ture in international relations, information is an important explanatory variable. It has been difficult, however, to empirically operationalize and test such theories. In this book I show how new information affects estimates of the outcome of the war and, subsequently, war aims. To show how *new* information affects estimates, it is necessary to first establish initial expectations. It would be extremely time consuming to develop reliable indicators and code expectations of the outcome of the war at subsequent stages for all participants in all wars. Such coding would also seem prohibitively costly for another variable of interest: the minimum terms of settlement. The case studies in this book therefore combine maximum empirical leverage with feasibility.

Conclusion

This book aims to provide a theoretical framework that shows how the *politics* of war termination affect the variation between war and peace, the duration of wars, and the choice of military strategy (especially when states are willing to adopt risky strategies). In addition, this framework will show how the fate of political leaders and elites, issues of electoral reform, revolution, wartime censorship, and manipulation of the media all are intricately connected with war termination. The empirical contribution in the case studies amounts to a brief but new and integrated history of the First World War that puts both battlefield and homefront developments in their proper diplomatic and strategic perspective.

2

A THEORY OF WAR TERMINATION

> We can thus only say that the aims a belligerent adopts, and the resources he employs, must be governed by the particular characteristics of his own position; but they will also conform to the spirit of the age and to its general character. Finally, they must always be governed by the general conclusions to be drawn from the nature of war itself.
>
> (*Clausewitz, Book 8, Chapter 4*)[1]

THIS CHAPTER FIRST presents a unitary rational actor baseline theory of war termination and then adds the dimension of domestic politics. In the previous chapter I reviewed the existing arguments on the causes of war termination and laid out their shortcomings. Here I reconstruct a rationalist framework of the causes of war termination that can address these shortcomings. The addition of domestic politics in the second half of this chapter leads to the surprising and counterintuitive result that one particular regime type sometimes increases its war aims even as its leaders get more pessimistic about the outcome of the war. I explain why such regimes prefer to continue a losing war in a "gamble for resurrection." Such regimes gamble that through some new strategy or luck they can still win and thereby avoid domestic political punishment. In addition I briefly address how domestic politics can affect the utility for fighting and the commitment problem.

Main Themes

The main task of this chapter is to identify causal mechanisms that explain how states at war choose between two broad options: continued fighting and settlement. When decision makers choose between these options, they weigh the potential consequences of each course of action. It is therefore essential to explicitly model the potential consequences of continued fighting and the potential consequences of settlement. On the one hand, the consequences of continued fighting include

[1] Clausewitz, p. 594.

additional costs of war and potentially better or worse terms of settlement. The terms of a settlement, on the other hand, may leave a state almost defenseless in a next round of fighting and can have important domestic political repercussions for a regime and its leaders.

My approach links the causes of war termination to the causes of war. War breaks out because one side demands more than the other is willing to concede, that is, because states have incompatible terms of settlement, and each side hopes to procure its demands through war. In other words, each side expects to do better by going to war than by conceding the opponent his demands. Such demands can vary from maintenance of the status quo to unconditional surrender and need not be explicit. In terms of bargaining theory, wars start because both sides have reservation values that preclude a bargaining space.

This basic framework of the causes of war initiation points directly to the causes of war termination. Before the war both sides have a higher expected utility for fighting than for settlement. For a war to end, however, both sides must have a higher expected utility for the available settlement than for continued fighting. Therefore, for a war to end, for at least one side either the expected utility of fighting or the expected utility of settlement must change. In other words, for at least one side continued war must become less attractive or a settlement more attractive. In bargaining terms a necessary condition for war termination is that a bargaining space opens up.

For a bargaining space to open up it is necessary that for both sides the expected utility for settlement increases relative to their expected utility for continued fighting. The expected utility for fighting changes when a state changes its estimate of its probability of victory and the expected costs of the war. The proposed mechanism is learning; during war information that was private before the war becomes public.[2] This mechanism, the revelation of new information produced by fighting wars, can explain why wars end at some time yet could have started in the first place. Before war states have incentives to exaggerate (or understate) their strength and resolve and the expected costs of war. Events on the battlefield, however, provide belligerents with the best and most direct information to estimate their relative strength and resolve and the costs of war. Thus, when states update their estimates of

[2] This mechanism may seem similar to Blainey's contention that "[w]ars usually end when the fighting nations *agree* on their relative strength, and wars usually begin when fighting nations *disagree* on their relative strength" (Blainey, p. 122). The main difference in my approach lies in my very different dependent variables. Whereas Blainey's dependent variable is war/peace, my dependent variable is upward/downward change in the minimum terms of settlement or war aims. The differences between Blainey's and my approach will become clearer in the section below. By "learning" I refer to the evolution of information sets over time.

their relative strength and resolve, their utility for continued fighting changes. States would change their minimum terms of settlement, or war aims, as the utility for continued fighting changes if the expected utility of settlement did not often play an important role.

The expected utility for settlement depends on the available terms of settlement and the domestic and international consequences of those terms. The domestic consequences of the terms of settlement differ in different regime types. The mechanism that affects the expected utility for settlement is that some regimes and leaders anticipate severe domestic punishment—exile, imprisonment, or even death—whether they lose moderately or disastrously and therefore gamble for resurrection.[3] I differentiate regimes by two variables: the degree of repression employed to stay in power and the proportion of the (productive) population excluded from access to power. Regimes that do not employ repression and exclude no significant proportion of the population from power (the typical "Democracy") are likely to lose power even if they lose the war moderately. Such regimes and leaders are likely to suffer severe additional punishment, such as exile, imprisonment, or even death, only if they lose the war disastrously, and then mostly at the hand of the foreign enemy. Regimes that use extreme repression and exclude the rest of the population from access to power (the typical "Dictatorship") are unlikely to lose power if they lose the war on moderate terms because they can use their repressive apparatus to suppress attempts to remove them from power. If they lose disastrously, however, they can expect not only to lose power, but to suffer severe additional punishment. Regimes that use moderate repression and exclude a large proportion of the population from access to power (the typical "Mixed Regime" or "Anocracy") can expect to lose power and face a similar likelihood of severe punishment *whenever* they lose, be it moderately or disastrously. As a result, when they learn they will probably lose the war, such regimes and leaders have incentives to gamble for resurrection. If the gamble is successful and they win the war, they are unlikely to be punished. But if the gamble fails and they lose the war disastrously, the regime and leaders are not significantly worse off than before.

Because they fear punishment, such semirepressive and moderately exclusionary regimes have a very low utility for settlement on losing terms and settle only on terms that allow them to buy off the domestic opposition. Therefore, such regimes formulate terms of settlement, that is, war aims, that will allow them to show a profit on the war. With a profit they can buy off their opposition and stay in power. Thus, if they learn they are winning the war, such regimes do not worry about their

[3] See Downs and Rocke; see also Mnookin and Wilson.

domestic political audience and change their war aims with their estimates of the probability of victory. However, if they learn they will probably lose the war, they *increase* their war aims as the absolute costs of the war increase. Other regimes (the typical "Dictatorships" and "Democracies") always change their war aims in the same direction as they change their estimates of the probability of victory.

The international consequences of the terms of settlement revolve around the consequences of shifts in relative power, as they affect not just the (former) belligerents but also third parties. If the terms of settlement increase one state's relative power, that state will be in a better position to demand even more concessions later on. The central puzzle is: How can the "winner" credibly commit himself not to exploit his bargaining advantage in the future? If the "winner" cannot credibly commit himself to abstain from further and higher demands in the future, the "loser" must include the value of such further demands and the probability they will be made in his expected utility calculation. The commitment problem can be overcome, in an anarchic system, when the terms of settlement are self-enforcing

The terms of settlement are self-enforcing when the marginal benefits of additional demands are less than the marginal costs of fighting to achieve those demands on the battlefield. In other words, the "defender" can be sure the "attacker" will not raise further demands after the settlement, if both sides know that in a war over such new demands the additional costs of war are higher than the value of those demands for the attacker but not for the defender. I propose three mechanisms that increase the marginal costs of fighting. The first mechanism is outside intervention; the second focuses on geography; a potential third relies on a straightforward extension of the principal-agent model developed earlier.

The Theoretical Framework, Part I: Unitary Rational Actors

Like Schelling, Pillar, and Wagner, I view warfare as a bargaining process.[4] In this process both sides try to find out each other's reservation value. The "reservation value" is an important concept from the bar-

[4] Schelling; Pillar; Wagner, "The Causes of Peace"; Wagner "Peace, War, and the Balance of Power." Wagner aptly summarizes the bargaining context of war: "While adversaries can certainly choose to negotiate without fighting, if they fight it is because each sees fighting as a way to influence the outcome of negotiations" ("Peace, War, and the Balance of Power," p. 595).

gaining literature. The reservation price of a negotiator is the minimum price he prefers to pay or receive for the good over no agreement at all. In other words, a "negotiator's reservation price or 'bottom line' depends directly on the value of no agreement alternative to a proposed agreement."[5] This "bottom line" must change for the combatants to make an agreement possible where no such agreement was possible before. The reservation prices of both sides combine to create a bargaining space or a bargaining gap. As long as one side asks for more than the other side is willing to give up, a bargaining space does not exist.

