
The Politics of Risking Peace: Do Hawks or Doves Deliver the Olive Branch?

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Abstract This article explores the politics of risking international cooperation with a distrusted adversary. It develops a model in which two states attempt to learn over the course of two periods whether or not mutual cooperation is possible given their (initially unknown) preferences. In one of the states, the government is engaged in domestic political competition with an opposition party. One party is known to have more hawkish preferences than the other, on average, and voters must decide which party to elect after observing the international interaction in the first period. The model shows that, when trust is low but continued conflict is costly, cooperation is most likely to be initiated by a moderate hawk—a leader with moderate preferences from the more hawkish party. Moreover, while dovish leaders are better at eliciting cooperation in the short run, mutual cooperation is most likely to endure if it was initiated by a hawk. Some empirical implications and illustrations of the model are discussed.

Peace is not made with friends, peace is made with enemies.
—Yitzhak Rabin, 1993

Making peace is risky business. At the international level, ending or reducing conflict often requires governments to take risky actions that leave them vulnerable to exploitation, such as making territorial concessions, cutting armaments, or opening commercial and financial relations. These risks are compounded by uncertainty and distrust over the other side's intentions: Are they committed to peaceful relations or do they seek a unilateral advantage? At the domestic level, there can be serious disagreements over the desirability of risking peace, disagreements that manifest themselves in political conflict between "hawkish" and "dovish" factions. As a result, what happens between states can affect the personal and political fortunes of actors within them. Particularly in democratic political systems,

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efforts at cooperation take place under the gaze of voters who must decide which leaders they want to guide their country's foreign policy. Governments that attempt to make peace risk being undermined by political opponents seeking to capitalize on voters' fear and distrust.¹

Given these risks, under what conditions will a government attempt peace with a distrusted rival? Under what conditions will those attempts be successful in bringing about robust cooperation? What are the domestic political costs and benefits of trying to initiate cooperation? Such questions are vitally important to our understanding of international conflict and its resolution. As the research into "enduring rivalries" notes, the vast majority of militarized conflicts take place in the context of long-running adversarial relationships: for example, France and Germany, India and Pakistan, Greece and Turkey, Britain and Russia, Israel and its Arab neighbors, the United States and any number of rivals such as the Soviet Union, China, Cuba, North Korea, and Iran.² Interest in this problem has given rise in recent years to studies, mostly empirical, that explore the timing of rivalry termination,³ when adversaries make concessions in long-running territorial disputes,⁴ and whether repeated conflicts can be tamed by bilateral norms.⁵

Nevertheless, this area of inquiry remains undertheorized, particularly in connecting the international and domestic sides of the problem.⁶ As one study notes, "Rapprochement . . . has attracted much less attention than war and peace."⁷ Many international conflict models assume a peaceful status quo and then examine governments' incentives to threaten or use military force to change that status quo.⁸ Less systematic attention has been paid to the opposite process: starting from a status quo of conflict and distrust and considering the incentives to initiate peaceful, or at least more cooperative, relations.⁹ Likewise, the vast literature on cooperation that grew out of the analysis of repeated games focuses on whether or not cooperative equilibria exist, but it does not explicitly model the transition from conflict to cooperation.¹⁰

This article develops a two-level game that examines a government's decision to risk cooperation, taking into account the strategic interdependence of the international and domestic levels. At the international level, states must decide whether or not to agree to some mutually accommodating deal. In each of two periods, one

1. See Mor 1997; and Colaresi 2004.

2. Goertz and Diehl 1993.

3. Bennett 1998.

4. See Huth and Allee 2002; and Chiozza and Choi 2003.

5. Gelpi 2003.

6. See Kydd 2000 and forthcoming; Maoz and Mor 2002; Rock 1989; and Armstrong 1993.

7. Armstrong 1993, 20.

8. See, for example, Bueno de Mesquita and Lalman 1992; and Powell 1999.

9. Exceptions include Ward 1989 and Kydd 2000. I note that there is a growing literature on bargaining to end wars; see, for example, Wagner 2000; Smith and Stam 2003; and Slantchev 2003. The model developed here focuses on the problems of cooperation under distrust, rather than the problem of bargaining during costly conflict.

10. See, for example, Axelrod 1984.

state decides either to cooperate or defect, and then the other chooses to cooperate or defect in response.¹¹ Each state leader is uncertain about the preferences of the other. Possible types include hard-liners, who have strong incentives to exploit cooperation by the other side; moderates, who will reciprocate both cooperation and defection; and soft-liners, who would rather cooperate on exploitative terms than risk mutual defection. The interaction at this level highlights a number of problems previously identified in the literature on cooperation under uncertainty.¹² A confrontational policy can signal toughness and may deter the adversary from thinking the state can be exploited; on the other hand, such a policy may also lead to an unwanted conflict spiral. A cooperative strategy can open the door to peaceful relations, but it also leaves the state vulnerable to exploitation by the other side and may tempt the adversary to defect in the future as well.

The domestic component of the game captures electoral competition between two parties within one of the states. The international interaction takes place in the view of an electorate that must try to decide which of two parties it wants to run the state's foreign policy. One party is known to have more hawkish preferences, on average, than the other, although the exact preferences of any particular government are uncertain and depend on whether the party is controlled by moderate or extremist factions. The strategy of the incumbent and the foreign state's response give voters a chance to learn about the preferences of both the current government and the adversary. I assume that the median voter is moderate, meaning that the voter is dogmatically neither soft- nor hard-line. Rather, the voter would be willing to cooperate with the rival state if the voter trusted it to respond in kind—a trust that is initially lacking but may be acquired over the course of the game. Given this assumption, the electorate wants a government that is neither so dovish that it will not defend the national interest if challenged nor so hawkish that it will create unnecessary conflict.¹³ Thus in deciding whether or not to attempt cooperation, governments must worry not only about how the foreign adversary will respond, but also on how voters will react to their decisions.

The model generates a number of predictions about the conditions that lead to cooperation and conflict at the international level and the domestic political repercussions of the possible international outcomes. For the purposes of this article, I focus on the different incentives that leaders of hawkish and dovish parties have to initiate cooperation under conditions of high distrust. Are hawks or doves more likely to initiate cooperation with a distrusted adversary? How does the foreign state's response vary depending on which party is in power? Are hawks or doves better at eliciting long-term cooperation? In other words: do doves deliver the olive branch, or does it take a "Nixon to go to China"?

11. The international component of the game is similar to that in Kydd 2000.

12. See, especially, Jervis 1976; Larson 1997; Kydd 2000 and forthcoming; and Ward 1989.

13. Gaubatz 1999, 57–58.

I derive two main results. First, when trust is low but the costs from continued conflict are high, the type of government most likely to initiate cooperation is one with a hawkish reputation but moderate preferences. Second, while leaders from dovish parties can be better at promoting mutual cooperation in the short term, cooperation initiated by a hawkish leader is more robust to future shocks in the relationship and thus is more likely to be longer lasting. Hence, the model suggests that hawks enjoy a number of political and strategic advantages in trying to make peace. While it may not require a Nixon to go to China, it certainly helps to have one. That said, the model also shows that hawks may not always want to take advantage of their superior ability to make peace. If the hawkish party is dominated by hard-liners or if the costs of continued conflict are low, then hawks may choose to perpetuate an international rivalry rather than risk peacemaking. The model specifies conditions under which hawks' incentives to risk peace align with their political and strategic advantages in doing so.

In developing these results, I depart from and extend the conventional argument for why hawks can be better peacemakers than doves. This story, formalized most prominently by Cukierman and Tommasi, hinges on the leader's credibility with his domestic electorate.¹⁴ If voters are unsure whether peace is in the nation's interests, they are more likely to approve of a deal endorsed by a hawk than one endorsed by a dove. After all, when President Richard Nixon said that peace with China was in U.S. interests, this was more credible than if the message had come from a leader with less obvious anticommunist credentials.¹⁵

While probably correct in some measure, this conventional wisdom is incomplete in at least two respects. First, this argument says little about the incentives of the government to take the risky action of initiating cooperation. Even if hawks are better at selling cooperation to their electorates, when do they have the incentive to even try?¹⁶ Are hawks or doves more likely to try to initiate cooperation? Second, by focusing solely on the leader's credibility with the domestic electorate, this story ignores a very important actor in this interaction: the foreign state. As the literature on two-level games suggests, choices at the international and domestic levels are strategically interdependent.¹⁷ Hence, it makes little sense to think of the interaction between leaders and voters in isolation from the inter-

14. Cukierman and Tommasi 1998; see also Cowen and Sutter 1998.

15. This logic is a natural extension of Calvert's argument about the value of biased information sources; see Calvert 1985.

16. Cukierman and Tommasi generate an electoral incentive for hawks to promote cooperation by assuming that candidates are committed to carrying out their proposals. Hence, a hawk that proposes peace becomes desirable to voters by convincing them that a more accommodative policy is in their interests and, at the same time, committing to pursue such a policy after the election. Without this exogenous commitment mechanism, voters might be inclined to elect a dove after learning from the hawk that peace is a good idea, weakening the latter's incentive ever to make such a proposal; see Cukierman and Tommasi 1998. The model in this article assumes that politicians cannot precommit to future actions.

17. See, especially, Putnam 1988.

action between states. How does the hawkishness or dovishness of the leader affect the way a foreign state responds to a cooperative gesture?

The model developed in this article fills these gaps by considering not only the electorate's response, but also the leader's incentives to initiate cooperation and the foreign state's incentives in responding. Which kind of government is most likely to initiate cooperation depends in part on the cost of continued conflict. When the payoff from mutual defection is relatively tolerable, only a soft-line dove will initiate cooperation. When the costs of mutual defection become large, however, cooperation is most likely to be initiated by a moderate hawk. Moderate hawks are likely to test the waters of cooperation in large part because it is electorally safer for them to do so. The model shows that the costs and benefits of risking peace fall asymmetrically on hawkish and dovish governments. When parties have different reputations, the same policy—for example, cooperation—leads voters to make different inferences about the preferences that prevail in that party. A dovish government that cooperates is considered to be extreme, while a hawkish government that cooperates is believed to be moderate. As a result, initiating cooperation can be an electoral boon for a hawk but electoral suicide for a dove. This difference derives from the fact that moderates in each party have to pursue different strategies to signal their type. Doves have to guard against being seen as soft-liners, while hawks have to guard against being seen as hard-liners. Moderates of each party consequently reveal themselves in different ways: doves by defecting, hawks by cooperating.¹⁸ Hence, a moderate hawk is the most likely type to initiate cooperation.

