

The constitutional political economy of Gordon Tullock¹

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We must be skeptical about each theory, but this does not mean that we must be skeptical about the existence of truth. In fact our skepticism is an illustration of our belief in truth. We doubt that our present theories are in fact true, and look for other theories which approach that goal more closely. Only if one believes in an objective truth will experimental evidence contrary to the predictions “disprove” the theory. (Gordon Tullock, *The Organization of Inquiry*, p. 48)

1. Introduction

This review essay focuses on the subset of Gordon Tullock’s research that contributes to the constitutional political economy (CPE) research program. His most direct work on constitutional political economy is his joint work with James Buchanan, *The Calculus of Consent* (1962), which is widely acknowledged to be a classic work in the field. A good deal of his subsequent work also sheds light on the origins and properties of standing procedures for making and implementing public policies, although it is less explicitly “constitutional” in focus, and less recognized by other scholars working in the CPE research program.

Tullock’s other work on constitutional political economy tends to be neglected for several reasons. The most important of these is that his long-time colleague, James Buchanan, focused most of his own intellectual energy on that field for several decades, producing an impressive body of research that largely built the case for distinguishing between the “rules of the game” and “play of the games under standing rules,” which forms the conceptual basis for most work on constitutional political economy (Buchanan 1975, Brennan and Buchanan 1985). Tullock’s work on political institutions after *The Calculus of Consent* does not stress the Buchanan distinc-

¹The perspective on Tullock’s work presented here is based partly on his prolific writings and partly on numerous conversations with him in the course of several decades.

tion, nor does it explicitly address constitutional design issues, but rather analyzes rational decision-making in alternative institutional settings using tools from neoclassical economics. That body of research indirectly characterizes the effects that institutions have on behavior and that political interests have on institutions, as with his research on conflict, rent seeking, autocracy, and judicial proceedings.

Tullock's work takes for granted that the net benefit-maximizing model of rational decision-making can be used to analyze all manner of subjects, including behavior in a wide range of political and legal settings. His use of that conventional economic approach is, however, routinely unconventional and has generated many important new insights. That Tullock has applied economic analysis so broadly has attracted considerable criticism from other scholars. That he fails to use a constitutional vocabulary or stress the importance of his institutional analysis has reduced his impact on the constitutional political economy literature, narrowly construed.

This paper surveys four areas in which Gordon Tullock has made significant contributions to constitutional political economy. His first major contribution was his joint project with James Buchanan on liberal constitutional design. Although both he and Buchanan had previously written about constitutional issues, their book (1962) essentially created the rational choice approach to constitutional analysis. Three of its most widely cited chapters were principally Tullock's work, and those are analyzed below in Section 2.

The explicitly constitutional analysis in *The Calculus* was followed by a series of papers and books that focus on the use of resources in conflict, including Tullock's contributions to the anarchy literature in the early 1970s and his paper on "Efficient Rent Seeking" in 1980. Although much of the rent-seeking literature takes existing political institutions for granted, Tullock's 1980 analysis focuses attention on the rules of rent-seeking contests. At roughly the same

time, Tullock also pioneered the rational choice–based analysis of the origins and durability of dictatorships (1974, 1987). Although that work does not focus much attention on the standing procedures of policymaking within dictatorships or the constraints under which most dictators operate, it does focus on the maintenance of authority and succession, both of which have constitutional implications. Section 3 summarizes Tullock’s work on rent seeking, anarchy, and dictatorship.

Tullock has also examined the relative merits of alternative legal systems, a topic that has been neglected until fairly recently by most scholars working in the CPE tradition. Civil law provides the rules of the economic game—the economic constitution—which are largely taken for granted by both entrepreneurs and politicians. Tullock argues that both the law and the procedures for implementing that law can be more or less efficient. Section 4 provides a brief overview of his work on judicial systems. Section 5 provides a short critical assessment of Tullock’s body of constitutional research. The present essay is a somewhat more focused and critical review than Congleton (2004), which was written to honor Tullock on the occasion of his 80th birthday in 2002.

2. Tullock and *The Calculus of Consent*

Constitutional analysis is an ancient field of research. The nineteenth century constitutional debates included many discussions of alternative voting systems, the eighteenth century includes the first written constitutions adopted through more or less democratic procedures, the seventeenth century includes theories of social contract and popular sovereignty, and the sixteenth century includes important declarations of the rights of man and theories of natural law. More than fifteen hundred years earlier, Aristotle devised a classification scheme for political systems and

analyzed the relative merits of those systems by studying the constitutional histories of various Greek city states.

In spite of this long history of constitutional analysis, *The Calculus of Consent* was in many respects a pioneering work. It applied an entirely new mode of analysis to the ancient research program. The rational choice approach allowed the effects of a broad range of institutional designs to be analyzed in general, without specific concrete examples in mind. It also allowed constitutional architecture to be analyzed one piece at a time using deduction, rather than induction, in an “other things being equal” setting.