Hence, a necessary condition for war termination is that a bargaining space opens up. If there exists no bargaining space before the war starts, such a bargaining space can be created only if the reservation value of the belligerents changes. In simpler terms, the minimum demands of both sides must become compatible. The reservation value of the belligerents depends on how they value no agreement compared with the value of the proposed agreement. To examine how the reservation values of the belligerents change, we must first identify the causes of changes in their value for no agreement (the expected utility of continued fighting) and their value for agreement (the expected utility of settlement). Then we must show how changes in the expected utility for fighting affect the expected utility for settlement. To avoid jargon as much as possible, I prefer to use "minimum terms of settlement" and "war aims" rather than "reservation price," but all three formulations refer to essentially the same concept: the minimum agreement a belligerent would prefer over continued fighting.

Below I flesh out and complete the argument that war ends when for both sides the expected utility of continued fighting is less than the expected utility of settlement. I present the mechanisms missing in the competing explanation that create the necessary preconditions for an agreement that leaves both sides better off than continued fighting. These mechanisms focus on both sides of the equation. The first mechanism reveals how the expected utility for continued war changes, and the second reveals how the expected utility for settlement changes.

For purposes of exposition I overemphasize the distinction between the expected utility from war and the expected utility from settlement. However, the two are of course related. In each period, states compare

[5] Lax, "Optimal Search in Negotiation Analysis," p. 456. As Morrow remarks, "No bargainer should ever accept an agreement that it believes to be worse than no agreement at all" ("Social Choice and System Structure in World Politics," p. 81). Rational decision makers weigh the value of any proposed agreement against the value of the absence of agreement. They choose to accept an agreement if it gives them a higher utility than they expect to get by rejecting that agreement.

the terms of settlement that currently are on offer versus the settlements that might be on offer in the next period (once more information is revealed) minus the costs of fighting for that period. Thus, the expected utility of continued fighting includes expectations about future settlement offers.

The Expected Utility for Fighting

For the purposes of exposition I assume in this section that the terms of settlement have no domestic or international consequences. (Subsequently these assumptions will be relaxed.) Looking at the problem in a slightly different way, I assume that the system is made up of only two actors, both unitary. In addition, I assume no one values fighting in itself.

One of the fundamental features of war is that it is costly. If they could, opponents would want to avoid the costs of war. In President Truman's words, "Warfare, no matter what weapons it employs, is a means to an end, and if that end can be achieved by negotiated settlement of conditional surrender, there is no need for war. I believe this to be true even in the case of ruthless and terroristic powers ambitious for world conquest."[6]

In a system of two actors, as Truman noted, if both sides knew the outcome on the battlefield, war would be unnecessary and wasteful. War is costly; it destroys lives and property. Because of the costs of war, the overall pie to be divided between belligerents after war is smaller than it was before the war. In other words, war is a *negative* sum game. If both sides knew how the pie would be divided after the war, both would be better off if they divided the pie accordingly before the war. Although their share of the pie would be the same, they would be dividing a larger pie and would therefore gain in absolute terms. In other words, because fighting is inefficient ex post there should exist ex ante bargains that rational states would both prefer to war.[7]

Why can states not avoid the costs of war? The best-known answer in international relations comes from Blainey, who suggested: "Wars usually end when the fighting nations agree on their relative strength, and wars usually begin when fighting nations disagree on their relative strength."[8] Earlier in this century Simmel had already argued that "The most effective prerequisite for preventing struggle, the exact knowledge of comparative strength of the two parties, is very often

[6] Truman, *Memoirs of Harry S. Truman*, vol. 1, p. 210.
[7] Fearon, "Rationalist Explanations for War," pp. 380, 383, 387–88.
[8] Blainey, p. 122.

obtainable only by the actual fighting out of the conflict."[9] The argument implies that events on the battlefield tell the belligerents something they did not and could not know before the war. It is this new information that makes it possible to reach an agreement to end war. To predict how disagreement about relative strength changes into agreement, we need to know the fundamental cause of such disagreement. If we cannot explain how rational states can disagree on their relative strength and/or resolve before the war, we cannot explain how they can later come to agree. In other words, if wars end when the causes of war initiation are removed, we need to know the causes of war initiation in order to explain war termination.

If disagreement must be explained by "misperception" or some other irrational behavior, a rational choice model could only partially predict war termination. At a minimum, it would be necessary to control for irrational behavior. Most often that would require additional insights from political psychology. I do not deny the potential of such an approach, but as shown below a rational choice model can explain why states sometimes cannot agree on their relative strength and resolve and the expected costs before war. Such a model also starts to explain how war produces agreement on relative strength, resolve, and the costs of war.

Some recent work in international relations, by scholars such as James Fearon, James Morrow, and R. Harrison Wagner, has followed up on Blainey's insight.[10] Fearon, Morrow, and Wagner have filled many of the theoretical holes in what essentially was a one-liner in Blainey. I call this new approach *rationalist learning theory*. Rationalist learning theory provides a mechanism to account for the lack of agreement on relative strength and resolve between rational leaders. Below I sketch the main theoretical underpinnings of rationalist learning theory and apply it to the question of war aims.

Rationalist learning theory postulates that states are expected utility maximizers. In straightforward expected utility terms: "Each state considering war will calculate its expected utility for war by weighting its utility for each possible outcome by the probability of that outcome occurring and subtracting the expected costs of war."[11]

[9] Quoted in Rosen, p. 183.
[10] Fearon, "Rationalist Explanations for War"; Fearon, "War, Relative Power and Private Information"; Fearon, "Threats to Use Force"; Morrow, "A Continuous-Outcome Expected Utility Theory of War"; Morrow, "Social Choice and System Structure in World Politics"; Morrow, "Capabilities, Uncertainty, and Resolve"; Wagner, "The Causes of Peace"; Wagner, "Peace, War, and the Balance of Power"; Wagner, "Bargaining and War." See also Bueno de Mesquita and Lalman, *War and Reason*.
[11] Morrow, "Social Choice and System Structure in World Politics," p. 88.

In simple terms, a fundamental cause of war is that the most each side is willing to cede (rather than fight) may be less than what the other side thinks it can get by fighting minus the costs of war. What one side is willing to cede and what the other side demands depends on each side's estimate of its relative strength, resolve, and the expected costs of war.[12] The relative strength of the belligerents depends on a host of factors, including the quality of the leadership, troops, their equipment, training and morale, technology, strategy, tactics, and logistics.[13] A state's resolve is determined by how much that state values the issues at stake; it reflects the importance a state attaches to these issues.[14] The expected costs of war depend on beliefs about relative strength, relative resolve, and structural factors such as the offense-defense balance and random factors such as the weather.

Rationalist learning theory argues that leaders are strategic calculators who go to war because they have competing wants and imperfect information about the real balance of military power between their states. Leaders also have less than perfect knowledge about how much the other side values the issues at stake, that is, its resolve. Finally, leaders can only estimate the costs of war.

If the leaders of one side have such private information,

> they should understand that their own estimates based on this information are suspect because they do not know the other side's private information. In principle both sides could gain by sharing information, which would yield a consensus military estimate (absent bounded rationality). And . . . doing so could not help but reveal bargains that both would prefer to a fight.[15]

Because the costs and risks of war surely supply leaders and states with incentives not to miscalculate and thus to find out what other leaders and states will or will not agree to, a rationalist explanation for war must explain what prevents leaders and states from sharing their private information. The answer, Fearon argues, must be that

> rational leaders may be unable to locate a mutually preferable negotiated settlement due to *private information* about relative capabilities or resolve

[12] Ibid., pp. 82, 84. See also Morrow, "A Continuous-Outcome Expected Utility Theory of War."

[13] See Stam, chs. 2 and 3. Michael Howard's four dimensions of strategy, logistical, operational, social, and technological, offer an attractive and relatively simple framework. Howard, *The Causes of Wars and Other Essays*, p. 105.

[14] Since the issues at stake vary endogenously during war, I assume that a state's utility function for all potential issues at stake is given before the war and does not change during war.

[15] Fearon, "Rationalist Explanations for War," p. 393.

> and *incentives to misrepresent* such information. Leaders know things about their military capabilities and willingness to fight that other states do not know and in bargaining situations they can have incentives to misrepresent such private information in order to gain a better deal. . . . Given these incentives, communication may not allow rational leaders to clarify relative power or resolve without generating a real risk of war.[16]

On the basis of the insights of Fearon, Morrow, and Wagner, I construct a theoretical framework to explain war termination: *strategic learning theory*. As the reader will note below, the word "strategic" does double duty. First, the strategic interaction of the war aims of the belligerents creates or fails to create a bargaining space. (Fearon argues, of course, that technically a bargaining space always exists; the players are just unable to identify it because of their private information and incentives to misrepresent.) Second, and in contrast to the usual game-theoretic approach, the strategic interaction does not just lie in attempts to discover or signal each player's preferences—as in attempts to discover each side's cost tolerance—but also in attempts to signal or discover each other's relative strength and the costs of war. This signaling, moreover, does not take place in a series of offers and counteroffers, but occurs on the battlefield, in the interaction of the belligerents' military strategies. Specifically, each side designs its military strategy to present the other with new information about relative strength and resolve and the costs of war. Thus, I believe that most of the strategic interaction of war termination is to be found in military strategy and tactics, which provide credible signals of relative strength, resolve, and the expected costs of war. (Note that, if this is correct, a much deeper understanding of the "art of war" itself, of strategy, tactics, and their interactions, is needed than is usually assumed to fully understand the bargaining that is war.)

