

Rationality and the Limits of Psychology in Explaining Interstate War Duration

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Given their immense costs, extended interstate wars seem hard to explain rationally, and hence appear to be fertile ground for theories grounded in psychology. Most existing work on war duration, however, neglects psychology, and even when psychological biases are explicitly incorporated into theories, their implications typically simply exacerbate rationalist factors impeding settlement. I argue that three central difficulties complicate efforts to apply insights from psychology to explain war duration. First, many psychological biases produce empirically intractable predictions because core concepts cannot be operationalized clearly. Second, common psychological biases that might produce extended violence, such as sunk cost bias, do not produce good explanations for shorter conflicts. Third, in the few cases in which psychology produces compelling hypotheses, extant rationalist arguments point in the same direction.

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The main participants in World War I fought for more than four years, with a result that did not clearly benefit any of them: millions died, the German, Austro-Hungarian, Ottoman, and Russian Empires were destroyed, and the victorious French and British acquired massive debts that they aimed to pay through German reparations, setting the stage for the Great Depression, German revanchism, and World War II. Shortly before the war started, Norman Angell had predicted precisely this sort of an outcome, arguing that growing economic interdependence and rising nationalism meant that conquest could not pay.¹ More recently, John Mueller argued that at least in the developed world, war has come to be seen as an unacceptable way of resolving disputes, in part because of the apparent irrationality of paying exorbitant costs to achieve uncertain and often limited gains.²

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1. Norman Angell, *The Great Illusion: A Study of the Relation of Military Power in Nations to Their Economic and Social Advantage* (New York: G. P. Putnam's Sons, 1911).

2. John Mueller, *The Remnants of War* (Ithaca, N.Y.: Cornell University Press, 2004).

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From this perspective, a natural expectation would be that theoretical explanations for war, and especially for unusually destructive wars, would engage with findings from psychology that identify ways in which people deviate from the expectations of rationality. In practice, however, work on war duration, as on the causes of war more generally, overwhelmingly adopts a rational choice approach.³ What explains this puzzling disjuncture?

I argue that the dearth of psychological explanations for war duration reflects several particular challenges that psychological work generally has not been able to overcome. First, as is the case for psychological work in other substantive areas, psychological arguments are frequently empirically intractable, especially across a wide range of cases. Second, the most obvious candidates for psychological explanations for particularly destructive wars, such as sunk cost biases, do not provide a good explanation for why some wars are long and destructive while others end comparatively quickly. Third, in those cases in which arguments from psychology have produced clear comparative static predictions, those predictions have aligned closely with rationalist predictions. Unless these problems are addressed, psychological approaches to the study of war duration are likely to remain at the margins of the field.

Clarifying Terms

While the definitions of rational choice and psychology are fairly standard in the international relations literature, there can be ambiguity at the margins, and it is thus worth briefly clarifying terms. Rational choice approaches in the study of war adopt a thin rationality in which actors are permitted to hold a wide range of (transitive) preferences, and simply are expected to choose options that they anticipate will give them the best possible outcome, given what they know about the situation and the likely behavior of others.⁴ Importantly, this definition implies that actors

3. A recent general review of literature on the causes of war devotes less than 10% of its substantive pages to psychological approaches; see Jack S. Levy and William R. Thompson, *Causes of War* (Malden, Mass.: Wiley-Blackwell, 2010). As the bargaining model of war has gained prominence, scholars have largely remained within the rationalist framework originally advocated by James D. Fearon; see his “Rationalist Explanations for War,” *International Organization* 43 (1995): 379–414. Some earlier work on war duration introduces psychology, albeit without deriving clear hypotheses about the determinants of war duration. See in particular Fred Iklé, *Every War Must End* (New York: Columbia University Press, 1991). The studies by Stanley and Dolan that I discuss in this article are, I would argue, the standard-bearers for the psychological study of war duration.

4. Thin rationality is contrasted with thick rationality, which imposes additional assumptions about the acceptable content of preferences. In practice, rational choice scholarship on war tends to impose additional assumptions, such as that war is costly or that leaders prefer retaining office to

with non-material preferences, such as for honor, also can be rational.⁵ It also can be applied across levels of analysis, whether the actor assumed to be rational is the state as a whole, an individual political leader, or a bureaucrat.

