Are “Rational” Actors Aware of Rationality in Authoritarian Governments? A Case Study of the Soviet Union

Are authoritarian governments (or their leaders) rational? Much recent work in political science rests on this assumption that the actors involved are rational. Of course, we realize that this is only a (very) crude approximation of reality; no one walks around calculating their own utility function. But it is important to at least ask how close of an approximation this rational choice perspective is. In particular, it seems reasonable to predict that actors who are explicitly familiar with rational choice theory—as demonstrated, e.g., by familiarity with game theory, social choice theory, recent trends in political science, etc.—would be more likely to follow these predictions of rationality.

So, are authoritarian governments aware of or open to the ideas of rationality and its applications to politics? Archie Brown wrote in the 1980s that “probably most western political scientists would accept the view succinctly expressed by W.J.M. Mackenzie:”

Political science cannot develop except in certain limited intellectual and social conditions; there must be an established practice of debate based on analysis and observation, and it must be accepted that there exist political questions open to settlement by argument rather [than] by tradition or by authority. In this sense political science is conditioned by political society.

(quoted in Brown 1986, pp. 469-470)

Where among authoritarian governments would we be most likely to find a more intellectually tolerant authoritarian government? The Soviet Union, known for its vast
military and scientific apparatus and fighting against (and spying on) a United States that hired game theorists, stands out as an obvious candidate.

In this paper, I focus on the Soviet Union in the 1960s as a case study, asking whether or not it was aware of the ideas of rational choice theory. My primary goal is to ask this because of its relevance to rational actor models in political science, but an interesting secondary question is whether the Soviet Union confirms Mackenzie’s claims that authoritarian governments are naturally hostile—for ideological or political reasons—to the study of rational choice and related theories.¹ First, I briefly outline the fundamentals of rational choice theory. Next, I analyze the history of Soviet study of rational choice theory. Then I discuss the merits of my premise that actors more aware of rational choice theory might be more rational. Finally, I look at the implications of my study to rational choice studies of Soviet actions, and mention some other cases where a similar approach might be useful.

The basic premise of the rational choice perspective is that actors have well-defined preferences over the alternative states of the world.² This can be expressed by assigning to each actor a utility function that assigns a numerical utility value to every possible state of the world. The actor then prefers one alternative to another if he assigns it a higher utility value. (What matters, however, is simply the rankings between alternatives, not the actual numerical values.) For example, I might have a utility

¹ This is an interesting and substantial claim. The objective study of political science is relatively recent, and it seems that the sample size of areas that do study it is one (the democratized, Western world), so this isn’t exactly a law. One interesting subquestion is whether the study of social choice theory, in particular, would be less likely in autocracies, which make a mockery out of voting. Note that this claim could also present part of the explanation of the economic and political success of democracies, if capitalism succeeds more with more understanding of economic thinking.
² See, for example, the discussion on pp. 19-20 of Acemoglu and Robinson (2006) for a basic summary of this theory, or Riker and Ordeshook (1973) for a detailed introduction. This approach is also referred to (e.g., by Acemoglu and Robinson) as an “economic” approach.
function that prefers being paid $20 an hour for my job to being paid $10 an hour, and
prefers being paid $10 an hour to having no job and being sent to jail. Given these
preferences, rational choice theory assumes that actors then act strategically in a way to
maximize their utilities. As a trivial example, given a simple utility function based only
on income, I would rationally choose a job that pays $20 an hour over a job that pays $10
an hour. With this assumption that actors behave rationally, political scientists can use
the formal tools of game theory to study and make predictions about their behavior.

Though this is not an empirical paper, it’s nonetheless important to attempt to
operationalize these central ideas of “rationality” and “awareness of rationality.” By
“rationality” I mean the idea that actors have preferences over alternatives of the world
(i.e., they have utility functions), and that “rational” actors seek to maximize these utility
functions. I consider different degrees of “awareness of rationality.” As a first step,
some sort of objective and scientific study of political science or economics is a sign of
some understanding of rationality (at the very least, it is probably a prerequisite to the
useful application of these ideas to the real world). More importantly, the study of social
choice theory—the mathematical theory of voting procedures—and in particular game
theory, both of which explicitly require actors to have preferences over alternatives of the
world, is a sign of such awareness. Finally, most relevant is a study of the actual
application of game theory to political situations.