War makes agreement possible because *war provides information*.[17] On the battlefield each side can measure its relative strength and resolve directly on the basis of their actions and performance. Once a war starts, and the belligerents spend some time fighting each other, they acquire new information about their own as well as their adversaries' capabilities and the costs of war.[18] They also begin to learn more about

[16] Ibid., p. 381. Statesmen seem to be well aware of their adversaries' incentives and attempts to misrepresent information to them. See Hankey, vol. 2, p. 479.

[17] "An agreement reached after a costly conflict would prompt regret that a similar agreement was not reached initially—unless the information of one or both parties has changed during the conflict" (Kennan and Wilson, p. 101).

[18] "[S]ince incentives to misrepresent military strength can undermine diplomatic signaling, states may be forced to use war as a credible means to reveal private information

both sides' resolve. Specifically, continuous combat will tell both sides all sorts of things about the final outcome on the battlefield that they can never know before the war.[19]

Events that confirm previous expectations do not influence estimates; belligerents adjust their estimates only when they get *new* information. Assume, for example, that before the war both sides agreed on their relative resolve, but each expected to be twice as strong as their opponent (because they developed a new weapon or some innovative strategy). As the war progresses, at least one side must discover that its estimate was wrong. As *unexpected* defeats and failures on the battlefield mount, the relatively weaker side learns it overestimated its strength. A rational actor then lowers his estimate of his relative strength. In this manner combatants continuously adjust their estimates until they agree on their relative strength.[20] In more technical terms, states adjust their probability density functions of the outcome on the battlefield until they are consistent. In a similar manner combatants learn each other's resolve and the costs of war. Combatants still have incentives to exaggerate their resolve to their opponent, but each can now directly observe the other's resolve on the battlefield and the homefront.

As the warring states get new information about their "true" relative strength, resolve, and the costs of war, their expectations about the outcome of the war change, and therefore the expected utility for continued fighting changes. Because we assumed that there are no domestic consequences to the terms of peace, what each side is willing to cede rather than fight should change as a result of the changing expected utility for fighting. Changes in estimates of these three factors, relative

about their military capabilities" (Fearon, "Rationalist Explanations for War," p. 400). Timasheff argued well before Blainey that in the course of the war "estimates and expectations of the parties as to their relative strength, including the eventual intervention of neutrals, are gradually replaced by facts. Through fighting it is established beyond reasonable doubt that one party is stronger than the other. . . . Then, one of the conditions of warfare, uncertainty as to relative strength, is eliminated" (Timasheff, pp. 204–5).

[19] This, of course, raises the question of where each side's priors come from, how they construct their initial expectations. It seems reasonable to posit that in the era of the General Staff system countries formulate their priors through extensive war games. In the pre–General Staff system era, I would assume that military leaders form priors based on past engagements and readings of military history.

[20] An empirical problem could be that states come up with new private information as they invent new weapons, tactics, and strategies. Such new private information will only temporarily derail this process of adjustment of expectations and estimates of relative strength.

strength, resolve, and the costs of war, therefore lead to changes in war aims during the fighting.[21]

First, when one side learns that he is stronger than he previously thought and upwardly revises his subjective estimate of his relative strength, what he thinks he can get by continued fighting minus the costs of war should increase. Therefore, his minimum demands or war aims will go up.[22] In other words, changes in the estimated battlefield outcome and in war aims should move in the same direction. Thus, the following hypothesis:

> *Hypothesis 1*: As unitary rational belligerents get new information about their relative strength, they change their war aims. If they learn they are stronger than they previously estimated, they increase their war aims; if they learn they are weaker, they lower their war aims.

Second, when a belligerent learns his opponent is more resolved (i.e., the opponent values issues at stake higher than previously estimated) he will lower his war aims. I should note that I have a slightly unconventional view of a belligerent's resolve and its relationship to his strength. This unconventional view may have important implications for the enforceability of agreements. The fundamental point in my view is that a state's resolve at least partly determines the force he mobilizes on the battlefield. Nobody would dispute that the United States could have defeated the North Vietnamese if the United States had mobilized as it did during the Second World War. Why, then, did the United States deploy only relatively limited forces? The answer must be that the United States did not care enough about the issue at stake.[23] How much your side can hurt the other obviously depends at least partly on your own willingness to suffer. In other words, the costs you can inflict depend partly on your own cost tolerance, whether you are willing to pay the costs it takes to hurt the enemy.

The bargaining strength of states is therefore determined by a combination of strength and resolve, not by the simple addition of their individual values. In my view *resolve is the total amount of resources one side is willing to expend for the issue and relative strength is the numbers of troops and casualty ratio*. Thus, the higher your resolve, that is, your willingness to suffer, the higher your expected utility for fighting.

[21] See Morrow, "A Continuous-Outcome Expected Utility Theory of War": "Among the new conclusions [of Morrow's article] is the finding that nations shifting their level of acceptable outcomes to a conflict upward or downward after fighting starts is perfectly consistent with a rational model" (p. 473).

[22] See Wittman; Morrow, "A Continuous-Outcome Expected Utility Theory of War."

[23] Morrow, "Social Choice and System Structure in World Politics," p. 83.

Hypothesis 2: As unitary rational belligerents get new information about their opponent's resolve, they change their war aims. If they learn their opponent has a lower resolve than estimated previously, they increase their war aims; if they learn he has a higher resolve, they lower their war aims.

Relative power and relative resolve interact to determine each state's relative bargaining strength. Relative power functions as an "exchange rate" that translates resolve in overall relative bargaining strength.

Third, when one side learns the costs of war will be lower than he previously estimated, his utility for continued fighting will go up. If he expects the same probability of victory, but now for a lower price, what he thinks he can get by continued fighting minus the costs of war should increase. Changes in estimates of the costs of war therefore lead to changes in war aims in the opposite direction.

Hypothesis 3: As unitary rational belligerents get new information about the expected costs of war, they change their war aims. If they lower their estimate of the costs of war, they increase their war aims. If they increase their estimate of the costs of the war, they lower their war aims.

In summary, a rational unitary state will lower its war aims when it lowers its estimate of its relative strength, raises its estimate of the opponent's resolve, and raises its estimate of the costs of war.

Over time, combatants must come to agree on their relative strength and resolve because the mechanisms that prevent such agreement before war cannot survive prolonged fighting. Indeed, war may be the only way to credibly reveal private information about each side's relative strength and resolve. Private information becomes public once relative strength, resolve, and the costs of war can be directly observed on the battlefield. Although states may still have incentives to misrepresent this private information, it becomes much harder to plausibly claim greater resolve and strength than you are willing to show on the battlefield.

A change in war aims depends on the revelation of private information and random factors, such as the weather, which help determine the battlefield outcome. It is the very essence of private information and random factors that they are not known in advance. Therefore, most of the time we can also not predict exactly when private information will become public and when random factors will play a less important role. However, we can sometimes predict whether some events will decisively alter estimates of strength, resolve, and the costs of war. An example would be the credible and determined intervention by a third state of overwhelming power.

I do not claim that in the real world states learn their relative strength and resolve easily and without the intrusion of complications. For example, states could come up with new weapons and secret plans during the war, creating, in effect, new private information; it can be argued that the pace of innovation tends to speed up during war. Moreover, the information processing and evaluative apparatus of a state can significantly affect how quickly a state learns.[24] In his important book *Strategic Assessment in War*, Scott Gartner has recently shown how political actors develop and apply indicators to evaluate the military's performance and prospects on the battlefield.[25] Gartner shows convincingly that the indicators different actors choose can substantially affect their estimates of the probability of victory. Nevertheless, the underlying logic still holds: Over time private information becomes public.

The Expected Utility for Settlement

So far, I have argued that states choose between continued fighting and settlement on the basis of the probable consequences of their choice. If a state expects a better payoff from continued fighting than from the terms of settlement offered, it will rationally decide to continue fighting. Above I outlined how the expected utility for fighting changes. In this section I focus on the consequences of the alternative course of action: settlement. Postponing an analysis of the potential effects of domestic politics for the moment, I argue that the international consequences of the available terms of settlement can decisively affect the expected utility of settlement.