Psychological approaches, by contrast, apply findings from psychology about how people make decisions to produce predictions about behavior that need not be consistent with how a rational actor would behave. The most prominent psychological work in international politics has focused on cognitive heuristics that simplify complex environments, and on the ways in which emotions influence behavior.⁶ In psychological explanations, actors reach decisions through mental pathways other than reasoned calculation, or they undertake reasoned calculation that produces decisions different from what a fully rational actor would decide.

The dominant approach to integrating psychology into theoretical arguments in this field has been to start with a baseline rationalist argument and then identify psychological biases that might produce deviations from rational behavior.⁷ As Mercer argues, however, and consistent with Dolan's contribution to this symposium, it is also possible to use psychological approaches to explain behavior that is consistent with rational choice.⁸ Similarly, Petersen emphasizes that emotions can often trigger rational responses more quickly than would be possible from a more reasoned decision-making process.⁹ In practice, however, the greater theoret-

losing office. These additional assumptions, while generally uncontroversial, should be understood as extending beyond thin rationality: it is possible for two scholars to both assume that actors are rational (or are subject to particular psychological biases) while differing in the ancillary assumptions that they make about the actors' preferences.

5. Recent discussions of honor and war duration include Thomas M. Dolan, "Demanding the Impossible: War, Bargaining, and Honor," *Security Studies* 24 (2015): 528–62; and Alexander Lanoska and Michael A. Hunzeker, "Rage of Honor: Entente Indignation and the Lost Chance for Peace in the First World War," *Security Studies* 24 (2015), 662–95.

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

7. Consider, for example, Jervis's discussion of the spiral model, which as Kydd notes shows how psychological biases might exacerbate a preexisting rationalist basis for mistrust in international politics; see Jervis, *Perception and Misperception*, 62–67 (see previous note); Andrew Kydd, "Game Theory and the Spiral Model," *World Politics* 49 (1997): 371–400.

8. Jonathan Mercer, "Rationality and Psychology in International Politics," *International Organization* 55 (2005): 77–106. Dolan's discussion of ways in which theories grounded in psychology might account for short (and hence initially less puzzling) conflicts also follows this line. See Thomas Dolan, "Moving Beyond Pathology: Why Psychologists Should Care About Short Wars," *Polity* 50 (2018): 201–14.

9. Roger Petersen, *Understanding Ethnic Violence: Fear, Hatred, and Resentment in Twentieth Century Eastern Europe* (New York: Cambridge University Press, 2002), ch. 2. See also Antonio Demasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Penguin Books, 1994).

ical simplicity of rational choice theory—which contrasts with a diverse set of findings from psychology that have not been unified into a coherent theory of decision making—has meant that most scholars have found psychology useful primarily when it can explain behavior that rational choice theories cannot. Stated differently, the field has found psychological approaches most useful when they account for behavior that rationalist arguments cannot easily explain. Examples such as the seemingly irrational commitment of World War I participants to an apparently futile war suggest that war duration is a context in which arguments grounded in psychology might be well positioned to take a leading role.

Explaining the Limited Impact of Psychology on the Study of War Duration

I argue that the limited impact of psychological arguments in the study of war duration arises from three problems that work grounded in psychology has had difficulty overcoming: difficulty operationalizing key variables, difficulty explaining both long and short wars, and the frequent tendency of psychological arguments to produce predictions that mirror rationalist ones. Unless these problems are overcome, psychological explanations for war duration are likely to remain at the margins of the discipline.

The observation that it is frequently difficult to operationalize key variables from psychological arguments is neither new nor particularly more problematic in the study of war duration than when explaining other aspects of politics. Prospect theory, the central finding of which is that people on average choose riskier options when approaching decisions from a frame of losses rather than a frame of gains, provides a pertinent example.¹⁰ While there has been significant interest in the application of prospect theory to international relations, the field has not been able to identify a consistent basis for determining which frame is likely to be operative in a particular case.¹¹ Similarly, studies that examine emotional responses to external stimuli must grapple with the difficulty of observing leaders' emotional responses.

10. Daniel Kahneman and Amos Tversky, "Prospect Theory: An Analysis of Decision under Risk," *Econometrica* 47 (1979): 263–92.