The final drafts of *The Calculus of Consent* emerged from Buchanan’s typewriter, so the “voice” of *Calculus* tends to be that of James Buchanan. Most of the chapters were joint products, but three were mainly Tullock’s work (chapters 6, 10, and 16), and there is also an appendix by Tullock.² Tullock contributions to other chapters, such as chapter 8, provide much of the neoclassical geometry of the book. Buchanan provides the philosophical counterpoint that anchors Tullock’s expected net benefit–maximizing approach in a broader intellectual context and notes limits to some of the conclusions reached through the neoclassical approach.

Much of the discussion in *the Calculus* applies to voluntary clubs and other similar organizations that draft operating rules or charters for themselves, although the volume as a whole addresses “the political organization of a free society” (p. v). Tullock’s chapters are among those most often referred to by economists and will be the main focus of the first section of this review of Tullock’s contributions to constitutional political economy.

2.1. Chapter 6: choosing among voting rules

²Tullock had written an 80-page working paper on constitutional economics toward the end of his visit to the University of Virginia in 1959, which provided the core of his contributions to *The Calculus of Consent* and helped to motivate the project.

A preliminary version of chapter 6 was written as a stand-alone paper by Tullock and circulated in the summer of 1959 as a mimeograph titled “A Preliminary Investigation of the Theory of Constitutions.” It provides an abstract analysis of the relative merits of voting rules that differ with respect to the number of the votes required to undertake collective decisions.

Tullock argues that there are two costs that need to be taken into account when ranking decision rules to be used by a group of fixed size (N). First, collective actions often impose (external) costs on persons not consulted or opposed to the actions undertaken. The extent of the external costs varies with the policy decision(s) to be made and the number (percentage) of decision-makers required to make a collective choice. For a given class of policy decisions, Tullock argues that the maximum external cost occurs when any single person can use group resources (the power of the state) as he or she likes. The lowest external cost occurs when unanimous agreement (N votes) is required. Given these plausible assessments of the maximum and minimum external cost of group or state action, Tullock simply assumes that the external cost curve (function) is monotonically decreasing in the number of votes required for collective action, starting very high and falling to zero at unanimity.

The second cost that needs to be taken into account is the cost of reaching decisions. Tullock argues that the cost of reaching group decisions on a given policy is lowest when a single person can undertake any policy and highest when unanimity is required. Tullock assumes that the decision-cost curve is monotonically increasing in the number of votes required. The total cost of alternative voting rules is simply the vertical sum of these two curves. Tullock argues that the shapes of the two cost curves vary with the policies to be chosen and that the best constitution is that which minimizes the total cost of making collective decisions for each subset of policies.

For a given activity, the fully rational individual at the time of constitutional choice will try to choose that decision-making rule which will minimize the present value of the expected costs that he must suffer. He will do so by minimizing the sum of the expected external costs and the expected decision-making costs ... [In this manner,] the individual will choose the rule which requires that K/N of the group agree when collective decisions are made. (Buchanan and Tullock 1962: 70)

The analysis is extremely straightforward and can be used to characterize either individual preferences over voting rules or social welfare-maximizing ones, according to one's interpretation of the cost curves. The analysis can be also used to characterize the best decision-making procedures for voluntary clubs, corporations, and nation states that emerge from a constitutional convention.

Given the shape of the cost curves assumed, the cost-minimizing decision rule often tends to be in the mid-range of voting rules, although not necessarily at the 50 percent point associated with majority rule. Tullock's analysis thus challenges the intuitive support that most of us growing up in contemporary democracies have for majority rule. The cost-minimizing voting rule varies with the choice to be made. No universal rule is likely to prove optimal. For decisions that are likely to have relatively large external costs, a relatively large number of votes (supermajorities) will minimize the total cost of group decisions. For decisions that are likely to have relatively small external costs, a lower threshold will minimize total costs.

Tullock's characterization of preferences over decision rules, thus, simultaneously reminds us that a variety of decisions rules are possible and provides a partial explanation for the various decision rules that we observe in practice. For example, in the United States, supermajority rules are used for amending constitutions, majority voting for selecting policies in Congress, plurality rule for selecting representatives, and minority rule for selecting military policies and many others during "emergencies." The analysis also indirectly provides a utilitarian justification for pri-

vate autonomy in areas of life in which externalities are minor—such as choosing what clothing to wear while in public and which side of a sidewalk to walk on in uncrowded public spaces.

That such a simple model can shed so much light on so many grand constitutional issues was unknown before Tullock developed his analysis. Other scholars would have used much more complicated and roundabout arguments to make similar points and would have reached far weaker conclusions. In this, chapter 6 illustrates Tullock's genius at abstraction and also the reason why his work often attracts significant criticism. Tullock often maps a variety of complex institutional issues into a single dimension in a manner that cannot be easily provided with rational choice or institutional foundations. He defends the assumed geometry with plausible intuitions about human nature and so manages to make his simple, but sophisticated, geometry seem so obvious that others cannot believe that they had not already thought of it.

The assumptions required to produce this simplicity, however, are rarely as obvious or non-problematic as Tullock's prose makes them appear. For example, the shapes (and finiteness) of Tullock's external and decision cost curves are by no means self-evident in the domain below $N/2$. In cases in which public policy decisions can be made with less than majority rule, nearly every redistributive and public goods decision will be countermanded by other sub-majorities. A libertarian might disband the government, which might be followed by a decision by an extreme central planner to bring every aspect of human life under the control of government, followed by more moderate middle grounds, and so on.

