Lecture 14
"Nonstandard" theories of fighting

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Nonstandard theories of fighting

A taxonomy of bargaining failures

Agency problems
    Models of "Political bias"
    Roots of "Political bias"
    Caselli et al 2015: Geography of inter-state wars

Intrinsic preferences
    Relative status
    Intrinsic motivations
    Fairness, reciprocity, and punishing injustice

What are the alternatives to rationalist explanations?

Opening paragraphs of Fearon 1995

The central puzzle about war, and also the main reason we study it, is that wars are costly but nonetheless wars recur. Scholars have attempted to resolve the puzzle with three types of argument. First, one can argue that people (and state leaders in particular) are sometimes or always irrational. They are subject to biases and pathologies that lead them to neglect the costs of war or to misunderstand how their actions will produce it. Second, one can argue that the leaders who order war enjoy its benefits but do not pay the costs, which are suffered by soldiers and citizens. Third, one can argue that even rational leaders who consider the risks and costs of war may end up fighting nonetheless.

This article focuses on arguments of the third sort, which I will call rationalist explanations.[1] Rationalist explanations abound in the literature on international conflict, assuming a great variety of specific forms. Moreover, for at least two reasons many scholars have given rationalist explanations a certain pride of place. First, historians and political scientists who have studied the origins of particular wars often have concluded that war can be a rational alternative for leaders who are acting in their states' interest—they find that the expected benefits of war sometimes outweigh the expected costs, however unfortunate

Most explanations for a conflict falls into 5 kinds of bargaining failure

1. Commitment problems
2. Incomplete information + incentives to misrepresent
3. Agency problems
4. Intrinsic preferences
5. Miscalculation

An expanded list

1. Commitment problems
2. Incomplete information + incentives to misrepresent
3. Agency problems
   3.1 Absence of formal institutional checks
   3.2 Absence of informal checks (social norms & preferences)
   3.3 Absence of economic incentives/integration
4. Intrinsic preferences
   4.1 Relative status
   4.2 Fairness & reciprocity
   4.3 Joy or pleasure in violence
   4.4 Value rational violence
5. Miscalculation
   5.1 Errors in belief formation
   5.2 Decision-making under arousal

Where today's papers fit in

3. Agency problems — **Jackson & Morelli 2007, Caselli et al 2015**
4. Intrinsic preferences
   4.1 Relative status — **Ager et al 2018**
   4.2
   4.3 Fairness & reciprocity — **Passarelli & Tabellini 2018, Fehr & Gachter 2000**
   4.4 Joy or pleasure in violence
   4.5 Value rational violence
5. Miscalculation
   5.1 Errors in belief formation — **Jha & Shayo 2018?**
   5.2 Decision-making under arousal

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Intrinsic preferences
Relative status
Intrinsic motivations
Fairness, reciprocity, and punishing injustice

Recall the very simple setup from last week

- ▶ North is poor and war less costly for them
  - ▷ $x_N < c_S$: North does not have enough resources to make war worthwhile for South
  - ▷ $x_S > c_N$: South has enough resources to (possibly) make war worthwhile for North

- ▶ North will accept South's proposal if North's consumption of butter exceeds its expected payoff from war

$$b_N + t \geq \frac{g_N}{g_S + g_N}(b_S + b_N) - c_N$$

- ▶ South proposes the smallest t that satisfies the above appeasement constraint

$$t = \frac{g_N x_S - g_S x_N}{g_S + g_N} - c_N$$

A simple version of Jackson and Morelli 2007: Agency problems and war

▶ Model a country's decisions though the eyes of a pivotal decision maker in the society: a monarch, the median oligarch, or median voter

▶ Suppose she receives a fraction a of wealth in peacetime, and loses a fraction a in war, but receives spoils of war a'

▶ North will accept South's proposal if

$$a_N(b_N + t) \geq a'_N \frac{g_N}{g_S + g_N}(b_S + b_N) - a_N c_N$$

▶ South proposes smallest t to satisfy appeasement constraint

$$t = \frac{a'_N}{a_N} \frac{g_N x_S - g_S x_N}{g_S + g_N} - c_N$$

▶ $a'_N/a_N = $ "political bias", which is ≥ 1

Some obvious and not-so-obvious implications

▶ Plausibly the political bias for military rulers and autocrats is greater that of democratic rulers

  ▷ This might explain the "democratic peace": two democracies are much less likely to go to war with each other than are two countries when at least one is not a democracy

  ▷ Since more biased leaders are willing to enter conflicts that they have a lower probability of winning, may help explain why democracies tend to win wars against autocracies

▶ How should this affect the equilibrium choice of leaders?

