long as he has the support of the hawks. We call such countries *limited democracies*. The leader of a limited democracy cannot dismiss his citizens' opinions. By assumption, there are more hawks than doves, which creates a *hawkish bias*. Therefore, our theoretical model predicts that limited democracies will be the most aggressive regime type. In order to maintain the support of the hawks, the leader's must look strong in the eyes of his population. Argentina was not a full democracy during the Falklands War, neither was Germany during World War I, but their leaders could not remain in power after military defeat.

Our model also answers the question of when a full democracy is the *least* aggressive regime. *If foreigners are perceived as aggressive*, then the median citizen wants his own leader to be aggressive. In this case, the leader of the full democracy will behave *more* hawkishly than a dictator (who, by definition, cares nothing about his citizens' opinions). For example, the democratically elected Hamas might destabilize the Middle East, and the democratically elected George W. Bush initiated a major conflict in Iraq. On the other hand, *if foreigners are perceived as peaceful*, then the full democracy will be the *least* aggressive regime type. For this reason, our model predicts a "democratic peace" between democracies. In general, if the neighboring countries are peaceful, changing a *dictatorship* into a *full democracy* is predicted to promote peace. But this version of the democratic peace hypothesis comes with two qualifications. First, in regions where conflict is common, full democracies will be more aggressive than dictatorships. Second, even in a peaceful region, the *limited democracy* is the *most* hawkish regime type, so changing a dictatorship into a *limited* democracy can promote war. In general, we predict that the relationship between level of democracy and conflict is non-monotonic, with limited democracies being most aggressive.

We use the Correlates of War data to measure conflict, and the Polity data to classify regimes as dictatorships, limited democracies or full democracies. We define a conflict within a dyad to be a *militarized dispute*. These include not only wars, but also other aggressive acts such as the testing of a bomb, which fits our broad interpretation of aggression. Most other empirical studies of conflicts use the Correlates of War data, and many take militarized disputes as their unit of analysis, as it maximizes the amount of data available. Also, most empirical studies use Polity scores to rank regimes in terms of their level of democratic development.

Our two main empirical findings are consistent with the theoretical predictions. First, between 1816 and 2000, a dyad of *two limited democracies* is *more* likely to experience a militarized dispute than *any* other

dyad of regime types (including "mixed" dyads, where the two countries have different regime types). All comparisons are significant at the 1% level. Second, a dyad of *two full democracies* is *less* likely to experience a militarized dispute than *any* other dyad of regime types (again, including mixed dyads, all comparisons are significant at the 1% level). The results are robust to dividing up regimes into three categories along other lines using the Polity scores. They are also robust to alternative empirical specifications. In our most conservative estimates, the likelihood that a dyad engages in a militarized dispute increases by 36% when a dyad changes from a pair of dictatorships to a pair of limited democracies, and by 73% when it changes from a dyad of full democracies to a pair of limited democracies.

The data set reveals that many wars involve limited democracies. In the nineteenth century, Britain had a Parliament, but even after the Great Reform Act of 1832, only about 200,000 people were allowed to vote. Those who owned property in multiple constituencies could vote multiple times.[3] Hence, Britain is classified as a limited democracy for 58 years, and becomes a full democracy only after 1879. France, Italy, Spain and Germany are also limited democracies at key points in the nineteenth and early twentieth centuries. These countries, together with Russia and the Ottoman Empire, were involved in many military disputes in Europe and throughout the world. For much of the nineteenth century, Britain and Russia had many skirmishes and outright wars in the "Great Game" for domination of Central Asia (see Hopkirk [28]). France is a limited democracy at the time of the Belgian War of Independence, and at the time of the Franco-Prussian War. France's successful support of Belgium does not result in the demise of King Louis-Philippe, but France's loss against Prussia forces Napoleon III from power (which agrees with our theoretical model's assumptions about limited democracy). France and Mexico were both limited democracies when they fought the "Pastry War" 1838-1839, ostensibly over the looting of a French chef's shop in Mexico City, but more significantly over the repayment of outstanding debt. Eventually Mexico was forced to repay, which triggered a series of domestic crises that led to the overthrow of Mexico's President Bustamente. France's King Louis-Philippe, on the other hand, remained in power (Frost [20], p. 170-173).

The data, robustness checks and a wealth of examples provide considerable support for the prediction that a dyad of limited democracies is the most conflict prone. But there is also strong empirical support for the "democratic peace" hypothesis that a dyad of full democracies is the most peaceful. There is a tension between these two findings. The democratic peace hypothesis has persuaded policy makers that democratization of dictatorships, for example in the Middle East, will lead to peace (see, for example, Bush [13]). But our theory and data warn that intervention may inadvertently increase the risk of war by replacing dictatorships with limited democracies.

We conduct various other robustness checks to our empirical analysis. A more nuanced picture emerges when we split the data into sub-samples. Before World War II, there is unambiguous support for our theoretical prediction that limited democracies are the most conflict-prone, but there is less support for this relationship after the war. Very few countries are classified as limited democracies after 1945, and full democracies have very stable Polity scores. Hence, it is hard to test our theory for this period, as there is both less data and less variation in the data. Also, during the Cold War, the threat of nuclear war largely eliminated the wars that occurred between the great European powers in the nineteenth century (see Hobsbawm [27]). According to Gaddis ([21], p 262), "because nuclear weapons could be used in any great power war, no such conflict took place." We test if the weakening and demise of the Soviet Union brings a return to the pre-1945 patterns. For the post-1984 period, we again find significant support for the

[3] The infamous "rotten borough" of Old Sarum sent two representatives to Parliament. In 1831, it had only eleven eligible voters, all of whom were landowners living elsewhere (Paine [44]).

prediction that a dyad of limited democracies is the most prone to conflict. We obtain weaker results for the post-1989 period, because the sample size is halved. This preliminary evidence strikes a cautionary note for contemporary policy: the current international system may be similar to the pre World War II structure. As we have already noted, the lessons of the pre World War II period for democratization are decidedly mixed.

We are not the first to notice a complex relationship between democratization and peace. A prominent hypothesis due to Mansfield and Snyder [38] is that the *transition* from dictatorship to limited democracy fuels nationalism, which increases the likelihood of war. Our theoretical model predicts that limited democracies, young *and* old, are more aggressive than all other political regimes, due to their inherent hawkish bias. Mansfield and Snyder [38] find empirical support for their hypothesis by studying countries that made a recent transition from dictatorship to limited democracy. To distinguish their dynamic theory from our theory, we incorporate their transitional dummy into our baseline model. Our results that a dyad of limited (resp. full) democracies is the most (resp. least) conflict-prone are robust to the inclusion of the transition measure. In our baseline model, the non-monotonic relationship between democracy and peace persists even when transitions from dictatorship to full democracy are controlled for. For alternative definitions of regime types, both our theory and Mansfield and Snyder's [38] hypothesis get some support.

Some theoretical work has investigated the relationship between political systems and war. Jackson and Morelli [30] consider a model where the political leader's costs and benefits from a war may differ from the population at large. This model formalizes the intuition that countries go to war if their leaders preferences are sufficiently biased, i.e., different from the population at large. Two unbiased leaders would prefer to sign a peace treaty (the "unbiased peace"). Levy and Razin [36] study the willingness to make concessions under different political systems. In their model, an uninformed population is more likely than an informed autocrat to favor concessions when the net benefit to this is low. Their model predicts that the probability of peace is higher in a democratic dyad than in any other. Bueno de Mesquita et al. [10] allow a political leader to buy off key supporters in the event that their foreign policy fails. A dictator, who has to buy off fewer key supporters, is hence more likely to go to war than a democratically elected leader who faces rejection by the electorate should he fail. On the other hand, domestic political concerns may force a leader to "gamble for resurrection" and fight or continue a war to avoid being replaced (Downs and Rocke [17], Bueno de Mesquita and Silverson [9] and Hess and Orphanides [26]). This is reminiscent of the aggressive behavior of full democracies that arises in our model when the median voter is sufficiently fearful. Fearon [18] studies a war of attrition where a leader suffers "audience costs" if he backs down. He suggests that audience costs are higher in democracies and hence elected leaders can commit to fight and communicate their resolve more easily. Hence, democracies may be less conflict-prone that dictatorships where the leader has less scope to credibly signal his resolve. None of these models appear to predict a non-monotonic relationship between democracy and war.

2 Theory

2.1 Basic Assumptions

There are two countries, $i \in \{1, 2\}$. Each country i has a leader, leader i, and a continuum of citizens. The two leaders play a game which is similar to the arms race game of Baliga and Sjöström [6]. Each leader can choose an *aggressive* hawkish strategy (A) or a *peaceful* dovish strategy (P). The aggressive strategy may represent building new weapons, firing a missile, preparing for war, or attacking the other country. The

peaceful strategy means refraining from such activities. Each citizen has a *cost type*, a cost of aggression c, which is drawn from a distribution F with support $[0, \bar{c}]$. We assume F is continuous, strictly increasing and concave. The *median citizen*'s cost type is denoted c^{med}, i.e., $F(c^{med}) = 1/2$. To focus on the link between political institutions and conflict, we assume there is no innate difference between the two countries, so the distribution F is the same in both. In the same spirit, we assume there is in principle no innate difference between the leader of a country and a citizen: the leader has a cost type c which is also drawn from the same distribution F. This allows us to study the pure impact of political institutions and the incentive to go to war without weighing the case for or against any one system of government. The leader's cost type is his private information. Everything else in the game is common knowledge.

The payoff for a citizen of country i with cost type c depends on whether the two leaders are aggressive or peaceful. It is given by the following matrix, where the row represents the choice of leader i and the column represents the choice of leader j:

$$\begin{array}{cc|cc} & & A & P \\ A & & -c & \mu - c \\ P & & -d & 0 \end{array} \tag{1}$$

The parameter μ represents the gain from being on the offensive and the parameter d is the loss from being on the defensive. For example, if the hawkish strategy is to attack, then μ represents the "first mover advantage" enjoyed by the aggressor and d is the opponent's cost of defending itself against a surprise attack. If aggression represents the successful firing of a missile, μ represents the utility gain from a bargaining advantage in some international negotiation or even from a bribe while d is the corresponding loss to the opponent.