11. Robert Jervis, "The Political Implications of Loss Aversion," *Political Psychology* 13 (1992): 187–204; Jack S. Levy, "Prospect Theory and International Relations: Theoretical Applications and Analytical Problems," *Political Psychology* 13 (1992): 283–310; Barbara Farnham, *Avoiding Losses/Taking Risks: Prospect Theory and International Conflict* (Ann Arbor: University of Michigan Press, 1994); Rose McDermott, *Risk-Taking in International Politics: Prospect Theory in American Foreign Policy* (Ann Arbor: University of Michigan Press, 1998); Rose McDermott, "Prospect Theory in Political Science: Gains and Losses from the First Decade," *Political Psychology* 25 (2004): 289–312.

In principle, it is possible to circumvent these problems by identifying factors that are likely to produce a particular emotional response, as with Dolan's argument that unexpected victories will produce a different emotional response than will expected victories.¹² Even here, however, coding whether a victory is expected or unexpected requires careful case analysis, complicating efforts at the kind of statistical analysis that has been privileged in recent international relations scholarship. Similarly, Stanley's discussion of the window of tolerance in this symposium raises the difficult question of how one might identify the size of an actor's window of tolerance *ex ante*¹³ (in addition to the challenge, noted also by Shirkey, of determining how individuals with varying views will affect policy).

Second, if the question is why leaders might irrationally commit to long and severe wars, some of the more obvious candidates for a useful psychological explanation suffer from the inability to explain variation in the destructiveness of wars. Sunk cost bias provides the most obvious example to substantiate this point. The sunk cost explanation for destructive wars is that leaders irrationally inflate the value of the political stake in dispute in response to the costs imposed by fighting. Whereas the leader initially would have conceded the political stake rather than choose to fight a long and destructive war, once initial costs have been paid, the leader prefers to pay additional and possibly far higher costs rather than make the same political concessions.¹⁴ This sort of bias provides an apparently compelling explanation for war in cases in which it is hard to imagine that any of the participants initially would have been willing to pay the costs of intense and extended fighting.¹⁵

12. Thomas M. Dolan, "Go Big or Go Home: Positive Emotions and Responses to Wartime Success," *International Studies Quarterly* 60 (2016): 230–42.

13. Elizabeth A. Stanley, "War Duration and the Micro-Dynamics of Decision Making under Stress," *Polity* 50 (2018): 178–200. Zachary C. Shirkey, "Challenges to the Study of Long Wars," *Polity* 50 (2018): 225–37.

14. Jervis, *Perception and Misperception*, 393–404 (see note 6 above); Zeev Maoz, *Paradoxes of War: On the Art of National Self-Entrapment* (Boston: Unwin Hyman, 1990), 276–82; Thomas W. Milburn and Daniel J. Christie, "Effort Justification as a Motive for Continuing War: The Vietnam Case," in *Psychological Dimensions of War*, ed. Betty Glad (London: Sage Publications, 1990), 236–51; Elizabeth Stanley, *Paths to Peace: Domestic Coalition Shifts, War Termination and the Korean War* (Stanford, Calif.: Stanford University Press, 2009).

15. Disentangling sunk cost bias from other explanations for continued commitment presents some challenges. Leaders might conclude that it would have been better not to get involved but also that once involved there are reputational consequences for backing down that militate against concessions. Alternately, a leader who is persistently optimistic might conclude that victory is still just around the corner, and hence repeatedly decide that a minor and justifiable additional investment will produce a substantially better result. Schroeder, for example, presents Napoleon's persistent willingness to fight in the face of worsening odds as a consequence in part

The difficulty here, however, is that not all wars end up like World War I. Indeed, most interstate wars end quickly and at low cost.¹⁶ To provide a compelling explanation for destructive wars, an argument grounded in sunk cost bias needs to be able to explain why that bias has the effect of extending some wars and not others. It is of course perfectly conceivable that such an explanation exists, but it has not to date been identified, likely at least in part because the conventional case study approach used to examine psychological arguments has meant that scholars frequently restrict their focus to a small number of cases that they find interesting, which limits their ability to generalize convincingly beyond those cases. Dolan's contribution in this symposium, in which he explores potential psychological explanations for short wars, constitutes a useful first cut at addressing this limitation.¹⁷

Third, some of the most prominent psychological arguments in the study of war duration have predictions that align with those of rationalist models.¹⁸ This situation is not overly surprising given the argument that psychological heuristics and emotions often serve to accentuate rational choice, but to the extent that psychological arguments make the same predictions as rational choice ones, the benefits in terms of additional explanatory power from looking beyond a rational choice framework will be limited. Three examples, drawn from particularly prominent psychological explanations for war duration, will serve to substantiate this point.