  ▷ Strategically, oligarchs or citizens may want to be lead by a "hawk" who can extract higher transfers from other countries

  ▷ Provided the bias is not so strong to lead the country into wars

  ▷ A gamble some societies may be willing to pay

Rationalist conflict

Roots of political bias

▶ An institutional failure to compel decision makers to internalize costs of war to all group members.
  ▷ e.g. Selectorate theory (Bueno de Mesquita et al. 2005)
  ▷ A large comparative politics literature locates civil conflicts and failed states in the over-centralization of executive power, especially in postcolonial Africa (Sawyer 1992, Bates 2008)

▶ Cultural variation in social preferences

▶ Decision-makers can be checked through economic integration
  ▷ Thomas Paine: "If commerce were permitted to act to the universal extent it is capable, it would extirpate the system of war."
  ▷ Jha (2013) finds intertwined trading interests reduces the risk of conflict in urban India
  ▷ War economies offer a reverse incentive (e.g. Sanchez de la Sierra 2019)

	(1)	(2)	(3)	(4)
One	0.034	0.029	0.049*	0.077**
	(0.032)	(0.027)	(0.027)	(0.030)
One × Dist	−0.050	−0.044	−0.073***	−0.086***
	(0.035)	(0.027)	(0.026)	(0.027)
Both	0.022	0.028	0.034	0.045*
	(0.021)	(0.020)	(0.029)	(0.027)
Both × MinDist	−0.077**	−0.044	−0.105***	−0.089***
	(0.035)	(0.035)	(0.030)	(0.029)
Both × MaxDist	0.026	−0.014	0.016	0.004
	(0.040)	(0.036)	(0.030)	(0.029)
Type oil	All	All	All	All
Country FE	No	No	Yes	Yes
Add. controls	No	Yes	No	Yes
Observations	19,962	11,303	19,962	11,303
R-squared	0.019	0.090	0.145	0.158

Rationalist conflict

Conflict between states increasing with oil close to border

Caselli et al 2015
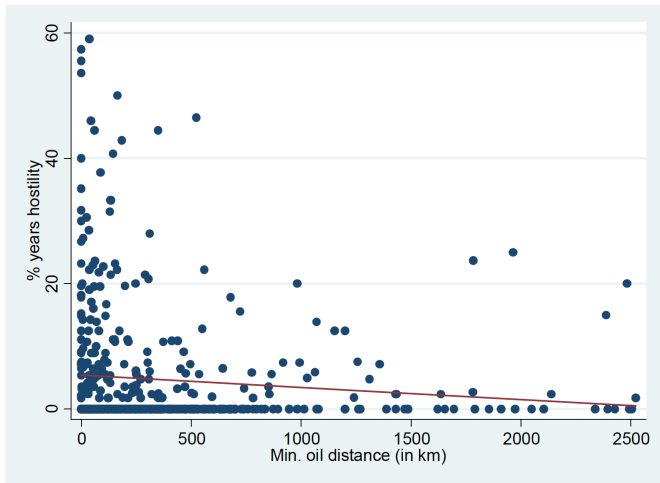

Figure: Unconditional correlation between minimum oil distance and hostility

OLS specification

$$Hostility_{d,t+1} = \alpha + \beta One_d t + \gamma (One \times Dist)_d t + \delta Both_d t$$

$$+ \eta (Both \times MinDist)_d t + \omega (Both \times MaxDist)_d t + X'\xi + u_d t$$

Hostility $= 1$ if conflict in that country-year

One $= 1$ if one country has oil

Both $= 1$ if both have oil

Distance $=$ Distance from border normalized to [0,1]

MinDist / MaxDist $=$ Minimum/Maximium of the distances of the oil from the border in the two countries

OLS specification

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▶ What is being estimated here?