After the two leaders have chosen their strategies, each citizen decides whether or not to support his leader. A citizen of country i backs leader i if and only if leader i's action was a best-response to leader j's action *according to the citizen's preferences* (as given by (1)). Each citizen sees himself as a "principal" and the leader as his "agent". He rewards the leader with his support if he takes the action the citizen himself would have taken in the same circumstances and punishes him by withholding his support otherwise. Leader i needs the backing of at least a fraction $\sigma_i^* \leq 1/2$ of his population in order to stay in power.[4] We can use σ_i^* to study circumstances where the leader needs the support of a large coalition of agents to survive in power and also those where he can get by with very little support. In fact, we will show below that this simple variable generates the three types of political regimes we study in this paper. The value of staying in power is $R > 0$, which we refer to as the *rents from office*. To simplify the exposition, we assume $R < \mu$. This assumption guarantees that the most aggressive leader (cost type $c = 0$) always prefers to choose H, even if this means he risks losing power. Removing this assumption will not change our main results, but it would introduce the possibility of multiple equilibria, without adding any insights. Whether a citizen supports his leader or not depends on his cost type and the action profile that was played. We make the following assumption about the cost types:

Assumption 1. We assume

$$0 < \mu < c^{med} < d < \bar{c}. \tag{2}$$

A citizen of cost type c is a *hawkish type* if $c < \mu$. For the hawkish type, A is a dominant strategy, because $\mu - c > 0$ and $-c > -d$ (using (2)). Therefore, as $\mu > c$, a hawkish type is greedy and gains from a war even if the opponent is passive. As $-c > -d$, he also loses if the opponent acquires a first-mover advantage

[4] The case where the leader needs a *supermajority* $\sigma_i^* > 1/2$ to stay in power is not very interesting and is not considered here.

in a war. We can think of hawkish types as the members of an elite who have a lot to lose in a war started by the opponent and a lot to gain from starting one themselves. Hence, a hawk always wants his leader to be aggressive. The fraction of citizens who are hawks is $F(\mu)$. A citizen of cost type c is a *dovish type* if $c > d$. For the dovish type, P is a dominant strategy, because $-d > -c$ and $0 > \mu - c$ (using (2)). Therefore, as $-d > -c$, a dovish type always suffers the cost of war, even one where the opponent has a first-mover advantage. As $c > d > \mu$, a dovish type also does not gain from a war that his leader starts unnecessarily. Hence, dovish citizens always lose from a war economically and want their leader to be a peaceful. The fraction of citizens who are doves is $1 - F(d)$.

A citizen of cost type c is a *normal type* if $\mu < c < d$. The normal type is neither hawkish nor dovish: he thinks the best response to A is A, and the best response to P is P. The fraction of citizens who are normal types is $F(d) - F(\mu)$. For the normal type, there is no dominant strategy: the game is akin to a stag-hunt game, where the best response is to match the action of the opponent. Assumption 1 implies that the median citizen is a normal type. Thus, the representative (median) citizen does not want to initiate aggression if the opponent is peaceful, which is consistent with the democratic peace hypothesis. However, if he thinks the other leader is aggressive, then he wants his own leader to be aggressive, which is the basis for the fear dynamic embodied in Schelling's dilemma. We can think of the median citizen as the leader of a mob whose support depends on the actions of the leader against the opponent. The mob supports aggression if it is justified by the opponent's aggression but punishes it if it is unwarranted. Hence, the views and the support of the mob can be swayed but the views of hawks and doves cannot.

Without hawkish types, there would be an equilibrium where P is chosen with probability one. But this rules out both greed and fear generated by the possibility of an opponent's greed. Therefore, in order to study the impact of both greed and fear, we need $F(\mu) > 0$. On the other hand, dovish types do not play any role in Schelling's dilemma, and in fact Baliga and Sjöström [6] assumed they did not exist ($1 - F(d) = 0$). Here we will weaken that assumption to the following:

Assumption 2. Greed is more prevalent than pacifism: $F(\mu) > 1 - F(d)$.

If leader i takes the aggressive action, then he is definitely supported by the hawks, but he is supported by the normal types only if the opponent is also aggressive. If leader i takes the peaceful action, then he is definitely supported by the doves, but he is supported by the normal types only if the opponent is also peaceful. The following table shows the types of citizens who support leader i, and in parenthesis their fraction of the population. The row represents the choice of leader i and the column represents the choice of the opponent, leader j.

	A	P
A	Hawks and Normal $[F(d)]$	Hawks $[F(\mu)]$
P	Doves $[1 - F(d)]$	Doves and Normal $[1 - F(\mu)]$

(3)

Assumptions 1 and 2 imply

$$1 - F(d) < F(\mu) < \frac{1}{2} < 1 - F(\mu) < F(d) \tag{4}$$

In order to maximize his support, the leader should match the opponent's behavior, since this is what the median citizen wants. Deviations lead to loss of support. If leader i responds to an aggressive opponent by choosing P instead of A, then he suffers a net loss of support equal to $F(d) - (1 - F(d)) > 0$. On the other hand, if leader i responds to a peaceful opponent by choosing A instead of P, then he suffers a net loss of

$(1 - F(\mu)) - F(\mu) > 0$. Assumption 2 implies

$$F(d) - (1 - F(d)) > (1 - F(\mu)) - F(\mu).$$

Thus, taking the "wrong" action when the opponent is hawkish is more costly, in terms of loss of support, than taking the "wrong" action when the opponent is dovish. Leader i's support reaches a minimum, $1 - F(d)$, if he responds dovishly to a hawk. We gave several historical examples in the Introduction that fit this assumption. It is consistent with Schelling's analysis [50], which emphasizes fear as a driving motive for action.

From (3), whenever the median citizen and the mob of normal types support the leader, so do either the hawks or the doves. From (4), the leader then has the support of at least half the population. Hence, as $\sigma_i^* \leq 1/2$, the support of the mob is sufficient to guarantee survival in any political regime. If it is also necessary, country i is classified as a *full democracy*. In this case, we must have, $F(\mu) < \sigma_i^* \leq 1/2$. If the leader miscoordinates with the opponent, then his support is either $F(\mu)$ or $1 - F(d)$ (see (3)), and in either case, he will be ousted. Since the median voter is a normal type, leader i enjoys rents from office if and only if he matches the action of the opponent. Therefore, leader i's payoff matrix is

$$\begin{array}{ccc} & A & P \\ A & R - c & \mu - c \\ P & -d & R \end{array} \tag{5}$$

where c is his cost type.

If the leader can also hold on to power when the hawkish elite support him, then country i is classified as a *limited democracy*. In this case, we must have $1 - F(d) < \sigma_i^* \leq F(\mu)$. Notice that $1 - F(d) < \sigma_i^*$ means leader i loses power if only the *doves* support him, while $F(\mu) \geq \sigma_i^*$ means leader i stays in power if only the *hawks* support him. He also survives in power when the mob support him. Hence, the only case where he will not enjoy rents from office is if he is dovish and his opponent is hawkish. Therefore, leader i's payoff matrix is

$$\begin{array}{ccc} & A & P \\ A & R - c & R + \mu - c \\ P & -d & R \end{array} \tag{6}$$

where c is his cost type.

Finally, if $\sigma_i^* \leq 1 - F(d)$, then leader i can never lose power, since his support is never less than $1 - F(d)$. Therefore, if $\sigma_i^* \leq 1 - F(d)$ then country i is classified as a *dictatorship* or *autocracy*. In a dictatorship, domestic political survival is guaranteed, and domestic politics plays no role in the leader's decision-making. Hence, the leader's payoff function is simply given by (1), where c is his cost type.

2.2 Equilibrium

Let country i's *regime type* be denoted $T_i \in \{De, Di, Li\}$, corresponding to full democracy, dictatorship and limited democracy. Leader i knows the regime type of country j but does not know the cost type of leader j. Leader i's optimal decision depends on his own cost type, his own regime type, and the probability he assigns to the event that leader j plays A.

First, if country i is a dictatorship, then the payoffs of leader i are given by (1). Hence, if the probability

that leader j plays A is p_j, then leader i prefers A if

$$-c_i + (1 - p_j)\mu \geq -dp_j$$

which is true if and only if $c_i \leq \mu + (d - \mu)\, p_j$. Therefore, the probability that leader i chooses A is $p_i = h(p_j, Di)$, where

$$h(p_j, Di) \equiv F\left(\mu + (d - \mu)\, p_j\right) \tag{7}$$

The function $h(\cdot, Di)$ can be thought of as the best response function for the leader of an autocratic country.

Second, in a limited democracy, leader i's payoffs are given by (6). Hence, if the probability that leader j plays A is p_j, then leader i prefers A if

$$R - c_i + (1 - p_j)\mu \geq -p_j d + (1 - p_j)R$$

which is true if and only if $c_i \leq \mu + p_j\left(d + R - \mu\right)$. Therefore, the probability that the leader of country i chooses A is $p_i = h(p_j, Li)$, where

$$h(p_j, Li) \equiv F\left(\mu + p_j\left(d + R - \mu\right)\right) \tag{8}$$

This is the best response function for the leader of a limited democracy.

Third, in a full democracy, leader i's payoffs are given by (5). If leader j chooses A with probability p_j, then leader i prefers A if

$$p_j R + (1 - p_j)\mu - c_i \geq -p_j d + (1 - p_j)R \tag{9}$$

which is true if and only if $c_i \leq (2R + d - \mu)\, p_j + \mu - R$. Therefore, the probability that leader i chooses A is $p_i = h(p_j, De)$, where

$$h(p_j, De) \equiv F\left((2R + d - \mu)\, p_j + \mu - R\right) \tag{10}$$

This is the best response function for the leader of a full democracy.

Since F is strictly increasing and concave, the best-response functions are also increasing and concave. Concavity implies that the two leader's best response functions $h(p_2, T_1)$ and $h(p_1, T_2)$ intersect only once. The point of intersection is the unique equilibrium. In equilibrium, each leader chooses to be aggressive (A) with a probability strictly greater than zero, as he may be a greedy type, and strictly less than one, as he may be a pacifist. Finally, as the best response functions are strictly increasing, the conflict game is one of strategic complements. This is because a leader who is a normal type becomes aggressive as when he is sufficiently fearful the opponent is aggressive. Moreover, as a normal type with cost c becomes aggressive, this triggers yet more fear as now both greedy and normal types may attack. Higher and higher cost types may now become aggressive and fear feeds on itself. This process is at the heart of Schelling's dilemma and it is a fundamental force in our model. Changing the regime type in a country exasperates or dampens the marginal incentives to become aggressive for a given cost type. This change is reflected in the leader's best response function. This allows us to the other fundamental force in the our model, the impact of political institutions on incentives for aggression.