I then show that cooperation initiated by hawks is more likely to endure than is cooperation initiated by doves. This result stems from the foreign state's incentives in responding to cooperative gestures from the two kinds of parties. In brief, cooperation is tempting when coming from a dove but reassuring when coming from a hawk. Since a dove that cooperates reveals itself to be exploitable, hard-liners in the foreign state have some incentive to keep such leaders in power. Consequently, they may reciprocate cooperation by a dove in the short term, with the hope of exploiting the dove down the line. As a result, a cooperative gesture by a dove can elicit cooperation in the short run, but such cooperation need not endure into the future—as hard-liners who initially cooperated only for tactical reasons later reveal their true type. The same incentive does not exist when a hawk initiates cooperation. A hawk who cooperates reveals itself to be moderate, which means that it can be trusted to reciprocate cooperation but it cannot be exploited. The result, I show, is that a cooperative gesture by a hawk more faithfully reveals whether or not the foreign state has moderate preferences, thereby laying the groundwork for a stable cooperative relationship, if indeed such a relationship is possible.

18. In a related context, Nincic refers to this phenomenon as the “politics of opposites”; see Nincic 1988.

This article proceeds as follows. The first section lays out the main assumptions of the model. The second and third sections sketch the main features of the equilibria that exist when trust between the states is low. While formal details of the solution are in the Appendix, these sections highlight the incentives actors have in this strategic setting, and particularly the choices that they face in initiating or responding to a cooperative gesture. The fourth section then directly compares the equilibrium strategies and outcomes for hawkish and dovish governments, focusing particularly on which government is most likely to initiate cooperation and on the prospects that cooperation will endure. The final section offers concluding remarks and discusses the model's empirical implications.

The Model

Actors and Sequence of Moves

The model captures interactions on both the international and domestic levels. At the international level, the game is similar to that developed by Kydd.¹⁹ There are two states, A and B, which interact over two periods. In each period, one state decides whether to cooperate (*c*) or defect (*d*); and then the other state, after observing the first one's choice, decides whether to cooperate or defect in return. In period 1, state A moves first, and in period 2, state B moves first. Because the risk of exploitation falls mainly on the state that moves first, this alternating structure means that both states get a turn being exposed to that risk. The uncertainty is greater for state A, because it does not have the benefit of observing one round of play before its move.

To capture the domestic component of the game, I assume that state A is composed of three actors: an electorate and two political parties, the Hawks and the Doves. At the start of the game, one of these parties is in government and the other is in opposition. In the first period, the governing party determines whether A cooperates or defects. After observing B's response, but before the second period begins, the electorate decides either to retain the incumbent or to replace it with a leader from the opposition party. The party that wins the election controls the state's foreign policy in period 2. State B observes the outcome of the election before making its decision in that period.

Outcomes and Payoffs

In each period, there are four possible outcomes at the international level: mutual cooperation (*cc*), mutual defection (*dd*), unilateral defection by A (*dc*), and unilateral defection by B (*cd*). The international payoffs associated with each outcome are as shown in Figure 1. I assume that $r > t > w > 0$. Hence, if α and β

19. Kydd 2000.

		B	
		Cooperate	Defect
A	Cooperate	r, r	$0, t + \beta$
	Defect	$t + \alpha, 0$	$w + \alpha, w + \beta$

FIGURE 1. *International outcomes and their payoffs*

were zero, the actors would have the payoff orderings of the familiar Stag Hunt game—that is, each would prefer to cooperate if the other cooperates and to defect if the other defects. In addition, I assume here that cooperation is relatively risky, in the sense that the spread between the payoffs that can be obtained from cooperating (r or 0) is large relative to the spread between the payoffs that can be obtained from defecting (t or w).²⁰

The parameters α and β index how hawkish the actors are, with higher values indicating a greater willingness to engage in noncooperative or conflictual policies. The values of these parameters determine the actors' preference orderings over the possible outcomes. Different values of α , for example, induce five different preference orderings for actor A:

1. *Pacifist*. When $\alpha < -t$, then A's ordering is $cc > cd > dc > dd$, and A prefers any outcome in which it cooperates to an outcome in which it defects.
2. *Soft-liner*. When $-t \leq \alpha < -w$, then A's ordering is $cc > dc > cd > dd$. A soft-liner would rather cooperate under unfavorable terms (cd) than to experience mutual conflict (dd).
3. *Moderate*. When $-w \leq \alpha < r - t$, then A's ordering is $cc > dc > dd > cd$, which are the Stag Hunt preferences just described.
4. *Hard-liner*. When $r - t \leq \alpha < r - w$, then A's ordering is $dc > cc > dd > cd$. In this case, A prefers unilateral defection to mutual cooperation, but still prefers mutual cooperation to mutual defection. This ordering of outcomes is the same as in the prisoner's dilemma.

20. In particular, I assume that $r > 2^*(t - w)$. This assumption is not particularly strong and is made largely for convenience. The preference ordering alone ensures that $r > t - w$. As $t - w$ approaches r , the difference between cooperation and defection vanishes, as both strategies yield the same payoff regardless of the other side's response. Hence, assuming that $r > 2^*(t - w)$ ensures that the difference between cooperation and defection is sufficiently meaningful.

5. *Warmonger*. When $\alpha \geq r - w$, then A's ordering is $dc > dd > cc > cd$. A prefers any outcome in which it defects over any outcome in which it cooperates.

One can similarly identify five kinds of state B depending on the value of β .

As with any game-theoretic model, this one is silent about why actors have different preferences over international outcomes; rather, it takes preferences as given and explores the strategic implications. Nevertheless, it is easy to see how such heterogeneity can arise. Actors can have different assessments of the state's national interests or identity, different views about the utility and desirability of using force, different costs and benefits from conflict, or different attitudes toward risk. In some cases, hard-line and warmonger preferences arise from an ideological antipathy toward the adversary: for example, anticommunism in the United States, Hindu nationalism in India, and militant Islam in Pakistan and some Arab states. In other cases, hard-line preferences can be rooted in the material interests of those who might stand to lose from a peace deal, such as Cuban exiles in the United States or Israeli settlers in the West Bank. Soft-line or pacifist types might arise from an ideological aversion to confrontation and militarism or in constituencies that bear the costs of continued conflict. For example, groups that benefit from trade with an adversary might be willing to cooperate on exploitative terms if continued conflict would jeopardize that trade.²¹ It is also quite likely that the influence of third countries can induce softer preferences in the bilateral relationship being modeled. In the 1970s, for example, the New Democracy party in Greece was open to the charge of being overly accommodating to Turkey because of its pro-Western orientation at a time when the Western allies were pushing for Greek concessions to end the rivalry.²² And if Nixon had moderate preferences with respect to China in the early 1970s, this was in large part because of his recognition that rapprochement with China could help the United States in its conflict with the Soviet Union.

Whatever their type, all actors value the international outcome in each period.²³ Hence, the leader, the opposition, and the voters in state A all get a payoff from the international interaction that is determined by their specific values of α . Let α_H , α_D , and α_V denote the hawkishness of the Hawk party leader, the Dove party leader, and the pivotal voter, respectively. In addition, politicians value holding office. In particular, assume that the leader who holds office in each period receives an additional benefit, $V > 0$.

Because members of different parties tend to have different policy preferences, the party labels inform voters and foreign decision makers about the likely pref-

21. See, for example, Papayouanou 1997.

22. Coufoudakis 1985, 205, 210.

23. I assume that there is no discounting of future payoffs. This assumption simplifies the solution of the model and focuses attention on how current decisions are shaped by their future consequences.

ferences of the incumbent and opposition leader.²⁴ I assume that the Hawk party is identifiably more hawkish than the Dove party, in the sense that a leader affiliated with the Hawks is likely to have higher payoffs from confrontational outcomes than does a leader affiliated with the Doves. Because party cleavages rarely form solely or even primarily over foreign policy issues, however, the party labels do not perfectly predict preferences on this dimension; rather, they suggest tendencies. Thus while Hawks tend to be more hawkish than Doves, the distributions of foreign policy preferences within the two parties overlap: there can be relatively dovish Hawks and relatively hawkish Doves.

In particular, I assume that each party has moderate and extremist factions. The Hawk party is composed of moderates, for whom $\alpha_H = 0$, and extremists, for whom $\alpha_H = \alpha_H^* > r - t$. Notice that the extremist Hawks can be either hard-liners or warmongers, or some mix of the two; none of the results depend on how extreme this faction is. As a short-hand, however, I will generally refer to the extremist Hawks as hard-liners. Similarly, the Dove party is composed of moderates, for whom, $\alpha_D = 0$, and extremists, for whom $\alpha_D = \alpha_D^* < -w$. Again, one needs not specify whether the extremist Doves are soft-liners or pacifists or both, though I will generally use the term soft-liner as a short-hand to refer to this faction.²⁵ The actual preferences of a Hawk or Dove government depend on which faction in the party calls the shots, which I take to be a key source of uncertainty in the model, as specified below.

The electorate in state A consists of numerous individuals with potentially heterogeneous preferences covering the entire spectrum. I show below that standard median voter results will hold in this context, which means that one needs only concentrate on the preferences of the median or pivotal voter. Here, I assume that the pivotal voter is a moderate, with $\alpha_V = 0$.²⁶ While this assumption need not always be true, this is the most interesting assumption from a strategic perspective, because it means that the median voter does not have a natural affinity for one party or the other. As a result, the electoral outcome is maximally dependent on the actors' choices. Assuming that the median voter is moderate is not the same as asserting that the median voter always prefers to cooperate. A moderate prefers to cooperate only if it expects the other side will as well. Hence, whether a moderate prefers cooperation or defection depends strongly on its beliefs about the rival. More extreme types, by contrast, tend to prefer one strategy or the other regardless of the other state's expected response. The best indicator of moderation, then, is a willingness to revise policy preferences—in either a cooperative or conflictual direction—in response to changing beliefs about the adversary. Studies of public opinion in a variety of conflicts—involving the United

24. See, for example, Kiewiet and McCubbins 1991; Cox and McCubbins 1993; and Aldrich 1995.

25. These assumptions do not rule out the existence of other preference types within each party, for example, hard-liners or warmongers in the Dove party. I simply assume that these preferences cannot be dominant in that party.