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▶ What is being estimated here?
  ▷ Appears to be a measure of incidence, so may be capturing conflict intensity not likelihood of onset
  ▷ If oil fields are relatively constant over time, could simplify to a cross-sectional regression
  ▷ But if there are new oil discoveries, then identifying assumption is that the timing of the discovery is not endogenous to interstate tensions (e.g. no development or explorations in periphery in response to perceived future threats)
  ▷ Note this does not take into account reassessments of oil field sizes (more common than oil field discoveries?)
  ▷ Also does not take into account major changes in value (price swings)

Regression results

- ▶ Appears to be principally driven by within-country changes in oil discoveries (though that might require dyadic FE to be sure)
- ▶ Very influenced by control variables—not clear which
- ▶ But relatively robust to alternate specifications

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How to interpret? Simple version of their model

Many conflict scenarios can be crudely captured by the following static, two-player game:

		Player B	
		Action 0	Action 1
Player A	Action 0	0,0	$x + c_A, -x + c_B$
	Action 1	$x + c_A, -x + c_B$	$x + c_A, -x + c_B$

where x, c_A, c_B are real numbers. Action 0 is a "peace" action that, if played by both parties, maintains the "status quo," here normalized to $(0, 0)$. Action 1 is a "conflict" action, such as initiating a war. The parameter x $(-x)$ is the expected (gross) payoff from the conflict to player A (B). If $x > 0$ player A is the expected winner. For example, x could represent the capture of a strategic location or a mineral resource deposit currently located in country B, weighted by the probability that A succeeds at capturing it. Finally, c is a country-specific cost (or benefit if positive) of undertaking the conflict action.[8]

Some unusual features built in: Payoff asymmetry

		Player B	
		Action 0	Action 1
Player A	Action 0	0,0	$x + c_A, -x + c_B$
	Action 1	$x + c_A, -x + c_B$	$x + c_A, -x + c_B$

- ▶ Will see peace (0,0) iff: $c_B \leq x \leq c_A$
- ▶ $|x|$ is a measure of *payoff asymmetry*
- ▶ How does this setup differ from the simple "Coasean" case?

How does this setup differ from the simple Coasian case?

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▶ If A and B could negotiate, they should be able to settle on $(x, -x)$ without fighting, rather than (0,0)

    ▷ This would reflect their relative probabilities of victory

    ▷ By assumption, the efficient bargain is not available

▶ What, theoretically, is the payoff asymmetry $|x|$?

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▶ If A and B could negotiate, they should be able to settle on $(x, -x)$ without fighting, rather than (0,0)

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▶ What, theoretically, is the payoff asymmetry $|x|$?

    ▷ Could indicate a private incentive for conflict (but why not put in c?)

    ▷ Could indicate a commitment problem, such as a difficult-to-divide resource that is so valuable that neither side can compensate the other for possessing it

Some challenges merging theory and empirics in a paper

▶ Journals and referees seem to be resistant to "inductive" papers that put the theory after the empirics
▶ Hence it is often difficult to tell whether the theory motivated the empirical test or the finding motivated the theory
  ▷ Particularly true with non-experimental work
  ▷ In these situations, would kike to see further tests of the empirical regularity
  ▷ e.g. Test for same relationship in other point resources, such as valuable minerals

▶ More difficult: how would we know this is the right theoretical explanation, and how would we test the mechanism?
▶ There is a difference between empirical regularities that are consistent with a theoretical prediction, and a test or falsification of a theory

Nonstandard theories of fighting

A convention in economics of not explaining puzzling observations by changing assumptions on preferences

▶ Can lead to less parsimonious theory, and hundreds of special cases

▶ A legitimate worry that it over fits particular cases, and makes propositions non-falsifiable

▶ At the same time, there are phenomena that are difficult to fully explain absent social or intrinsic preferences, e.g.
  ▷ Voting
  ▷ Armed conflict

▶ And experimental evidence has begun to document a number of regularities, e.g.
  ▷ Large amounts of non-selfish behavior in anonymous, one-shot games

▶ Over time, theories involving social and other preferences have become more parsimonious and general