For any given $p_j > 0$, $h(p_j, Li) > h(p_j, Di)$. Thus, the probability that leader i is aggressive is strictly bigger if country i is a limited democracy than if it a dictatorship. The incentive to choose be aggressive is higher in a limited democracy, because if the opponent is aggressive, then the leader of a limited democracy cannot stay in power if he is peaceful, but a dictator can. Of course, p_j has to be determined

in equilibrium. Strategic complementarity implies that replacing a dictatorship in country i with a limited democracy increases the equilibrium levels of both p_i and p_j, whatever the regime type in country j. This can be seen in Figure 1, where country j's probability of playing A is on the horizontal axis and country i's on the vertical axis (all Figures are at the end of the document). Suppose initially, country j's regime type is $T_i \in \{De, Di, Li\}$, and country i's regime type is dictatorship. The equilibrium is the intersection of $h(p_i, Di)$ and $h(p_j, T_j)$. Changing country i's regime type from dictatorship to limited democracy shifts the best response function from $h(p_i, Di)$ to $h(p_i, Li)$, which increases both p_1 and p_2.

Similarly, for any given $p_j < 1$, the probability that leader i is aggressive is strictly bigger if country i is a limited democracy than if it a full democracy. The incentive to choose A is higher in a limited democracy, because if the opponent chooses P, then the leader of a limited democracy can stay in power even if he plays A, but the fully democratic leader cannot. Strategic complementarity implies that replacing a full democracy in country i with a limited democracy reduces the equilibrium levels of both p_i and p_j, whatever the regime type in country j. Again, this can be seen in Figure 1 (the best response function from $h(p_i, De)$ to $h(p_i, Li)$).

We summarize these arguments as follows:

Proposition 1 *Replacing any other regime type in country i with a limited democracy increases the equilibrium probability of conflict, whatever the regime type in country j.*

Next, consider the *democratic peace* hypothesis: are dyads of full democracies more peaceful than all other dyads of regime types? Our model does not give an unambiguous answer. Facing a hawkish opponent, there is a hawkish bias in full democracies, because the leader only survives if he responds to aggression with aggression. But facing a dovish opponent, there is a dovish bias in full democracies, because the leader only survives if he responds to P with P. If the opponent is equally likely to choose A and P, $p_j = 1/2$, then the two biases cancel out. If $p_j < 1/2$ then the dovish bias dominates and the leader of the full democracy is more likely to choose P than than a dictator. If $p_j > 1/2$ then the hawkish bias dominates and the leader of the full democracy is more likely to choose A than than a dictator. (Figure 1 also illustrates these properties.)

However, when the representative citizen has a relatively high cost of going to war, the equilibrium probabilities of playing A against a dictatorship are less than one half, and a dyad of full democracies is more peaceful than all other dyad of dictatorships. But while Levy [35] claims that a pair of democracies is particularly peaceful, he does not suggest that a democracy is peaceful when it faces another type of political regime. In fact, there are many examples ranging from the Peloponnesian War to the Falklands conflict where democracies and non-democracies fought wars. And the United States seems to be particularly warlike contemporary democracy when it faces other types of regimes. In fact, in our model, even when the median voter is relatively peaceful, full democracies can be more aggressive than dictatorships when facing a *limited* democracy. The reason is that, as limited democracies are the most aggressive political regime, their probability of aggression can be greater than 1/2. But in that case, we know that a full democracy is more aggressive that a dictatorship as their hawkish bias is stronger than their dovish bias. Our main findings are summarized in the following proposition (the proof is in the Appendix):

Proposition 2 *If $c^{med} > (d+\mu)/2$, replacing a dictatorship in country i with a full democracy decreases the equilibrium level of conflict, if country j is either a dictatorship or a full democracy. But if country j is a limited democracy, replacing a dictatorship in country i with a full democracy decreases the equilibrium level of conflict if and only if $c^{med} > \left(1 - F\left(\frac{d+\mu}{2}\right)\right)\mu + F\left(\frac{d+\mu}{2}\right)(d+R)$.*

Conversely, if the representative citizen's cost of going to war is low, then the equilibrium probabilities of playing A will be bigger than one half, and the democratic peace hypothesis will not hold. In the latter case, a full democracy is a "Hamas democracy" that increases the probability of conflict. We summarize our results as follows (the proof is in the Appendix):

Proposition 3 *If $c^{med} < (d+\mu)/2$, replacing a dictatorship in country i with a full democracy increases the equilibrium level of conflict, whatever the regime type in country j.*

3 Empirical Analysis

We now test two of the implications of the model using data on conflict and measures of democracy. The *probability of conflict between country i and country j*, w_{ij}, is the probability that one or other country in a dyad is aggressive:

$$w_{ij} = p_i + (1 - p_i)p_j$$

where p_i and p_j are the equilibrium probabilities of aggression for country i and j respectively. Notice that w_{ij} is increasing in p_i and p_j. Hence, given the prediction of our model that a dyad of limited democracies is more conflict-prone that any other pair of regime types (i.e. p_i and p_j are higher than in any other regime pair), w_{ij} is highest in a dyad of limited democracies, other things being equal. Our model is also consistent with the democratic peace hypothesis because, when the median voter is sufficiently peaceful, p_i and p_j and hence w_{ij} are lower for a dyad of limited democracies than for any other pairs of regime types. But, there are also cases where full democracies are more aggressive than dictatorships, even when facing another democracy. We study whether dyads of limited democracies are the most aggressive and whether dyads of full democracies are in fact the least aggressive in this part of the paper.

3.1 Data

3.1.1 Conflict Data

We use data on inter-state conflict from the Correlates of War [31] project (COW hereafter) to estimate the probability of conflict w_{ij}. This dataset is an unbalanced panel indexed by a country $i = 1, ..., N$ (approximately 190 countries) and a year $t = 1816, ..., 2000$. Either all or part of this data has been used in almost all empirical studies of the democratic peace hypothesis. The original dataset records whether a given country is engaged in a conflict in given year. In our model, the incentive to be aggressive depends on the regime types within each *pair* of countries. Hence, we use the dyadic form of the data which records if a given country-pair is in conflict in a given year.[5] Because our model characterizes the onset of a dispute, but does not identify the initiator of the dispute in each dyad, we use the so-called "undirected" form of the data in our empirical analysis. [6]

[5] Data for the historical period 1816-1992 is in monadic form in the COW dataset, and forming the dyadic data requires additional information not reported in the original dataset. Zeev Maoz [39] has augmented the standard monadic COW dataset and constructed a dyadic dataset for the years 1816-1992. The COW v 3.02 contains militarized dispute data in dyadic form for the remaining years 1993-2000 included in our sample.

[6] Further, our model does not predict the duration of the conflict or the formation of coalitions in multilateral disputes. We thus drop all dyad-year pairs corresponding to either an ongoing dispute or a country joining an ongoing dispute.

3.1.2 Regime Types

Data on regime characteristics are from the Polity IV dataset (Monty and Gurr [42]). Indexes measuring competitiveness of political participation, competitiveness of the process for selecting the chief executive, regulation of political participation, openness of executive recruitment and constraints on the chief executive are used to construct democracy and autocracy scores ranging from 0 to 10 for each regime. Oneal and Russett [43] and many others take the difference between the democracy and the autocracy index to give an aggregate score, net democracy. We also use this aggregate score to rank countries as dictatorships, limited democracies or full democracies. Very high values of the index signal strong democratic institutions with strong checks on the leader's power. Very low values of the index suggest the absence of any controls on the leader. Intermediate values of the index correspond to regimes where there are some checks and balances that limit the leader's power but not enough to qualify the political regime to be classified as a full democracy. We will use such intermediate values to define regimes as limited democracies. This approach has also been used in other studies that focus on this middle range, sometimes known as "anocracy" or a "mixed regime" (see Gurr [24], Goemans [22] and Mansfield and Snyder [38]). [7]

3.2 Empirical Model

Our empirical strategy has two steps. We first utilize the Polity net democracy index to construct a set of dummy variables that classify the regime types of each country pair. We then estimate the probability that a militarized dispute (MID) occurs within each dyad using regression models that include, as explanatory variables, these dummies along with other controls typically considered in the democratic peace literature. Our preferred estimation procedure is a panel logit regression model with fixed effects defined at the dyadic level. This simple methodology allows us to study the effects of democracy on conflict without imposing many parametric restrictions. It is thus particularly apt at capturing the non-monotonic link between democracy and conflict our model predicts. [8] The net democracy index from Polity IV ranges from -10 to 10, taking 21 possible values in all. In the baseline model, we divide the range of possible net democracy values into three subintervals of equal length. A dictatorship corresponds to values smaller than -3, a limited democracy to values between -3 and 3, and a full democracy to values greater than 3.

As limited democracies are particularly interesting for our theory, we expand on the examples we offered in the Introduction. Germany in the late nineteenth and early twentieth century is a limited democracy. Power was concentrated in the hands of the Kaiser and the German Parliament, the Reichstag, had little ability to check him. But the Kaiser was not secure enough to repress the views of the population entirely and the Socialist party formed a strong voting block in the Reichstag and even won the election in 1913 (Craig [16], Chapter 8). Louis-Philippe, "King of the French", rose to power in 1830 after the July Revolution overthrew the last monarch. He ruled as a popular king and was appointed by France's Chamber of Deputies over the monarchists' chosen candidate (Howarth [29]). During much of his reign, France is a limited democracy. Napoleon III initially ruled as a dictator but from the 1860s he gave the French Parliament more power (Wetzel [56]). By 1870, France is classified as a limited democracy in our data. Table 1 lists countries that are limited democracies for the longest time period in the sample used to estimate our baseline regression model. As well as the great European powers, Latin American countries such as Ecuador, Peru, Chile and

[7] The COW data and the Polity data, along with other controls considered in the democratic peace literature, are available from Scott Bennett's EUgene website at Penn State or through datasets from Bruce Russett's web-page at Yale.

[8] The main restriction imposed by the methodology is the initial classification of regimes into dictatorships, limited democracies and full democracies starting from the net democracy index of Polity IV as described below.

Argentina are heavily represented. Ecuador is classified as a limited democracy for the longest period, 114 years between 1854 and 1971. Some Middle Eastern countries also begin to appear in this classification in the post-war period.

We also consider an alternative classification where limited democracies correspond to values of net democracy between -6 and 6, and dictatorships and full democracies are defined accordingly. There are two obvious implications of this broader definition of limited democracy. First, countries like France which meet the narrower definition at certain points in time, now are limited democracies for an even greater length of time. Second, countries like Spain, which do not meet the narrower definition, are limited democracies according to the broader definition.

Since each dyad records the regime type of two countries, there are six possible configurations of regime types for any pair of countries. As shown in Table 2, we define a set of six dummy variables, D_j where $j \in J \equiv \{DiDi, DiLi, DiDe, LiLi, LiDe, DeDe\}$ is a *dyad type* ranging from a pair of dictatorships to a pair of full democracies with all other combinations in between. Each dummy variable is equal to one when the regime types within a dyad correspond to the pair of interest, and it is zero otherwise. For our baseline definition of limited democracy, the composition of dyad types varies from a maximum of 31%, for a democracy-dictatorship pair, to 6% for a limited democracy pair (see Table 3).