26. There is no loss in generality in fixing this parameter to zero.

States,²⁷ Israel,²⁸ and India²⁹—show that aggregate opinion, at least, tends to move in this way. That said, most of the core results developed here would continue to hold if the median voter were assumed to be hard-line rather than moderate.³⁰

Information and Beliefs

All actors are incompletely informed about the preferences of other actors in the game, with the exception of the pivotal voter, who is known to be moderate. Let p_H and p_D denote the prior probability that the Hawk and Dove governments, respectively, are controlled by their moderate factions. With the complementary probabilities, the parties are controlled by their extremist factions. These assumptions imply that there is some chance the party leaders have the same preferences as the pivotal voter, but there is also some chance that they are more extreme, in either the hawkish or dovish direction.³¹ The uncertainty surrounds not only the specific party leader's personal views, but also the relative strength of the factions within the party, the leader's need to cater to those factions, and so on. This interpretation takes the focus away from just the preferences of individual leaders, and puts it as well on the dynamics of intraparty politics. For example, even if one believes that the Hawk leader is personally a moderate, there may be uncertainty as to whether he can act on those preferences if the hard-line faction in the party is too strong.³²

In the case of state B, I assume that the government is either moderate, in which case $\beta = 0$, or hard-line, in which case $\beta = \beta^*$ with $r - w > \beta^* > r - t$. This assumption captures the distrust that actors in A have about B's intentions. There is some possibility that B is moderate, in which case mutually beneficial cooperation is possible, but there is also some chance that B is hard-line and will exploit cooperation when given the chance. As before, it is useful to interpret this assumption as deriving from factional politics within B—that is, B contains both moderates and hard-liners, and that A's uncertainty is over which faction actually calls

27. See Page and Shapiro 1992; Peffley and Hurwitz 1992; and Nincic 1988.

28. Arian 1995 and 2002.

29. Cortright and Mattoo 1996, 111–12.

30. Proofs are available from the author.

31. Though the two-type model is simple, it can capture a variety of party systems, including highly polarized systems in which both parties are likely to be extremist (p_D, p_H both low), moderate systems (p_D, p_H both high), “militant” systems in which the parties tend in the hawkish direction (p_H low, p_D high), and “pacifist” systems in which the parties tend in the dovish direction (p_H high, p_D low). While equilibrium behavior varies in its particulars depending on the actual values of these parameters, the general results discussed here hold for all combinations (p_D, p_H) such that $0 < p_D < 1$ and $0 < p_H < 1$.

32. By fixing the probabilities with which different factions control the parties, I have made intraparty politics exogenous to the game. This is an assumption that I hope to relax in future versions of the model.

the shots. Let q denote the prior probability that state B is moderate.³³ This probability roughly corresponds to how much A initially trusts B.³⁴ When q is low, actors in A think it quite likely that B is controlled by hard-liners and hence is not trustworthy. Because I am interested in situations involving high distrust, the discussion in this article focuses on the equilibria that exist when q is low.

The Incentive to Appear Moderate: Equilibrium Behavior the Second Period

The main intuition that emerges from equilibrium play in the second period is that governments in state A, whether Hawk or Dove, have strong incentives to convince both voters and the foreign state that they have moderate preferences. At the international level, generating a posterior belief that one is moderate is helpful for eliciting cooperation from state B. After all, a moderate will not exploit cooperation, nor can it be exploited. Hence, if state B is convinced that it is facing a moderate government, it will cooperate regardless of whether it has moderate or hard-line preferences. At the domestic level, convincing voters that one is moderate is also useful for getting reelected. The median voter prefers moderate leaders, not simply because the voter is moderate, but also because governments that are known to be moderate elicit cooperation from the adversary, and they reciprocate in kind, hence giving voters their best possible outcome.³⁵

At the very last node of the game, the government in A must decide how to respond to B's second-period strategy. This decision is quite straightforward and depends only on the current government's type. If A is a soft-liner, then it will cooperate regardless of what B did. If A is a hard-liner or warmonger, then it will defect regardless of what B did. If A is moderate, then it will reciprocate whatever B did: cooperating in response to cooperation, and defecting in response to defection. Notice that this means that a Dove will always reciprocate cooperation in the second period and may or may not defect in response to defection; a Hawk will always reciprocate defection and may or may not reciprocate cooperation.

Now consider B's strategy. Informally, both types of B want to cooperate if they are sufficiently convinced that the government in A is moderate. This is because even a hard-liner prefers mutual cooperation to mutual defection, and a moderate will respond to either strategy in kind. If B is sufficiently convinced that A is

33. This prior probability is shared by all actors in state A. It would be interesting to extend the model to permit heterogeneous prior beliefs about B's type.

34. Equating trust with a prior belief about preferences is consistent with the usage in Kydd forthcoming, who has a nice justification for this treatment of the term.

35. The fact that the second period generates this simple intuition may help counter skepticism that the results in this article are driven by a rather restrictive game structure—particularly, the assumptions that there are only two periods and the states alternate moving first. While this structure is not necessarily realistic, it does induce realistic incentives on the actors' first-period choices.

hard-line, then both types of B will defect. If B thinks that the government in A is soft-line, then a moderate B will want to cooperate, while a hard-line B will be tempted to defect.

Formally, consider first the case in which the Dove is in power in the second period. Let p_D^h denote the probability that the Dove is a moderate given the history of the game to this point. If the Dove was in office in the first period, then p_D^h is a posterior belief, updated based on what the Dove did in the earlier period; if the Hawk was in office in the first period, then $p_D^h = p_D$, because there is no history on which to update the prior belief about the Dove. Because B knows that a Dove is certain to reciprocate cooperation,

$$EU_B(c|Dove) = r. \tag{1}$$

If B defects, then with probability p_D^h , the Dove is a moderate and will defect, and with the complementary probability the Dove is an extremist and will cooperate, allowing itself to be exploited. Thus,

$$EU_B(d|Dove) = \beta + p_D^h w + (1 - p_D^h)t. \tag{2}$$

Comparing these equations, one finds that B will cooperate if

$$\beta < r - t + p_D^h(t - w) \equiv \hat{\beta}_D^h. \tag{3}$$

Because $\hat{\beta}_D^h \geq r - t > 0$, a moderate B, for whom $\beta = 0$, will always cooperate when a Dove is in power. A hard-line B will cooperate with a Dove if and only if $\beta^* < \hat{\beta}_D^h$. Notice that $\hat{\beta}_D^h$ is increasing in the posterior belief that the Dove is a moderate, p_D^h . This means that an increase in the probability that the Dove is moderate increases the range of conditions under which a hard-line B will cooperate.

Similar calculations show that, if a Hawk is in power in the second period, then B will cooperate if

$$\beta < p_H^h r - w \equiv \hat{\beta}_H^h, \tag{4}$$

where p_H^h is defined analogously to p_D^h . This means that a moderate B will cooperate with a Hawk if $\hat{\beta}_H^h > 0$, and a hard-line B will cooperate with a Hawk if $\hat{\beta}_H^h > \beta^*$. Once again, because $\hat{\beta}_H^h$ is increasing in p_H^h , a higher posterior probability that the Hawk is moderate makes these conditions easier to meet and hence increases the chances that B will cooperate.

Continuing up the tree, one next considers the voters' decision to keep or replace the first-period incumbent. The election hinges on which party is expected to deliver a better outcome in the second period, where the expectations depend in large part on the first-round history. Hence, voting is prospective in the sense that the electorate wants to maximize future payoffs, and retrospective in the sense that the

outcome in the previous period shapes the voters' beliefs about the type of the incumbent and foreign state.

Formally, let σ_D^h and σ_H^h denote the expected probabilities that B will cooperate in the second period with a Dove and Hawk, respectively, given the history of the game. For any given voter i , with hawkishness α_i , the expected utility of electing a Dove and a Hawk, respectively, are:

$$EU_i(\text{Dove}|h) = \sigma_D^h r + (1 - \sigma_D^h) p_D^h (w + \alpha_i), \text{ and} \quad (5)$$

$$EU_i(\text{Hawk}|h) = \sigma_H^h [p_H^h r + (1 - p_H^h)(t + \alpha_i)] + (1 - \sigma_H^h)(w + \alpha_i). \quad (6)$$

Because these equations are all linear in α_i , it is easy to show that there will exist some cutpoint $\bar{\alpha}$ such that all voters with $\alpha_i < \bar{\alpha}$ will prefer one party (generally the Doves), and all voters with $\alpha_i > \bar{\alpha}$ will prefer the other (generally the Hawks). This result justifies the focus on a single, pivotal voter, which in the case of majority rule voting would correspond to the median voter. Whichever party the pivotal voter prefers will win the election.

Given the assumption that the median voter is moderate, with $\alpha_V = 0$, one can readily show that the voter's expected utility from electing a given party is weakly increasing in the posterior probability that its leader is moderate. This result stems from two sources, one direct and the other indirect. The direct effect derives from the fact that a moderate voter always does better with a moderate leader, regardless of what the foreign state does. Holding constant the strategy of state B, the expected utility from each party is increasing in the probability that it is moderate, p_D^h or p_H^h . The indirect effect derives from the fact that a moderate voter is always better off if state B cooperates, and, as shown above, the probability that B will cooperate with a given leader is weakly increasing in the probability that the leader is moderate. Hence, government's help their reelection changes by encouraging the belief that they are moderate.

Of course, it is not always possible for voters to pick a candidate who is certain to be a moderate. In this case, voters have to decide which kind of extremist they are more willing to risk having in office, a choice that depends on their beliefs about B. The more the voters have reason to trust B after the first period, the more willing they will be to risk putting an extremist Dove in power. The less they trust B after the first period, the more willing they will be to risk electing an extremist Hawk. This observation suggests that hawkish parties often enjoy an advantage when trust is low. Under such conditions, even a known hard-liner can get reelected if the alternative is putting in place a government that might be too soft. This result recalls Iklé's observation that, during times of war, doves are generally more vulnerable to the charge of treason than hawks are to the charge of "adventurism."³⁶

36. Iklé 1971, chap. 4.

Initiating Cooperation: Equilibrium Behavior in the First Period

I now turn to the first-period strategies. The full derivation of these can be found in the Appendix. Here, my main goal is to discuss the basic form the equilibria take when q is low and to focus particularly on the conditions under which the government initiates cooperation and how B reacts in that event. Because the game can start with either the Dove or the Hawk in power, one needs to consider each scenario in turn.

Dove in Power

For low values of q , the equilibrium strategies in the first period are as follows:

1. A moderate Dove defects. A soft-line Dove cooperates with probability s_D and defects with probability $1 - s_D$, where s_D can be zero, one, or some number in between.
2. In response to cooperation, a moderate B always cooperates, while a hard-line B plays a mixed strategy, cooperating with probability σ_D^c and defecting with probability $1 - \sigma_D^c$.
3. In response to defection, a moderate B may cooperate or defect, while a hard-line B always defects.

Several observations flow from these equilibrium strategies.

