

Comments on
Gordon Tullock's THE ECONOMICS OF CONFLICT*
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Gordon Tullock's THE ECONOMICS OF CONFLICT

We have come to expect provocative and challenging insights from Gordon Tullock, and this paper contains many such. Nevertheless, I must record my disagreement with his main theme -- that "we should not expect economics to provide too much aid in analyzing conflict" (p. 6).

Tullock illustrates his negative thesis with some selected points of detail, which prove little one way or the other. For the benefit both of economists and non-economists, and in the interests of providing a truer guide to the broad territory constituting the economics of conflict, I will do two things. First, the Table below lists an enormous range of crucial issues in the analysis of conflict that fall naturally into categories amenable to economic thinking. And second, appended to this paper is a condensed Bibliography of works on conflict -- either written by economists, or employing an approach that economists will find sympathetic. Space limitations preclude going beyond the bare citations; in particular, I will not be able to correlate the items cited with coverage of the issues mentioned in the Table. Nevertheless, anyone who explores this impressive body of research will be satisfied that economics can make very substantial contributions to the understanding of conflict.

TABLE: Topics in the Economic Analysis of Conflict

1. Sources of Conflict

Taking a broad interpretation of conflict as including not only violent but also non-violent efforts to seize resources -- via robbery, threats, trespasses, lawsuits, rent-seeking competitions, and the like -- to what extent is resort to conflict due to factors such as (i) opposed material interests, (ii) biologically ingrained or culturally learned malevolence, or (iii) faulty perceptions? What of attitudes toward risk? Are certain forms of economic organization (e.g., feudalism or capitalism) more likely to bring about conflict? Does increasing wealth make conflict more or less likely?

2. Equilibrium and Comparative Statics

What are the determinants of equilibrium in the varying dimensions of conflict -- e.g., resources committed, level of escalation, duration, etc.? When are Cournot, Stackelberg, or other equilibrium concepts appropriate? What are the implications of simultaneous-move vs. sequential-move situations? When is the repeated-game model applicable, and how does that change the solution? When can an evolutionary (ESS) model be employed? Is the wealthier side always at an advantage? What happens when the number of parties increases from 2 to 3 to ...? When we consider that decisions are made not by unitary individuals but by groups?

3. Operations Research and the Conduct of Conflict

Tradeoffs: Offense vs. defense, manpower vs. materiel, mobility vs. fortification, accuracy vs. rate of fire, etc. Combat success as related to numbers and quality engaged. Centralized vs. decentralized control. Military aim: conquering territory vs. defeating enemy forces. Appropriate strategy with superior/inferior forces, better vs. poorer information, defensive vs. offensive goals.

4. Conflict, Economics, and Society

Role of conflict and threat of conflict (coercion) in determining differential power and wealth of nations, of social classes, and individuals. How does conflict affect the internal structure of social organizations?

Turning to some specifics, to support his contention about economics being of so little use for the analysis of conflict, in the opening paragraph Tullock makes two remarkable assertions :

- (1) "Economics is essentially a study of cooperative behavior, not inter-personal conflict."
- (2) "Further, economics assumes, if not perfect information, at least very good information."

Both of these statements are far off the mark. The contention about economics assuming perfect information can be dismissed out of hand. I am myself a specialist in the economics of uncertainty, and perhaps half the articles currently appearing in economics journals address the implications of varying patterns of imperfect and/or asymmetrical information. As for the statement about economics studying only cooperation, Tullock seems to have forgotten those two key words in the economist's vocabulary: scarcity and competition. It is true is that the marvelous social invention of the free market makes it possible for individuals to cooperate, in some degree, even while pursuing their separate competing desires. But voluntary cooperation through markets is necessarily limited and imperfect. For one thing, the market system can survive only in a supporting environmental context requiring coercive enforcement of contract. And we need only look at history, or look about us today, to see that force, fraud, and theft remain very popular ways of acquiring resources by means other than market exchange. Consequently, although moderated partially by market forces, the iron laws of scarcity and competition remain applicable to all human interactions. There is indeed a "Queensbury rules" economics of honest market dealings, but this is an entr'acte of the main drama -- the

"no-holds-barred" economics of force and fraud.

By way of illustrating the uselessness of economics, Tullock discusses two specific problems. The first is the supposed "non-existence of equilibrium" in certain generalizations of a model proposed in his own valuable paper, Efficient Rent Seeking. But why is non-existence of equilibrium in this model anything to be worried about? There are a variety of cyclic or chaotic phenomena in the real world that do not settle down at an equilibrium, and the model in question may be correctly indicating that certain forms of rent-seeking competitions fall into that category. And even if the non-existence of equilibrium could be regarded as some kind of analytical flaw or limitation, the failure of Tullock's own particular economic model can hardly be taken as evidence that the entire enterprise of economic analysis is without value.