As the interpretation of an act of aggression can be relatively broad in our model, we study MIDs rather than just wars. Also, focussing on MIDs allows us to maximize the amount of available data. Although our data span over a large number of years and countries, MIDs are rare events, and wars even more so. For instance, in our baseline model, a total of 40,786 observations are included but only 5% are MIDs let alone wars (see Table 3).

The baseline specification of our empirical model explains the likelihood of a MID for each dyad d as

$$\text{Prob}\{MID_{dt+1} = 1 | \{D_{j,dt}\}_{j \in J},\ \mathbf{X}_{dt}, c_d\} = G\left(c_d + \beta' \mathbf{X}_{dt} + \sum_{j \in J} \gamma_j D_{j,dt}\right), \tag{11}$$

where $\mathbf{X}_{dt}$ is a vector of controls, c_d is a fixed effect defined at the dyadic level and $\{D_{j,dt}\}_{j \in J}$ are dummy variables. The fixed effects account for unobserved heterogeneity arising from factors such as geography and persistence of culture and norms [9] in the cross-section of dyads. [10]

In logit regression models, variation in the left hand side variable is important as the model's parameters are only identified if the corresponding regressors cannot perfectly predict the outcome. Hence, since we include both dyadic and year fixed effects in our baseline model, only country-year pairs where at least one MID occurs can be included in the estimation procedure. [11] Further, any year in which no MID occurred is also excluded. [12] To reduce issues of reverse causality, the explanatory variables are lagged by one period. The entire set of dummy variables cannot be separately identified from the constant term, and thus one variable is excluded from the estimation procedure. We exclude the dummy $D_{LiLi,dt}$, so the coefficients on the remaining variables $\{D_{j,dt}\}_{j \in J}$ estimate the partial effects of every other dyad type relative to the

[9] For example, in seminal work, Acemoglu, Johnson and Robinson [1] suggest the colonial origin of countries in Africa and South America has played a large role in their subsequent development. See Acemoglu and Robinson [2] for a synthesis and summary of much of this work.

[10] The function $G(\bullet)$ is the c.d.f of the logistic distribution function. For a review of qualitative response models and their panel specifications see Wooldridge [57].

[11] The maximized value of the likelihood function is unbounded if these observations are included in the estimation procedure. In this case "full separation" is said to occur (see Albert and Anderson [3])

[12] The years not included in the sample are 1818, 1819, 1827, 1841, 1843, 1866, and 1891

dyad of limited democracies. Moreover, the magnitude of each partial effect depends on the fixed effect which cannot be consistently estimated. Instead, we use Chamberlain's [14] conditional maximum likelihood procedure to obtain estimates of the remaining parameters β_j's and γ_j's of (11) *without* estimating the fixed effects c_d. Hence, the partial effect of a dyad type j relative to a pair of limited democracies is

$$G\left(c_d + \hat{\beta}'\mathbf{X}_{dt} + \hat{\gamma}_j\right) - G\left(c_d + \hat{\beta}'\mathbf{X}_{dt}\right),$$

where hatted variables denote estimates of the corresponding parameters. The estimated partial effects produce an ordinal ranking of the propensity of different dyads types to engage in a MID. As the partial effects cannot be disentangled from the fixed effects, the baseline model does not produce a cardinal ranking. For example, if $\hat{\gamma}_{DiDi}$ is negative, we can say that a dyad of dictatorships is less likely to engage in conflict than dyad of limited democracies but we cannot say how much less likely. [13] The main prediction of our theory is that a pair of limited democracies is the most likely to engage in a MID. Hence, all the estimated parameters $\hat{\gamma}_j$ should be negative. Also, the democratic peace hypothesis suggests that a pair of full democracies is the least likely to enter into conflict: $\hat{\gamma}_{DeDe} < \hat{\gamma}_j$ for all $j \neq DeDe$.

Among the controls $\mathbf{X}_{dt}$'s we include year fixed effects to account for time varying factors that are common to all dyadic pairs (e.g. the number of countries in the system, worldwide economic shocks, world wars etc.). Further, we include cubic spline terms to capture the temporal dependence of MID's onset on the occurrence of disputes in earlier periods within each dyad. [14] We follow the literature on democratic peace (e.g. Oneal and Russett [43]) in selecting the remaining controls.

First, if a country is a major power, it may have more of an incentive to engage in a MID as it can escape retaliation. Or it may be less likely to be aggressive, if it can achieve its objectives without conflict. These effects are controlled for using the dummy variable $MajPower_t$, which is set equal to one if at least one of the two countries is a major power at time t.

Second, an imbalance of military power may create conflict (Bremer [12]). The COW dataset contains a measure of military capabilities, which gives equal weight to total population, urban population, energy consumption, iron and steel production, military manpower and military expenditure. The variable *LogCapRatio* that we include in the regressions is the logarithm of the maximum to the minimum level of military capabilities taken from the COW dataset.

Third, if the two countries in a dyad are formally allied by a non-aggression or neutrality treaty, we set an allies dummy variable equal to one.

We discuss details of the other controls used in the robustness checks below.

3.3 Empirical Results

The estimates of the empirical models are shown in Tables 4, 8 and 9. Each table is divided into two panels. Panel a) contains two columns for each regression model. The first column reports the estimated coefficients and standard errors for the dummy variables representing the five possible dyads types other than a pair of limited democracies. The second column reports the P-value of a Wald test for the null hypothesis that each

[13] We also consider alternative empirical models which allow us to estimate all the parameters and hence produce a cardinal ranking.

[14] Formal tests support the use of both year fixed effects and spline terms. The estimated coefficient on the spline terms indicate that the probability of a MID is higher when another MID occurred in recent past within the dyad. The use of spline terms allows us to capture the dependence without imposing any parametric restriction in a parsimonious way. Alternatively one can use dummy variables (see Beck, Katz and Tucker [8]).

D_j's coefficient is equal to that of D_{DeDe}, i.e. a pair of full democracies. [15] Panel b) reports coefficients and standard errors of the additional controls included in the regression models, with the exclusion of the year fixed effects and the cubic spline terms.

3.3.1 Baseline Model

Our baseline model is Model 1 in Table 4 and is estimated using the conditional maximum likelihood procedure. First, all parameter estimates on the dyad type dummies $\{D_{j,it}\}_{j \neq LL}$ are negative and statistically significant at the 1% level. In other words, the empirical model predicts that a dyad of limited democracies *is* the more likely to be involved in a militarized dispute that all other dyad types. In particular, even a dyad of dictatorships is less conflict prone that a dyad of limited democracies. To our knowledge this empirical result, which is predicted by our theoretical model, is novel in the literature.

Second, as shown in the second column of Model 1, the estimated coefficient on D_{DeDe} is the smallest amongst the dyad type dummies. The P-values reported in the second column show these differences are statistically significant at the 1 % level. We thus also find evidence that pairs of democracies rarely fight each other (Babst [5], Levy [35] and Maov and Russett [40]). [16]

Many countries in the Middle East are dictatorships or vacillate between dictatorship and limited democracy. For example, between 1981 and 2000, Afghanistan, Iraq, Kuwait, Libya, Saudi Arabia and Syria [17] are classified as dictatorships in our baseline model while Algeria, Egypt, Jordan, Iran and Tunisia are either dictatorships or limited democracies at different times. President Bush has adopted a "forward strategy of freedom in the Middle East" claiming "the advance of freedom leads to peace" (see [13]). If dictatorships can be converted into full democracies, our work and much empirical research that precedes it provides some support for democratization. But complete success is not guaranteed and intervention may create limited not full democracies. In that case, our results suggest the Middle East will become more violent not less: the *limited* advance of freedom leads to *more* war.[18] Democratization carries the risk of triggering more conflict.

Table 5 lists limited democracies that engaged in disputes most frequently. Latin American countries such as Argentina, Ecuador, Nicaragua and Peru, are heavily represented in both the nineteenth and twentieth centuries. As we have already described, in the nineteenth century, the great European powers are limited democracies and are heavily involved in disputes. In Asia, Japan and Thailand are involved in conflicts frequently. In Africa and the Middle East, countries like Kenya and Jordan are limited democracies for a short period of time but engage in disputes relatively frequently during that period.

Table 6 lists dyads of limited democracies that engaged in disputes most frequently. Latin American countries are notable for fighting the European powers and also each other. In one of the most long-standing disputes, Ecuador and Peru repeatedly fight over the Condor Mountain range in the Amazon (Simmons [51]). The late 1930s and early 1940s marked a violent turning point in the conflict and, during this period, both countries are defined as limited democracies in our data. Ecuador's loss led to a coup against President Arroyo del Río. [19] Peru's victory secured the position of President Prado y Ugarteche who was the first Peruvian President to serve out his term since 1914. [20] Bolivia and Paraguay and Argentina and Chile are

[15] The t-test (first column) on D_{DeDe} is asymptotically equivalent to the analogous Wald test, and it is thus not reported in the Table.

[16] Only the dummy for alliance treaties is statistically different from zero among the additional controls included in the model. The existence of a treaty reduces the likelihood of a MID within the dyad.

[17] Morocco, Oman, Qatar and United Arab Emirates are also classified as dictatorships.

[18] It has also be suggested that the transition from dictatorship to a limited democracy creates nationalism and hence conflict (Mansfield and Snyder [38]). We assess the robustness of our results to regime transitions in a later section.

[19] See Hanratty [25].

[20] According to Pike ([45], p. 279), "Prado was given much of the credit for what was regarded by many as the country's

other aggressive dyads of limited democracies. Japan is also a particularly aggressive though its aggression is not aimed at any one particular country. It is also interesting to notice that many of these disputes occurred during the nineteenth and the first half of the twentieth century.

3.3.2 Robustness

Alternative Empirical Specifications We consider two other specifications to study whether the results we obtain in the conditional logit specification are robust. These specifications also allow us go beyond the baseline model is assessing *how much* a dyad type is prone to conflict relative to a pair of limited democracies. Hence, we can quantify, for example, the impact of complete and limited democratization of dictatorships on the probability of conflict.