What could a more expansive utility function look like?
Recall discussion of social preferences from past 2 weeks

e.g. Charness Rabin (2002) social preferences (see also Chen & Li 2009)

$$U_B(\pi_A, \pi_B) = (\rho r + \sigma s + \theta q) \times \pi_A + (1 - \rho r - \sigma s + \theta q) \times \pi_B$$

where •

- $r = 1$ if $\pi_B > \pi_A$, and $r = 0$ otherwise
- $s = 1$ if $\pi_B < \pi_A$, and $s = 0$ otherwise
- $q = -1$ if A has misbehaved, and $q = 0$ otherwise

▶ Pure self interest: $\rho = \sigma = \theta = 0$ and $U_B = \pi_B$
▶ Altruism: $\rho = \sigma, \theta = 0$ and $U_B = \rho \pi_A + (1 - \rho)\pi_B$
▶ Charity (if $\pi_B > \pi_A$): $\sigma = \theta = 0$ and $U_B = \rho \pi_A + \pi_B$

To the best of my knowledge, theorists have yet to introduce social preferences into conflict models
Though we can speculate about the outcome

▶ **Altruism**, e.g. concern for the deaths of civilians on other side)
  ▷ Would make war less likely, by reducing the transfer t needed to appease the aggressor, perhaps even increasing the cost c_N above x_S
  ▷ Parallels to the agency problem, in reverse (Jackson & Morelli 2007)
▶ **Relative status** of competing groups, e.g. concerns over the economic success of a competing ethnic group
  ▷ When $x_N < x_S$ this could increase the t required to satisfy the appeasement constraint and accentuate limited transfer problems
▶ **Reciprocity & fairness**, e.g. intrinsic desire to punish unjust acts
  ▷ Could help explain why skirmishes from information asymmetries lead to longer conflicts or feuds
  ▷ At the same time, the threat of feuds *should* be a major deterrent to hostile or insulting actions

Today we will look at a few recent empirical conflict contributions that push us towards taking these preferences seriously

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Intrinsic preferences
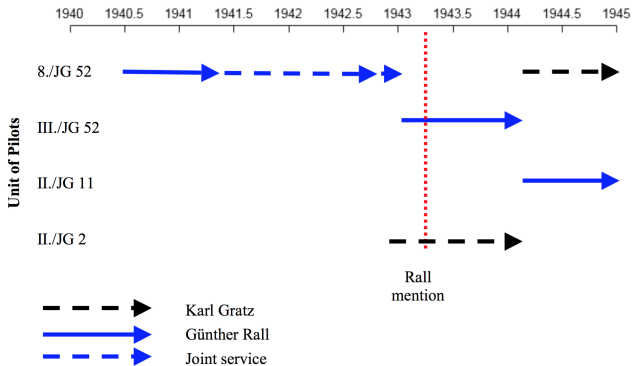   Relative status
    Intrinsic motivations
    Fairness, reciprocity, and punishing injustice

Economists have long hypothesized that individuals care about their *relative* position

▶ *Within* reference groups:
  ▷ Higher earnings of neighbors correlate with lower levels of self-reported happiness (Luttmer 2005)
  ▷ Knowledge of relative salary or income matters for job satisfaction (Card et al. 2012), subjective well-being (Perez-Truglia 2016)
▶ *Between* ingroup and outgroup
  ▷ In lab games, out group envy exceeds in group envy (Chen & Li 2009)
  ▷ Pleasure region of brain active when out group experiences relative losses (Cikara et al 2011)

Ager et al 2018 on German WWII fighter pilots

Figure 4: Identification Strategy

Figure: How does (exogenous) recognition affect aerial victories and death rates of peer pilots in the same month? Effect of mentions in the German armed forces daily bulletin (Wehrmachtbericht)