The main result is that Doves are hesitant to initiate cooperation. A moderate Dove always defects, and even a soft-line Dove generally defects some or all of the time. (There does exist an equilibrium in which the soft-line Dove always cooperates, or $s_D = 1$, but as I note below, the conditions under which it holds seem implausible.) The reason for this hesitance is that cooperation is risky for a Dove, both because of what it reveals about the government and because of how the rival state responds. When trust is low, the only type of Dove that cooperates is an extremist.³⁷ The political danger of this revelation is most clearly evident in the event that B does not reciprocate. Following a cd outcome, the Dove is known to be soft-line, and B is known to be hard-line. Under these conditions, the voters know that keeping the Dove will encourage B to defect, the soft-line government will cooperate in response, and voters will get the “sucker’s payoff” of zero. Alternatively, they can put the Hawk in power, and the worst result will be mutual defection, for a payoff of w . Because $w > 0$, the pivotal voter always prefers to remove the Dove following a cd outcome. Thus the international cost to being

37. When the soft-line Dove is the only type to cooperate with nonzero probability, this is trivially true. In the pooling equilibrium in which the soft-line Dove always defects, it is assumed that, off the equilibrium path, a Dove that cooperates must be soft-line.

unilaterally exploited is compounded by a domestic political cost, creating a disincentive for Doves to cooperate. This result captures the standard story for the electoral defeat of Israeli Prime Minister Ehud Barak after the breakdown of talks with the Palestinians in September 2000 and the onset of the second Intifada. To many in Israel, Palestinian rejection of the terms offered by the Labor leader at Camp David represented unilateral defection in the face of a cooperative gesture. This act convinced much of the Israeli electorate that Palestinian leader Yasir Arafat was a hard-liner (or worse) and had the effect, domestically, of shifting the Israeli public to the right.³⁸ The landslide election of the more hawkish Likud leader, Ariel Sharon, and the diminished political standing of the Labor party, which had been closely associated with the Oslo peace process, were natural outgrowths of this development.

Even if cooperation is reciprocated by state B, this outcome is not without political risks for a Dove government. The reason has to do with B's equilibrium response to cooperation.³⁹ While a moderate B will always reciprocate cooperation, a hard-line B does so as well with some nonzero probability. This is because a hard-line B knows that, if it defects in response to cooperation, it will surely face the Hawk in the next period. On the other hand, if there is a good chance that the Dove will be kept after a *cc* outcome, then there is some incentive to cooperate in order to keep the Dove in power. In doing so, it foregoes the temptation payoff in the first period to enhance the electoral prospects of the soft-line Dove, whose reelection allows the hard-liner to get the temptation payoff in the second period. Thus the hard-line B may resist the temptation to defect unilaterally in period 1 because it would rather have the Dove than the Hawk as its opponent in period 2.

As a result of this logic, the electorate does not necessarily keep a Dove that cooperates even if B reciprocates. Though the Dove has delivered the best possible outcome in the first period, it has revealed itself to be soft-line, and B's cooperative response is only partly reassuring. After a *cc* outcome, there remains some lingering doubt that B is a wolf in sheep's clothing: a hard-liner who has cooperated purely for tactical reasons, to prevent the election of a Hawk. I show in the Appendix that the electorate must play a mixed strategy in this event, reelecting the Dove with probability $k_D^{cc} \in (0,1)$ and removing the Dove with the complementary probability.

This result recalls the fate of French Prime Minister Joseph Caillaux, who attempted to resolve the Franco-German colonial rivalry in Africa in the wake of the 1911 Agadir incident. Caillaux struck an advantageous deal: Germany renounced all political rights in Morocco in exchange for some territorial concessions in the

38. See, for example, Arian 2002.

39. In the event that the soft-line Dove defects in equilibrium, the responses to cooperation by state B and the electorate are off the path of play and are based on the off-the-path belief described in fn. 37.

Congo. In the process, he was aided not only by British support, but also by the threat that, if Germany's intransigence undermined Caillaux's center-left government, the Germans would end up having to deal with the much more hawkish Georges Clemenceau.⁴⁰ Hence, German decision makers were aware of the hawk waiting in the wings. Even so, the German concessions did not save Caillaux. As details of the deal emerged, he fell victim to strident attacks from the right, alleging that he would seek deeper reconciliation with Germany at the expense of French colonial interests.⁴¹ His government collapsed in the face of this criticism. Thus Caillaux lost power despite the advantageous deal because the outcome raised doubts about his firmness in dealing with Germany while doing nothing to dispel distrust of that adversary.

The political risks of cooperation for a Dove are underscored by the conditions that are required to support the separating equilibrium in which the soft-line Dove always cooperates. This equilibrium exists only when the value of office is low, the soft-line type is extremely averse to conflict, and the Hawk party is very likely to be run by moderates. When these conditions hold, an extremist Dove strictly prefers to cooperate largely because it is content to commit electoral suicide. Since office is not all that valuable and a new Hawk government is likely to elicit and reciprocate cooperation, a soft-line Dove would rather cooperate and see the Hawk elected than engage in the noncooperative action that would help its political fortunes. While the model shows that this behavior is logically possible, the conditions under which it makes sense are unlikely to be observed empirically. Under more plausible conditions, then, even soft-line Doves defect at least some of the time.

Hawk in Power

When the Hawk is in power to start that game, the equilibrium can take two different forms, reflecting the mixed incentives that Hawks have. On the one hand, moderate Hawks have strong electoral incentives to attempt peace in order to reveal their moderation; in doing so, they benefit from the fact that, as Hawks, they are less vulnerable than Doves to the charge of being soft. On the other hand, as I noted earlier, Hawks enjoy a natural electoral advantage over Doves when trust is low because, under these conditions, voters fear hard-liners less than they fear soft-liners. Hence, Hawks sometimes have an incentive to perpetuate the rivalry to maintain this advantage. Which incentive is stronger turns out to depend on how bad the mutual defection outcome, w , is and, in particular, whether it is above or below some threshold, \hat{w} , which I derive in the Appendix. When $w > \hat{w}$, then mutual defection is a relatively tolerable outcome, and the incentive to try to ini-

40. Barlow 1971, 371, 385–86.

41. Binion 1960, 46–49.

tiate peaceful relations is low. When $w < \hat{w}$, then mutual defection is relatively unattractive, increasing the incentive to attempt peace.

Not surprisingly, then, if $w > \hat{w}$ and q is sufficiently low, a Hawkish government will always defect in the first period, regardless of whether it is moderate or hard-line. Likewise, both kinds of state B will defect in response, and all actors will enter the second period with their beliefs unchanged. Because voters do not have an opportunity to revise their initial distrust of the foreign adversary, they will generally retain the Hawk given this outcome. Thus when trust is low and mutual defection is relatively tolerable, a Hawkish government in A will not initiate cooperation, thereby perpetuating the rivalry and their party's natural electoral advantage.

When $w < \hat{w}$, the prospects for cooperation are more promising. When q is between zero and a threshold derived in the Appendix, the equilibrium strategies take the following form:

1. A moderate Hawk cooperates, and a hard-line Hawks defects.
2. In response to cooperation, a moderate B cooperates, and a hard-line B defects.
3. In response to defection, a moderate B cooperates, and a hard-line B defects.

Notice that these strategies are all separating, in the sense that different types always take different actions, thereby revealing their preferences unambiguously. Several implications follow from this.

Because a Hawk that cooperates reveals itself to be a moderate, the electorate will almost always reelect such a government, regardless of how B responds.⁴² As discussed above, a known moderate is the best possible leader for the pivotal voter, because such a leader elicits and reciprocates cooperation in the second period. Hence, whether B's response to the cooperative gesture reveals it to be moderate or hard-line, the electorate is happy to retain the Hawk.

Unlike when a Dove cooperates, then, the hard-line B has no incentive in this case to disguise itself in the first period to influence the electoral outcome. It simply cannot change the fact that the moderate Hawk will be reelected. While the hard-line B will cooperate with the moderate Hawk in the second period—when it must go first—it will exploit the Hawk's cooperation in the first period. The moderate B, on the other hand, is happy to know that it is dealing with a moderate, and so it reciprocates cooperation in the first period and offers cooperation again in the second. Because the hard-line and moderate types of B respond differently to cooperation by a Hawk, B's choice in this event perfectly reveals its type. As I will note below, the superior information elicited by a Hawk's cooperative gesture can promote the stability of cooperation in the long run.

42. The "almost" caveat is needed because there exists a set of conditions under which the electorate removes the Hawk with nonzero probability after the *cd* outcome. Nevertheless, the probability that a Hawk will be reelected after a *cd* outcome is always greater than zero and hence always greater than the corresponding probability for a Dove.

TABLE 1. *The probability of initiating cooperation by party and type*

<i>Party</i>	<i>Preference</i>	$w < \hat{w}$	$w > \hat{w}$
Dove	Soft-line	$s_D \in [0,1]$	$s_D \in [0,1]$
Dove	Moderate	0	0
Hawk	Moderate	1	0
Hawk	Hard-line	0	0

Given the political and diplomatic benefits that accrue to a Hawk that cooperates, it might seem puzzling that a hard-line Hawk does not also cooperate, at least some of the time. Indeed, there is an interesting asymmetry in the equilibria between Hawks and Doves: while an extremist Dove might sometimes mimic its moderate counterpart by defecting, the extremist Hawk does not mimic its moderate counterpart by cooperating. This asymmetry arises from the assumption of low trust. Under this condition, the danger of revealing oneself to be a hard-liner is much lower than the danger of revealing oneself to be a soft-liner. When q is low, the most likely response to a Hawk’s defection is defection by a hard-line B. Once B has revealed itself to be hard-line, the electorate has no reason to dump a hard-line Hawk, since the Dove can do no better and may do much worse. Thus the initial condition of low trust means that the hard-line Hawk has little to fear by revealing itself.

Comparing Hawks and Doves

One can now answer the questions set out at the beginning of this article. Under conditions of high mistrust, are hawks or doves more likely to initiate cooperation? Are hawks or doves better at eliciting cooperation from the foreign state and at promoting mutual cooperation over the long run?

Who Initiates Cooperation?

As I have shown, the Hawk and Dove governments have different first period strategies. In the case of the Dove, there is a semi-separating equilibrium in which the moderate Dove always defects and the soft-line Dove plays a mixed strategy, cooperating with some probability $s_D \in [0,1]$. In the case of the Hawk, there is either a pooling equilibrium in which both types defect ($w > \hat{w}$) or a separating equilibrium in which the moderate Hawk cooperates and the hard-line Hawk defects ($w < \hat{w}$). Table 1 summarizes the probability that cooperation will be initiated by different types of government.