First, we estimate a linear probability model with fixed effects defined at the dyadic level, Model 2 in Table 4. As shown in the first column of Panel a) all estimated coefficients on regime types are negative and significantly different from zero. Further, the coefficient on D_{DeDe} is the smallest and the difference is significant as shown in the second column. Thus, the linear model also predicts that a pair of limited democracies is the most likely to engage in a MID and that a dyad of full democracies is the less conflict-prone that other pairs of regime types. Because of the linearity of the model, the coefficients on the dummies D_j are a direct measure of the partial effects. The probability of a MID onset as predicted by the model is 0.0054, and thus the magnitudes of the partial effects are sizable. [21] The baseline probability of an "average limited democracy pair" is 0.0075. It is constructed by setting the values of all other dummies equal to zero and of all remaining regressors equal to the respective sample mean. Hence, the likelihood that a dyad engages in a MID falls by 36% when a dyad changes from a pair of limited democracies to a pair of dictatorships. Moreover, it falls by almost 100% when a dyad changes from a pair of limited democracies to a pair of full democracies. Of course, due to the very low MID frequency in the sample, a large fraction of the predicted probabilities have to be negative. In fact, the lowest half of the predicted probabilities turn out to be negative.

Hence, we next consider a pooled logit regression model (Model 3 in Table 4) which avoids these difficulties but excludes dyadic fixed effects. We enlarge the set of controls to include other standard measures from the democratic peace literature. In particular, we add the logarithm of the distance between the two countries' capitals, *LogDist*, and a dummy variable, *Contig*, which indicates whether the country pair has contiguous borders. Unlike the other models, both within and between-dyadic variation of the data is used to estimate the model parameters. Further, in contrast to Model 1, all parameters are estimated and it is possible to quantify the magnitudes of the partial effects associated with different dyads types. As shown in Model 3 in of Table 4, a dyad of limited democracies is again the most likely to engage in a MID and a dyad of full democracies is the most peaceful (all results are significant at conventional levels). [22] Table **??** displays the partial effects of each possible dyad type relative to the limited democracy pair. The baseline probability of a MID is that of an "average limited democracy pair" and is constructed by setting the value of all the other dummies to zero. The values of all remaining regressors are set equal to the respective sample mean. The magnitudes of the partial effects relative to the baseline probability are sizable. For example, the likelihood

supreme moment of military glory in its entire republication history."

[21] This number is significantly smaller than the frequency of MID onset reported in Table 3, as a large number of dyads that never engaged in a MID are included in the linear probability model but aren't in the conditional logit model

[22] The addition of more controls and the elimination of the fixed effects changes some of the results for the remaining controls. The Alliance dummy is no longer significant, while MajPower and LogCapRatio are now statistically significant. The parameter estimates suggest that country pairs that have similar military capabilities and countries that are major power are more likely to engage in a MID.

that a dyad engages in a MID falls by more than 73% when a dyad changes from a pair of limited democracies to a pair of full democracies. Also, it falls by 59% when a dyad changes from a pair of limited democracies to a pair of dictatorships.

To summarize, both the alternative empirical models we have considered here show that a dyad of limited democracies is the most likely to engage in a MID and a dyad of full democracies is the least likely. This corresponds with the qualitative results of our baseline specification. Moreover, we are now able to make quantitative comparisons. Even the more conservative estimate coming from the linear probability shows that the limited democratizations of a dyad of dictatorships causes the likelihood of conflict to increase by over 30%. A failed attempt to fully advance democratization can make the world significantly more violent and dangerous.

There are several other possible variations on the baseline specification that we discuss here. Economic indicators such as GDP or the level of trade may affect the incentive to engage in conflict. [23] However, reliable data on these variables is not available for the full sample of conflict data and regime type. Hence, inclusion of these controls would severely hamper our ability to utilize all the available data. [24] Moreover, the fixed effects included in our baseline specification capture some of the impact of these variables. First, the year fixed effects capture the impact of global economic shocks and cycles. Hence, economic fluctuations which are common to both members of a dyad and affect their incentives to be aggressive are captured by the year fixed effects. Second, the dyadic level fixed effects control for the impact of the relative disparity of natural resource endowments. These can affect both growth and trade and the impact of constant component of these economic variables is accounted for by the dyadic fixed effects.

Regime Definitions and Transitions We estimate the model on the entire sample but using an alternative classification of regime types where limited democracies correspond to values of the net democracy index between -6 and 6, and dictatorships and democracies are defined accordingly. As shown in Model 6, the results of the baseline model are confirmed when using this alternative classification of regime types, i.e., dyads of limited democracies are prone to engage in a MID, while pairs of democracies are the most peaceful.[25]

Our model suggests the idea that limited democracies, whether they are new or old, have a hawkish bias that makes them more aggressive than any other dyad type. Another theory of incomplete democratizations argues that leaders of *new* democracies rising from former dictatorships are most likely to resort to nationalistic policies to survive in power (Mansfield and Snyder [38]). To study the robustness of our theory to this change in regime type, we follow Mansfield and Snyder [38] in defining a transitional dummy that indicates whether a transition occurred from a dictatorship to a limited democracy. We use both the definition of limited democracy from our baseline empirical model and the definition adopted of a net democracy index of [-6,6] used by Mansfield and Snyder [38]. As shown in Model 1 of Table 8, our baseline regression results are not affected when we include the transitional dummy: all dummies are negative and significant at the

[23] Different political indicators for classification of regime types might be another variation worth considering. The most obvious choice is the index from the Freedom House Project [19]. This data has been used in theoretical and empirical studies of democratization and economic development (see Acemoglu et al. [1] and Acemoglu and Robinson's [2] book for an overview of the literature). However, this data is only available starting in 1972. The results confirm our results for the post World War II subsamples reported in a later section.

[24] For example, we augmented the baseline specification to include a measure of dyadic trade as a control (we used the data and approach of Barbieri [7]). The estimated coefficient on dyadic trade was not statistically different from zero. Moreover, due to missing observations, the sample size drops by more than two thirds relative to the baseline model, and only the years 1871–1992 get included in the estimation.

[25] The sampling distribution of dyads by regime type using this alternative classification is as follows: D_{11} 12%, D_{21} 17%, D_{22} 18%, D_{31} 19%, D_{32} 22%, D_{33} 12%

5% level at least. The democratic peace hypothesis also gets very strong support. Our theory is thus robust to the inclusion of the additional control - new and old limited democracies are more violent than all other dyads of regime types and a dyad of full democracies is the most peaceful. Moreover, the transitional dummy has the wrong sign and is significant at the 10% level: a transition *decreases* the likelihood of conflict. When we use the [-6,6] classification, the transitional dummy is positive and significant at the 10% level, while all the coefficients on the dummies for dyads of regime types are negative, though only two are significant at conventional levels. This suggests both theories have some support in the data, at least for some definitions of regime types.

Subsamples We estimate the baseline model over two subsamples of pre- and post-World War II data. This sample split is particularly interesting as Table 6 indicates that a large number of MIDs for limited democracy pairs occurred before World War II. As shown in Table 9, the results in the pre-World War II subsample are analogous to the ones obtained over the entire sample. All coefficients on the dummies D_j are negative and statistically different from zero; the coefficient on D_{DeDe} is the smallest among the dummies D_j's, although the difference is significant for four out of the five dummies. In the post-World War II sample, we find weaker evidence, both for our model and for the democratic peace hypothesis. Indeed, although all coefficients on the dummies D_j are all negative, only one differs significantly from zero. Further, only three of the dummies are significantly larger than D_{DeDe}.

Hence, while our theory finds considerable support in pre-World War II data, it finds less support after the war. The main reason for this is probably the decline in the number of limited democracies in our sample. But also, the end of inter-state war in Europe is associated with the Cold War. For example, Hobsbawm ([27], p. 26) reports that during "the era of confrontation between the two superpowers,..there were no significant inter-state wars in the western hemisphere at all in the 20th century". Gaddis ([21], p. 261-263) suggests that the fear that any confrontation would escalate into a nuclear war prevented even minor disputes from developing. Within the extended sphere of influence of the Soviet Union, signs of independence were suppressed. Peace was enforced within the Soviet bloc by the threat of violence. But cracks first appeared with the founding of Solidarity in 1980. Also, the newly elected Margaret Thatcher and Ronald Reagan adopted a more aggressive stance towards the Soviet Union, breaking with the previous philosophy of mutual peaceful coexistence and détente.

With the erosion of the power of the Soviet Union, our theory again applies. To study if it is supported in the data, we consider the subsample of militarized disputes after 1984. The decline of the enforcement of peace in the Soviet bloc and the return of the incentives we study should precede the fall of the Berlin Wall in 1989. In 1983, martial law was lifted in Poland and many imprisoned member of Solidarity were freed.[26] In 1985, Mikhail Gorbachev became the leader of the Soviet Union. Thus, 1984 marks a mid-point between the arrival of Solidarity and the fall of the Berlin Wall and is a natural candidate to study our hypothesis. Also, the amount of available data falls significantly if we begin the subsample later.

The details of the empirical specification are the same as in our baseline model. Our results are reported in Model 3 of Table 9. A dyad of limited democracies is again the most violent of all possible dyads of regime types and this finding is significant at conventional levels. We also found that this result is also robust to the broader definition of limited democracy we study in the section on regime definitions and transitions. A dyad of full democracies is the most peaceful, but the difference is significant on only two dummies. There is little change in the countries that we classify as full democracies and hence it is difficult to test the democratic

[26] See Perdue [47] for a history of Solidarity.

peace hypothesis. Model 4 in Table 9 reports our weaker results when we study the post-1989 subsample. Notice that the sample size is halved relative to Model 3 and hence it is difficult to make strong predictions.

However, there is certainly some support for our theory in the data. It suggests that the nineteenth and early twentieth centuries offer a better prediction of the contemporary pattern of conflict than the Cold War period. Indeed, with the end of the Cold War, countries arising from the disintegration of Yugoslavia and the end of the Soviet Union bring war back to Europe. Armenia, Croatia, Georgia, Russia and Yugoslavia satisfy either our narrow or broad definitions of limited democracy during key conflicts.

4 Conclusions

We have offered a simple theory of political institutions and the incentives to go war. Our theory implies that limited democracies are the most aggressive regime type and, if the median voter is sufficiently passive, that full democracies are the least aggressive regime type. These two conclusions receive considerable support in our analysis of militarized disputes in the nineteenth and twentieth centuries. Our empirical results are robust to other specifications and many robustness checks.

Much research remains to be done. For example, in our model, the leader of a limited democracy does not survive weakness in a conflict. But, not only did the Tsar not survive World War I, nor did the Russian political system. That is, conflict can lead not only to a change in the leader but also a change in the regime type. A dynamic model of conflict and regime change is the next step in this research agenda. Leaders and regimes also change as a consequence of revolution and civil war. And leaders of different regime types have different incentives to continue a war. It has been suggested that leaders of limited democracies have the most incentive to continue to fight a war that they know is likely lost (Goemans [23]). A non-monotonic relationship between regime type and war duration may then arise from a dynamic version of our model which includes not only war initiation but also war termination. We hope to study these questions and others in the future.