In an anarchic international system any terms of settlement that change the relative balance of power between the two actors threaten to trigger the commitment problem. How can the "loser" be sure that the "winner" will not try to take advantage of his increased power in

[24] Basically, belligerents and nonbelligerents move from incomplete to more complete information. There are three factors that affect this updating: the quantity of information the war provides, the quality of information, and the evaluative apparatus of each side. If a state receives more or clearer information, its estimates are more accurate, and the state learns faster. Some states possess a better evaluative apparatus than others. In a fascinating paper entitled "Why States Believe Foolish Ideas," Stephen Van Evera shows that sometimes it can be in the narrow self-interest of an evaluative organization to suppress information about the war. The better the evaluative apparatus, the faster and the more accurate a state will learn. Scott Gartner incorporates some of these effects in "I'm OK, You're OK."

[25] Gartner, *Strategic Assessment in War*.

the future? If the "winner" cannot credibly commit himself not to exploit his bargaining advantage in the future, the "loser" must include the value of any further demands and the probability they will be made in his expected utility calculation.[26] In anarchic international systems, thus, agreements must be self-enforcing.[27]

Agreements will be self-enforcing at terms where for both sides the marginal benefits of additional demands are less than the marginal costs of fighting to achieve those demands on the battlefield. The marginal benefit of an additional demand can be less than the marginal costs of fighting for the stronger side that is actually winning if the additional demand triggers third-party intervention. Potential interveners will balance against one side if that side's war aims threaten the interests of the potential intervener.[28] As a result of intervention, the previously winning side must now lower its estimate of its relative strength and lower its war aims. The presence of potential interveners can make agreements self-enforcing because states can anticipate intervention and its consequences. If the winner raises his demands, against the interests of a third state, he should increase his estimate of the probability of hostile intervention. As he increases his estimate of the probability of intervention, his expected utility for war goes down. The winner's additional demand is "self-defeating" if it makes hostile intervention so much more likely that the winner must lower his expected utility for fighting to the point where he would prefer to settle on the *original* demands.

Two historical examples may serve to illustrate the point. The first shows the mechanism in action after war termination and the terms of settlement became known. The second is an example where the anticipation of intervention limited war aims. In the 1877 Russo-Turkish War

[26] This problem has not gone unnoticed by students of war termination. As William Fox noted, "Hitler could not, however, translate an unimaginably vast military success into any kind of political settlement with Britain, because he had a totally insoluble credibility problem. Too many times, in too few years, too recently, he had made lightning moves of his military forces—into the Rhineland, into Austria, and into Czechoslovakia—and won reluctant acquiescence to successive *faits accomplis* by asserting in each case that he had no further demands in Europe. Given the circumstances, the British government could see little point, no matter how bleak its military prospects, in accommodating to the self-designated victor's demand for peace. The pitcher had gone to the well one too many times, and it failed Hitler on its most crucial trip" ("The Causes of Peace and Conditions of War," p. 9). See also Quester, pp. 31–32, 34, 37–38; Pillar, pp. 205, 231; Wagner, "Peace, War, and the Balance of Power." As Wagner argues in "Bargaining and War," if the disagreement outcome in the next conflict changes, the equilibrium agreement of the current conflict will change. See also Fearon, "Bargaining over Objects that Influence Future Bargaining Power."

[27] Wittman similarly notes that we must look for self-enforcing contracts but proposes only geography as a mechanism (Wittman, p. 757, note 15).

[28] See Walt.

Russia defeated Turkey, and the Ottomans accepted the Russians' maximum demands. In the Treaty of San Stefano of March 1878, the Turks accepted the creation of a large independent Bulgarian state. However, Britain and Austria-Hungary opposed this treaty because they feared Russia would totally control this new Bulgaria. As a consequence, Russia would achieve mastery over all the Balkans and the Straits. When the other European countries became aware of the consequences of the settlement of the Russo-Turkish War, they were willing to intervene to force Russia to accept lesser terms. The British demonstrated their displeasure and signaled their concern when they heard of the Treaty of San Stefano by mobilizing reserves and sending Indian troops to the Mediterranean. The threat of war was averted when the European powers, led by Britain, forced Russia to accept much lower terms of settlement at the Congress of Berlin in June 1878.

During the Seven Weeks' War Bismarck kept Germany's demands low to prevent hostile intervention, mainly by the French.[29] Bismarck *anticipated* the French would intervene if they thought Germany's demands would threaten French interests or, more generally, change the European balance of power. To keep the French out of the war Bismarck granted the Habsburgs moderate terms by the Treaty of Prague. Neither Austria nor its most faithful ally, Saxony, was asked to cede any territory. Thus, the presence of a potential intervener allows winners to credibly commit to limit their war aims if both winners and losers know that any further demands would invite balancing behavior by a third party.[30] The anticipation or actuality of third-party invention in war provides the first mechanism that makes a self-enforcing agreement to end war possible.

Geography can also help to make some terms to end war self-enforcing. On the one hand, terms of settlement that include giving up territory will increase the relative strength of the winner in the current war. On the other hand, by withdrawal the loser may gain more defensible borders. By increasing the superiority required for a successful offensive, new borders along mountain ranges, passes, or rivers can sometimes negate any increase in relative strength and make an agreement to end war self-enforcing.[31]

[29] Bismarck seems to have well understood the dynamics of war aims and the conduct of war: "The definition and limitation of war aims remains a political task during a war, and the way of solving it necessarily influences the conduct of the war" (quoted in Reiners, p. 197).

[30] The role of potential interveners as guarantors might explain why states sometimes "win the war, but lose the peace." A prime example is the Sino-Japanese War of 1894, and also Turkey in the war over Crete.

[31] It might also be possible that the marginal benefit of an additional demand can be less than the marginal costs of fighting for the "winning" side if the additional demand

One additional concern of the international consequences of settlement deserves notice. In a coalition war allies will also be concerned how the terms of settlement affect the future relative power among the coalition members. States may put downward pressures on the overall coalition's war aims to prevent too large gains to their current allies who may after all be future rivals.

If an agreement cannot be made self-enforcing, there will exist a lower bound of war aims below which states will not be willing to settle because they would be dependant on the victor. If the defender's increased willingness to suffer does not compensate for the attacker's increase in strength, or if there exists no credible and powerful intervener (as in a system of only two states, or in a war in which all the members of the system are involved on two opposing camps), the loser will not settle on terms that leave it unable to defend itself in a next war.

War Aims and War Termination

As I argued above, simply more agreement about the outcome on the battlefield does not necessarily make agreement more likely. However, when both sides agree on their relative strength and resolve, a bargaining space must open up because war is ex post inefficient. In other words, because war is costly, once belligerents have consistent[32] expectations about the outcome of the fighting and their relative resolve, there exists an agreement that leaves both sides better off than contin-

triggers a sufficiently increased willingness to suffer on the part of the losing side. The defender's (increased) willingness to suffer must compensate for the attacker's (increased) advantage in relative strength. Thus, the costs the defender must be willing to suffer to make an agreement self-enforcing depend on two factors: how much the attacker values the (next) issue at stake and the relative strength of the combatants. For a formal model on very similar lines, deriving very similar conclusions, see Fearon, "Bargaining over Objects that Influence Future Bargaining Power." Note that because the disagreement outcome in the next war has not changed there is no commitment problem in this example.

The commitment problem is triggered, even if the marginal utility of territory increases for the conceding state, if the current settlement changes the disagreement outcome of the next war. Fearon argues that this commitment problem may also be overcome if (1) there is always a delay in the effect of territorial transfers on relative power, (2) the function relating probability of winning to territory is continuous, and (3) the alternative to an agreement now is an all-out war to the finish (Fearon, "Bargaining over Objects that Influence Future Bargaining Power"). I thank R. Harrison Wagner for clarifying my thinking on this issue.

[32] See Wagner, "Peace, War, and the Balance of Power," for the important distinction between uncertainty and consistency.

TABLE 2.1
New Information and War Termination

	Favorable New Information for A	*Unfavorable New Information for A*
Favorable New Information for B	War Termination *less* likely	Indeterminate
Unfavorable New Information for B	Indeterminate	War Termination *more* likely

ued fighting. This does not imply that an agreement will be immediate. Even when a bargaining space exists, both sides may continue fighting for a while to get the best possible terms.[33] In other words, the theory outlined here offers only a *necessary* condition for war termination.

The presence or absence of a bargaining space depends on the interaction of the belligerents' reservation values, that is, their war aims. War started because the war aims of both sides precluded a bargaining space. Therefore, the creation of a bargaining space that makes war termination possible depends on how the war aims of the belligerents change, and therefore on how new information affects their prior estimates and war aims. It would seem obvious that war termination becomes more likely if both sides become more pessimistic about the outcome: Both will lower their war aims. Similarly, war termination becomes less likely when both sides become more optimistic about the outcome. When one side receives good new information and the other side receives bad new information the situation is more complicated. (It requires an estimate not only of the direction, but also of the magnitude of the change in war aims to predict whether war termination becomes more or less likely.) The effect of new information, which leads to changes in war aims, on war termination is summarized in table 2.1.