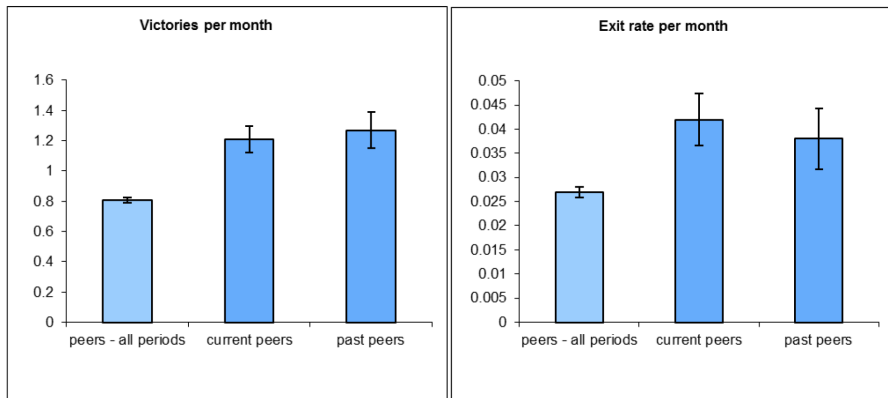# Victory & death rates per month during mention periods

Figure: Mean monthly victory and exit rates for (1) pilots who ever flew with a mentioned pilot, (2) those who currently fly with a mentioned pilot, and (3) those who flew with one in the past.

A principal innovation of this paper is the data

▶ Merge two main sources

    1. Database of German fighter pilots during World War II from a combat claims list that contains the number of monthly victories per pilot together with pilots' first and last name, rank, wing, group, and squadron

    2. Match with a separate database of personal data on German fighter pilots including war status (e.g., killed in action, prisoner of war, World War II survivor) and for some the starting date of his Luftwaffe career

    3. Treat exit from the claims list as a death, verified in some cases with a separate source of death records

▶ Selection

    ▷ No data on pilots who never scored a victory (presumably people who died very quickly)

    ▷ Exclude nighttime pilots who mainly intercepted bombers

        ▶ Unclear why you wouldn't show these in tables, or account with a dummy and interaction

Victory rates after past peer recognition

	(1) Full sample	(2) <80	(3) 80+	(4) 90+
Past squadron peer of mentioned	0.346***	0.008	1.054***	1.486***
	(0.125)	(0.059)	(0.358)	(0.572)
N	88327	70174	17108	8682
R^2	0.263	0.252	0.292	0.313
Aircraft type	Y	Y	Y	Y
Pilot quality	Y	Y	Y	Y
Eastern front	Y	Y	Y	Y
Experience	Y	Y	Y	Y
Pilot FE	Y	Y	Y	Y
Squadron FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y

Death rates after past peer recognition

	(1) Full sample	(2) <80	(3) 80+	(4) 90+
Past squadron peer of mentioned	1.400[*]	1.671[**]	0.831	1.060
	(1.84)	(2.39)	(-0.50)	(0.12)
Ever peer of mentioned pilots	0.549[***]	0.497[***]	0.552[***]	0.438[***]
	(-8.83)	(-9.86)	(-5.19)	(-4.44)
N	88761	71038	17723	9017
Aircraft type	Y	Y	Y	Y
Pilot quality	Y	Y	Y	Y
Eastern front	Y	Y	Y	Y
Pilot FE	N	N	N	N
Squadron FE	Y	Y	Y	Y
Time FE	Y	Y	Y	Y

Why is this potentially a powerful example?

▶ In normal circumstances, it is difficult to determine whether individuals *intrinsically* care about their relative position, versus the instrumental advantages
  ▷ But the incredibly lethal effects of this behavior hardly look instrumental
  ▷ e.g. A "fly till you die" rule

▶ This means one of the principal challenges of this paper is ruling out other explanations, e.g.
  ▷ Correlated shocks (results robust to faraway comparisons, to equipment upgrades)
  ▷ Social learning (not consistent with movement during mention periods only)

Some comments

▶ Could these findings extend to out-group status competition, and hence inter-group competition?

  ▷ Working against: The scale of the behavior changes is greatest when the former peers worked together more closely, or are more similar the geographical origin of pilots

  ▷ There are interesting parallels to social identity theory with categorization, identification, and comparison

  ▷ e.g. For the purposes of my identity as an advanced nation I make relative status comparisons with other advanced nations

▶ The mainly temporary effects somewhat surprising

  ▷ Is this what we would have predicted ex ante if this is about sustained status competition?