A Appendix

It can be checked that $h(p, De)$ and $h(p, Di)$ have a unique intersection at $p = 1/2$. If $p > 1/2$ then $h(p, De) > h(p, Di)$. Thus, when facing an opponent who is likely to be a hawk, the leader of the full democracy responds more hawkishly than a dictator. However, if $p < 1/2$ then $h(p, De) < h(p, Di)$. Thus, when facing an opponent who is more likely to be a dove, the leader of the full democracy responds less hawkishly than a dictator. Since the two best response curves intersect, it cannot be determined a priori whether a full democracy is more or less hawkish than a dictatorship. It depends on the equilibrium probability that the opponent is a hawk.

Proof of Proposition 2

Suppose $c^{med} > (d + \mu)/2$. In this case the median citizen has a high c, i.e., he is fairly dovish. This generates a low equilibrium risk of conflict against dictatorships. In this case, the intersection of $h(p, De)$ and $h(p, Di)$ lies below the 45% line, because

$$h\left(\frac{1}{2}, Di\right) = h\left(\frac{1}{2}, De\right) = F\left(\frac{d+\mu}{2}\right) < F\left(c^{med}\right) = \frac{1}{2}.$$

It can verified that as long as neither country is a limited democracy, in equilibrium each leader chooses A with a probability less than one half. But for $p < 1/2$ we have $h(p, De) < h(p, Di)$. Therefore, in interactions that do not involve limited democracies, a dictator behaves more hawkishly than the leader of a full democracy. This proves the first part of the Proposition.

But suppose

$$c^{med} < \left(1 - F\left(\frac{d+\mu}{2}\right)\right)\mu + F\left(\frac{d+\mu}{2}\right)(d + R). \tag{12}$$

It can be checked that (12) implies $h\left(F\left(\frac{d+\mu}{2}\right), L\right) > 1/2$. It can be checked diagrammatically that if one country is a limited democracy and the other either a dictatorship or a full democracy, then in equilibrium each leader chooses A with probability greater than $1/2$. But for $p > 1/2$ we have $h(p, De) > h(p, Di)$. Therefore, in interactions that involve limited democracies, a full democracy is more hawkish than a dictatorship (see Figure 2).

If instead

$$c^{med} > \left(1 - F\left(\frac{d+\mu}{2}\right)\right)\mu + F\left(\frac{d+\mu}{2}\right)(d + R), \tag{13}$$

we have $h\left(F\left(\frac{d+\mu}{2}\right), L\right) < 1/2$. It can be checked diagrammatically that if one country is a limited democracy and the other either a dictatorship or a full democracy, then in equilibrium each leader chooses A with probability less than $1/2$ (see Figure 3). But for $p < 1/2$ we have $h(p, De) < h(p, Di)$. Therefore, in interactions that involve limited democracies, a dictatorship is more hawkish than a full democracy. But we also know that a dictatorship is more hawkish than the full democracy in interactions that do not involve limited democracies. Therefore, dictatorships are more hawkish than full democracies in all interactions. This proves the second part of the Proposition.

Proof of Proposition 3 Suppose $c^{med} < (d + \mu)/2$. In this case the median citizen has a low c, i.e., he is fairly hawkish. This generates a high equilibrium risk of conflict. In this case, the intersection of $h(p, De)$

and $h(p, Di)$ lies above the 45% line, because

$$h\left(\frac{1}{2}, Di\right) = h\left(\frac{1}{2}, De\right) = F\left(\frac{d+\mu}{2}\right) > F\left(c^{med}\right) = \frac{1}{2}$$

In this case, it can be verified diagrammatically that *regardless of regime types,* in equilibrium each leader chooses A with a probability greater than one half (see Figure 4).

But for any $p \in (1/2, 1)$, we have $h(p, L) > h(p, De) > h(p, Di)$. Therefore, in this case, the model produces a definite ranking of the three regime types: the limited democracy will be most hawkish and a dictatorship the most dovish. Formally, regardless of which regime types are interacting, replacing a dictatorship with a full democracy increases the equilibrium values of both p_1 and p_2.

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Table 1: Limited Democracies in Baseline Model

COW Code	Name	N. of years	First Year	Last Year
501	Kenya	10	1963	2000
345	Yugoslavia	10	1921	1940
703	Kyrgyzstan	10	1991	2000
850	Indonesia	10	1949	1958
640	Turkey	11	1909	1972
452	Ghana	11	1970	2000
732	South Korea	12	1949	1971
350	Greece	13	1833	1924
551	Zambia	13	1964	2000
663	Jordan	14	1952	2000
110	Guyana	14	1966	1979
630	Iran	16	1941	2000
355	Bulgaria	16	1918	1933
220	France	17	1830	1869
730	Korea	17	1887	1904
230	Spain	18	1837	1878
817	Republic of Vietnam	20	1955	1974
325	Italy	22	1900	1921
235	Portugal	23	1823	1909
651	Egypt	24	1937	1998
433	Senegal	24	1960	1999
660	Lebanon	24	1946	1969
310	Hungary	25	1920	1988
255	Germany	27	1890	1917
790	Nepal	28	1920	1989
93	Nicaragua	31	1909	1989
101	Venezuela	34	1892	1957
95	Panama	35	1920	1954
800	Thailand	36	1935	1991
830	Singapore	36	1965	2000
42	Dominican Republic	37	1894	1977
150	Paraguay	39	1876	1991
100	Colombia	43	1832	1903
92	El Salvador	44	1875	1976
140	Brazil	44	1889	1984
91	Honduras	47	1904	1979
40	Cuba	47	1902	1951
390	Denmark	50	1849	1900
200	United Kingdom	58	1816	1879
70	Mexico	59	1831	1993
90	Guatemala	62	1868	1995
210	Netherlands	66	1849	1916
41	Haiti	67	1859	2000
165	Uruguay	69	1882	1951
740	Japan	76	1868	1944
145	Bolivia	82	1848	1963
160	Argentina	84	1853	1965
135	Peru	99	1839	1999
155	Chile	99	1851	1988
130	Ecuador	114	1854	1971

Table 2: Dummy Variables

	Autocracy $Dem_2 : [-10, -4]$	Limited Democracy $Dem_2 : [-3, 3]$	Democracy $Dem_2 : [4, 10]$
Autocracy $Dem_1 : [-10, -4]$	D_{DiDi}	D_{LiDi}	D_{DeDi}
Limited Democracy $Dem_1 : [-3, 3]$	D_{LiDi}	D_{LiLi}	D_{DeLi}
Democracy $Dem_1 : [4, 10]$	D_{DeDi}	D_{DeLi}	D_{DeDi}

NOTES: Each D_j is equal to one over the corresponding *net democracy* range and zero otherwise.

Table 3: Sample Description for Baseline Model

Variable	Mean	Std. Dev.	Min	Max
MID onset	0.05	0.21	0	1
D_{DiDi}	0.21	0.40	0	1
D_{LiDi}	0.13	0.34	0	1
D_{LiLi}	0.06	0.24	0	1
D_{DeDi}	0.31	0.46	0	1
D_{DeLi}	0.12	0.32	0	1
D_{DeDe}	0.17	0.38	0	1
MajPower	0.54	0.50	0	1
LogCapRatio	2.40	1.67	0	8.44
Allianced	0.20	0.40	0	1
Obs=40,786				

NOTES: Summary statistics for observations included in Model (1) of Table 4.

Table 4: Regression Models

	Dependent Variable: Onset of a MID							
Model	(1) BASELINE		(2)		(3)		(4)	
Panel a)								
D_{DiDi}	-0.58		-0.0027		-0.90		-0.35	
	[0.21]***	(<0.01)***	[0.0013]**	(<0.01)***	[0.18]***	(0.03)**	[0.16]**	(<0.01)***
D_{LiDi}	-0.54		-0.0030		-0.47		-0.26	
	[0.20]***	(<0.01)***	[0.0013]**	(<0.01)***	[0.19]**	(<0.01)***	[0.13]**	(<0.01)***
D_{DeDi}	-0.57		-0.0033		-0.34		-0.40	
	[0.20]***	(<0.01)***	[0.0013]**	(<0.01)***	[0.19]*	(<0.01)***	[0.17]**	(<0.01)***
D_{DeLi}	-0.70		-0.0044		-0.44		-0.26	
	[0.21]***	(<0.01)***	[0.0014]***	(<0.01)***	[0.20]**	(<0.01)***	[0.15]*	(<0.01)***
D_{DeDe}	-1.38		-0.0071		-1.33		-1.34	
	[0.22]***		[0.0014]***		[0.23]***		[0.25]***	
Panel b)								
Alliance	-0.38		-0.0054		-0.06		-0.41	
	[0.12]***		[0.0016]***		[0.12]		[0.12]***	
MajPower	0.36		0.0030		1.84		0.42	
	[0.28]		[0.0025]		[0.15]***		[0.28]	
LogCapRatio	-0.01		0.0001		-0.13		-0.01	
	[0.07]		[0.0004]		[0.036]***		[0.07]	
Contig.	-		-		2.27		-	
					[0.15]***			
LogDist	-		-		-0.36		-	
					[0.06]***			
Estimator	CLOGIT		FE-LPM		LOGIT		CLOGIT-Ds	
Years	1816-2000		1816-2000		1816-2000		1816-2000	
Observations	40786		495062		492420		40786	
(pseudo) R2	0.09		0.01		0.32		0.09	

NOTES: * significant at 10%; ** significant at 5 %; *** significant at 1 %. Robust standard errors in brackets below each coefficient. P-value of a Wald test for equality between each coefficient and the coefficient of D_{DeDe} is reported in parenthesis next to the corresponding standard error. Models (1) and (4) are conditional logit models with fixed effects for each dyadic pair. Model (2) is a linear probability panel model with dyadic fixed effects. Model (3) is a pooled logit model. Standard errors clustered at the directed dyadic level in model (2) and (3). Model (4) differs from (1) in the definition of the dummy variables: values of the Polity IV net democracy index in [-6,6] are coded as limited democracies, values of [-10,-7] as dictatorships and of [7,10] as democracies. Each regression model includes (coefficient not reported) year fixed effects and cubic spline terms to account for temporal dependence in the MIDs (see Beck, Katz and Tucker [8]).