In general terms a bargaining space becomes more likely if one side lowers his minimum terms *more* than the other side raises his terms. To predict the creation of a bargaining space, therefore, we often need to know whether the change in one side's war aims is larger or smaller than the change in the opponent's war aims. The theory offers some predictions about the magnitude of such changes in each side's war aims. The worse (better) the new information about relative strength, resolve or the expected costs of war, the larger the decrease (increase) in the minimum terms of settlement. The practical value of these predictions is limited; at most they can tell us something about the order

[33] For more on such bargaining, see Pillar.

of magnitude of changes in minimum terms. In other words, at most we can predict whether a state's minimum terms should change little or a lot. Thus, if one state learns its relative strength is much lower than it previously estimated, it should substantially lower its minimum terms. If the enemy learns little new, because its estimates were basically correct, it should hardly change its minimum demands at all. In this case a bargaining space, and therefore war termination, will become more likely.

The Theoretical Framework, Part II: Domestic Politics and War Termination

Many scholars have argued that the internal politics of states can affect their foreign policy.[34] They have proposed multiple mechanisms to account for the observed different behavior of different regimes. In the literature on war termination several authors similarly suggest that domestic politics can have an important impact on a state's decision whether to terminate war or continue fighting.[35] Fred Ikle, among others, suggests that a change of regime makes war termination more likely.[36] However, these authors have failed to develop a general theoretical framework to link domestic political structure and war termination.

I link domestic politics and war termination through the logic of the well-known principal-agent model. In all regimes the outcome of the war serves as a signal for the people (the principal), on the basis of which they decide to reward or punish the leadership (the agent) for their choice to go to war and their wartime performance.[37] However, the same outcome and terms of settlement can have very different consequences for leaders in different regimes.

[34] See, for example, Allison; Putnam; Tsebelis; Levy, "Domestic Politics and War"; Snyder, *Myths of Empire*; Jervis, "Cooperation under the Security Dilemma," p. 177; Jervis, "War and Misperception," p. 103; Stam, ch. 6. The democratic peace literature has spawned a whole host of potential mechanisms for how regime type affects the likelihood of war initiation. The literature is too vast to cite, but see Schultz, "Looking in Black Boxes"; Doyle; Russett, *Grasping the Democratic Peace*.

[35] See Craig and George, p. 231; Rothstein; Randle, "The Domestic Origins of Peace"; Halperin; Blainey; Ikle, pp. 59, 69, 84. Handel, "War Termination—A Critical Survey," p. 54; Shillony, p. 101; Waltz, pp. 273–74; Holl; Sigal.

[36] See Ikle.

[37] Skocpol and Tilly have shown that defeat in an international war can often lead to revolution. I go one step beyond their analysis here and suggest that one prewar regime type should be particularly susceptible to revolution because even a moderate loss suffices to coordinate the domestic opposition. See Tilly, pp. 6, 12, 102–3, 216–21, 231; Skocpol, pp. 60–64, 73–77, 94–99.

Regime Types and the Expected Utility of Settlement

One simple and attractive way to differentiate regimes is to assume that given the same terms of settlement, different regimes have different probabilities of losing power.[38] This assumption has led some scholars to conclude that Democracies are fundamentally different from other regimes.[39] However, losing power might not be so bad if you or your party could run and win again in subsequent elections. Losing power could be very bad when it almost certainly leads to additional severe punishment, such as exile, imprisonment, or death. What matters for leaders, in other words, is not just the probability but also the *consequences* of losing power. The probability of losing power and the probable consequences of losing power thus together determine the leaders' expected value of the outcome of the war. My central point is that for semirepressive and moderately exclusionary regimes the expected value of settlement remains the same, whether they lose moderately or disastrously. Therefore, when such regimes learn they will probably lose the war, they have little to lose by continuing the war and gambling for resurrection. For other regimes (repressive and exclusionary and nonrepressive and nonexclusionary), in contrast, the expected value of a settlement on moderately losing terms is significantly higher than the expected value of a settlement on disastrous terms.

My typology to differentiate regime types in some aspects closely mirrors the logic of *political opportunity structures* developed in the Comparative Politics literature.[40] However, because the typology developed here is less ambitious in scope and only aims to predict the fate of leaders as a result of war termination, I employ only two closely related variables to differentiate the three ideal typical regime types. The first variable that determines regime type is the degree of repression employed to stay in power. The degree of repression interacts with the terms of settlement to determine when leaders in the different regime types lose power. The second, and related, variable is the proportion of

[38] That war affects the political survival of leaders was recently shown in Bueno de Mesquita, Siverson, and Woller. Bueno de Mesquita et al. examine only one kind of punishment: the violent overthrow of regimes. I argue that the *degree* of punishment, mere overthrow or additional punishment, makes an important difference for the incentives of regimes to keep fighting or settle on losing terms. See also Bueno de Mesquita and Lalman, "Domestic Opposition and Foreign War"; and Bueno de Mesquita and Siverson, "War and the Survival of Political Leaders."

[39] See Downs and Rocke; see also Bueno de Mesquita and Siverson, "War and the Survival of Political Leaders."

[40] See especially Kitschelt; Lipsky; Eisinger; McAdam, McCarthy, and Zald; Kriesi et al.; Linz and Stepan.

the (productive) population excluded from access to the policy-making process. These two variables are related because the ability to exclude largely relies on the ability to repress to some degree those excluded from access to the policy-making process.

Together with the terms of settlement, the ability to repress the domestic opposition determines when leaders and regimes lose power. The terms of settlement of the war serve as a signal of the regime's competence and leadership abilities. In effect, the outcome of the war helps coordinate the expectations of members of the opposition and determines whether a sufficiently large group will attempt a revolt to make it successful.[41] If the war ends in even a small defeat and the regime employs no repression at all, it is extremely easy for the opposition to coordinate and remove the leader from power. However, the more the regime represses the domestic opposition, the more difficult it becomes for the opposition to coordinate an attempt to overthrow the regime. The reason is simple: the more repressive the regime, the higher the potential costs of an attempt to overthrow a repressive regime. Therefore, individual members of the opposition have to be very confident that others will join them in their attempt to remove the leader and make it successful.[42] Thus, the more repressive the regime, the worse the outcome of the war must be to coordinate the expectations of the members of the opposition so that a sufficient number will join to make the attempt to remove the leader successful. The worse the outcome of the war, the more citizens will agree that the leader should be removed simply because the worse the outcome of the war, the more the citizens will want to deter future similar behavior. If they fail to deter such behavior, they might have to pay similarly high costs of war again. Moreover, the worse the losses in war, the more the means of repression are destroyed.

The proportion of the (productive) population excluded from access to wealth and power largely determines the consequences of losing power. When groups that were previously denied access to the policy-making process come to power they have incentives to punish the former leaders to deter future attempts at exclusion.[43] Hence, the higher the proportion of the population that is excluded, the higher the likelihood that the leaders and regime will suffer severe additional punishment above and beyond their removal from power.

[41] See Hardin, *Collective Action*; Hardin, *One for All*.

[42] See Kuran; Lohmann.

[43] The competition between ruling elite and other groups in society can be based on many cleavages, for instance, along class, ethnic, ideological, civil-military, or kinship lines.

To be sure, the proportion of the (productive) population excluded from access is closely related to the degree of repression employed: the higher the proportion that is excluded, the more repression will be necessary to maintain the in-group(s) in power. For analytical purposes, however, the separation of the two variables usefully highlights the distinction between losing power and suffering additional severe punishment. Because we would expect both repressive but nonexclusionary and nonrepressive but exclusionary regimes to be extremely rare empirically, we can roughly distinguish three regime types. The first type is repressive and exclusionary—roughly corresponding with "Dictatorships." These regimes consist of a relatively small in-group that maintains its position by harsh repression of the rest of the population. The second type is semirepressive and moderately exclusionary—roughly corresponding with "Mixed Regimes" or "Anocracies." These regimes exclude a large proportion of the population and consist of a larger sized in-group or several in-groups that use moderate repression to maintain control. Finally, nonrepressive and nonexclusionary regimes—which can roughly be equated with "Democracies"—include all or almost all of the (productive) population and therefore need little or no repression.

If they win the war, leaders in all regimes are unlikely to lose power. (Well-known exceptions are, of course, Winston Churchill after the Second World War and George Bush after the Gulf War; note that both were leaders of nonrepressive and nonexclusionary democracies.) If they lose the war disastrously, leaders in all regimes are likely not only to lose power but also to suffer additional punishment. The fate of leaders governing under different types of regimes only significantly differs if the outcome of the war is somewhere between a total defeat and breaking even on the war. I argue that for semirepressive and moderately exclusionary regimes *any* loss is as bad as a total defeat. In either case the leadership is likely not only to lose power but in addition to suffer severe punishment such as exile, imprisonment, or even death. Such regimes would thus almost sign their own death warrant if they settle for anything less than a profit on the war. More importantly, such regimes have little to lose by continuing a losing war and gambling for resurrection. After all, a worse loss does not increase the probability of severe punishment. To avoid punishment, these regimes will settle only on terms that allow them to show a profit on the war and buy off the domestic political opposition. Hence, when such semirepressive and moderately exclusionary regimes become more pessimistic about the outcome of the war they will sometimes increase their war aims to cover the costs of the war. Leaders in nonrepressive nonexclusionary regimes will lose power if they lose a war but will only

suffer severe additional punishment if they lose very badly. Thanks to their repressive apparatus, repressive and exclusionary regimes will stay in power unless they lose the war very badly, in which case they not only lose power but can also expect severe additional punishment. Because for leaders in both nonrepressive nonexclusionary regimes and repressive exclusionary regimes a worse loss significantly increases the chance of severe punishment, they have no incentive to continue a losing war and gamble for resurrection. Therefore, these regimes change their war aims as do the rational unitary actors in the baseline model considered above. When they become more optimistic about the outcome of the war they raise their war aims; when they become more pessimistic they lower their war aims.