There are several results here. When payoff from mutual conflict is relatively high, only a soft-line Dove will initiate cooperation. This makes intuitive sense: when the prospects for cooperation are at their worst—that is, when trust is lacking and the continued conflict is tolerable—only the most conciliatory will try to make peace. When the payoff from mutual defection is low, however, the type that is most likely to initiate cooperation is a moderate Hawk. This is especially so given the implausibility, noted above, of the $s_D = 1$ equilibrium. Partisan politics aside, these results collectively mean the probability that any government will initiate cooperation is highest when continued conflict is particularly costly, or ($w < \hat{w}$). This observation recalls Zartman’s finding that a “mutually hurting stalemate” helps to make a rivalry “ripe for resolution.”⁴³

Notice that these results do *not* imply that any Hawk government is necessarily more likely to cooperate than is any Dove government. The *ex ante* probability of cooperation by a Hawk is the probability that moderates control that party, p_H , while the *ex ante* probability of cooperation by a Dove is $(1 - p_D)s_D$. Depending on the actual distribution of types within each party, either of these probabilities could be the larger. In particular, if the Hawk party contains no moderates ($p_H \approx 0$), then cooperation by a Hawk is unlikely. Only if extremists are relatively rare is a Hawkish leader more likely to initiate cooperation than a Dovish leader (and then only when $w < \hat{w}$).

This result arises from the signaling aspects of the decision to cooperate. As noted earlier, leaders are trying to achieve the same goal: convincing foreign and domestic audiences that they have moderate preferences. Though this incentive is common to both parties, the strategies that they must use to generate these beliefs are different. A moderate Hawk must convince everyone that it is not hard-line. To do this, it must choose a strategy that a hard-line type is reluctant to mimic: cooperation. A moderate Dove, by contrast, must convince everyone that it is not too soft. It does so by selecting a strategy that a soft-line Dove finds costly to mimic: defection. Interestingly, this means that two moderates with identical preferences but from different parties will behave differently in otherwise exactly similar situations. Put another way, the same policy—cooperation—is a moderate policy coming from a Hawk, but an extremist policy coming from a Dove.

Because of this asymmetry, cooperation is politically much riskier for the Dove than for the Hawk. This is easiest to see when the government cooperates and the adversary defects, thereby revealing that it is hard-line. After this result, the voters prefer to have a Hawk in power. Thus when a Hawk extends a gesture of cooperation, it knows that a defection by the adversary, while bad from a foreign policy perspective, will not destroy its reelection prospects. By contrast, when a Dove cooperates, defection by the adversary leads both to a foreign policy and an electoral defeat. Moreover, even when the foreign state reciprocates cooperation in the first round, the Hawk is electorally more secure than the Dove. Under condi-

43. Zartman 1989.

tions of low trust, a Dove that cooperates reveals itself to be an extremist. Because voters cannot rule out the possibility that B is hard-line, they may remove the Dove in spite of the optimistic first-round outcome. In sum, the parties' domestic political incentives make cooperation relatively safer for the Hawk.

Will Cooperation Be Reciprocated, and Will It Last?

The second set of results deals with the probability that the states will achieve mutual cooperation in the short and long term. There are two subtly different findings here. First, consider the probability that an initial gesture of cooperation will be reciprocated. When a Hawk attempts cooperation, only a moderate B will reciprocate cooperation. When a Dove initiates cooperation, a moderate B will always reciprocate, and a hard-line B does likewise with positive probability. Hence, the probability that a cooperative gesture will be reciprocated in the first period is higher under the Dove.

Mutual cooperation in the first period, however, does not guarantee future cooperation. The problem stems from the fact that a hard-line B might reciprocate cooperation from a Dove, hoping to appear moderate to take advantage of the Dove after it is reelected. Knowing this, voters may reject a Dove government even after a *cc* outcome. As a result, mutual cooperation initiated by a Dove in the first period can break down in the second period in two different ways. First, there is a lingering danger that B is a hard-liner who is waiting until the second period to reveal itself. Second, a skeptical electorate may replace the Dove with a Hawk, in which case there is some chance that the new government will be hard-line, making continued cooperation impossible. Either way, the high hopes for peace coming out of the first period can be dashed in the second.

The fragility of cooperation initiated by the dovish party is evident in the efforts of Democratic President Bill Clinton to rein in North Korea's nuclear program in the mid-1990s. The 1994 Framework Agreement—in which North Korea agreed to halt its program and readmit inspectors in exchange for energy assistance and other guarantees—eventually unraveled because of one or both of the shocks identified here. Republicans immediately questioned the wisdom of the deal, arguing that Clinton had given into blackmail and that North Korea could not be trusted to carry out its end of the bargain.⁴⁴ This criticism took greater force when Republicans took over control of the Congress a month after the deal was struck. Without walking away from the agreement altogether, Congress dragged its feet on funding the U.S. commitments, citing the concern that North Korea was not living up to its side of the bargain. With the election of Republican George W. Bush as president, confrontational rhetoric and charges of cheating intensified. The distrust was not unwarranted. In October 2002, the North Koreans admitted that they had been secretly reprocessing uranium in violation of the deal, and shortly there-

44. Sigal 1998, 192–99.

after they restarted the reactor that had been closed by the Framework Agreement, expelled inspectors, and withdrew from the Nonproliferation Treaty.⁴⁵ These actions are consistent with the view that North Korea's cooperation in 1994 was a temporary, tactical shift to defuse the current crisis, not a signal of the regime's moderation. While each side claims that it was merely responding to the provocations of the other, it is evident that hard-liners reasserted themselves in at least one of the states, leading cooperation to collapse.

By contrast, mutual cooperation initiated by a Hawk is more robust. Cooperation by a Hawk not only reveals its moderate preferences, but also induces the two types of B to separate, with the moderate type reciprocating cooperation and the hard-line type defecting. Hence, after an initial round of mutual cooperation, it is common knowledge that both the Hawk party and state B are run by moderates. Under these conditions, cooperation in the second round is assured.

Furthermore, if the game were to go on for additional periods, the superior information generated by the Hawk's initial gesture of cooperation would have a lasting and beneficial effect. After the Hawk and state B both cooperate in the first round, it is common knowledge that none of the actors in the game are hard-line. Given this, future cooperation is robust to an alternation in power within A. The only shock that could upset this cooperative equilibrium would be a takeover of the Hawk party or state B by hard-liners (a possibility that is outside the scope of the current model). By contrast, even if the Doves manage to achieve mutual cooperation over two periods, this cooperation might not survive a future change in power within A. The lingering possibility that the Hawk is hard-line could cause trust to break down. Hence, mutual cooperation initiated by a Dove is vulnerable to a wider range of shocks than is cooperation initiated by a Hawk. In expectation, then, the latter should be longer-lasting. In sum, while Doves may be more successful in promoting cooperation in the short run, lasting cooperation is more likely if the first step is initiated by a Hawk.

Conclusion: Implications and Illustrations

The model in this article is obviously quite stylized. The order of moves is fixed somewhat arbitrarily, and the interaction ends after only two periods. An election is assumed to follow predictably between the periods, and its outcome hinges entirely on the international outcome. None of these assumptions is realistic. As with any model, the one developed here exists to highlight some key strategic dilemmas and trade-offs that governments encounter when they consider risking peace. It captures an interaction in which there are potential gains from cooperation coupled with a danger of exploitation, a lack of trust that arises from uncer-

45. See, for example, Alvarez 2003.

tainty about the adversary's preferences, and domestic political competition among factions that have different preferences about the desirability of risking cooperation. To do so, it marries a canonical model of trust with a simple game of two-party electoral choice. Although assuming that the election swings entirely on the international outcome is unrealistic, doing so brings out in starkest detail the influence of domestic political incentives on foreign policy choice.

The model yields several key results regarding the initiation and robustness of mutual cooperation. When trust is lacking and the costs of continued conflict are relatively tolerable, then it takes a pacifist to attempt peace. Under these conditions, a soft-line Dove is the only type willing to take the risky steps that are needed to learn whether mutual cooperation is possible. On the other hand, when trust is low but costs of mutual defection are high, efforts to initiate cooperation are most likely to come from moderate Hawks. Moreover, mutual cooperation initiated by such a government has a better chance of enduring over the long run than does cooperation initiated by a Dovish government. Moderate Hawks enjoy greater electoral security when risking cooperation, and foreign states respond to their cooperative gestures in a way that promotes robust cooperation over the long term.

These results suggest a number of potentially testable empirical implications, though there are nontrivial challenges in measurement and operationalization. The hypotheses cover three areas: the probability of initiating cooperation, the political effects of attempting peace, and the likelihood that cooperation, once started, will endure.

The Probability of Initiating Cooperation

The first hypothesis from the model is that, as the costs of conflict increase, a moderate from the hawkish party becomes the most likely type to initiate cooperation. Considerable care must be taken in testing this hypothesis because the prediction is conditional on two things that may, in practice, be hard to measure. First, whether a moderate Hawk or soft-line Dove is the most likely type to initiate cooperation depends on the magnitude of w relative to other parameters. This suggests that this effect is most likely to be evident in the context of particularly dangerous and costly rivalries.

Second, this hypothesis does not say that any Hawk government is more likely to initiate peace than any Dove government. As noted above, the *ex ante* probability of initiating cooperation depends on the probabilities that each party is controlled by moderates. Hence, it is useful to have *ex ante* indicators of the Hawk party's moderation. Several factors might help free the Hawk party from the influence of its hard-line faction. First, majoritarian, rather than proportional representation, electoral rules tend to empower moderates over extremists. Second, if there are other issues that bind the hard-liners to the Hawkish party, then they may not have a credible exit threat, again diminishing their influence over the party's policies. Third, if a hawkish government enjoys a sizable majority among voters or in the legislature, then it may be less vulnerable to pressure from its extremist wing.