Table 5: Sample Description for Baseline Model

COW Code	Name	Freq. of MIDs	N. of MIDs	N. of years	First Year	Last Year
91	Honduras	15%	7	47	1904	1979
42	Dominican Republic	16%	6	37	1894	1977
433	Senegal	17%	4	24	1960	1999
730	Korea	18%	3	17	1887	1904
452	Ghana	18%	2	11	1970	2000
645	Iraq	20%	1	5	1936	1940
483	Chad	20%	1	5	1996	2000
703	Kyrgyzstan	20%	2	10	1991	2000
140	Brazil	20%	9	44	1889	1984
101	Venezuela	21%	7	34	1892	1957
663	Jordan	21%	3	14	1952	2000
70	Mexico	22%	13	59	1831	1993
230	Spain	22%	4	18	1837	1878
350	Greece	23%	3	13	1833	1924
41	Haiti	24%	16	67	1859	2000
130	Ecuador	25%	28	114	1854	1971
540	Angola	25%	1	4	1997	2000
702	Tajikistan	25%	1	4	1991	2000
552	Zimbabwe	25%	1	4	1983	1986
660	Lebanon	25%	6	24	1946	1969
145	Bolivia	27%	22	82	1848	1963
155	Chile	27%	27	99	1851	1988
310	Hungary	28%	7	25	1920	1988
110	Guyana	29%	4	14	1966	1979
850	Indonesia	30%	3	10	1949	1958
501	Kenya	30%	3	10	1963	2000
100	Colombia	30%	13	43	1832	1903
93	Nicaragua	32%	10	31	1909	1989
510	Tanzania	33%	2	6	1995	2000
516	Burundi	33%	2	6	1962	2000
678	Yemen Arab Republic	33%	3	9	1963	1973
160	Argentina	33%	28	84	1853	1965
135	Peru	34%	34	99	1839	1999
150	Paraguay	36%	14	39	1876	1991
325	Italy	36%	8	22	1900	1921
355	Bulgaria	38%	6	16	1918	1933
551	Zambia	38%	5	13	1964	2000
713	Taiwan	40%	2	5	1987	1991
434	Benin	40%	2	5	1960	1971
345	Yugoslavia	40%	4	10	1921	1940
732	South Korea	42%	5	12	1949	1971
811	Cambodia	43%	3	7	1993	2000
200	United Kingdom	43%	25	58	1816	1879
255	Germany	44%	12	27	1890	1917
740	Japan	49%	37	76	1868	1944
373	Azerbaijan	50%	2	4	1991	1994
530	Ethiopia	50%	3	6	1995	2000
679	Yemen	50%	4	8	1993	2000
630	Iran	50%	8	16	1941	2000
651	Egypt	54%	13	24	1937	1998
640	Turkey	55%	6	11	1909	1972
800	Thailand	56%	20	36	1935	1991
220	France	59%	10	17	1830	1869
817	Republic of Vietnam	60%	12	20	1955	1974
770	Pakistan	63%	5	8	1948	1968
652	Syria	67%	2	3	1950	1962
344	Croatia	67%	2	3	1992	1994
438	Guinea	67%	4	6	1995	2000
365	Russia	71%	5	7	1917	1991
450	Liberia	75%	3	4	1997	2000
339	Albania	75%	3	4	1914	1996
411	Equatorial Guinea	100%	1	1	1968	1968

NOTES: The Table displays the list of countries that were limited democracies and were most frequently involved in MIDs in the sample of Model (1) of Table 4. Limited democracies are defined as values of the Polity IV net democracy index of [-3,3].

Table 6: Sample Description for Baseline Model

COW Code	Name	COW Code	Name	Freq. of MIDs	N. of MIDs	N. of years
255	Germany	740	Japan	5%	1	22
101	Venezuela	740	Japan	5%	1	21
140	Brazil	145	Bolivia	5%	2	40
135	Peru	145	Bolivia	5%	3	57
135	Peru	155	Chile	5%	4	74
100	Colombia	135	Peru	6%	2	36
730	Korea	740	Japan	6%	1	17
101	Venezuela	210	Netherlands	6%	1	17
135	Peru	230	Spain	7%	1	15
200	United Kingdom	235	Portugal	7%	1	14
100	Colombia	220	France	7%	1	14
135	Peru	140	Brazil	7%	2	27
140	Brazil	150	Paraguay	8%	2	26
160	Argentina	255	Germany	8%	2	26
145	Bolivia	155	Chile	8%	5	63
40	Cuba	255	Germany	8%	1	12
91	Honduras	740	Japan	9%	1	11
70	Mexico	220	France	9%	1	11
41	Haiti	42	Dominican Republic	10%	2	20
93	Nicaragua	255	Germany	11%	1	9
150	Paraguay	160	Argentina	11%	3	27
91	Honduras	92	El Salvador	12%	2	17
200	United Kingdom	220	France	12%	2	17
100	Colombia	200	United Kingdom	12%	3	25
310	Hungary	345	Yugoslavia	13%	1	8
220	France	235	Portugal	13%	1	8
651	Egypt	740	Japan	13%	1	8
452	Ghana	461	Togo	13%	1	8
90	Guatemala	92	El Salvador	13%	4	32
41	Haiti	255	Germany	13%	3	23
155	Chile	160	Argentina	13%	9	68
100	Colombia	101	Venezuela	18%	2	11
740	Japan	800	Thailand	22%	2	9
130	Ecuador	135	Peru	24%	15	62
230	Spain	235	Portugal	25%	1	4
630	Iran	740	Japan	25%	1	4
540	Angola	551	Zambia	25%	1	4
501	Kenya	530	Ethiopia	25%	1	4
345	Yugoslavia	355	Bulgaria	25%	2	8
350	Greece	355	Bulgaria	33%	1	3
652	Syria	660	Lebanon	33%	1	3
510	Tanzania	516	Burundi	33%	1	3
325	Italy	640	Turkey	40%	2	5
145	Bolivia	150	Paraguay	41%	11	27
438	Guinea	450	Liberia	67%	2	3
255	Germany	365	Russia	100%	1	1
365	Russia	640	Turkey	100%	1	1

Notes: The Table displays the list of dyadic country pairs that were limited democracies and were most frequently involve
of Model (1) of Table 4. Limited democracies are defined as values of the Polity IV *net-democracy* index in [-3,3].

Table 7: Partial Effects for Model (3) in Table 4

Variable	Partial Effect	% Change
D_{DiDi}	-0.001000	-59.1
D_{LiDi}	-0.000635	-37.5
D_{DeDi}	-0.000489	-28.9
D_{DeLi}	-0.000607	-35.9
D_{DeDe}	-0.001243	-73.5
Pr(MID)=0.0017		

NOTES: The baseline probability Pr(MID) is the fitted value corresponding to all D_js equal to zero and the remaining regressors at their respective sample means. The reported partial effect in each row indicates the discrete change in Pr(MID) corresponding to a change in the value of the relative D_j from zero to one.

Table 8: Regression Models—Comparison with Mansfield and Snyder [38]

	Dependent Variable: Onset of a MID			
Model	(1)	(2)	(3)	(4)
Panel a)				
D_{DiDi}	-0.69	-	-0.22	-
	[0.26]*** (0.04)**		[0.18] (<0.01)***	
D_{LiDi}	-0.48	-	-0.37	-
	[0.23]** (<0.01)***		[0.14]*** (<0.01)***	
D_{DeDi}	-0.58	-	-0.31	-
	[0.25]** (<0.01)***		[0.19] (<0.01)***	
D_{DeLi}	-0.62	-	-0.13	-
	[0.25]** (<0.01)***		[0.17] (<0.01)***	
D_{DeDe}	-1.14	-	-0.98	-
	[0.26]***		[0.28]***	
Panel b)				
Dict.-Lim.Dem Trans	-0.31	-0.14	0.18	0.29
	[0.16]*	[0.14]	[0.11]*	[0.11]***
Alliance	-0.52	-0.60	-0.59	-0.61
	[0.13]***	[0.13]***	[0.14]***	[0.13]***
MajPower	0.26	0.33	[0.34]	0.34
	[0.32]	[0.31]	[0.30]	[0.31]
LogCapRatio	0.03	0.06	0.03	0.06
	[0.08]	[0.08]	[0.08]	[0.08]
Estimator	CLOGIT	CLOGIT	CLOGIT	CLOGIT
Years	1816-2000	1821-2000	1821-2000	1821-2000
Observations	32793	32793	32793	32793
(pseudo) R2	0.08	0.09	0.09	0.09

NOTES: * significant at 10%; ** significant at 5%; *** significant at 1%. Robust standard errors in brackets below each coefficient. P-value of Wald test for equality between each coefficient and the coefficient of D_{DeDe} is reported in parenthesis next to the corresponding standard error. All models are conditional logit models with fixed effects for each dyadic pair. Models (3)-(4) differ from (1)-(2) in the definition of the dummy variables: values of the Polity IV *net democracy* index in [-6,6] are coded as limited democracies, values in [-10,-7] as dictatorships and in [7,10] as democracies. The Dict.-Lim.Dem Trans dummy is defined accordingly. At each date t, the dummy variable detects whether at least one of the countries' political system in a dyad transitioned from a dictatorship to a limited democracy between t-5 and t. Each regression model includes (coefficient not reported) year fixed effects and cubic spline terms to account for temporal dependence of the MIDs (see Beck, Katz and Tucker[8]).

Table 9: Regression Models—Sub-samples

	Dependent Variable: Onset of a MID							
Model	(1)		(2)		(3)		(4)	
Panel a)								
D_{DiDi}	-0.84		-0.24		-10.63		0.14	
	[0.26]***	(0.14)	[0.38]	(0.03)**	[0.65]**	(0.65)	[0.99]	(0.11)
D_{LiDi}	-0.64		-0.47		-10.46		-0.30	
	[0.22]***	(0.03)	[0.40]	(0.35)	[0.71]**	(0.50)	[0.91]	(0.22)
D_{DeDi}	-0.62		-0.25		-10.20		-0.04	
	[0.26]**	(<0.01)***	[0.37]	(<0.01)***	[0.68]*	(0.04)**	[10.00]	(0.03)**
D_{DeLi}	-0.66		-0.59		-10.71		-0.32	
	[0.24]***	(0.01)**	[0.39]	(0.52)	[0.71]**	(0.67)	[10.02]	(0.11)
D_{DeDe}	-10.36		-0.72		-10.86		-10.32	
	[0.36]***		[0.38]*		[0.71]***		[10.1]	
Panel b)								
Alliance	-0.72		-0.10		-0.19		-10.10	
	[0.21]***		[0.18]		[0.28]		[0.49]*	
MajPower	0.02		0.35		0.64		-0.68	
	[0.26]		[0.54]		[0.88]		[10.47]	
LogCapRatio	-0.10		-0.10		-0.19		-0.25	
	[0.11]		[0.14]		[0.36]		[0.36]	
Estimator	CLOGIT		CLOGIT		CLOGIT		CLOGIT	
Years	1816-1945		1946-2000		1984-2000		1989-2000	
Observations	16143		15615		2946		1624	
(pseudo) R2	0.13		0.05		0.07		0.14	

NOTES: * significant at 10%; ** significant at 5 %; *** significant at 1 %. Robust standard errors in brackets below each coefficient. P-value of Wald test for equality between each coefficient and the coefficient of D_{DeDe} is reported in parenthesis next to the corresponding standard error. All parameters are estimated using conditional logit models with fixed effects at the dyadic level. Regression models include (coefficient not reported) year fixed effects and cubic spline terms to account for temporal dependence of the MIDs (see Beck, Katz and Tucker [8]). The regression models correspond to Model (1) of Table 4 but the parameters are estimated using only the sub-samples at the bottom of each column.