Repressive and Exclusionary Regimes

Repressive and exclusionary regimes basically consist of one group—their inner circle—that rules at the expense of all others. The ability to exclude the rest of the population clearly relies on the regime's ability to ruthlessly repress their opposition. (These regimes thus correspond closely to what are commonly called "Dictatorships" or sometimes "totalitarian" regimes.) A good modern example of such a regime is Iraq under Saddam Hussein. The regime's ability to harshly repress the domestic opposition makes any attempt to overthrow the regime a very dangerous affair. Because the costs of an attempt to overthrow the regime are potentially very high, individual members of the opposition have to be very confident that others will join them in their attempt to remove the leader and regime and make it successful. As long as the war ends in a moderate loss and the regime's repressive apparatus remains intact, any attempt to overthrow the regime is extremely risky and unlikely to attract enough supporters to make it succeed. Only when the war ends in a disastrous loss and the regime's repressive apparatus is severely weakened will the domestic opposition be likely to attempt a revolt.

Once the leader is removed from power, however, it is very likely that he or she will suffer severe additional punishment. The previously excluded and repressed proportion of the population has strong incentives to punish the former leader severely once he loses power. We can identify at least four basic sets of incentives to punish former leaders of repressive and exclusionary regimes. The first is simple revenge for previous repression. The second incentive is that severe punishment serves to deter leaders aspiring to such repressive and exclusionary control. The third and fourth incentives come into play when members of their own in-group overthrow the leader. By punishing the former

leader, the new rulers offer a scapegoat and at the same time prevent coordination of any potential opposition to their new rule from rallying around the old leader.[44]

Repressive and exclusionary regimes and their leaders who learn they will probably lose the war on anything less than disastrous terms have no incentive to gamble and continue the war. Such regimes and leaders have much more to lose than to gain by such a gamble. By continuing a losing war the regime would needlessly suffer additional costs of war and put at risk the forces they rely on to maintain their position. Because for such regimes and leaders the terms of settlement have no important domestic political consequences, unless the war ends in a disastrous defeat, they change their war aims along with their expectations about the outcome of the war.

Semirepressive and Moderately Exclusionary Regimes

Semirepressive and moderately exclusionary regimes consist of one medium sized in-group or several competing in-groups, jockeying among each other for power and influence while extracting rents from the excluded proportion of the population.[45] Unable to ruthlessly eradicate the domestic opposition like repressive regimes, repression in these regimes takes the form of occasional incarceration, bureaucratic obstructionism, and control over information. (Although there exist no consensus in the literature, such regimes roughly correspond with what the literature has referred to as "Mixed," "Anocratic," "Authoritarian," or sometimes "Oligarchic" regimes.) With only a moderate ability to repress their domestic political opposition, these regimes and their leaders stay in power by preventing the effective coordination of their opposition and through bribes to buy off the opposition. Unlike repressive regimes, thus, semirepressive regimes depend on the acquiescence of the governed. A good example of a modern semirepressive and moderately exclusionary regime is Yugoslavia under Milosevic.

[44] If we model the in-group as the principal, the in-group also has incentives to punish the leader only when the outcome of the war is very bad. Because in these regimes leaders have to satisfy only their one in-group, they can easily accrue reliability credits. See Bueno de Mesquita and Lalman, *War and Reason*; Bueno de Mesquita and Siverson, "War and the Survival of Political Leaders"; Morgan and Campbell. The in-group will thus forgive moderate losses and count them against past successful performance.

[45] Snyder, *Myths of Empire*. In their endeavor to exclude the opposition these regimes sometimes experience collective action problems among their constituent groups. Because repression and bribes are costly, each of the constituent groups in such moderately exclusionary regimes tries to shift these costs onto other groups. In other words, some groups will try to free-ride on others. The effect of free-riding on the probability and consequences of losing power is unclear; arguments can be made in both directions.

Semirepressive and moderately exclusionary regimes use a combination of moderate repression and bribes to affect their opposition's calculations of the costs and benefits of an attempt to overthrow the regime. Because such regimes use *moderate* repression, it is easier for their opposition to coordinate attempts to overthrow the regime than it is for the opposition in repressive exclusionary regimes. A much smaller loss in the war therefore suffices to coordinate the expectations of the domestic opposition to prompt their attempt to remove the leadership. These regimes also use bribes to buy off potential members of the opposition. Such bribes can take many forms, such as national prestige, economic growth, or possibilities for advancement (e.g., in the colonies) to siphon off ambition. When the regime can no longer afford bribes, when the losses of the war outweigh its gains so that the regime becomes unable to buy off the opposition without giving up power, the domestic opposition will attempt to overthrow the regime. For these reasons, semirepressive and exclusionary regimes face domestic revolt even if the war yields only a moderate loss.

When the leadership in such regimes loses power, it will likely suffer additional severe punishment such as exile, imprisonment, or death. As in repressive regimes, the excluded have incentives to punish the former leadership severely: revenge for previous repression and to deter leaders who aspire to such semirepressive and moderately exclusionary control. When the ruling coalition learns that it will probably lose the war and lose power, each coalition member will therefore try to blame the other for all mistakes and excesses of the past in the hope a scapegoat will satisfy the opposition. In the scramble to avoid punishment, where former allies turn against each other, it actually becomes more likely the in-groups will lose power and some of them suffer severe punishment. However, because these regimes repress their opposition less than do fully repressive regimes, and exclude a smaller proportion of the population, semirepressive and moderately exclusionary regimes are slightly less likely to be punished if they lose power than fully repressive and exclusionary regimes.

Once they learn the war will end in a loss, these regimes and their leaders can attempt two general strategies to try to avoid a loss of power and severe additional punishment: buy off the opposition or repress it. On the first strategy, they have two options if they aim to buy off the people: redistribute the international pie or redistribute the domestic pie. In other words, the leadership can choose between domestic political concessions and the redistribution of gains at the expense of the external enemy. The leadership can try to open up the regime and include (some of) the excluded population, but such transitions are difficult to control.[46] The higher the total loss on the war, the more far-reaching the domestic political concessions must be until these concessions threaten the continued dominance of the in-group members themselves. (This distinguishes moderately exclusionary regimes again from fully exclusionary regimes, who have more room to maneuver.) A shift to full participation and democracy would, of course, entail a loss of the regime's and leadership's privileges; moreover, it would also mean that the leadership would have to give up the means to protect themselves from punishment. Members and leaders of such semirepressive and moderately exclusionary regimes have reason to argue that opening up the regime could come close to suicide from fear of death. To throw themselves completely at the mercy of the new regime is a dangerous strategy, especially because the new regime still has incentives to deter future attempts at (even moderate) exclusion and repression. (Indeed, the commitment problem lurks in any regime change; how can the new regime credibly promise not to punish the old, failing regime?) The alternative way to buy off the people is to extract redistributable resources from the enemy. For example, territorial gains can be used to reward returning soldiers for their sacrifices in the form of land grants.

On the second strategy, semirepressive and moderately exclusionary regimes can also attempt to forestall a revolution by repressing the opposition. Such regimes could try to become a full-fledged repressive and exclusionary dictatorship and repress the people, but this is a very risky strategy that may make revolution even more likely. Any attempt to turn the current semirepressive and moderately exclusionary regime into a full-fledged repressive and exclusionary dictatorship would, of course, meet with the strong opposition of the groups that are currently included but in the future would be excluded from power. Moreover, since the regime lacks a strong repressive apparatus, any attempt to eliminate the people's rights would also invite resistance from the people. When the regime and leadership find themselves unable to buy off the opposition, the competing in-groups may have incentives to form a regime based on only their own group at the expense of other groups and launch a full-scale repression to try to avoid punishment. However, because each currently included group has such incentives to defect, the overall regime becomes less able to present a common front and becomes less stable and more vulnerable to an overthrow from the opposition. Furthermore, the aspiring dictator would need to create an effective force to repress the people after the war. (However, scapegoating might help to buy off the population to some

[46] See Przeworski.

degree by redistributing the rents of former in-groups and by assuring opponents there will be no future similarly ill-advised wars.) The competing groups and opposition will, of course, similarly lobby for the support of the returning soldiers. Any attempt to change the domestic regime into a fully repressive and exclusionary regime to avoid punishment is therefore a very risky strategy that could easily backfire and make the punishment of the aspiring dictators only more likely.