This last point is consistent with Huth and Allee's finding that governments with large legislative majorities are more likely to offer concessions in territorial disputes.⁴⁶

All three of these factors are evident in the rapprochement between Greece and Turkey in the 1930s. In that conflict, the most potent hard-line faction in Greece consisted of Greek refugees who had been forced to flee Turkey after their war in 1921–22 and who demanded compensation for property left behind. The refugees were a hard bloc to ignore not only because of their passion for the issue, but also because of sheer numbers: they accounted for roughly 20 percent of the Greek population at the time. Ultimately, though, refugee interests would be sacrificed on the altar of Greco-Turkish rapprochement, as the agreements signed in 1930 absolved Turkey of all claims by the refugees. Interestingly, the man who delivered this deal was Eleutherios Venizelos, who had not only been a long-time champion of Greek irredentism, but who also counted the refugees as key supporters of his Liberal party.⁴⁷ For this reason, contemporary reports of Venizelos' visit to Turkey in 1930 express the same surprise that accompanied Nixon's visit to China in 1972.⁴⁸

Several factors freed Venizelos from the hard-line interests within his party. First, an electoral reform enacted before the 1928 election changed the voting rules from proportional representation to plurality. This change, combined with Venizelos's high personal popularity, led to a thoroughly lopsided electoral result. While Venizelos's Liberal party received 46.9 percent of the vote, it won 71.2 percent of the seats in the Chamber of Deputies; adding several smaller pro-Venizelos parties, the Greek prime minister could count on the support of more than 90 percent of the legislature.⁴⁹ This dominance meant that Venizelos had unprecedented autonomy to ignore the refugee bloc, which made up only 13.6 percent of the chamber.⁵⁰ Moreover, the refugees were ideologically tied to the Liberal party, meaning that they could not credibly threaten to defect to the opposition. The main cleavage in the Greek political system at the time was between those who supported Venizelos and the republic, and those who supported the old monarchy. For a variety of reasons, the refugees were adamantly prorepublic and personally loyal to Venizelos.⁵¹ These tight bonds diluted the power that this large voting bloc might otherwise have exercised. Hence, once Venizelos had come to the realization that continued conflict with Turkey was no longer in Greek interests, he was politically free to act on those moderate preferences.⁵²

46. Huth and Allee 2002, 207.

47. See Pentzopoulos 1962, chap. 3; and Mavrogordatos 1983, chap. 4.

48. See, for example, *New York Times*, 27 October 1930, 9.

49. Mavrogordatos 1983, 38.

50. See Pentzopoulos 1962, 186; and Psomiades 1962.

51. See Pentzopoulos 1962, 173–77; and Mavrogordatos 1983, chap. 4.

52. For a discussion of why Venizelos had become a moderate by 1930, see Psomiades 1962, chap. 14.

The Political Effects of Risking Peace

The next set of predictions deals with the electoral implications of international outcomes. The model predicts a fundamental asymmetry between hawkish and dovish parties in the political costs and benefits of risking peace. Testing the waters of cooperation is politically risky for doves, especially, but not exclusively, when the other side responds aggressively. For a hawkish government, on the other hand, initiating a cooperative gesture can be a political boon, by reassuring voters that its preferences are moderate. Colaresi finds evidence that a record of unreciprocated cooperation toward a rival can shorten a leader's tenure in office, but his tests do not differentiate between leaders based on reputation or party affiliation.⁵³ Elsewhere, I use counterfactual simulations on survey data from the 1968 National Election Study to show such an effect in the canonical case of "Nixon going to China": U.S. rapprochement with China in the late 1960s and early 1970s.⁵⁴ The evidence presented in that article shows that a hypothetical proposal to open ties with that communist nation would have been electorally rewarding in the 1968 presidential race for the Republican candidate, Nixon, but politically costly for the Democratic candidate, Hubert Humphrey.

A corollary hypothesis that would provide indirect evidence of this asymmetry deals with the timing of peace initiatives. The logic here suggests that Doves might prefer to make their initiatives early in the electoral cycle, when they are relatively secure, while Hawks might be tempted to attempt peace as an election approaches to boost their standing.⁵⁵ Nixon, again, provides the classic example, delivering not only his China trip, but also the Strategic Arms Limitations Treaty and the Anti-Ballistic Missile treaty with the Soviet Union within months of the 1972 election—all rare instances of bold peacemaking in an election year.⁵⁶ Other peace initiatives by hawks share this timing. In 1988, just a year before a general election, Greek Prime Minister Andreas Papandreou abandoned his Socialist party's long-standing position against talks with Turkey and helped to initiate one of the most significant efforts at rapprochement between those countries. The so-called "Davos process" failed to resolve the ongoing conflicts over Cyprus and the Aegean, and Papandreou eventually lost power because of ill health and scandals. Nevertheless, his conversion from hard-liner to peacemaker a year before an election has been interpreted as political opportunism.⁵⁷ Moreover, Papandreou's choice of timing stands in marked contrast with that of the previous New Democracy government, which was known to have a much more flexible position on Turkey.⁵⁸

53. Colaresi 2004.

54. Schultz 2004.

55. Huth and Allee 2002 and Chiozza and Choi 2003 present evidence that democratic leaders are more likely to make concessions in territorial disputes early in the term rather than later, but neither test for a conditional relationship of the type hypothesized here.

56. Quandt 1986, 25–26.

57. Pridham 1991, 82.

58. Coufoudakis 1985, 205.

The most prominent initiative of then Prime Minister Constantine Caramanlis—a summit meeting with his Turkish counterpart in March 1978—took place only four months after a general election. Indeed, Caramanlis had called early elections in order to have them behind him when he entered the negotiations.⁵⁹

While I have mostly emphasized the implications of a decision to cooperate, the model also suggests that Doves might enjoy political benefits from a tough strategy. Just as cooperation is an electoral boon for a Hawk, defecting can boost the political fortunes of a Dove. Borker, Kriesberg, and Abdul-Quader present evidence consistent with this hypothesis. Updating and refining Mueller's model of rally events and presidential popularity, they distinguish between conciliatory and confrontational events and show that public reactions to each depended on the president at the time. In particular, conciliatory events tended to boost the popularity of Presidents Dwight D. Eisenhower, Lyndon B. Johnson, and Nixon—arguably the three presidents with the most hawkish reputations during the period covered (1945–80)—while confrontational events increased the popularity of Presidents John F. Kennedy and Jimmy Carter—the most dovish of the lot.⁶⁰

The Probability That Cooperation Will Endure

The final prediction is that cooperative arrangements delivered by hawks are more likely to endure than are deals delivered by doves. With an appropriate data set on such agreements, this hypothesis could be tested using duration analysis, much as Werner and Fortna test the duration of settlements that emerge from interstate wars.⁶¹ To date, however, a comprehensive data set on agreements—especially one that includes peace plans that do not directly emerge from wars—is lacking.

In the absence of systematic proof at this stage, there is suggestive evidence for this third hypothesis in a number of cases in which enduring rivals were able to achieve long-lasting settlements of core disputes. In many prominent rivalries that were successfully terminated, the governments that brought about rapprochement counted hard-line elements in society among their core supporters.⁶² Nixon bucked the anticommunists in the Republican party to bring about the opening with China.⁶³ As already noted, Venizelos and the Greek Liberal party sacrificed the interests of the refugees to make peace with Turkey. In early twentieth-century Britain, those most opposed to rapprochement with Russia were Radicals who loathed the tsarist political system and adamantly opposed any dealings with it.⁶⁴ Nevertheless, it was the Liberal party that silenced its Radical wing to settle those countries' rivalry

59. *Washington Post*, 20 September 1977, A14.

60. See Borker, Kriesberg, and Abdul-Quader 1985; and Mueller 1973.

61. See Werner 1999; and Fortna 2003.

62. See Bennett 1998 for a coding of rivalry termination.

63. See, for example, Haldeman 1994, 321–22, 368.

64. Weinroth 1970.

in Central Asia in 1907.⁶⁵ In Israel, the hard-line opposition to peace with the Arab states and Palestinians comes from a mixture of ideological considerations and the material interests of those who have settled on lands taken by Israel in the 1967 war. In delivering peace with Egypt in 1979, Israeli Prime Minister Menachem Begin overrode these constituencies in spite of the fact that they were central in his Likud coalition.⁶⁶ Such cases suggest a pattern in which successful conflict resolution was achieved by a government that counted among its core supporters those most opposed to peace.

Of course, hawkish governments do not always deliver peace. In the ongoing conflict between Israel and the Palestinian Authority, hard-liners who support continued settlement of the West Bank and the Gaza Strip form a strong voting bloc for the Likud party. While the results of this article suggest that a Likud-led government is in a better position to deliver a lasting peace than is a Labor government, it is not at all clear that moderate voices in that party have sufficient clout. For example, in a May 2004 referendum, 60 percent of Likud members voted against a plan put forward by their own prime minister, Ariel Sharon, to withdraw Israeli soldiers and settlers from the Gaza Strip.⁶⁷ The weight of this faction, combined with Likud's dependence on several far-right parties to maintain its governing majority, suggests a case in which p_H is very low.

Together with the theoretical results, this last observation suggests an unfortunate dilemma arising from the potential mismatch between a government's preferences and its political incentives. Doves want peace, but they may not have the electoral security or credibility to deliver it. Hawks enjoy both electoral security and credibility in attempting cooperation, but they may not want to try.

Appendix

This Appendix presents formal derivations of the equilibria to this game. The full proofs are quite long, so I focus only on the equilibria that hold under certain initial conditions. A complete treatment is available from the author. Proposition 1 considers the case in which a Dove is in power at the start of the game. Proposition 2 deals with the case in which a Hawk is initially in power and the payoff from mutual defection, w , is relatively low. As noted in the text, this condition is associated with the separating equilibrium that is at the heart of the claim that Hawks make good peacemakers.

In the event that the opposition is elected at the start of the second period, conditions (3) and (4) determine how different types of B will respond to the new government. A moderate B will always cooperate with a Dove, while a hard-line B will cooperate with a new Dove only if $p_D > (\beta^* - r + t)/(t - w)$. Similarly, a moderate B will cooperate with a new

65. Neilson 1995, chap. 9.

66. See Roberts 1990, 141; and Friedlander 1983, 240–43.

67. *New York Times*, 3 May 2004, 1.

Hawk if $p_H > w/r$, and a hard-line B will cooperate with a new Hawk if $p_H > (\beta^* + w)/r$. Collectively, these conditions create six possible configurations of the prior probabilities p_H and p_D . Here, I present the proofs of the equilibria that hold when $p_D < (\beta^* - r + t)/(t - w)$ and $(\beta^* + w)/r > p_H > w/r$. Under these conditions, a moderate B will cooperate with, and a hard-line B will defect against, either kind of new government.

In all equilibria, state A's behavior at the last node of the game follows trivially from the payoffs. In response to cooperation, the government in A cooperates if $\alpha < r - t$ defects otherwise. In response to defection, the government in A defects if $\alpha > -w$, and cooperates otherwise. To save space, these strategies will not be repeated in the statements of the equilibria that follow.

Proposition 1. The following strategies and the beliefs they generate through Bayes's rule describe a perfect Bayesian equilibrium to this game when a Dove is in power to start the game and $q < \min[\bar{q}_1, \bar{q}_2]$, with \bar{q}_1 and \bar{q}_2 to be defined below.