The most straightforward example comes from Elizabeth Stanley's work.¹⁹ Stanley argues that leaders who take their countries to war tend, because of psychological biases, to be reluctant to settle, even when the results from the battlefield and the bargaining table suggest that it is in their interest to do so. Because these leaders commit to war, in many cases shifts in the ruling coalition will be necessary for them to agree to peace. This argument thus provides a potential explanation for long wars. Stanley argues that it helps to account in particular for the Korean War,

of his deep confidence in his own abilities; see Paul Schroeder, *The Transformation of European Politics, 1763–1848* (New York: Oxford University Press, 1994), e.g. 265, 284, 341, 462. Finally, apparent evidence of sunk cost bias may reflect rhetoric: leaders refer to the importance of ensuring that the dead not have died in vain in cases in which they favor continuing the war for completely unrelated reasons.

16. Alex Weisiger, *Logics of War: Explanations for Limited and Unlimited Conflicts* (Ithaca, N.Y.: Cornell University Press, 2013), 2.

17. Thomas M. Dolan, "Moving Beyond Pathology" (see note 8 above).

18. Shirkey in this his article in this symposium notes the challenges that this sort of overlap creates for the study of war duration more generally; Zachary C. Shirkey, "Challenges to the Study of Long Wars" (see note 13 above).

19. Stanley, *Paths to Peace*, 46–47 (see note 14 above).

where peace was preceded by leadership turnover in both the United States and the Soviet Union; the latter, while only a marginal military participant, played an important role in war planning, financing, and execution.

The psychological biases that Stanley identifies have clear implications, and by connecting the biases to leadership turnover, her theory produces hypotheses that can logically explain both long and short wars. That said, the psychological biases are not *necessary* for the argument. As both Stanley and (in subsequent work) Sarah Croco note, there are rationalist reasons to expect leaders who initiate wars to resist settling them on losing terms, including domestic political entrapment, rationalist reasons for delayed updating of beliefs, and personal benefits from continued fighting.²⁰

To cite a specific example, George W. Bush's decision to double down on the Iraq intervention through the 2007 troop surge, at a time when many Americans were calling for the United States to cut its losses and withdraw, could be interpreted in psychological terms, as a continuation of the Bush administration's refusal to update beliefs about the likelihood of victory. Advocates for such an interpretation could point to Secretary of Defense Rumsfeld's assertion that the insurgency consisted of a handful of regime "dead-enders" or Vice President Cheney's claim that the insurgency was in its "last throes," both claims that underestimated the widespread appeal of the insurgency.²¹ The commitment to the troop surge could also, however, be interpreted in rationalist terms as a gamble for resurrection: withdrawal would guarantee failure, with negative implications both for the Republican Party and for President Bush's legacy, while the surge retained the possibility of turning the situation around.²²

A second example arises with Dolan's discussion of the implications of emotional responses for bargaining behavior.²³ Dolan argues that expected battlefield successes will produce contentment, which tends to be associated with continuity in behavior (and hence, he argues, with unchanged political demands), while unexpected successes will produce joy, which is more likely to produce a change in be-

20. Sarah Croco, *Peace at What Price?: Leaders and the Domestic Politics of War Termination* (Cambridge U.K.: Cambridge University Press, 2015).

21. Eric Schmidt, "After the War: Attacks; 2 U.S. Officials Liken Guerrillas to Renegade Postwar Nazi Units," *New York Times*, August 23, 2003; Jim VandeHei and Peter Baker, "Bush's Optimism on Iraq Debated; Rosy View in Time of Rising Violence Revives Criticism," *Washington Post*, June 5, 2005.

22. On the concept of gambling for resurrection, see George W. Downs and David M. Rocke, "Conflict, Agency, and Gambling for Resurrection: The Principal-Agent Problem Goes to War," *American Journal of Political Science* 38 (1994): 362–80.