  ▷ Are these time consistent preferences? Or evidence of more reflexive decision-making?

Finally, can we just pause for a moment to reflect on some of the statistics in this paper?

▶ e.g. During January 1942, the air force lost 1.8% of its fighter pilots; by May 1944, it was losing 25% of them *every month*

▶ This more than anything else ought to make us wonder what the utility function looks like for a volunteer recruit

▶ There is more to this participation than simply status relative to other pilots

Nonstandard theories of fighting

"Value-rational violence"

- ▶ Weber (1978) described value rational actions as ones "determined by a conscious belief in the value for its own sake of some ethical, aesthetic, religious, or other form of behavior, independently of its prospects of success"
  - ▷ Varshney (2003) has applied the concept to the elimination or subjugation of an ethnic rival, or the extermination of a heretic ideology
  - ▷ Here violence is not so much end itself, but the sole means to an end
  - ▷ Another instance is one where the idea of compromise on some ideological value or principle is itself abhorrent—liberty and self-determination in the case of the colonial U.S., the Irish Republic, or other separatist movements.
- ▶ Little hard evidence on presence of variation
- ▶ Maps trivially to model of political bias

Joy or pleasure in violence

▶ Participant observers in British soccer hooliganism, the Vietnam War, and mobs demanding sacrifice all describe an overwhelming (though often momentary) joy in group violence (Broyles Jr 1984, Girard 1977, Buford 2001)

▶ Evolutionary biology and behavioral economics also suggest that a common feature of human identity groups is parochial altruism—not only do we have preferences for the well being of our in group, we take pleasure in seeing the other group do poorly or receive punishment (Chen and Li, 2009; Cikara et al., 2011; Glowacki et al., 2017; Kalin and Sambanis, 2018).

▶ Little hard evidence on presence of variation

▶ Maps trivially to model of political bias
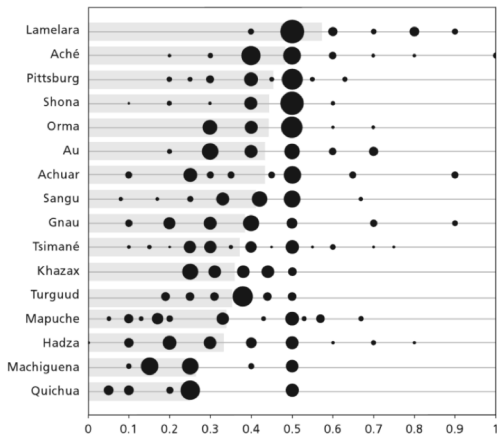
Nonstandard theories of fighting

Matt Rabin's fable:
Think about every Hollywood blockbuster

Do humans have a taste for punishing injustice?
Ultimatum game play

- Offers of 40-50% common
- Offers less than 20% are frequently rejected
- Modal offer in a "Dictator Game" often zero, though average offer is typically 20-30

Source: Henrich et al. 2004.

Note: The size of the bubble at each location along each row represents the proportion of the sample that made a particular offer. The right edge of the lightly shaded horizontal gray bar gives the mean offer for that group.

Conclusions from many, many, many ultimatum games
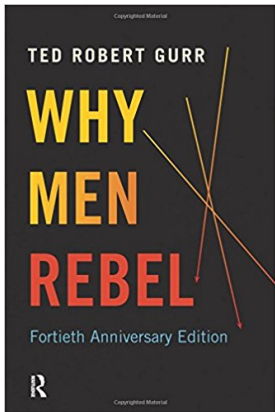## Fehr & Schmidt 2006 Handbook chapter

▶ Consistent across many places, cultures
  ▷ Also observe third party punishment of injustice

▶ Increases in the monetary stakes (amounts to give) did little or nothing to change behavior

▶ One interpretation is that indidivual emotional responses and prevailing social norms affect subjects' preferences for justice
  ▷ Some evidence from ultimatum game play that norm and fairness perceptions trigger emotional arousal, when responders are confronted with an unfair offer, and that punishment of an unfair action activates reward areas of brain
  ▷ "Automatic" reactions via emotion could be a product of biological and cultural evolution, or imply internalized social norms
  ▷ but not beyond considered thinking: strong experimental evidence suggesting that the demand for altruistic giving and for punishment increases if its price decreases

What does the ethnographic evidence say?