It is not clear what is "decided," if an endless series of reforms and counter-reforms emerges. Does this chaotic policy oscillation imply low decision costs and high externalities, high decision costs and low externalities, or high decision costs and high externalities? Moreo-

ver, each of these decisions might well have high external costs associated with them, but how can anyone place a number on those costs?

Stable policy decisions evidently require institutions or disciplined coalitions of sufficient size so that the policies chosen in one period are not simply countermanded in the next instant by advocates of other policies. The instability strand of the public choice literature is also based on relatively straightforward rational choice–based analysis. In Tullock’s defense, it could be noted that there is far more stability under real-world institutions than implied by the literature on instability, as Tullock noted in 1981.

Unfortunately, that defense is not entirely appropriate in the context of the *Calculus*, because it seems likely that the observed lack of minoritarian and majoritarian cycles is partly accomplished through other more complex constitutional means (Shepsle and Weingast 1981) and/or through widely shared goals and norms (Congleton 2003), neither of which can simply be taken for granted in a book about constitutions based on narrow rational choice models. Once above $N/2$, Tullock’s intuitions may be more easily defended, according to some of the more optimistic strands of the cyclic majority literature that emerged in the years after *The Calculus of Consent* was published. For example, Balasko and Crès (1997) argue that cycles tend to be rare for decision rules that require more than 53% of the votes.

Problems also emerge at the other end of the spectrum of vote thresholds for collective decision. At the extreme of unanimity, most people would also anticipate the complete absence of decisions in large groups composed of honest, myopic voters. If so, the status quo would continue forever; in which case, the neglected *status quo ante* suddenly becomes an important determinant of the optimal decision rule. Beginning with utopia, many group members would favor un-

animous agreement. Beginning with dystopia, nearly any decision rule would produce improvements.

Although the magnitude of external and decision costs are by no means as obvious as Tullock suggests, the two types of costs focused on are clearly important ones. In spite of the missing details, if decisions are to be made about decision rules, surely it must all boil down to comparisons of opportunity costs (or expected costs and benefits), regardless of the difficulties one might confront in determining them. Constitutional decisions are clearly made by persons with future interests at stake.

2.2. Chapter 8: Group size and the cost of collective decisions

The cost-minimization approach developed in chapter 6 is used to characterize the optimal size of a polity in Chapter 8. In that chapter, it is argued that the external and decision costs of collective action vary with group size, and so can be used to characterize the optimal size of a group or political community. A very nice bridging discussion on bargaining costs in markets and politics suggests that institutions can be adopted to eliminate “needless and resource-wasting higgling,” an important point that has been lost on those who believe in the strong forms of the Coase theorem.³

Chapter 8 is clearly a jointly produced chapter, as is evident in quotes from Frank Knight and the analysis of the implicit constitutional nature of individual decision-making, both hallmarks of Buchanan’s approach. The core analysis is, however, based on the Tullock cost-minimization model. The same two relevant factors, decision-making and external costs, are used to assess the relative merits of alternative group memberships.

³It bears noting that Coase had been a member of the University of Virginia’s faculty (1958–64) at the time that he wrote his most famous paper. He left Virginia to join the economics faculty of

Expanding the size of the group increases decision-making costs, which are assumed to rise with the number of group members under unanimity (and most other decision rules). The increase in decision costs is argued to vary with the types of persons included in the community. Decision costs are lower in more homogeneous groups than in more heterogeneous ones of equal size. The advantage of expanding group size is that more positive and negative externalities can be addressed through collective action. Buchanan and Tullock (1962: 113) conclude that the “the group should be extended so long as the expected costs of the spillover effects from excluded jurisdictions exceed the expected incremental costs of decision-making resulting from adding the excluded jurisdictions.”

Another possible dimension of constitutional choice is addressed in their short discussion of the advantages of federalism, decentralization, and mobility among jurisdictions. Their analytical riffs on the inter-jurisdictional effects of policy decisions anticipate research that would emerge in the next decade under the heading of fiscal federalism (Oates 1972).

Although the analysis makes it clear that there are many factors that need to be taken into account, they argue that the cost-benefit calculus can be applied to assess the relative merits of all these aspects of constitutional design, at least in principle. Given the results of chapter 6 and the discussion of chapter 8, the marginal increase in decision costs for an increase in group size varies with the decision rule applied, the homogeneity of the group, and the externality problems addressed.

As in Chapter 6, however, the implicit cost-benefit “calculus” is clearly more complicated than their prose makes it appear. For example, homogeneity does not necessarily reduce decision costs. Several strands of the rent-seeking literature would subsequently demonstrate that conflict

the University of Chicago’s law school from 1964 to 1981, at which time he retired and became an emeritus professor.

within homogeneous groups can be significant. Indeed, there are many cases in which bargaining efforts (conflict) among homogenous agents may cause the value at hand to be completely dissipated through bargaining (rent-seeking) costs (Hillman and Samet 1987; Congleton and Tollison 1999). The homogeneity required for the Buchanan and Tullock analysis of group size to go through is evidently with respect to norms that reduce conflict of this sort or goals that otherwise tend to promote agreement among the persons in the group(s) of interest.