23. Dolan, "Go Big or Go Home" (see note 12 above).

havior and higher bargaining demands. This argument is plausible and is consistent with evidence from the Pacific War in World War II. However, it is also consistent with a rationalist updating story, in which battlefield events that conform to expectations provide little reason to revise one's estimates of the likelihood of ultimate victory, while unexpected victories (or defeats) provide reason to update expectations and hence demands.²⁴

For example, scholars have argued that American leaders increased their war aims in the Korean War after the Inchon landing dramatically reversed the battlefield situation in September 1950.²⁵ The resulting victory absolutely was unexpected from the American perspective; although Douglas MacArthur's description of the landing as "a 5,000 to 1 gamble"²⁶ was an overstatement, it was a very risky undertaking. Hence, for Dolan it would be expected to produce both joy and an increase in war aims. By precipitating the annihilation of North Korean forces, it also turned what had appeared to be a dicey effort just to salvage the position on the peninsula into an opportunity to reunify Korea under the South Korean government. It is thus far from surprising from a rationalist perspective that American leaders would be willing to increase war aims in this setting.

Prospect theory provides a third example of overlap between psychological and rationalist theories. The finding that people operating in a frame of losses are more willing to take risks can be seen as implying that they will be more willing to accept the risks of continued fighting rather than accede to a known settlement. The challenge, as noted before, is to identify when wartime leaders on both sides approach the conflict from a frame of losses.²⁷ A particularly plausible answer arises in the context of commitment problems driven by shifting power: a declining power initiates a war motivated by the expected losses that it will be forced to accept if it permits its adversary to rise, while the rising power faces a challenger that seeks to cut short its growth. Again, however, rationalist arguments make a similar prediction: commitment problem wars are particularly difficult to resolve for purely rationalist reasons.²⁸

24. Alex Weisiger, "Learning from the Battlefield: Information, Domestic Politics, and Interstate War Duration," *International Organization* 70 (2016), 347–75, at 352.

25. See, for example, Donald Wittman, "How a War Ends: A Rational Model Approach," *Journal of Conflict Resolution* 23 (1979), 743–63, at 750. For a contrary view, which holds that American war aims increased prior to Inchon, see Reiter, *How Wars End* (Princeton, N.J.: Princeton University Press, 2009) ch. 5.

26. William Whitney Stueck, *The Korean War: An International History* (Princeton, N.J.: Princeton University Press, 1995), 85.

27. Jervis, "Political Implications of Loss Aversion," 192 (see note 11 above).

28. Robert Powell, "War as a Commitment Problem," *International Organization* 60 (2006), 169–203; Weisiger, *Logics of War* (see note 16 above).

For example, in his writings and statements on international politics, Adolf Hitler demonstrated that he viewed the position of Germany in the 1920s and 1930s from a frame of losses.²⁹ He argued repeatedly that, even without the territorial losses of the 1919 Versailles Treaty, and especially once those losses are taken into account, Germany faced long-term decline at the hands of its neighbors. In his theory of politics, power depended on population, and population depended on arable land; Germany's limited arable land meant that the German nation was headed for long-term decline absent a major territorial revision. German aggression, designed to acquire that land, obviously put Germany's adversaries in a frame of losses. From a rationalist perspective, however, German behavior is perfectly consistent with the commitment problem logic: unable to trust Germany's neighbors (especially Soviet Russia), Hitler felt he had no choice but to launch an aggressive war in order to revise the status quo in a way that would prevent the feared decline from ever occurring. Once we understand Hitler's theory of international politics, Germany's large war aims can thus be explained from a rationalist perspective.

In all these cases, therefore, there exists a psychological explanation that comports with the evidence, but there also exists a plausible rationalist explanation that makes the same predictions with respect to the difficulty of ending the war. Given that psychological theories typically are more complex than rationalist theories (most obviously, as with prospect theory, in cases in which rationality provides a baseline on the basis of which psychological arguments predict deviations), a preference for theoretical parsimony implies that scholars in the field will tend to prefer rationalist accounts.

Conclusion

I do not mean to argue that psychological approaches are meritless. Leaders undoubtedly deviate from rationality in their decisions, and even when those deviations are minimal, psychological theories can plausibly account for rational behavior. The attraction of rational choice models, however, is that they are comparatively simple: in contrast to the wide range of different cognitive and emotional processes identified in psychology, expected utility calculations provide a unified framework for modeling a wide range of decisions. As long as the resulting models are seen as reasonable approximations of reality—which will be true so long as alternatives are not clearly better—it will be hard for psychological approaches to gain greater traction in the study of war duration.

29. For a more extended version of the argument in this paragraph, see Weisiger, *Logics of War*, 112–22 (see note 16 above).

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