Thus, when the leadership of a semirepressive and moderately exclusionary regime estimates the war will end in defeat and will not yield the required profit to buy off the people, political reform, toward either inclusion or repression, is a risky and unattractive option. But settlement on losing terms will almost surely lead to a loss of power and severe additional punishment. This leaves the leadership with only one option: continue the war in the hope that a new strategy or luck will turn the tide and enable them to avoid domestic political punishment. The leadership in such regimes can rationally choose to continue or even escalate the war because if the gamble is successful and they win the war they are unlikely to be punished. Further, if the gamble fails and they lose the war disastrously, the leadership is not much worse off than if they lost it moderately. Because for the leadership the probability and level of punishment is not significantly different whether the war ends in total defeat or any more moderately losing settlement, leaders in such semirepressive and moderately exclusionary regimes have little to lose by continuing a losing war. Although the expected value of the outcome of continued fighting may be lower than that of settlement for the people as a whole, for the individual leaders the greater variance of continued conflict holds out a better possibility of somehow gaining a profit on the war and thus avoiding punishment.[47]

The leadership in such semirepressive and moderately exclusionary regimes can rationally prefer to continue war as long as the variance of the potential outcomes of the war is high enough to include terms that would forestall their punishment. In other words, and as illustrated by the figure below, such regimes maximize the area under the war outcomes probability curve to the right of the "enough profit to buy off the people" vertical line. However, the leadership does not have to take the variance of the outcome on the battlefield as given but can manipulate the variance and rationally adopt a high-variance war-fighting strategy. It can be rational for leaders to adopt a high-variance strategy as long as this strategy increases the probability they achieve a

[47] Downs and Rocke, p. 375. Note that Downs and Rocke only allow for continued intervention or escalation. I add the dimension of strategy.

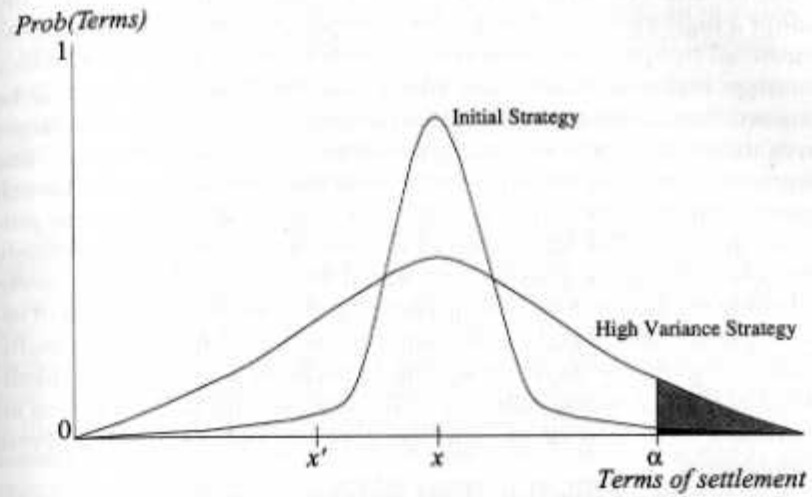

Figure 2.1. High-Variance Strategies

settlement that will allow them to buy off the people. A high-variance strategy is rational because the likelihood of severe punishment does not increase significantly when the outcome of the war gets even worse while the likelihood of achieving terms sufficient to buy off the people increases. Hence, while both repressive and exclusionary *and* nonrepressive and nonexclusionary regimes maximize the expected value of the war, semirepressive and moderately exclusionary regimes maximize the probability of reaping a profit on the war. Figure 2.1 helps to illustrate the logic.

After each round of fighting states update their probability estimates of the outcome of the war and the terms of settlement. Assume that after the latest round of fighting the leadership of the semirepressive and moderately exclusionary regime has a probability estimate of the terms of settlement given by the high-spiked Initial Strategy probability density curve. They estimate that the terms will be at their mean, at **x**. Now assume that **x** represents a loss in the war. The leadership of the semirepressive and moderately exclusionary regime knows that if the settlement results in **x** they are highly likely to be severely punished. In order to forestall punishment they estimate they need to achieve terms of at least α, because α minus the costs of war leaves enough to buy off the people. (Thus, α indicates the "enough profit to buy off the people, the regime survives" line segment.) Notice that the likelihood of achieving α under the Initial Strategy is extremely low (the area under the curve is very small). The leadership of the semire-

pressive and moderately exclusionary regime can now rationally adopt a high-variance strategy, for example, by denuding one front to throw all troops in one offensive on another front. The high-variance strategy makes it much more likely that the threshold at α will be crossed than it was under the initial strategy (because there is a larger area under the curve to the right of the "regime survives war" line segment). However, the high-variance strategy will also make it much more likely that the outcome will be at x', a substantially worse outcome than at x. The leadership of the semirepressive and moderately exclusionary regime does not care about this increased risk of a worse outcome because it does not significantly increase the likelihood of severe punishment. Leaders of semirepressive and moderately exclusionary regime are therefore willing to trade off a much higher likelihood of a much worse outcome of the war, as long as it also gives an increased likelihood of an outcome good enough to forestall severe punishment.

The domestic opposition, in the meantime, obviously would prefer not to continue fighting for the survival of the regime and would prefer settlement on terms x. The opposition has no incentive to suffer additional costs to ensure the survival of the regime. Therefore, if the leadership learns they will probably not be able to win the war, they can continue fighting only as long as the opposition does not find out the war is probably lost. After all, the regime faces a threat to its political position when the opposition learns that the terms of settlement will not cover the costs of the war. *Whenever* the opposition learns the war is probably lost, they will be tempted to overthrow and punish the regime and its leaders. Thus, the leadership's ability to control and manipulate information is a crucial aspect of their moderate ability to repress. In all regime types leaders typically possess better information about the prospects of the war than do citizens. Semirepressive and fully repressive regimes have an added advantage over nonrepressive regimes because the leadership controls the media and thereby restricts the dissemination of bad news. Their control over the domestic flow of information allows them to manipulate their war aims for domestic political purposes. As long as they can prevent the opposition from finding out the precarious state of affairs, the leadership of semirepressive and moderately exclusionary regimes will continue a losing war in the hope they can pull a rabbit out of the hat and gain a profit.

The only terms such leaders are willing to settle on will then be those that allow them to gain the required profit on the war. Thus, even when they estimate they will probably lose, leaders of semirepressive and moderately exclusionary regimes will formulate war aims that recoup the losses of the war; as losses mount, so will the war aims to

compensate the people for their sacrifices. If they are winning, these leaders need not fear punishment and change their war aims as their expected utility for war changes, similar to rational unitary actors.

> *Hypothesis 4*: Semirepressive and moderately exclusionary regimes that learn that the war probably will not bring a profit will increase their war aims with the expected costs of the war unless their aims are already high enough to cover the expected costs.

The leadership of the semirepressive and moderately exclusionary regimes will lower their war aims only when the outcome of the war is certain or when the people and potential opposition learn that the war will end in a loss. When the potential outcome of the war no longer includes an outcome sufficient to buy off the people, and there exist no further strategies to increase the variance of the outcome up to that point, for example, when the outcome of the war is determinate, leaders of semirepressive and moderately exclusionary regimes can only try to forestall punishment by domestic reforms. Similarly, when the people do find out the war is lost, the regime must shift to one of the two alternative strategies proposed above. The regime can attempt a small revolution from above to prevent a larger one from below and institute some reform to give the excluded proportion of the population greater access, in other words, attempt a transition to democracy. Alternatively, some members of the ruling elite can propose to institute a full-fledged dictatorship and harshly repress the domestic opposition. A failure to lower war aims when the people know high war aims serve merely to keep the current regime in power will only increase the chances of a revolution from below. Hence, the leadership of semirepressive and moderately exclusionary regimes will lower their war aims like unitary rational actors only when the outcome of the war is certain or when the people find out the war is lost.

Nonrepressive and Nonexclusionary Regimes

Nonrepressive and nonexclusionary regimes do not exclude a significant proportion of the (productive) population and therefore do not need to repress their opposition at all. Such regimes—but not individual governments—stay in power because they offer all groups the chance to be winners in the future.[48] At the same time leaders of such nonrepressive and nonexclusionary regimes survive because it is much easier for them to buy off their opposition without sacrificing their own access to power. Often, in such nonexclusionary regimes, issues

[48] See Przeworski, ch. 1.

of significant salience among the populace will be co-opted by political parties for electoral gains. Because opposition to such governments is cheap and extremely unlikely to lead to repression, it is very easy for members of the opposition to coordinate efforts to unseat the government. Leaders of such nonrepressive and nonexclusionary regimes, therefore, lose power earlier than the other two regime types. Any loss on the war suffices to lead to their removal from power.