Tullock's second problem raises more substantial issues. He claims that, using Prisoners' Dilemma theory, it would have been and remains rational for the US and the SU each to initiate a nuclear attack against the other. ("I think at all times we have been in a prisoners dilemma situation in which the dominant strategy has been to initiate a nuclear conflict" -- p. 12.) The failure of nuclear war to occur is therefore evidence, supposedly, against the use of economic reasoning for the analysis of conflict. In short, what's good news for people is bad news for economics!

Fortunately we don't have to accept this linkage. In fact, Tullock's analysis is mistaken at almost every point. The first error is his assertion (p. 3): "the only thing we get out of game theory is that conflict will characteristically be a prisoners dilemma..." This is quite false. Prisoners' Dilemma is only one of many possible environmental payoff

patterns that may or may not lead to conflict. Among other patterns having received a good deal of attention in the literature, to cite just a few, are the games known as Chicken (or Hawk-Dove), Battle of the Sexes, and War of Attrition. Many others are described in several of the works cited below, of which I'll mention specifically only the Snyder & Diesing volume (Chapter 2).

Turning now more specifically to the US/SU nuclear conflict situation mentioned by Tullock, the relation in question is emphatically not a Prisoners' Dilemma. Even if we were to ridiculously oversimplify in order to reduce the interaction to a 2-strategy format -- this means ignoring essential elements of the problem such as (i) the presence of third parties (China and Western Europe), (ii) the fact that nations are not unitary decision-makers, and (iii) the repeated-game aspect of the problem -- the essential characteristic of Prisoners' Dilemma is absent. Prisoners' Dilemma requires, and this is almost the only point where Tullock is correct, that both sides have a dominant non-cooperative strategy. That feature is not present here. Specifically, even if America would want to retaliate if attacked, itself a doubtful point, almost all Americans would surely prefer "neither side attacks" to "we attack first." So "attack first" is not a dominant strategy. Nor can such a preference be dismissed as irrational soft-headed woolliness, if only for the reason that the "victor" nation in such an exchange might still suffer some millions of deaths.

At the risk of going a bit afield from the main issue, I'd like to make two additional comments. First, Tullock is on only very slightly stronger ground when he argues (p. 12) that, at least in the earlier postwar period,

initiation of nuclear war "would have been the game theoretically recommended choice" for the U.S. In that period U.S. nuclear superiority was counterbalanced by Soviet near-absolute predominance in land war. The limited American nuclear inventory could not have been a very effective weapon against a Red Army sweep that would have brought all of western Europe into the Soviet empire. Second, he is seriously misinformed in referring to the current situation as a "position of nuclear balance." Current Soviet nuclear predominance over the U.S. is, depending upon the criterion employed, on the order of 2:1 to 6:1.¹ In consequence, while Tullock's contention -- that game theory would call for an immediate first-strike -- was never applicable to the U.S. decision situation, it may well be nearing applicability for the other side. The Soviet Union today finds itself in the position of being the long-run economically weaker power, yet possessing overwhelmingly predominant military strength in both the nuclear and the non-nuclear dimensions. Hence a first-strike nuclear attack might arguably be a tempting option for the Soviet rulers.

In this connection, while I myself strongly support the Strategic Defense Initiative (SDI), Tullock's denunciation of the Mutual Assured Destruction (MAD) strategy is somewhat hysterical. In fact, part of the current military problem is that the U.S. has chosen a posture that represents only one of the essential elements of the MAD strategy, to wit, foregoing an anti-missile defense. But a stance involving this element alone does not make sense. We have not been faithful to the other essential element of the strategy, maintaining a retaliatory force adequately large

¹Presentation of U.S. Secretary of Defense Weinberger in Senate Armed Services Committee, Hearings: Department of Defense Authorization for Appropriations for Fiscal Year 1985 (Washington, D.C., 1984), Part I, p. 123.

and invulnerable to eliminate any temptation for the other side to strike first. In substance, it is our violation of an implicit agreement to live up to the requirements of MAD that is placing before the Soviet rulers an unduly tempting opportunity to win total world dominance through nuclear war.

I will close with a brief peroration:

The analysis of conflict requires an economic approach. But correspondingly, economic models will produce distorted versions of reality unless competition through conflict comes to play a central role in economic theorizing. In short, economics is necessary for understanding conflict, while addressing the issue of conflict is equally essential if economics is to make progress.

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