Given the secrecy of the cold war and the language barrier, there are not
surprisingly relatively few sources in English on areas Soviet research in areas related to
rational choice theory.\(^3\) I will first discuss the general Soviet study of political science,

\(^3\) Unfortunately, I do not speak Russian and so was unable to look at the original sources. As I shall
mention below, however, several important sources were translated in English in the 1960s.
based on several analyses by western scholars during the cold war. I will then briefly discuss the highly mathematical Soviet work in social choice theory and game theory. For this, there are several good translations of articles and historical discussions by Soviet scholars in English. Next, I will consider the most relevant study of rationality: Soviet study of the application of game theory to political science, relying on a RAND report as well as translations of several Soviet articles from the 1960s. Finally, I will consider whether it was likely that the Soviet leaders were aware of these ideas. In general, there is a danger that the Western literature might be biased by anti-communist sentiments, but these are the best sources there are, and they seem relatively non-ideological. A basic trend throughout what I have found is the ideological pressures Soviet scholars faced to criticize bourgeois American practices and satisfy Soviet norms; it is a challenge to determine whether to what extent these views were included only to satisfy censors.

Political science developed slowly in the Soviet Union. In 1963, Canadian Gordon Skilling, after visiting the USSR, wrote “A western political scientist finds it difficult to identify his opposite number in the Soviet Union” (p. 519). Rather, scholars in law, economics, and history studied areas related to the American conception of political science. By the late 1960s and early 1970s, Brown (1986) reports, there were the beginnings of a discipline of Soviet Union, though Robinson notes (1970, pp. 5-7) that after “an explosion of interest” in 1965 and 1966, an “apparent ban on open discussion of political science had gone into effect” shortly afterwards. Much of what appeared was shaped by ideological bluster but potentially receptive. Theen (1971) reviewed a 1969 monograph by the Soviet scholar V. G. Kalenski on political science in the US. “Throughout his study,” Thane writes, “[Kalenski] condemns American political science
for its tendency to engage in abstract theorizing, its conservative bias, and its attempt to
be ideologically neutral and value-free.” (p. 689) Nonetheless, Theen interprets
Kalenski’s criticisms as being only superficial.

The clear implication of Kalenskii’s study is that the kind of research done
by American political scientists could be both sound and useful—if carried
out in a different spirit, and from the correct ideological perspective.

Concentrating his fire on the researcher rather than the research itself,
attacking the uses to which political science research is put (or not put) in
the United States rather than its basic nature and character, Kalenskii is in
a position to suggest the desirability of encouraging similar research in the
Soviet Union. And, indeed, by emphasizing the importance of empirical
political science research to the American ruling circles, the author very
clearly implies the potential utility and practical value of such research to
the Soviet leadership. (Theen 1971, p. 690)

Thus there was at least some awareness by the 1960s of some objective study of
political science that might be receptive to ideas of rationality.

Another discipline connected to the ideas of rationality where we might find
Soviet research is social choice theory, the mathematical theory of voting procedures.
The fundamental framework of social choice theory depends on the idea of actors having
preferences over alternatives; these preferences are then cast as votes. The theory merely
requires that actors have preferences, not that they act strategically, so an awareness of
social choice theory does not necessarily mean an awareness of all of rational choice
type, but it is a start, and there areas of social choice theory that do discuss strategic
behavior, e.g., discussions of manipulations of votes. The founding work was Kenneth Arrow’s "Social Choice and Individual Values" in 1951, and social choice theory grew to become a lively field at the intersection of economics and political science in the United States. Fuad Aleskerov, a Russian social choice theorist, wrote in 1995 a history of social choice theory in the Soviet Union. Up until the 1980s, he writes, “the studies in social choice theory were not welcomed in [the] Soviet Union” (p. 428). Censorship could be avoided by presenting work as “mathematical”; a few articles were published in the late 1970s using this technique. Aleskerov recounts how when he was submitting an article published in 1983, he was forced to change the words “dictator” and “oligarchy,” which have technical meanings in social choice theory. By the mid 1980s, though, the situation had improved. Social choice theory “attracted a lot of attention from the scientific community”; indeed, there were conferences that hundreds attended, with interest “so enormous that people were forced to stand next to walls and in corridors” (p. 428). Still, Soviet ideology remained deep. A 1987 Economic-Mathematical dictionary, in its entry on Arrow’s fundamental impossibility theorem, declared: “However, Arrow’s theorem first completed ignores the class structure and contradictions of a capitalist society,” a bizarre interpretation of the theorem. (Aleskerov 1986, p. 429). In summary, the history social choice theory in the Soviet Union shows that ideological barriers prevented its success until perestroika.

In contrast with social choice theory, Soviet scholars were studying game theory from the 1950s. The Princeton Econometric Research Program in 1968 published a collection of translated Russian papers in game theory from 1959-1965 (Takeuchi and Wesley 1968). The papers’ citations show a familiarity with American research in the
1950s; a translation of Luce and Raiffa’s classic introduction into Russian appeared 1961
(p. 15) N.N. Vorob’ev wrote a text on game theory in 1974, translated into English in
1977. There was a vibrant community of mathematical economists working in game
theory through the 1970s and 1980s, some of whose work is translated in Driessen et al.
(2006). All of this work in game theory was highly mathematical—which is why it might
have gotten past the censors—and not directly applied to political situations.

In the mid-1960s, a few Soviet scholars, looking at research by Americans, began
to consider the applications of game theory to political situations. The primary English
source on such work is a RAND report by Thomas W. Robinson (1970). In addition,
several early Russian articles have been translated into English. Together, these sources
provide a good sense of the initial Soviet study of the application of game theory to
political situations.4

The most important early proponent of Soviet study of the application of game
theory to politics was Gennadi Gerasimov.5 In the 1960s, he had worked as an exchange
journalist in the United States, where he came across the work of Thomas Schelling,
whose The Strategy of Conflict (1960) was a seminal work in the application of game
theory to political science. Gerasimov was later to become famous as the spokesman for
the Foreign Ministry in the Gorbachev years. A November 27, 1990, New York Times
brief referred to him as a “wisecracking, Westernized former journalist” who “disarmed
the Americans with humor and candor.” During the 1990s, he accepted a visiting
position at Muhlenberg College and other schools (Richmond 2003, p. 166).

4 I have been unable to find any English sources more recent than the Robinson (1970) article. It’s therefore
unclear to what extent this research continued after 1970. Also, Robinson’s is the only article I’ve found
that at all addresses my question directly.
5 There are few sources on Gerasimov. I have relied on a brief description in Richmond (2003), pp. 166-
167, as well as some newspaper articles.
In the mid-1960s, Gerasimov published several articles in Soviet journals about the western study of game theory. In July 1964, he wrote in the Soviet journal *International Relations (Moscow)* a very critical review of the “civilian militarists” in America like Schelling. Consistent with his later reputation as a joker, he uses over-the-top rhetoric. “The militarists have dug in and have ringed their ideological fortress with at least two moats,” he writes (p. 78). He feels a need to attack the Americans: “Kahn, Schelling and Morgenstern abuse mathematics for criminal purposes” (p. 81) and “their anti-Communism distorts their view of the world.” He ends by dismissing these “modern nuclear astrologers...who invent and sponsor such plans and the clever-clever but utterly false pseudo-scientific theories cooked up by their servants and accomplices” (p. 82).

Despite his ideological attacks on American game theorists, however, it’s clear that Gerasimov values these ideas. In his articles, he takes pains to explain the basic theory of games, beyond what would be necessary simply to attack bourgeois Americans. Some of his criticisms are mere ideological bluster, but in other cases he shows that he has been thinking hard about these issues. He starts by saying, “If we abstract ourselves from moral considerations which the aggressor ignores; if we abstract ourselves from international legal obligations (the U.N. Charter, for example) which he similarly is likely to disregard; if we proceed from considerations of military advantage, the only viewpoint the aggressor respects...” (1965: p. 39). This shows that, despite the rhetoric, he’s aware of the importance of these abstractions. He considers whether or not the cold war conflict should be treated as a zero sum game (see, e.g. Robinson (1970), p. 53). And he clearly is

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6 These were Gerasimov (1964; 1965; 1966) in *International Affairs (Moscow)*, and two articles translated in the appendix of Robinson (1970).
grappling with the ideas of rationality. He discusses, for example, the debates that American game theorists had about to what extent states would act rationally (p. 79). Robinson’s analysis seems reasonable: “The point for Gerasimov…is not only to make sure he has clear targets for attack, thus retaining his own ideological credibility, but also to find a reasonable excuse to present game-theoretic ideas that his own readers will find interesting and provocative… [His central argument is that], despite its abuse by the Americans, game theory still can be useful in analyzing international affairs, if only it is placed in the safer hands of the Russians themselves.” (pp. 16-17).

Robinson analyzes two more Soviet authors’ discussions of American game theory. An article by Petrovskaia follows a similar pattern to Gerasimov’s articles: Robinson writes that it is “ostensibly an attack” on Schelling, but in fact “its purpose appears to be to describe the Schelling theory to Soviet readers; to encourage the useful (i.e., Marxist) application of his approach to current problems of strategy.” (p. 27) N. N. Vorob’ev, mentioned above as one of the founders of mathematical game theory in the Soviet Union, wrote in 1966 a much more balanced, philosophical discussion of the application of game theory to describing political reality. In it, he discussed the general difficulties of what rationality should be. “These tasks are exceedingly difficult and no general approaches to their resolution are as yet visible,” he wrote (p. 75). He addresses the important question of whether the political implications of game theory threaten Marxist-Leninist ideology—it will be up to Soviet leaders to decide whether to take this

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7 He does still note dismissively how “behavior is recognized as rational when it is in line with most irrational and absurd views, an example being the ‘better dead than red’ idea propounded by Senator Goldwater” (p. 79). This is partially a semantic trick, presumably employed for rhetorical purposes, playing between the technical and non-technical definitions of “rational.” It could be interpreted as an understanding of the subtleties and difficulties of actually capturing human motivation, or it could be interpreted as a naive failure to understand this basic distinction in meaning.
risk, or to relegate game theory to the more politically palatable purely mathematical approaches.

The articles Robinson discusses make it clear that Soviet scholars were aware of these ideas of rationality, and that they could be applied to actual political situations. There is no clear evidence, however, whether or not these ideas reached the upper echelon of Soviet leaders. (In the United States, by contrast, the Air Force sponsored the RAND corporation, where Schelling and many other game theorists did research, not to mention Robinson, whose article discussing Soviet study of game theory I’ve relied on.\(^8\)) Other than Robinson’s article, none of the American books on foreign policy I looked at seemed to address the issue of whether the Soviets were aware of game theory. The journal *International Affairs (Moscow)* that three of Gerasimov’s articles appeared in, however, seems to have been a major publication; it published monthly (as *Mezhdunarodnaya Zhizn*) in Russian with official English and French translations. I wasn’t able to find specific details of its stature as a publication in the 1960s, but a 1998 *Foreign Policy* review of global news referred to it being “closely linked to Russia’s Ministry of Foreign Affairs,” at least in the 1990s, so most likely it was important when Gerasimov published, too (Trennen 1998).

As Robinson and others mentioned, there was a general trend in these Soviet articles. Soviet scholars would read about an American idea, ostensibly attack it viciously to maintain ideological appearances, but nonetheless seem at least somewhat receptive to its ideas. The challenge would be whether or not the ideas were too threatening to the Marxist ideology of “scientific communism.” Robinson suggests that

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\(^8\) See, for example, Kaplan (1983), for an account of the RAND corporation and its role in foreign policy.
the leadership decided it was too threatening; writing in 1970, he notes that there had been “considerable backtracking” and no publications in the open literature (pp. 28-29).  

One possibility is that such research continued, in secret. At times, it can be strategic to appear irrational. The classic example is the game of chicken, where two cars are to drive directly at each other. Whoever chickens out and turns loses. In such a game, a successful strategy can be to appear irrational, for example walking into the car drunk, or tearing out the steering wheel. Gerasimov explicitly noted this scenario in his 1966 article (p. 57). It could be that Soviets decided to appear less “rational” than they were, by hiding their further study of it.  

In summary, it’s at least conceivable that some of these ideas of rationality reached the leaders of the Soviet Union, but there is not clear evidence either way. At the very least, Gerasimov by the 1980s was the spokesman of the foreign ministry, so he must have had some influence by then.  

So, what are the implications of this research to actual political studies relying on rational choice theory? There are (at least) two ways of using rational choice to model a government’s behavior. One can treat the state as an actor itself, and assume that the state has preferences and acts to maximize these. Or, one can treat each of the major players within the state as rational actors, with their own motivations. Thus, Khrushchev would be analyzed as having a different utility scale than his potential challengers in the Soviet hierarchy; both would wish for the Soviet Union to succeed, but also wanted 

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9 I haven’t been able to find any evidence after 1970 for more such Soviet research, at least not mentioned in the literature in English, but it might be there.  
10 Along this line of reasoning, one might wonder whether or not it was “rational” for the Americans to let the Soviets know that they knew that the Soviets were studying game theory and politics, by publishing Robinson’s article openly.
power for themselves. Whichever approach is used, there are two problems to relying on rational choice.

The first problem is whether there is a clear underlying utility function. Many rational choice models of authoritarian leaders are based, either explicitly or implicitly, on utility functions that either strive to maximize riches or to preserve power. But human motives might be more complicated: a dictator also might care about passing power to his sons, maintaining certain ideological beliefs, or having leisure time. Though in principle there is still an underlying utility function, formally modeling such a range of human motivations requires sacrificing the mathematical simplicity of traditional utility functions that has allowed for interesting formal and theoretical results.

The second problem is whether, even with such an underlying utility function, actors actually behave strategically—that is, whether they behave in a way that maximizes their utility. To an economist, it seems natural to assume that people carefully consider what their preferences are, and make choices that maximize their utility. But experimental research has shown that real people don’t actually behave rationally. Kahneman and Tversky are famous for their research on the limits of human rationality, showing that humans use heuristics that don’t always lead to the logical or “rational” solution. Even when one is explicitly aware of the “rational” perspective, it’s hard to avoid making certain fallacies. For example, I paid $10 for a discount card that gives me 10% off at some restaurants. I sometimes find myself thinking “I’d better go to those restaurants to earn back those $10,” even though it’s a sunk cost. I’m aware that this is irrational, but I still find it natural to think this way.

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11 See, e.g., Olson (1993) for a profit-maximizing attitude or Fearon (1994) for survival-maximizing.
The basic premise of my paper comes from the observation that the ideas of utility-maximization aren’t so obvious to those who haven’t learned basic economic theory. (After all, if it were so immediate, students wouldn’t struggle so much with introductory economics courses, and it wouldn’t have taken so long for the theory to develop.) A priori, one would expect that those who are familiar with these ideas of utility maximization will be more likely to consciously consider what their true preferences are, and then act strategically, rather than on impulse. To take my discount card example, I’m sure most people who haven’t heard of “sunk cost” would be more likely to act irrationally and go to the restaurants often than someone like me who is aware of the idea.12

How is this in particular relevant to Soviet studies? One approach would be to try to operationalize precisely when and whether the Soviet leaders were aware of the predictions of game theory. For example, based on the publications of Gerasimov’s articles, we could declare that “after 1965, the Soviet Union leadership was aware of the ideas of rationality theory.” Then we could look at the various predictions of rational choice models. For example, we could compare Soviet behavior in the Cuban missile crisis (before 1965) to Soviet behavior in, e.g., the SALT negotiations, or look at the actions of political figures in Khrushchev’s coup compared to the failed coup against Gorbachev.

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12 I’m not aware if this idea has been raised in the literature. This is an empirical claim that could be tested, at least in certain circumstances. For example, college students could be tested on strategic behavior at the beginning and the end of a course on economics. (Of course, things would have to be done carefully, and this is a somewhat artificial situation, but I’d be shocked if they didn’t act more “rational” after learning economics.) Or subjects who haven’t taken economics could be divided into two groups, one of which is taught the basics of rational choice and one of which is a control, and then tested on a situation of rationality.
To do so would be scientifically deceptive. The independent variable—awareness of rationality—is hard to measure, everything is based on a sample of one country, and there are so many confounds (e.g., Khrushchev was a different person than Gorbachev; even if we accept rational choice theory, they might have different “reasonable” utility functions).

Instead, it makes more sense to test my claim—that predictions of rational choice models will be more realistic if the actors are aware of rationality—qualitatively on other cases. For example, Pinochet was famous for having University of Chicago-trained economists helping his economic policy. Might he therefore have been more receptive to predictions of rationality?  

My idea is of course relevant not just to actual dictatorships, but also analogous structures where theoretical predictions should also hold. Mancur Olson’s theory of stationary bandits was inspired by the mafia. The mafia have smart lawyers working for them; might some of these lawyers have been political science majors who’ve read some of this literature? Corporate governance is, in ways, similar to authoritarian leadership. Are CEOs who are familiar with ideas of game theory more successful? Of course, there are great strategic thinkers who know nothing about rational choice theory, and I’m sure there are economists and political scientists who don’t act so “rationally,” but it seems natural to predict that such knowledge might help in aggregate. These sorts of smaller examples might be more amenable to empirical studies. More generally, my premise is relevant to rational choice models that have nothing to do with dictatorship: it’s just as relevant, for example, when a democratic leader makes decisions.

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13 It would also be worthwhile to look at whether historical leaders were aware of weaker ideas of strategic behavior. For example, which leaders were aware of Machiavelli? Stewart (1928), for example, notes the significant influence of Machiavelli on Mussolini.
Many dictatorships occurred before rational choice methods were commonly used—formal game theory has been around for less than a century—but now, as more and more research in political science follows the rational choice paradigm, there are dictators today who could (in theory) read the very analyses of “rational behavior.” Have dictators like Saddam Hussain or King Jung Il been aware (through their advisors) of ideas like those of Fearon (1994), about escalation in war? This is an interesting open question, and it is obviously relevant to current international policy, especially for a government like the United States that is set on ridding the world of dictators.

In particular, the relevance of this question to current dictatorships makes clear the importance of my second question: are there specific properties of authoritarian regimes that make them less (or more) likely to be receptive to rational choice theory. My case study of the Soviet Union showed that there were clear ideological challenges to studying anything that could question Marxist-Leninist doctrine. Typological distinctions between authoritarian states could be very relevant. A first guess would be that socialist states would be less open to “capitalist” ideas of utility maximization, but perhaps more capitalist dictatorships would encourage such ideas. A state based around a cult of personality of a leader might discourage the idea that he is rationally calculating his strategy. And, of course, any more general correlations between type of dictatorship and level of education and research would be relevant. On the other hand, perhaps an authoritarian government might more easily stomach the amoral nature of rational choice theory than democracies (where, for example, one could make a good argument that it’s irrational to vote.)
My paper is intended merely as a first step, introducing an idea and giving one case study. Much work in political science, including the study of authoritarian governments, is based on models that presume that the actors involved are rational. It seems reasonable to assume that actors who are aware of the ideas of rationality might be more likely to act “rationally” in the sense of these political science models. This is an empirical claim that deserves more scrutiny, but it seems at least plausible. I have considered the Soviet Union as a case study, looking to see if its leaders were aware of the ideas of rationality. I found that there was some awareness of these ideas in the 1960s, but it was unclear whether or not it reached the higher echelons of power. The case of the Soviet Union also suggests a trend: there were ideological barriers to disciplines that threatened Marxism. It would be interesting to consider further cases, and this seems particularly relevant now that ideas of game theory and rationality are more likely to reach contemporary dictators. Of course, rational choice models are just that—models. We don’t expect actors actually to behave rationally all the time. My idea at least suggests certain cases where we might find the models to be more accurate, if the actors involved are aware of rationality.

Bibliography