The effects of group size are also somewhat more problematic than the prose suggests. As a group increases in size, individual efforts to secure a larger share of the gains from collective action become less effective at the margin. Rather than sitting around a table discussing alternatives, larger groups often vote on options determined by other smaller groups of representatives, who serve as agenda setters. Members of very large groups may simply cast votes on the basis of the normative merits of the policies, rather than actively pursue divisions of the pie that favor them, making agreements easier to obtain, rather than more difficult (Kliemt 1986).

Another more fundamental conundrum must also be overcome if the analysis is taken to address constitutional decision-making, rather than forming clubs or amending an existing constitution. *Clearly, the act of choosing a group size implies that there is already some preexisting group of decision-makers.* That is to say, the analysis implicitly assumes that the status quo ante includes a “natural” group of some kind that decides whether to expand or contract its membership.

However, Chapter 8, unlike chapter 6, does not propose a specific geometric representation of the constitutional decisions to be made (possibly reflecting Buchanan’s concerns), but simply outlines the factors that would be taken into account when choosing group size. Their analysis

implies that choice of decision rule, group size, and group homogeneity, are determined simultaneously at the constitutional level.

2.3. Chapter 16: Bicameralism

Chapter 16 uses models worked out in earlier chapters to analyze bicameral legislatures. The chapter assumes that bicameralism works more or less as in the United States, where majority support in both chambers is necessary for a public policy to be adopted. It demonstrates that the minimum support from voters sufficient to induce policy decisions in bicameral governments varies with the heterogeneity of voter preferences among the electoral districts used to elect representatives in the two chambers.

The minimum (implicit) electoral support for the policies adopted in bicameral systems varies from $\frac{1}{4}$ to near unanimity under the assumption that majority rule is used to elect representatives and to make decisions in each chamber. The $\frac{1}{4}$ result is similar to that developed earlier for a single representative chamber. It takes $\frac{1}{2}$ of the votes in each district to elect representatives. It takes $\frac{1}{2}$ of the members in each chamber to pass a bill, so $\frac{1}{2} \times \frac{1}{2}$ equals $\frac{1}{4}$ of all voters, the minimum (implicit) degree of voter support sufficient to cause new legislation to be adopted in a bicameral system.

In cases in which voter interests differ substantially among districts, bicameralism can limit policy choices to those with unanimous support among voters. If, for example, there are three types of voters and two share control of the first chamber and the other group dominates the second chamber, then only bills that advance the interests of all three groups can be adopted. Consequently, in cases in which the pivotal members of the two chambers represent different interests, bicameralism is likely to require (implicit) support levels that are substantially greater

than minimal level ($\frac{1}{4}$) for laws to be adopted. The less uniformly voters are distributed, the more likely it is that bicameral legislatures produce policies with supermajority support.

The constitutional choice examined in chapter 16 is implicitly between unicameral and bicameral systems, although the analysis could be extended to analyze other multi-cameral systems of government, as in the various estate-based parliaments in Europe prior to 1800. Insofar as those systems represented quite different interests, the Buchanan and Tullock analysis would predict very high decision costs, which would tend to favor royal authority. It is also noted briefly toward the end of the chapter that a directly elected president can be thought of as a third chamber of government.

Overall, their analysis implies that decision costs within bicameral systems can vary from a little above those associated with single-chamber legislatures to much greater levels depending on the extent to which common interests are represented in the two chambers. Together with the analysis of chapters 6 and 15, chapter 16 demonstrates that a typical individual's ideal governmental architecture, choice of electoral rules, basis of representation, degree of representation, and rules used within the representative assembly for making decisions can all be analyzed as efforts to minimize collective decision-making costs.⁴

Nonetheless, chapter 16 makes few universal claims, but rather demonstrates that bicameralism is likely to have direct effects on policy outcomes that are relevant for those choosing among constitutional designs.

⁴The chapter also notes, almost in passing, that Riker (1962)'s famous minimum winning coalition tends not to be an efficiently sized coalition, because every coalition member can threaten to end the coalition, which drives up bargaining costs. Instead, coalitions should be larger than that minimal coalition. They suggest that marginal bargaining costs fall faster than member coalitional rewards do. The chapter also distinguishes between veto power and agenda control, ideas that would play a role in the social choice and institutionally induced equilibrium literatures in the 1970s and 1980s.

2.4. Assessing *The Calculus of Consent*

Tullock's contributions to the joint enterprise were largely consequences of his fearless application of expected net benefit–maximization model of rational decision-making. His gift for simplification allowed him to frame questions in tractable ways that shed considerable light on the kinds of factors that “should” be taken into account by rational men and women facing constitutional choices. Buchanan moderates Tullock's genius for simplification through his nearly opposite interest in fundamentals and hesitation to make sweeping generalizations about much more than methodological issues.

The *Calculus of Consent* was clearly a major advance in constitutional theory. Buchanan and Tullock demonstrate that the design of standing procedures for making collective decisions is a complex problem, but one that is amenable to analysis using rational-choice models. Their analysis covers enormous ground and foreshadows much of the future rational choice–based analysis of constitutions, in a manner not so different from that which Aristotle's *Politics* can be said to have foreshadowed much of the political and historical analysis of constitutions that took place in past 2,300 years.