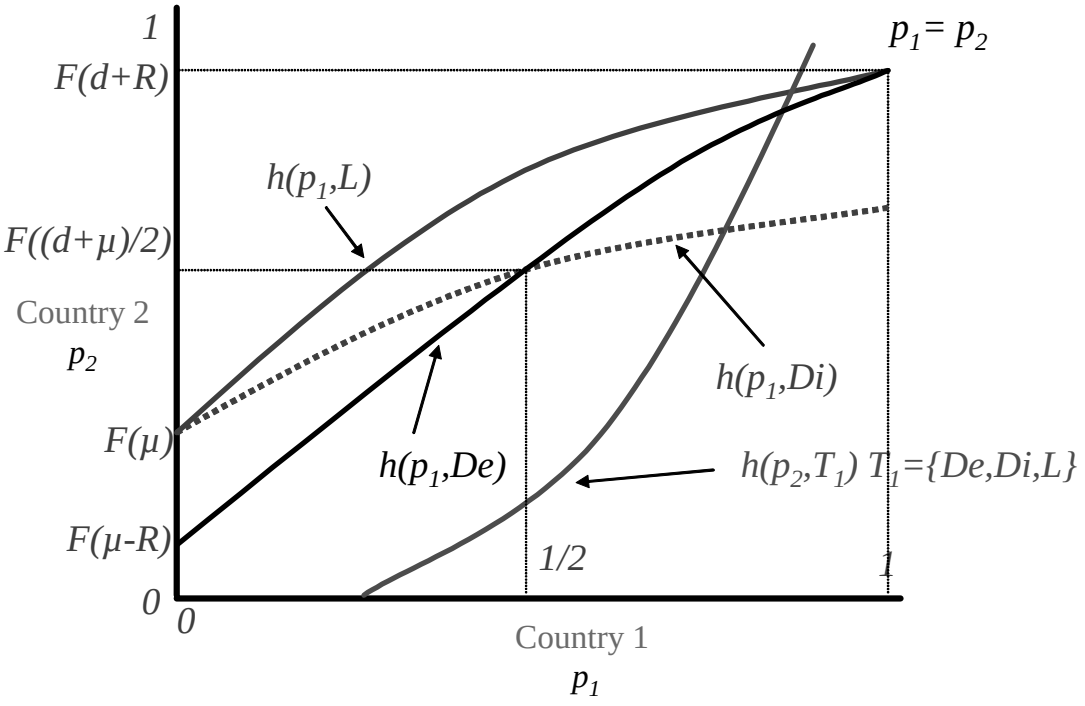
1
F(d+R)
F((d+μ)/2)
Country 2
p2
F(μ)
F(μ-R)
0
0
1/2
1
Country 1
p1
p1= p2
h(p1,L)
h(p1,Di)
h(p1,De)
h(p2,T1) T1={De,Di,L}

Figure 1:

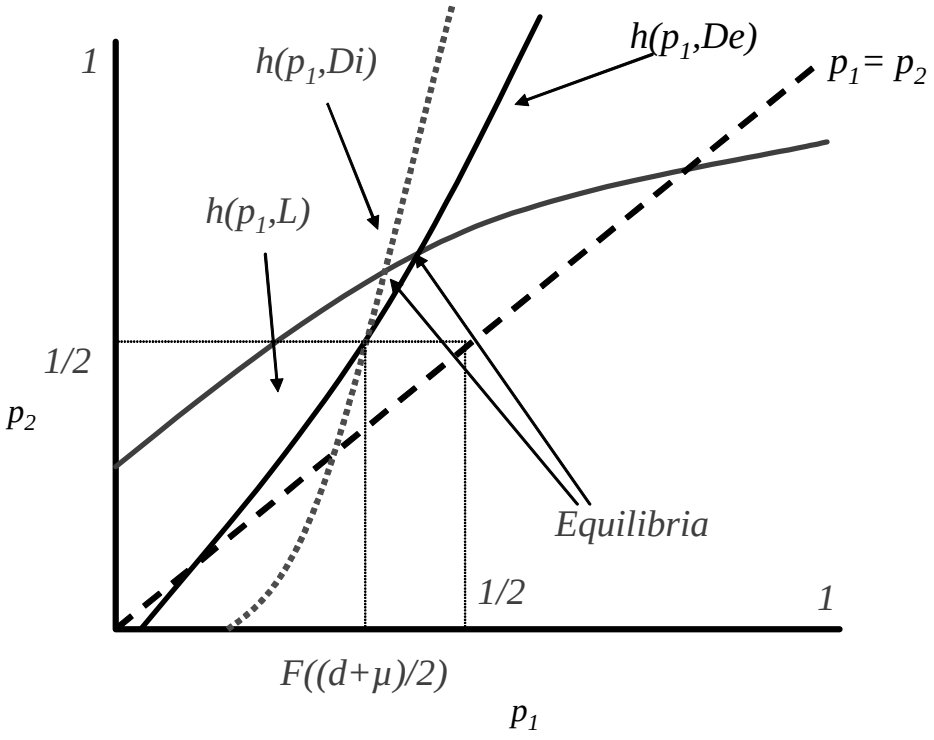

Figure 2:

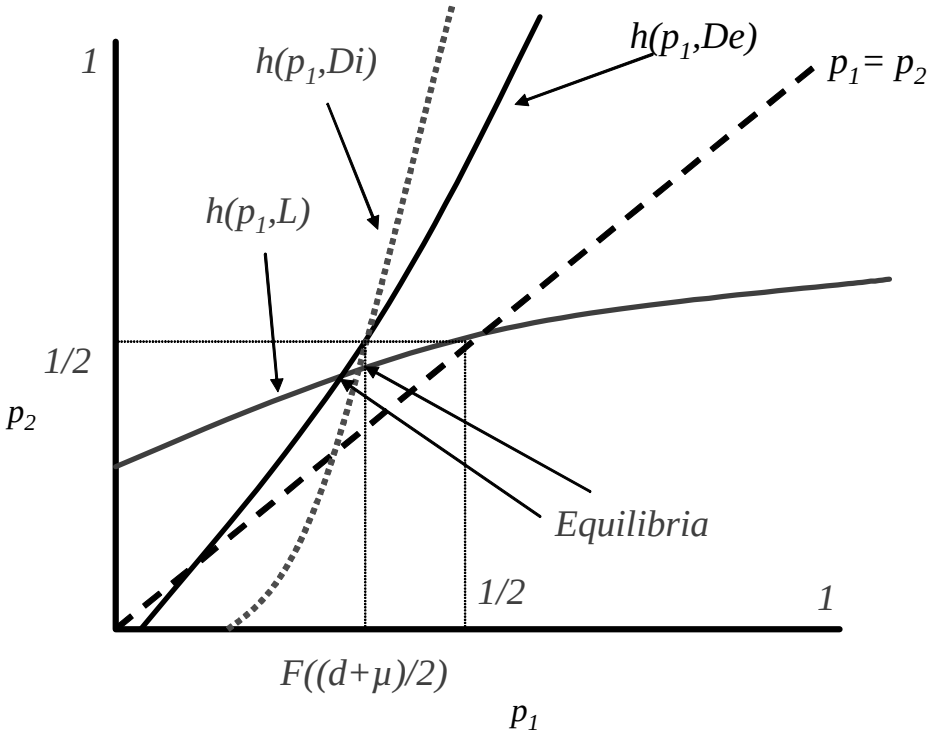

Figure 3:

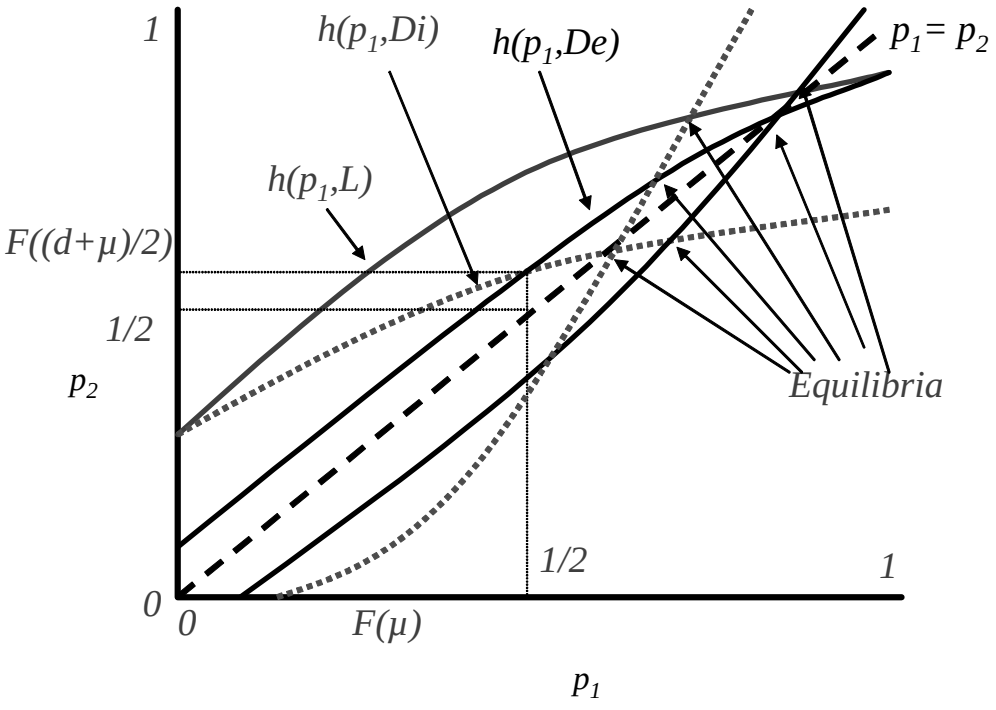

Figure 4: