> "Even if rival nations followed a similar formula…they would probably reach different conclusions. For predictions of how a nation will perform in a coming war are flavoured by moods which cannot be grounded in fact. Optimism may come from economic conditions, the seasons, ideologies and patriotism [or] from a failure to imagine what war is like…Whatever their source, **these moods permeate what appear to be rational assessments of the relative military strength of two contending powers. A prediction of a war about to be fought is thus a crystallization of many moods and arguments, each of which has some influence on the decision to make war."**
> **–** Geoffrey Blainey, "The Causes of War" (3rd), The Free Press 1973 p.246

> "The point is that we are all capable of believing things which we *know* to be untrue, and then, when we are finally proved wrong, impudently twisting the facts so as to show that we were right. Intellectually, it is possible to carry on this process for an indefinite time: **the only check on it is that sooner or later a false belief bumps up against solid reality, usually on a battlefield.**"
> – George Orwell, "In Front of Your Nose" (1st) Mariner Books 1970 [1942] p.117

One of the most intriguing implications of the strategic approach to international relations is the notion that political activity is fundamentally similar whether it is engaged in by states or by individuals. Approaches to international bargaining and conflict are characterized by a focus on strategic interaction, where interaction among states is frequently analogized to individual interaction, often via 2x2 games. This symmetry between individual and group activity leads to two startling implications. First, political activity appears to be fractal, in the sense that it manifests in the same manner at any scale.[1] Second, the same bounded rationality and cognitive biases that characterize individual human behavior must (to some extent) be operative in international politics. This essay will focus on the second of these implications.

James Fearon begins his justly renowned 1995 article "Rationalist explanations for war" by justifying his focus on so-called rationalist theories for the emergence and perpetuation of armed conflict. He locates the causes of war in the international system itself, advancing three interrelated mechanisms: private information, commitment problems, and issue indivisibilities.

[1] This observation was first made by Polybius, as he witnessed the detailed political interactions of microscopic Greek city states being played out at the level of the Hellenistic kingdoms and the Roman republic. Polybius, *The Histories.* See also R. Harrison Wagner, "The Causes of Peace," in Roy A. Licklider, ed., *Stopping the Killing: How Civil Wars End* (New York: New York University Press, 1993), pp. 235-57.

With emphasis on the first two mechanisms, Fearon goes on to distinguish between *ex ante* and *ex post* efficiency, arguing that war is always inefficient *ex post*, and that this inefficiency guarantees the existence of bargained solutions that risk-neutral or risk-averse states should prefer to war (Fearon 1995 p.388). However, such bargains may not be achievable for two reasons. First, states may have private information concerning their capabilities and resolve, coupled with incentives to misrepresent such information. Second, in an anarchic environment states face commitment problems because agreements are not binding and because states may have unilateral incentives to defect from bargains.

Fearon's treatment of uncertainty is interesting. While acknowledging that international politics is permeated by uncertainty, he nevertheless asserts that actors will be able to assess the expected value of action in the face of stochastic processes (Fearon 1995, p.337-8). He fails to distinguish between two different types of uncertainty. We may know that a process is stochastic with a fixed probability, in which case we can indeed take an expected value. But we may also suspect that a process is stochastic and have little or no data on the probability of seeing particular outcomes. Fearon defines risk-aversion as follows: "states prefer a fifty-fifty split…to a fifty-fifty chance of nothing at all" (Fearon 1995 p.388). One might call this "certain uncertainty." What are states to do when faced with an even split or an indeterminate or uncertain chance of nothing at all? To avoid confusion (at the risk of proliferating jargon), I will call such uncertainty "uncertain uncertainty."

In his subsequent discussion, Fearon asserts that disagreements about relative power or uncertainty about a potential opponent's willingness to fight stem from leaders' strategic incentive to misrepresent their private information concerning capabilities and resolve (Fearon 1995 p.395, 400). He argues that this incentive prevents states from uncovering mutually

agreeable diplomatic resolutions to potential conflict, and that the only way to "surmount this barrier to communication" is to take actions that make (inefficient) war more likely. Diplomatic discussion is susceptible to manipulation because of the incentive to misrepresent, so war may emerge as the only credible mechanism for revealing private information, recalling Orwell's conjecture. This phenomenon appears to limit the explanatory power of rationalist explanation.

In "The Strategic Setting of Choices," James Morrow discusses three interrelated strategic problems common in international politics: signaling, commitment and bargaining. He argues that "[i]n crises…the state with the greater ability to generate audience costs, not the state with the greatest resolve, has the advantage" (Morrow 1999 p.102). The status quo, on Morrow's terms, incorporates the distribution of capabilities. This is because "[w]hen a state has an observable advantage before the crisis, a crisis only occurs if the other state has unobservable advantages to compensate" (Morrow 1999 p.111). States therefore "select themselves into crises based on the observable components of their opponents' resolve" (Morrow p.112).

As Morrow points out, only the *separation* of types gives us new information. Pooling equilibria do not reveal private information, and are thus no use in distinguishing among types. For this reason, he argues that modeling states as unitary actors is inappropriate. Domestic institutions are an important source of the costs that make signals credible, allowing states to make credible commitments. As he puts it, "[i]t is time to unpack the unitary actor." He recommends studying the relationship between leaders and constituents via two-level games and principal-agent models (Morrow 1999 p.113).

It is inappropriate to criticize models on the basis of their omissions unless the omitted variables are crucial to understanding the phenomenon being explained (Trochim and Donnelly, 2003). However, Morrow convincingly argues that domestic constituencies are crucial elements

of a proper model of international politics. An important implication is that the bounded rationality (and sporadic irrationality) so characteristic of domestic politics shape international political outcomes, even without resort to the all-too-human characteristics of any particular head of government. This further limits the scope of rationalist explanations.

The analysis thus far receives support from Erik Gartzke, who argues that war "is typically the consequence of variables that are unobservable *ex ante*" and that "the advent of war is itself stochastic" (Gartzke 1999 pp.567-8). He points out that since all wars end, the commitment problem can clearly be resolved, so Fearon's approach cannot say why the states fail to resolve the commitment problem *ex ante*. The full-information model ought to be able to produce *ex ante* resolutions. Gartzke draws the conclusion that uncertainty and incentives to misrepresent (bluff) are the only plausible rationalist explanation for war (Gartzke 1999 p.573).

However, Gartzke goes on to undermine rationalist explanations more generally. He reasons that uncertainty and incentives to bluff preclude rationalist identification of causal mechanisms, concluding that such mechanisms are fundamentally stochastic. Core to this reasoning is the argument that as long as rationalist explanations of war require the actors themselves to be uncertain, then the information available to those actors cannot account for war. This exposes Fearon to his own criticism of indeterminacy because he treats uncertainty as simply another factor that might determine the occurrence of war. However, uncertainty, particularly uncertain uncertainty, is not homologous with other factors, but rather indicates our inability to precisely specify the relevant factors. This leads Gartzke to his conclusion – "…a rigorous rationalist explanation for war is one that is also most typically indeterminate" (Gartzke 1999 p.578).

Following Eugene Fama (1965), Gartzke asserts that political "markets" are efficient aggregators of information, "pricing in" rational expectations of current and future state power. On this basis, he argues that the international-political "market" quickly prices in information by incorporating it into states' decisions about whether or not to choose war. If the mechanism were not stochastic, states would identify the non-stochastic components and use them in their bargaining with one another. This process will eliminate non-stochastic factors from consideration, yielding Gartzke's title – war genuinely seems to be in the error term.

Fearon would surely not deny that irrationality plays a large role in international politics, but he would argue that, as with individual behavior, the relevant aspects to model are in some sense rational. If behavior contains a rational and an irrational component, the best we can do is model the rational component and hope that its explanatory power will justify the effort. Surely humans (and states) are *generally* rational?[2] This venerable line of reasoning has come under increased scrutiny in behavioral economics. While it may be true that human behavior in the aggregate approximates rationality, this effect only emerges in large samples. Individual behavior is deeply stochastic and idiosyncratic. Aggregations of individual behavior (such as financial markets) are efficient and rational in the long run, but short-run behavior is literally unpredictable. As Gartzke puts it, "[t]he predictable component of international interaction is subsumed by the expectations states have of one another" (Gartzke 1999 p.577).

[2] The intuition that states simply *must* be more rational than individuals is hard to shake. Even Gartzke genuflects in this direction: "…imposing the rationality assumption(s) on poker players is itself risky, but it may be less unrealistic to think of leaders or states in this way" (Gartzke 1999 p. 576).

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