A pioneering book or chapter often raises more questions than it directly answers, because a broad new methodology or approach can only be applied to a subset of the issues that potentially can be analyzed in a single book. How well such first efforts hold up in the long run is largely determined by the work of subsequent scholars, who address the unanswered questions and apply the approach to neglected cases. That contemporary research in constitutional political economy routinely cites *The Calculus of Consent* suggests that the rational choice approach and many of

its conclusions continue to be widely accepted as useful points of departure for constitutional research.⁵

Although a classic work in constitutional political economy, there are many points at which their analysis can be criticized, as noted above. Among the most serious challenges is that national constitutions are rarely designed whole cloth in the manner that Buchanan and Tullock seem to imagine. Most contemporary constitutions are amended versions of earlier ones. This suggests that the topic of constitutional reform, which is dealt with only in passing in chapter 15, may be more important for a positive theory of constitutions than it seemed to Buchanan and Tullock at the time *Calculus* was written (Congleton 2011). It bears noting, however, that the *Calculus* also sheds light on constitutional reform, insofar as the individual chapters can be used to analyze the relative merits of a broad range of possible amendments.

3. Anarchy, conflict, and the rules of rent-seeking contests

Tullock's other work on constitutional issues is not as directly "constitutional" as *The Calculus of Consent* and is examined more briefly in the rest of this paper. His other contributions to CPE were consequences of efforts to extend the rational-choice approach to topics thought to be outside the domain of economics at the time that he wrote. As part of that intellectual enterprise, Tullock analyzes behavior in a wide range of institutional settings, and by so doing, his work casts a good deal of indirect light on the properties and importance of political and legal institutions. An important example of that indirect illumination is his work on games of conflict in settings of anarchy and within contemporary democratic politics.

⁵At the time of this writing, Google Scholar notes that more than 5,000 academic papers and books cite *Calculus of Consent*. It is interesting to note that this process of extension, refinement, and deepening of an initial analysis is already under way in chapter 8, in that some of the conclusions of chapter 6 are revised somewhat by chapter 8.

Take a rational individual and place him in a setting that includes other individuals in possession of scarce resources, and most economists will predict the emergence of trade. Economists are all familiar with the Edgeworth box, which provides a convincing illustration of mutual gains in such settings. In contrast to most economists, Tullock would be inclined to predict conflict.

In the absence of well-enforced rights, the strong may simply take the initial “endowments” of the weak.

Economics has traditionally studied the benefits of cooperation. Political science is beginning to move in that direction. Although I would not quarrel with the desirability of such studies, the fact remains that conflict is also important. **In general conflict uses resources, hence it is socially inefficient, but entering into the conflict may be individually rational for one or both parties.** ... The **social dilemma**, then, is that we would always be better off collectively if we could avoid playing this kind of negative sum game, but individuals may make gains by **forcing such a game** on the rest of us. (Tullock 1974: 2)

The economist’s prediction that unrealized gains will be realized through voluntary exchange is implicitly grounded on institutional assumptions. Exchange is likely to be the main method for “redistributing” resources only in settings in which avenues for conflict are very limited or unrewarding.

Few economists would disagree with Tullock’s claims about wasteful conflict in a setting of anarchy, once reminded of the importance of well-enforced property rights. However, Tullock argues that wasteful conflict also tends to emerge in settings in which rights are initially well understood and enforced. In ordinary markets, there is conflict over the division of gains to trade and also by firms to increase their market shares at the expense of others through advertising and product innovation. In settled polities, conflict is evident in the efforts of opposing special interest groups to persuade legislatures to enact particular rules and regulations and in the efforts of opposing candidates to win elective office. In less lawful or settled settings, conflict may imply

widespread theft and fraud or bombs exploding and battles fought. Tullock reminds us that conflict is endemic to human existence.

Conflict is to be expected in **all situations** in which transfers or redistribution occur, and in all situations in which problems of distribution arise. In general, it is rational for individuals to invest resources to either increase the transfers that they will receive or prevent redistributions away from them. Thus, any transactions involving distribution will lead to directly opposing resource investments and so to conflict by our definition. (Tullock 1974: 6)

That losses exist in settings without government and in settings with governments, within both markets and normal legal procedures demonstrates the importance of conflict as a subject of research in social science. There is thus a sense in which Tullock's somewhat grim analysis suggests that institutions may be relatively unimportant, insofar as losses from conflict always exist.

There are institutions that will reduce the likelihood of being forced into such a game, but these institutions cost resources, too. . . [However] **the problem is unavoidable**—at least in the present state of knowledge. Pretending that it does not exist is likely to make us worse off than conceding its existence and taking rational precautions. (Tullock 1974: 2)

Tullock and other theorists usually analyze conflict in given circumstances, because it simplifies the analysis of particular forms of conflict. Such analyses shed relatively little light on the importance of “the rules of the game” for determining the magnitude, type, and losses associated with conflict.

Tullock pioneered the use of elementary game theory to model the use of resources in conflict. Tullock's main interest in conflict was not institutions, but rather to demonstrate that conflict is an important part of the normal state of human affairs, whether bound by institutions or not. As conflict is analyzed in a variety of settings, however, it became clear that institutions (the rules of the game) affect both the extent of investments in games of conflict, the nature of those investments, and the losses associated with them.

With such institutional effects in mind, Tullock often argues that losses from conflict can be reduced through thoughtful institutional design, although they cannot be entirely eliminated.

Obviously, as a good social policy, we should try to avoid having games that are likely to lead to this kind of waste. Again, we should try to arrange that the payoff to further investment in resources is comparatively low, or, in other words, that the cost curve [of rent seeking] points sharply upward. (Tullock 1980a: 109)

Changes in the “rules of the game” affect the investments and the modes of conflict, and so in this manner constitutional reforms potentially can replace relatively wasteful contests with less wasteful ones. This is a point that is admittedly more often emphasized in my own work than in Tullock’s, but it is clearly implied by his analysis of rent-seeking contests and much of the subsequent research inspired by his results.⁶

4. Conflict, autocracy, and dynastic secession

The historical importance of authoritarian regimes, together with the absence of research by other public choice scholars, induced Tullock to devote substantial time and energy to analyzing that very common form of government. His analysis of autocracy is nearly ardently non-institutional. That is to say, rather than focus attention on the standing decision-making procedures within autocratic regimes, he simply assumes that autocracy is one-man rule. To stay in office, the autocrat merely has to avoid popular revolts and palace coups and maintain control over the army. In these respects, Tullock’s analysis bears more than a passing resemblance to that re-

⁶ See Congleton, Hillman, and Konrad (2008) for an extensive overview of research that shows how the “rules of the game” (alternative contest success functions) affect rent-seeking losses. It is interesting to note that much of the rent-seeking literature continues to only indirectly shed light on the effects of institutions, rather than directly illuminate them.

cently developed by Acemoglu and Robinson (2005), although Tullock's work on autocracy is mentioned only in passing in their widely cited research.

Tullock argues that autocratic government often emerges from conflict, and he further suggests that dynastic forms of autocracy are the most likely form of autocracy to be sustained through time. In this one might conclude that Tullock agrees with Hobbes (1651), who believes unrestricted governments are necessary to avoid losses associated with anarchy, rather than with Buchanan (1974), who is more optimistic about the potential of constitutional design to limit the state to productive activities. However, neither turns out to be the case.

Tullock's theory of the origin of government and his theory of autocratic secession are based on conquest and domination, rather than social contract, in spite of his contributions to *the Calculus of Consent*.

Let us make the simplest assumption of transition conditions from the jungle to one where there is an enforcement apparatus. Assume, then, a jungle in which there are some bands—like prides of lions—and that **one of these bands succeeds in destroying or enslaving all of the others, and establishes firm control.**

This control would, firstly, lead to a considerable change in the income distribution in the jungle in that **the members of the winning band would have much larger incomes and the losers would have lower incomes.** It would be rational for the stronger members of the winning band to permit sizable improvements in the incomes of the weaker members at the expense of nonmembers of the band, simply in order to retain the support of these weak members. **The cohesion of the new government would depend on suitable reward for all members.** (Tullock 1972: 70)

In his analysis of an autocrat or junta's ability to hold onto power once acquired, Tullock stresses the need for control over the military and avoiding a palace coup. In contrast to Acemoglu and Robinson's work, Tullock argues that the leader of such a government, the autocrat or supreme council, can fairly easily avoid a popular revolt, in part for Olsonian (1965) reasons.

Tullock argues that popular uprisings are far more difficult to organize than are palace coups, because the individual advantages of participation in a popular uprising are very small relative to those obtained by members of a palace coup, although the aggregate benefits may be much larger. Moreover, being larger enterprises, revolutionary movements are also much easier to discover and to punish participation in Tullock (1987: ch. 3; 1965: 54.)

Preventing **overthrow by the common people is, in general, quite easy** if the ruler is only willing to repress vigorously and to offer large rewards for information about conspiracies against him. (Tullock 1987: 68)

In contrast, the large personal advantages that small groups of conspirators expect to realize if successful make palace coups difficult to eliminate completely; and consequently, the tenure of a particular dictator is far more likely to end because of a palace coup than a popular revolt.

Tullock also discusses a variety of other standing policies through which dictators can decrease the probability of coup d'état by in-house rivals, such as using commissions of various kinds to make narrow policy decisions and oversee their implementation. Such governmental institutions, by increasing the costs of conspiracy, reduce the probability of a coup attempt being organized. In addition, laws against treason will be aggressively enforced, and rewards for providing the ruler(s) with creditable evidence of conspiracies will be high. Potential rivals will be exiled or rotated in a manner that reduces opportunities for acquiring support among elites (Tullock 1987: ch. 1; and Tullock 1974: ch. 7).

Tullock's also analyzes the problems that autocrats face toward the end of their lives in cases in which they manage to hold onto office. The likelihood of coup d'états and assassination near the end of an autocrat's life, he argues, can often be reduced by passing the autocrat's authority on to his or her children. Tullock thus accounts for the emergence of dynastic systems, not through bonds of family, customs, or laws of inheritance, which would be plausible explana-

tions in many cases, but as a possible mechanism for reducing the risk of assassination by potential successors. He notes that allowing children (as with oldest sons in Europe) to inherit the throne does not eliminate assassination risks, but does reduce them.

[T]he father has greater confidence in his son and that in turn means that the son has a much weaker motive for murdering his father than would the designated successor if the designated successor was simply a high official of the regime. (Tullock 1987: 164)

Dynastic systems also reduce the likelihood and cost of secession struggles, because the son will subsequently employ many of his father's advisors.

Although Tullock's analysis of autocracy focuses for the most part on the difficulty of maintaining control, the fact that common solutions to these problems exist sheds considerable light on some of the core institutions of autocracy. History supports many of his implicit institutional predictions, insofar as autocracies and dynasties have been far more common than democracies throughout recorded history, and successful democratic uprisings have been few and far between. The common interests of autocrats imply that the institutions of autocratic governance are far more durable than a typical autocrat.

As usual, there are many bold simplifying assumptions that allow Tullock to make progress on his analysis of dictatorship. For example, relatively little attention is given to the purposes advanced by the military, advisory councils, and parliaments—all of which increase the probability of a palace coup. If these institutions were not necessary for governance, a dictator could avoid coups by simply disbanding the army, advisory councils, and parliaments. The fact that autocrats do not do so implies that dictators face other constraints not analyzed and/or that these decision-making bodies play important roles in autocratic governance. Instead, many of the particular institutions of autocratic governance are treated as historical accidents.

With respect to democratic transitions, which he acknowledges do occasionally happen in spite of the best efforts of autocrats, Tullock notes (although he does not emphasize) that the existence of parliaments in a subset of dictatorships provides a possible avenue through which democratic states can emerge: namely through a parliamentary overthrow of the dictatorship. That is to say, an elected parliament or state assembly may depose a king or appointed governor. If the parliamentary institutions are sufficiently stable and the members broadly elected, the result may be democracy, rather than an oligarchy (Tullock 1987: 53–68).

5. The effectiveness of standing procedures for enforcing the law

Assuring law and order are among the primary responsibilities of the state according to most normative political theories of government developed in the past four or five centuries. The ability to promulgate and enforce the law is often used as a defining characteristic of government. An unenforced law or public policy will clearly have less effect on behavior than an enforced one. The civil law (property rights) also serves as an important set of constraints that limit the policies that a government can create and the cost of the services that it provides. In all these respects, the civil law and judiciary are clearly among the core institutions of governance.

Nonetheless, both civil law and the judiciary are normally left outside the CPE research program for various reasons, some philosophical, some ideological, and some methodological. The law may be regarded to be supra-constitutional, grounded in pre-existing natural or divine rights, rather than human-made, and so properly beyond the scope of constitutional analysis. Alternatively, the law may be regarded as a subject for legal scholars that is beyond the proper domain of political and economic analysis. The judiciary may be regarded as simply another governmental bureaucracy of no special interest.

As a skeptic by orientation and a lawyer by training, Tullock lacked these inhibitions. His professional interest in the law and willingness to use benefit-cost analysis to analyze any subject in social science, naturally led him to employ it to analyze how laws should be chosen and enforced. For example, in an early piece coauthored with Warren Schwartz, he argues that:

The efficiency of the legal system is ... a function both of the definition of rights and of the means employed to invoke governmental force in support of them. A great deal of scholarly attention has been paid recently to the efficiency of various assignments of rights. Some beginnings have also been made in assessing the efficiency of different legal proceedings. What has not been done, however, is to view the **system as a whole**. . (Schwartz and Tullock 1975: 75)

Parties contemplating a contract or legislatures contemplating the enactment of a statute (if acting rationally) would seek to minimize the sum of these costs [those of breach, enforcement, and enforcement error] for any given substantive prescription. For each alternative regime under consideration the costs thus minimized would be compared with the benefits in efficiency enhancement and the regime offering the greatest net benefits chosen. (Schwartz and Tullock 1975: 77)

Tullock's subsequent work, however, focused for the most part on enforcement problems, rather than on alternative rights-enforcement systems that might be imagined.

Law enforcement normally involves formal legal proceedings to determine whether the person suspected of violating someone else's rights actually did so, and in some cases whether such a transgression occurred or not.⁷ Tullock reminds us that errors can be made during all phases of law enforcement. Not all criminals are caught, not all who are caught are criminals, not all of the

⁷ "The problem of determining what actually happened is one of the court's duties and the only one we are discussing now. A historic reconstruction, which is what we are now talking about, is a difficult task for a variety of reasons. One is that witnesses lie and in lawsuits, there usually are at least some witnesses who have a strong motive to lie. They may also simply be mistaken. Another reason is that many things which happen that are of interest to the court leave no physical traces and, indeed, may leave no traces on the minds of the parties ... different cases have different amounts of evidence of varying quality available, and ... this evidence leads us to varying probabilities of reaching the correct decision." (Tullock 1980b: 25–26)

guilty parties caught are punished, and not all innocent parties are released. He argues that mistakes are made at every stage of the policing and judicial processes.⁸

With such errors in mind, Tullock analyzes the accuracy of the existing U.S. institutions at determining fault or guilt. He argues that the available evidence implies that the U.S. courts make errors (wrongly determine guilt or innocence) in between 10% and 50% of the cases that they decide (Tullock 1980b: 33). He also attempts to assess the overall performance of the existing U.S. system of justice relative to alternative procedures for identifying criminals and other persons at fault.