1.1) Dove in period 1

$$\begin{array}{l}
 d \quad \text{if } \alpha_D = 0, \text{ and} \\
 \left. \begin{array}{l}
 c \quad \text{with prob. } s_D \\
 d \quad \text{with prob. } 1 - s_D
 \end{array} \right\} \text{if } \alpha_D = \alpha_D^*.
 \end{array}$$

1.2) State B in period 1

a) In response to c , B plays

$$\begin{array}{l}
 c \quad \text{if } \beta = 0, \text{ and} \\
 \left. \begin{array}{l}
 c \quad \text{with prob. } \sigma_D^c \\
 d \quad \text{with prob. } 1 - \sigma_D^c
 \end{array} \right\} \text{if } \beta = \beta^*.
 \end{array}$$

b) In response to d , B plays

$$\begin{array}{l}
 \left. \begin{array}{l}
 c \quad \text{if } k_D^{dd} < \frac{(1 - p_H)r - w}{(1 - p_H)r} \\
 d \quad \text{otherwise}
 \end{array} \right\} \text{if } \beta = 0, \text{ and} \\
 d \quad \text{if } \beta = \beta^*.
 \end{array}$$

1.3) Let $h \in \{cc, cd, dc, dd\}$ denote the outcome of the first period. The electorate elects

- a) Dove if $h = dc$,
- b) Hawk if $h = cd$,

- c) Dove with prob. k_D^{dd}
 Hawk with prob. $1 - k_D^{dd}$ } if $h = dd$, and
- d) Dove with prob. k_D^{cc}
 Hawk with prob. $1 - k_D^{cc}$ } if $h = cc$.

1.4) State B in period 2:

a) If Dove was reelected, then play

- c if $\beta = 0$,
- d if $\beta = \beta^*$ and Dove cooperated in period 1, and
- c with prob. σ_D^{dd}
 d with prob. $1 - \sigma_D^{dd}$ } if $\beta = \beta^*$ and Dove defected in period 1.

b) If Hawk was elected, then play

- c if $\beta = 0$, and
- d otherwise.

Proof. The moderate B’s strategy in (1.4a) follows from the fact that a Dove will always reciprocate cooperation. The strategies in (1.4b) follow from the conditions on p_H described at the introduction to this appendix.

Consider first the subgame that follows first-round cooperation by the Dove. From (1.1), a Dove that cooperated in period 1 must be soft-line. If a moderate B cooperates, it gets a first-period payoff of r , and, if it defects, it gets a first-period payoff of t . In addition, B knows that its strategy will influence which party wins the election. It is conjectured in (1.3b) that, if B defects, the Dove will be replaced by a Hawk. It follows from (1.4b) that the expected value to a moderate B of playing the second round against a new Hawk is $p_H r$. Putting this all together,

$$EU_B(d|\text{Dove cooperated} \ \& \ \beta = 0) = t + p_H r. \tag{A1}$$

If B cooperates, let k_D^{cc} be the probability that the Dove is retained after a cc outcome. Then,

$$EU_B(c|\text{Dove cooperated} \ \& \ \beta = 0) = r + k_D^{cc} r + (1 - k_D^{cc}) \cdot p_H r. \tag{A2}$$

It is trivial to see that equation (A2) is greater than (A1) for any value of k_D^{cc} . This confirms (1.2a). Because a moderate B will reciprocate cooperation, a B that fails to do so must be a hard-liner, and the electorate will certainly replace the soft-line Dove with the Hawk at the election, confirming (1.3b).

Now consider the hard-line B’s response to cooperation by a Dove. Based solely on first-period payoffs, a hard-line B prefers defection, for a payoff of $t + \beta^*$, over cooperation, for a payoff of r . It knows, however, that defection will lead to the election of a Hawk, while

cooperation will lead to the Dove's being reelected with probability k_D^{cc} . In the second period, a hard-line B defects against a Dove that is known to be soft-line as well as a new Hawk. Thus,

$$EU_B(d|\text{Dove cooperated} \ \& \ \beta = \beta^*) = t + \beta^* + w + \beta^*, \text{ and} \tag{A3}$$

$$EU_B(c|\text{Dove cooperated} \ \& \ \beta = \beta^*) = r + k_D^{cc}(t + \beta^*) + (1 - k_D^{cc}) \cdot (w + \beta^*). \tag{A4}$$

Thus, a hard-line B prefers to cooperate if

$$k_D^{cc} > \frac{t + \beta^* - r}{t - w}. \tag{A5}$$

Now consider the electorate's response to a *cc* outcome. Let q_D^{cc} denote the posterior probability that B is a moderate in this event. If the electorate keeps the Dove, then it will enjoy mutual cooperation in the second period if B is a moderate and the sucker's payoff if B is hard-line. Thus,

$$EU_V(\text{Dove} | h = cc) = q_D^{cc} r + (1 - q_D^{cc}) \cdot 0. \tag{A6}$$

If the voters elect the Hawk, then B will cooperate if it is moderate and defect if it is hard-line, and the Hawk government's response will depend on its type:

$$EU_V(\text{Hawk} | h = cc) = q_D^{cc} [p_H r + (1 - p_H)t] + (1 - q_D^{cc})w. \tag{A7}$$

Hence, the median voter prefers the Dove if

$$q_D^{cc} > \frac{w}{w + (1 - p_H)(r - t)}. \tag{A8}$$

The following lemma now establishes that, when q is sufficiently low, the hard-line B's response to cooperation and the electorate's response to the *cc* outcome are given by the mixed strategies proposed in (1.2a) and (1.3b).

Lemma. If q meets the conditions set out in the statement of the proposition, then a hard-line B will reciprocate cooperation with some probability $\sigma_B^c \in (0, 1)$, and the electorate will keep the Dove after a *cc* outcome with some probability $k_D^{cc} \in (0, 1)$.

Proof. Assume instead that the electorate always retains the Dove after *cc*, or $k_D^{cc} = 1$. By (A5), the hard-line B would always want to reciprocate cooperation in period 1. Because both types of B respond the same way, $q_D^{cc} = q$. It can be shown that $q < \bar{q}_1$ (the expression for which is in [A24] below) implies that $q < w/[w + (1 - p_H)(r - t)]$. By equation (A8), the electorate will remove the Dove after *cc*. This contradicts the initial assumption that $k_D^{cc} = 1$.

Now assume that the voters always remove the Dove after cc , or $k_D^{cc} = 0$. By equation (A5), a hard-line B would always defect in the first period. In that case, only a moderate B would reciprocate cooperation, so $q_D^{cc} = 1$. By equation (A8), the electorate would want to keep the Dove after cc , which contradicts the assumption that $k_D^{cc} = 0$.

Hence, under these conditions, there is no equilibrium in which the hard-line B plays a pure strategy in response to cooperation and the electorate plays pure strategy in response to cc .

To sustain this mixed strategy equilibrium in the subgame following cooperation by a Dove, it must be the case that a hard-line B is indifferent between cooperating and defecting. This is achieved by making equation (A5) an equality, providing an exact expression for k_D^{cc} . To encourage the electorate to play a mixed strategy after cc , it must be the case that the pivotal voter is indifferent between the soft-line Dove and a new Hawk given beliefs q_D^{cc} . Applying Bayes's rule and substituting into equation (A8), the electorate is indifferent when

$$\sigma_D^c = \frac{q(1 - p_H)(r - t)}{(1 - q)w} \tag{A9}$$

I have now characterized the subgame that follows cooperation by a Dove. Putting it all together, the expected value of cooperating for a moderate and soft-line Dove, respectively, are:

$$\begin{aligned} EU_D(c | \alpha_D = 0) &= q\{r + k_D^{cc}(V + r) + (1 - k_D^{cc})[p_H r + (1 - p_H)t]\} \\ &\quad + (1 - q)\sigma_D^c[r + k_D^{cc}(V + w) + (1 - k_D^{cc})w] + (1 - q)(1 - \sigma_D^c)w \end{aligned} \tag{A10}$$

$$\begin{aligned} EU_D(c | \alpha_D = \alpha_D^*) &= q\{r + k_D^{cc}(V + r) + (1 - k_D^{cc})[p_H r + (1 - p_H)(t + \alpha_D^*)]\} \\ &\quad + (1 - q)\sigma_D^c[r + k_D^{cc}V + (1 - k_D^{cc})(w + \alpha_D^*)] \\ &\quad + (1 - q)(1 - \sigma_D^c)(w + \alpha_D^*) \end{aligned} \tag{A11}$$

Now consider the subgame that follows a first-round defection by the Dove. For a hard-line B to play a mixed strategy against the Dove in the second period, as proposed in (1.4a), it must be indifferent between cooperating and defecting, which happens (from equation [3]) when

$$\beta^* = r - t + p_D^d(t - w), \text{ or} \tag{A12}$$

$$p_D^d = \frac{\beta^* - r + t}{t - w} \tag{A13}$$

Applying Bayes's rule and substituting into (A13) yields

$$s_D = \frac{\beta^* - r + t - p_D(t - w)}{(1 - p_D)(\beta^* - r + t)}. \tag{A14}$$

Assume, as conjectured in (1.2b), that only a moderate B would cooperate in response to defection. This means that, following a *dc* outcome, the electorate knows that B is a moderate. Because a moderate B will always cooperate with a Dove in the second period, the electorate wants to keep the Dove in this event, as proposed in (1.3a). A moderate B's expected utility of cooperating and defecting, respectively, are:

$$EU_B(c|Dove\ defected \ \& \ \beta = 0) = 0 + r, \text{ and} \tag{A15a}$$

$$EU_B(d|Dove\ defected \ \& \ \beta = 0) = w + k_D^{dd}r + (1 - k_D^{dd}) \cdot p_H r. \tag{A15b}$$

Comparing these, one finds that a moderate B will cooperate in response to defection if

$$k_D^{dd} < \frac{(1 - p_H)r - w}{(1 - p_H)r}, \tag{A16}$$

as proposed in (1.2b). If the electorate retains the Dove that defected, the hard-line B is indifferent between cooperating and defecting in the second period; this means that its expected value of play with a Dove in the second period must be *r*. Hence,

$$EU_B(c|Dove\ defected \ \& \ \beta = \beta^*) = 0 + r, \text{ and} \tag{A17a}$$

$$EU_B(d|Dove\ defected \ \& \ \beta = \beta^*) = w + \beta^* + k_D^{dd}r + (1 - k_D^{dd}) \cdot (w + \beta^*). \tag{A17b}$$

Comparing these, one finds that a hard-line B will cooperate in response to defection if

$$k_D^{dd} < \frac{r - 2(w + \beta^*)}{r - (w + \beta^*)}. \tag{A18}$$

It can be shown that $\beta^* > r - t$ and $r > 2(t - w)$ ensure that the right-hand side of this expression is negative. This confirms that a hard-line B always defects in response to defection, as proposed in (1.2b).