Cambridge Studies in Comparative Politics

Insurgent Collective Action and Civil War in El Salvador

Elisabeth Jean Wood

▶ Wood (2004) spent time with El Salvadorean guerrilla, understanding which peasants join or not

  ▷ Anticipated that rebels would use selective incentives to motivate and reward veterans (e.g. promises of land redistribution) but in fact ideology of the group was egalitarian

  ▷ Common narrative distinguishing those who did or did not join: person or family experienced a violent injustice by the government

▶ Similar narratives in

  ▷ Southeast Asia (Scott, 1976)

  ▷ Syria (Pearlman, 2017)

Echoes an older political and psychological literature on frustration-aggression

TED ROBERT GURR

WHY MEN REBEL

Fortieth Anniversary Edition

R

▶ Frustration-aggression hypothesis (Gurr 1970, Berkowitz 1969)

  ▷ Frustration arises when something blocks you from achieving a goal
  ▷ Aggression triggered by frustration, and directed at the blocker
  ▷ Used to explain scapegoating, revolution...

▶ In modern terms, reference dependent utility plus expressive preferences

  ▷ Individuals have reference point for a fair distribution of resources
  ▷ Below reference point they experience negative emotions (penalties to utility)
  ▷ Expressing anger or punishing the unjust actor is intrinsically valuable (positive psychic rewards)

Passarelli & Tabellini (2017): An example of a model introducing fairness and emotions into decision making

▶ Some people have "expressive preferences" based in fairness
  ▷ Participation has psychological rewards commensurate with the feeling of aggrievement, and these rewards are traded off against other considerations
  ▷ These expressive preferences arise from a social norms — the government violating an expectation of fair behavior, such as failure to deliver a "policy entitlement", a reference point

▶ Expressive preferences are augmented by others' expression
  ▷ There is a preference (not a strategic) complementarity: if expected participation is large, then more individuals are attracted to the protest for the same level of aggrievement

▶ But individuals behave rationally, weighing the pros and cons of participation, taking these non-standard preferences into account

More formally

Individual j in group i chooses to riot if benefits are larger than costs:

$$p_i \lambda_i a_i - \mu - \epsilon_{ij} \geq 0$$

- p_i is the proportion of your group participating
- λ_i is the size of your group
- a_i is the aggrievement caused by the policy to members of group i
- μ is the certain cost and risk of violent repression
- ϵ_{ij} is the idiosyncratic component of the cost or benefit of participation, uniformly distributed with mean 0 and density $1/2\sigma_{ij}$

Equilibrium participation rate is an increasing function of group aggrievement and a decreasing function of costs and risk:

$$p*_i = \frac{\sigma_i - \mu}{2\sigma_i - \lambda_i a_i}$$

Other thoughts

▶ Layers in a number of other elements, e.g. Reference points are endogenously determined, and are set by some sense of constraints facing the government

▶ Implications:
  ▷ Means that rational, far-sighted governments may wish to restrain their future selves
  ▷ Political power or influence here comes from a group's ease or technology of mobilization
  ▷ Capacity for unrest causes an "excessive" amount of redistribution

▶ Feels a bit overfit to European protests

▶ Layers in many different "nonstandard" assumptions that interact

▶ An important step, but one might like to see a collection of models that consider a menu of these and similar "nonstandard" elements and illustrates how equilibrium changes with different combinations

Are there applications to conflict?
A possible avenue for exploration

▶ There is potentially a distribution of "fair" and "selfish" types in society
  ▷ Many subjects behave quite selfishly even when they are given a chance to affect other people's well-being at a relatively small cost
▶ The interaction between fair and selfish individuals could be key to understanding the observed behavior in strategic settings
  ▷ Especially if there is imperfect information about fairness and incentives to misrepresent
  ▷ This could explain why wars break out (risky gamble when fair types are uncertain in magnitude) and why it would persist (because skirmishes lead to intrinsic preferences for violence)
  ▷ But war should be less likely to break out because each party can backwards induct this costly outcome