However, because they do not systematically exclude a significant proportion of the (productive) population from access to the policy-making process, the penalty for unsatisfactory performance in such regimes is the simple loss of power. Once out of power, losers in one election can retire, go into private practice, or run again in the next election. In contrast to moderately and fully exclusionary regimes, these nonexclusionary governments do not need to fear additional punishment. Severe punishment is likely only if the regimes suffer catastrophic defeats. Even then, severe punishment most often comes from the external enemy; prominent examples are France, the Netherlands, and Belgium in the Second World War. Like leaders of repressive and exclusionary regimes, leaders of such nonrepressive and nonexclusionary regimes have strong incentives to avoid such total defeats and therefore have more to lose than to gain by a gamble on continued war and high-variance strategies to stay in power. Moreover, the free press in nonrepressive and nonexclusionary regimes makes it very difficult to keep the people in the dark about the war and the prospects for victory. Therefore, nonrepressive and nonexclusionary regimes formulate their war aims as unitary rational actors and change their war aims along with their expectations about the outcome of the war.

In summary, repressive and exclusionary regimes and leaders are least likely to lose power but most likely to be severely punished if they do. Nonrepressive and nonexclusionary regimes are most likely to lose power, but least likely to suffer additional punishment. Semirepressive and moderately exclusionary regimes live in the worst of both worlds. If they lose a war, they are almost as likely to lose power as nonrepressive regimes, and when they lose power, they are almost as likely as fully exclusionary regimes to suffer severe additional punishment. Figure 2.2 shows in graphic form the hypothesized relation between regime types, the outcome of war, and each type's probability of severe punishment.

The essential point is that for semirepressive and moderately exclusionary regimes the probability of severe punishment jumps up like a step function close to the break-even point. For both repressive and exclusionary *and* nonrepressive and nonexclusionary regimes, how-

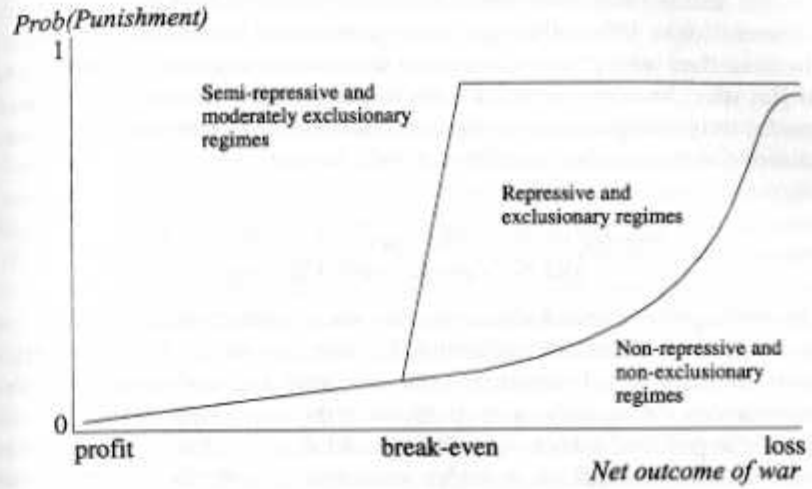

Figure 2.2. Prob(Punishment) Depending on the Outcome of War and Regime Type

ever, the outcome of the war has to be much worse before the probability of punishment increases to a similar level. Hence, Hypothesis 5:

> *Hypothesis 5*: Semirepressive and moderately exclusionary leaders and regimes are likely to lose power and suffer additional severe punishment whether they lose moderately or disastrously. Repressive and exclusionary and nonrepressive and nonexclusionary regimes and leaders are only likely to suffer severe punishment when they lose disastrously.

As I argued above, to avoid such severe punishment semirepressive and moderately exclusionary leaders and regimes will continue losing wars and gamble for resurrection. As long as pessimistic semirepressive and moderately exclusionary leaders and regimes see any chance to reap a profit on the war and buy off their domestic opposition, their minimum demands will be for such a profitable settlement. However, because their winning opponent expects to settle on winning terms, both sides will ask for more than the other is willing to concede and no bargaining space exists. Thus, the following proposition:

> *Hypothesis 6*: Wars with losers that are semirepressive and moderately exclusionary regimes will last longer than wars with other losers.

In summary, because the expected utility of settlement can have dramatic consequences for semirepressive and moderately exclusionary

leaders and regimes, they formulate their war aims by a fundamentally different logic. When they get more pessimistic about the outcome of the war they sometimes even raise their war aims to cover the costs of the war. As a result, wars with losers that are semirepressive and moderately exclusionary regimes do not end until the outcome is certain or the people find out the war will be lost.

Domestic Politics, the Expected Utility for War, and the Commitment Problem

Domestic politics could also influence the expected utility for war, independent of the effect continued fighting has on the terms of settlement on offer, but, I expect, in only very rare and highly unusual circumstances. It is, however, possible that war itself confers some domestic political advantages that would disappear if a settlement is reached. Gordon Tullock provides an excellent example that shows the mechanism as well as the unusual circumstances required:

> When Mao Tse-Tung seized control of China, he actually was the head of an organization in which there were in essence 5 armies all of which had been built up by one leader from practically nothing and which were to a considerable extent loyal to that leader. Mao may have been able to deal with this by ordinary methods, but the Korean war gave him a wonderful opportunity. He in essence drafted from each of these armies specific units to send to the Korean war. These units were then rotated back to China on a regular basis, but were not returned to their original army. As a result at the end of the Korean war the 5 major armies had melded into one. Mao was then able to remove the four most important generals from their positions of personal power.[49]

Domestic politics can also help overcome the commitment problem. First, it may be possible for domestic politics to allow some regimes to credibly tie their hands. For example, a regime that won a war and promised not to raise its demands in the future could potentially face domestic political punishment if it reneged on its promise. Such audience costs might then make it possible for a winner to credibly commit himself not to raise his demands in the future.[50] This could fit well with recent developments in the Democratic Peace literature.

[49] Tullock, p. 29. Note that this incentive to continue war held only until Mao effectively integrated all five armies into one. For an example of how Milosevic similarly used the war between Serbia and Croatia to deal with his potential domestic opposition see Gagnon.

[50] See Fearon, "Domestic Political Audiences and the Escalation of International Disputes."

Second, and perhaps more interesting, the same mechanism that induced repressive and exclusionary and nonrepressive and nonexclusionary regimes *not* to gamble for resurrection may also induce them to settle on terms that change the relative balance of power in the opponent's favor. A rational unitary actor might continue fighting out of fear that the enemy would absorb and integrate any concessions such as territory into his economy and then subsequently raise new demands. However, continued fighting ensures additional costs of war and most likely worse terms of settlement. Since for repressive and exclusionary and nonrepressive and nonexclusionary regimes continued fighting would only increase their chance of severe punishment, they may prefer to settle now on more moderate terms. For this to be rational, however, these regimes and leaders must be sufficiently myopic and hope they can avoid punishment in case the opponent raises his demands in a next round of fighting. Such regimes would, in effect, gamble on a lack of recognition by the domestic opposition that today's moderate terms may lead to additional and worse terms in the future. Alternatively, they might gamble that before the people find out their military situation will improve, perhaps by a military reorganization or because other belligerents will defeat their opponent. In such cases the principal-agent logic might trump the commitment problem.

Conclusion

I have argued in this chapter that the choice between war and settlement depends on the expected utility attached to each option. I proposed a mechanism that explains how the expected utility for war changes with new information about the outcome on the battlefield. As would seem intuitively obvious, when states get more pessimistic (optimistic) about the outcome of the war on the battlefield, they lower (raise) their war aims. I proposed a second mechanism that explains when war aims are determined by the expected utility for war and when they are determined by the anticipated international consequences of the terms of settlement. States will not accept terms of settlement that threaten their own long-term survival; the losing state will have a lower bound of war aims below which it will not settle if the winning state cannot credibly commit not to exploit its advantage in the future.

why? why not settle instead

A third mechanism explains when war aims change under the influence of the anticipated domestic political consequences of the terms of settlement. Although for very different reasons, repressive and exclusionary regimes and nonrepressive and nonexclusionary regimes

formulate their war aims by a very similar logic. Behaving like the rational strategic unitary actors in the first half of this chapter, these regimes change their war aims in the same direction as their estimates of the outcome of the war on the battlefield. Semirepressive and moderately exclusionary regimes, in sharp contrast, formulate their war aims by a very different logic because their likelihood of punishment remains the same whether they lose moderately or disastrously. When winning, these regimes change their war aims in the same way as the other regimes. However, when losing, they formulate war aims to cover the costs of the war. Thus, when they get more pessimistic about the outcome of the war, they do not decrease but instead often increase their war aims.

The theoretical framework outlined in this chapter presents some straightforward conclusions about war termination. First, it is impossible for the combatants to predict during a war when and on what terms the war will end. Neither side knows his opponent's private information; therefore, neither side knows which events would constitute new information for his opponent, nor how he would react to it; each only knows that fighting reduces the asymmetry of information. But neither side can predict when the asymmetry in information is removed. Second, if the winner cannot credibly commit not to exploit his (increased) bargaining advantage in the future, war continues until the loser surrenders unconditionally. Third, wars with losing semirepressive and moderately exclusionary regimes will continue until either they are completely defeated on the battlefield or there is a regime change. The hypotheses of the theory must, of course, be tested empirically. To this task we now turn.