This proof has already established that the electorate retains the Dove after a history of *dc*. Now consider the electorate's response to *dd*. Define q_D^{dd} to be the electorate's posterior belief that B is moderate given this history. There are two cases to consider. If equation (A16) holds, then the moderate B always cooperates in response to defection and $q_D^{dd} = 0$. The electorate's choice under these conditions is between

$$EU_V(\text{Dove} | h = dd) = \sigma_D^{dd} r + (1 - \sigma_D^{dd}) p_D^d w, \text{ and} \tag{A19}$$

$$EU_V(\text{Hawk} | h = dd) = w. \tag{A20}$$

Setting these two equations equal, one finds that the electorate is indifferent between the Dove and the Hawk when

$$\sigma_D^{dd} = \frac{w(r - w) - w\beta^*}{t(r - w) - w\beta^*}. \tag{A21}$$

If equation (A16) does not hold, then the moderate B always defects in response to defection and $q_D^{dd} = q$. From the equilibrium strategies,

$$EU_V(\text{Dove} | h = dd) = qr + (1 - q)[\sigma_D^{dd} r + (1 - \sigma_D^{dd}) p_D^d w], \text{ and} \tag{A22}$$

$$EU_V(\text{Hawk} | h = dd) = q[p_H r + (1 - p_H)t] + (1 - q)w. \tag{A23}$$

Setting these two equal and rearranging them yields the expression for σ_D^{dd} that holds in this case. This expression is not particularly interesting except to note that, for σ_D^{dd} to be a true probability, it must be the case that

$$q < \frac{w(r - w - \beta^*)}{w(r - w - \beta^*) + (1 - p_H)(r - t)(t - w)} \equiv \bar{q}_1, \tag{A24}$$

which is assumed in the statement of the proposition. It can also be shown that the mix probability σ_D^{dd} that creates indifference between equations (A22) and (A23) is lower than the corresponding value given in (A21).

I have now characterized the subgame that follows defection by a Dove. As shown above, there are two possible strategies for the moderate B in response to defection. For ease of notation, define σ_D^d as the probability that a moderate B will cooperate in this event; or

$$\sigma_D^d = \begin{cases} 1 & \text{if } k_D^{dd} < \frac{(1 - p_H)r - w}{(1 - p_H)r} \\ 0 & \text{otherwise.} \end{cases} \tag{A25}$$

Putting all of it together, the expected values of defecting for a moderate and soft-line Dove, respectively, are

$$\begin{aligned} EU_D(d | \alpha_D = 0) &= q\sigma_D^d(t + V + r) \\ &\quad + q(1 - \sigma_D^d)\{w + k_D^{dd}(V + r) + (1 - k_D^{dd})[p_H r + (1 - p_H)t]\} \\ &\quad + (1 - q)\{w + k_D^{dd}[V + \sigma_D^{dd} r + (1 - \sigma_D^{dd})w] + (1 - k_D^{dd})w\} \end{aligned} \tag{A26}$$

$$\begin{aligned} EU_D(d | \alpha_D = \alpha_D^*) &= \alpha_D^* + q\sigma_D^d(t + V + r) \\ &\quad + q(1 - \sigma_D^d)\{w + k_D^{dd}(V + r) + (1 - k_D^{dd})[p_H r + (1 - p_H)(t + \alpha_D^*)]\} \\ &\quad + (1 - q)\{w + k_D^{dd}(V + \sigma_D^{dd} r) + (1 - k_D^{dd})(w + \alpha_D^*)\} \end{aligned} \tag{A27}$$

For the soft-line Dove to play a mixed strategy at its first node, it must be indifferent between cooperating and defecting. This indifference is created by finding the value of k_D^{dd} that makes expected value of defection in equation (A27) equal to the expected value of cooperation in (A11). Let \hat{k}_D^{dd} denote this critical value when $\sigma_D^d = 0$, and let \hat{k}_D^{dd} denote the critical value when $\sigma_D^d = 1$. It is straightforward to show that $\hat{k}_D^{dd} > \hat{k}_D^{dd}$: as the moderate B's response to defection becomes less rewarding, the Dove must be compensated by a higher probability of reelection. This result ensures that at least one of the strategy pairs shown in equation (A25) holds in equilibrium.⁶⁸

In either event, the indifference condition can only be met if q is not too high. The key here is that, as q rises, cooperation becomes more attractive relative to defection. To maintain indifference between the two, k_D^{dd} must rise with q . The upper bound on q can be derived by finding the value of q at which k_D^{dd} must equal one in order to make the soft-line Dove indifferent. Let \bar{q}_2 denote this upper bound. To prove that there exists a $\bar{q}_2 > 0$, it can be shown that, for q arbitrarily close to zero, there exists a $k_D^{dd} < 1$ that creates the necessary indifference. Then, because k_D^{dd} increases with q , it must be the case that \bar{q}_2 is greater than zero.

As $q \rightarrow 0$, we know from equation (A11) that

$$EU_D(c|\alpha_D = \alpha_D^*) \rightarrow w + \alpha_D^* \tag{A28}$$

and from equation (A27) that

$$EU_D(d|\alpha_D = \alpha_D^*) \rightarrow \alpha_D^* + [w + k_D^{dd}(V + \sigma_D^{dd}r) + (1 - k_D^{dd})(w + \alpha_D^*)] \tag{A29}$$

Indifference between equations (A28) and (A29) is achieved when

$$k_D^{dd} = \frac{-(w + \alpha_D^*)}{V + \sigma_D^{dd}r - (w + \alpha_D^*)}, \tag{A30}$$

which must be in (0,1), recalling that $w + \alpha_D^* < 0$.

The final element of the proof is to note that, if the soft-line Dove is indifferent between cooperating and defecting, then the moderate Dove strictly prefers to defect, as proposed in (1.1).

Proposition 2. The following strategies and the beliefs they generate through Bayes's rule describe a perfect Bayesian equilibrium to this game when a Hawk is in power to start the game, $2w < r$, and $q < (\alpha_H^* - t + 2w)/(\alpha_H^* - t + 2w + V)$.

68. Note that, if $\hat{k}_D^{dd} > [(1 - p_H r) - w]/[(1 - p_H)r] > \hat{k}_D^{dd}$, there exist two equilibria: one in which the moderate B always defects in response to defection and one in which the moderate B always cooperates in response to defection. This possibility has no impact on the results discussed in the text.

2.1) Hawk in period 1

- c if $\alpha_H = 0$, and
- d if $\alpha_H = \alpha_H^*$.

2.2) State B in period 1

a) In response to c , B plays

- c if $\beta = 0$, and
- d if $\beta = \beta^*$.

b) In response to d , B plays

- c if $\beta = 0$, and
- d if $\beta = \beta^*$.

2.3) The electorate elects

- a) Hawk if $h = cd, cc, dd$, and
- b) Dove if $h = dc$.

2.4) State B in period 2:

a) If Hawk was reelected, then play

- c if Hawk cooperated in period 1, and
- d if Hawk defected in period 1.

b) If Dove elected, then play

- c if $\beta = 0$, and
- d if $\beta = \beta^*$.

Proof. As before, B’s strategy in (2.4b)—that is, moderates cooperate with a new Dove, while hard-liners defect—is ensured by the conditions on p_D assumed at the outset. B’s proposed strategy in (2.4a) follows from the beliefs generated by the Hawk’s first-period strategy. A Hawk that cooperated is certainly a moderate, so both types of B want to cooperate. A Hawk that defected is certainly a hard-liner, so both types of B want to defect.

Now consider the electorate’s strategy in (2.3). A Hawk that cooperated is certainly a moderate, and because both kinds of B will cooperate with a known moderate, the electorate keeps the Hawk, thereby ensuring its best possible payoff, r . A Hawk that defected is certainly hard-line. If B cooperated in response the Hawk’s defection, then it is certainly a moderate, and the electorate would rather have the Dove in office, again ensuring a cooperative outcome. If B defected, then it is certainly a hard-liner, and the best the electorate can do is to keep the hard-line Hawk in power, because a hard-line B will defect on either a new Dove or a hard-line Hawk, but the former might cave in response.

Now consider B’s response to cooperation by a Hawk. Because B knows that the Hawk will be retained regardless of what it does in the first period, there is no reason for either

type of B to act deceptively. Hence, each type acts to maximize its first-period payoff—that is, the moderate reciprocates cooperation while the hard-liner defects. If the Hawk defected, then B can either cooperate—getting the sucker’s payoff but also ensuring the election of the Dove in the next period—or it can defect and ensure the reelection of the extremist Hawk. For a moderate B, the expected utility from cooperating and defecting are:

$$EU_B(c|\text{Hawk defected} \ \& \ \beta = 0) = 0 + r, \text{ and} \tag{A31}$$

$$EU_B(d|\text{Hawk defected} \ \& \ \beta = 0) = w + w. \tag{A32}$$

Thus the moderate type cooperates if $r > 2w$, which is stipulated to be true in the statement of the proposition. For a hard-line B,

$$EU_B(c|\text{Hawk defected} \ \& \ \beta = \beta^*) = 0 + p_D w + (1 - p_D)t + \beta^*, \text{ and}$$

$$EU_B(d|\text{Hawk defected} \ \& \ \beta = \beta^*) = w + \beta^* + w + \beta^*.$$

Comparing these, one finds that a hard-line B defects if

$$\beta^* > -w + (1 - p_D)(t - w). \tag{A33}$$

This condition is ensured by the assumptions that $\beta^* > r - t$ and $r > 2(t - w)$. This confirms B’s strategies as proposed in (2.2).

Finally, I turn to the Hawk’s first-period strategy, starting first with the moderate type. If it plays its equilibrium strategy and cooperates, the moderate Hawk expects

$$EU_H(c|\alpha_H = 0) = q(r + V + r) + (1 - q)(0 + V + r) = qr + V + r. \tag{A34}$$

The expected value of deviating to defection is

$$EU_H(d|\alpha_H = 0) = q(t + r) + (1 - q)(w + V + w). \tag{A35}$$

Comparing these, one finds that a moderate B prefers cooperation if

$$q(t - 2w - V) < r - 2w. \tag{A36}$$

Because $r > t$, $r - 2w > t - 2w - V$, so this condition must be true for all $q \in [0, 1]$. Thus the moderate Hawk strictly prefers to cooperate. For the hard-line Hawk, the expected value of defecting is

$$EU_H(d|\alpha_H = \alpha_H^*) = \alpha_H^* + q(t + r) + (1 - q)(w + V + w + \alpha_H^*). \tag{A37}$$

The expected value of deviating to cooperation is

$$EU_H(c|\alpha_H = \alpha_H^*) = qr + V + t + \alpha_H^*, \quad (\text{A38})$$

because the extremist, by acting like a moderate, can take advantage of B in the second period. Comparing these, one finds that the hard-line Hawk prefers to defect if

$$q < \frac{\alpha_H^* - t + 2w}{\alpha_H^* - t + 2w + V}, \quad (\text{A39})$$

which is the condition given in the statement of the proposition.

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