Perhaps surprisingly given his legal training, Tullock argues that the system of justice used in the United States can be improved at relatively little cost. He suggests that the continental judicial system widely employed in Europe produces more accurate verdicts at a lower cost (Tullock 1980: ch. 6). In the continental system, panels of judges assess guilt or innocence and mete out penalties. European trials are organized directly by the judges, rather than produced by conflict between legal teams for the votes of jury members. Accuracy could be further increased, he suggests, if the training of judges included a “good background in statistics, economics, ideas of administrative efficiency, etc.” (Tullock 1980b: 204).

It bears noting that such institutional questions are more important for a political economist than for a legal or economic scholar whose work focuses on a single society, which probably explains why institutional aspects of law enforcement were given little attention in the early law and economics literature. The mainstream U.S. literature largely takes U.S. institutions as given, as, for example, Becker (1968) or Posner (1972) do. By focusing attention on the errors that can

⁸ “Most crimes are not simply the preliminary to punishment for the criminals, most people who are in prison have not had anything that we would recognize as a trial, and administrative decisions keep people in prison and (in effect) extend their sentence.” (Tullock 1971: 169)

emerge in the U.S. judicial system, Tullock is essentially forced to explore how alternative institutions might improve judicial accuracy. Without such an analysis, his conclusions about errors would be a mere curiosity.

His early discussion of rights-enforcement systems and his analysis of juries, adversarial legal proceedings, and that the procedures for choosing judges are all clearly significant contributions to the CPE research program. As Tullock argues, improving the accuracy of court proceedings can reduce the social cost of illegal activities by better targeting sanctions at transgressors, which tends to reduce both crimes and torts, and by encouraging greater efforts to settle out of court, tends to reduce court costs (Tullock 1980b: 73–74; Good and Tullock 1984).

6. Conclusions: An accidental constitutional political economist?

Tullock believes that (fairly) narrow self-interest can account for a wide range of human behavior once individual interests are characterized for the institutional settings of interest. This approach allows him to apply the net-benefit-maximizing model of man to an enormous range of choice settings, including many that more orthodox economists and political scientists would instinctively avoid. By analyzing behavior in a broad range of institutional settings, Tullock's research indirectly sheds a great deal of light on the importance and effects of institutions. It is the institutional settings that determine the specific costs and benefits that motivate rational decisionmakers. And, moreover, institutions are often adopted precisely because of their anticipated effects on human behavior.

That Tullock neglects many issues to simplify his analysis is, perhaps surprisingly, part of the reason that his work has influenced so much CPE research. Those who are skeptical of Tullock's conclusions naturally want to examine his assumptions more carefully. Those who support his conclusions, but see weaknesses in the arguments also focus on his assumptions, but to shore

them up, rather than push them down. As a consequence, a good deal of research on anarchy, rent seeking, autocracy, and legal institutions has been undertaken by both critics and fellow travelers, who focus on institutional issues and publish in the constitutional political economy literature.

In many cases, Tullock's work raises questions that require additional institutional analysis. For example, his theory of autocrats as service-providing income-maximizers was worked out in the first anarchy volume (Tullock 1972) and further developed in the *Social Dilemma* (Tullock 1974), but stimulated additional research by Ronald Wintrobe (1990) and Mancur Olson (1993) nearly two decades later. Tullock's contest success function developed for his analysis of trials and subsequently applied in his work on efficient rent seeking (1980) has been applied and extended in well over a thousand papers on rent seeking. Another striking example is Tullock's "Why So Much Stability" essay (1981), which helped launch the institutionally induced equilibrium strand of constitutional analysis.

Although Tullock's work is motivated, in large part, by his efforts to make sense of a broad range of historic and contemporary puzzles that have come to his attention over the course of a lifetime of rapid and extensive reading, his research addresses normative as well as positive issues. His normative approach is utilitarian and comparative, and for the most part, his normative conclusions follow closely from his positive analyses.

With respect to constitutional issues, he reasons that if he can show that the *average* person is better off under institution X than under institution Y, then Y is a better institution than X. In such cases, Y is approximately Pareto superior to X. Thus, a society with a stable criminal and civil law is better off than one lacking them (Tullock 1971: 2). A society with a more accurate judiciary is better off than one with a less accurate judicial process (Tullock 1980b: ch. 6). A so-

ciety with a more efficient collective decision rule is better off than one that fails to minimize decision costs (Buchanan and Tullock 1962: ch. 6). A society that uses the “demand-revealing process” to make collective decisions would be better off than one relying on majority rule (Tideman and Tullock 1976). A society that reduces rent-seeking losses is better off than one that fails to address this problem (Tullock: 1980).

As argued by many working in the constitutional research program—from Plato and Aristotle to the present—Tullock argues that thoughtful institutional design can improve the efficiency of the judicial system, reduce the losses from conflict, and produce better public policies, although it cannot eliminate all losses or mistakes. Tullock never claims that institutional arrangement X, Y, or Z is the best possible arrangement—only that existing arrangements can be improved. Indeed, he argues that utopian approaches may impede useful reforms (Tullock 1974: 140).

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