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The Calculus of Consent: 50th Anniversary

Introduction

James M. Buchanan and Gordon Tullock wrote *The Calculus of Consent* fifty years ago, in 1962. We write this article to celebrate the occasion. The three of us were graduate students at George Mason University when Buchanan and Tullock were actively participating in seminars and workshops in the early 2000s.

The book was novel in the sense that it applied economic tools—and, more specifically, microeconomic tools—to the study of collective decision-making. They were not the first ones in this endeavor. The Swedish economist Knut Wicksell had already attempted to apply economics to politics, without much success. But his work inspired James Buchanan. *Calculus* extended the assumptions of economic theory about individuals in the marketplace to political actors. Among their numerous contributions, Buchanan and Tullock argued that from an economic standpoint majority rule was not "the best" criterion to make collective decisions. Every decision-making rule generates costs. They proposed the unanimity rule as an ideal, especially when it came to deciding the "constitutional rule."

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In 1964 Buchanan wrote the article "What Should Economists Do?"[1] In that article he reflects on Adam Smith's idea that human beings have a natural tendency to trade. For Buchanan, the main task of economists should be precisely the study of trade and exchange in different contexts, and *The Calculus of Consent* does exactly that: it looks at the political sphere and pays attention to how trade occurs. For this reason, Buchanan and Tullock's analysis is often called "the study of politics as exchange." In 1986, the Nobel Prize was awarded to James Buchanan "for his development of the contractual and constitutional bases for the theory of economic and political decision-making." One wonders why Tullock was left out.

James Buchanan and Gordon Tullock have been exemplary to many economists, both because of their innovative contributions, and also because of their passion and love for what they studied. Our article presents the main arguments in the book, part by part, and then briefly presents some reflections on how the arguments in the book relate to political economy, constitutional economics, institutional economics, and development economics.

[1]James M. Buchanan, "What Should Economists Do?" *Southern Economic Journal,* 30 (Jan 1964): 213-22.

Laissez-Faire, No. 36-37 (Marzo-Sept 2012): 88-96

The Main Ideas of *The Calculus*[2]

Part I

The purpose of Part I of *The Calculus of Consent* is to ensure that readers all embark on the same train of intellectual discovery. Buchanan and Tullock carefully outline in the first four chapters a few key parameters within which they frame their arguments. Charles Rowley, in his introductory comments, refers to these parameters as "hand grenades" (p. xi). This description is quite apt, as the authors engage in a creative destruction that breaks down old accepted notions of romantic government, and use the first part of their book to clear the field for the insights to come in later chapters.

Buchanan and Tullock propose the goal of their work as defining not what "*the* State or *a* State actually is, but ... what *we think* a State ought to be" (p. 3, italics in original). They are careful to distinguish their approach to the political realm as micro-oriented, positing that groups do not make decisions, individuals do. Diverse individuals making choices based on self-interest and their own particular preferences do not always arrive at a group decision reflecting the choice of every individual. Universal consensus is recognized as an ideal standard, superior to majority rule, but also more costly. This issue brings to light the consent issue: Does an individual consent to a group decision that does not reflect his choice?

The authors build on methodological individualism and reject an "organic interpretation of collective activity" (p. 11). As such they discard notions of the general will of the people, as well as class distinctions and theories which involve exploitation of a ruled by a ruling class. The authors point out that "public interest" as a concept is faulty; only separate interests of private individuals are expressed through the political mechanism. As for government, it is seen as "nothing more than a set of processes, the machine, which allows such collective action to take place" (p. 13).

Buchanan and Tullock frame the political sphere as a type of market where exchanges take place between individuals seeking to realize separate goals. This concept of politics as exchange is absolutely revolutionary. Prior political theory was fundamentally rooted in the idea of political actors who sought the common good or acted in the "public interest." However, Buchanan and Tullock, having dismissed all notions of the existence of a public interest, instead propose that political behavior consists of voluntary exchanges between individual political actors. As with any voluntary exchange, it is not assumed that one actor succeeds at the expense of another, but that both parties to the exchange benefit. Buchanan and Tullock propose that the political sphere is marked by positive-sum exchange rather than conflict by individuals who, while participating in a collective decision process, are only seeking to maximize their own utility.

Part I ends with a brief but important discussion of rationality. In a discussion of rank-order and transitivity as applied to individual decision making, the authors explain the basics of rationality. An individual makes a choice given his own personal preferences and goals. A successful choice propels the individual toward his

[2]Page references to *The Calculus of Consent* will be provided in parentheses in the main text, and will be to the Liberty Fund edition, published as vol. 2 of *The Selected Works of Gordon Tullock* (Indianapolis: Liberty Fund, 2004).

goal, an unsuccessful choice does not. Buchanan and Tullock explain that when individual choice is aggregated by a collective decision process, the link between action and result is unclear. As they point out, "[n]o longer is there the one-to-one correspondence between individual choice and final action" (p. 35). Because there is no precise relationship between the two, behavior tends to be less rational in the collective.[3]

Part II

In Part II of *The Calculus*, Buchanan and Tullock seek to define the realm of social choice. Set against a backdrop of methodological individualism and rational actors engaged in political exchange, they begin by explaining the specific circumstances under which an individual selects his decision-making process. The authors propose that the determining factor rests with the externalities of the decision process:

> The choice between voluntary action, individual or co-operative, and political action, which must be collective, rests on the relative costs of organizing decisions, on the relative *costs of social interdependence* (p. 46, italics in original).

In essence, an individual compares the costs of private decision-making with the costs that he expects to be imposed upon him by collective decision-making, and chooses the less costly method.

After defining which decisions might fall under which type of decision-making rules, Buchanan and Tullock set out to explain how a society might select a system of decision rules, or a constitution. They examine the costs associated with different types of decision rules and the impact of decisions made under the different rules upon the individual actor. Using two extreme cases, where either one individual is able to use the process to impose costs upon a group or where the entire group must agree upon a course of action, the authors illustrate the idea that there is no optimal rule for every situation. While a unanimity rule provides the greatest protection for an individual, such a rule also imposes great costs:

> 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 (p. 67, italics in original).

Buchanan and Tullock are explicit about the trade-off between the protection afforded by a more inclusive rule and the lower costs of a less inclusive rule. Interestingly, while the authors propose it is rational to have a constitution defining the decision-making rules, they argue that it is not obvious that a majority rule system is implied by their analysis. Instead they propose that "51 per cent of the voting population would not seem to be much preferable to 49 per cent" (p. 77).

Buchanan and Tullock indicate that the unanimity rule is the only rule that can achieve a Pareto-optimal result, and as such, is decidedly superior. They concede, however, that reaching decisions under unanimous decision rules is very costly. Both at the time of writing and today, the majority rule retains tremendous popularity. However, the authors say that majority rule has value only so far as it is an imperfect compromise where unanimous agreement would be too costly to obtain.

[3]See also James Buchanan, "Social Choice, Democracy, and Free Markets," *Journal of Political Economy*, 62 (April 1954): 114-23.

Buchanan and Tullock elaborate on the various costs associated with collective decision-making. They acknowledge that even purely private decisions involve some cost to determine an optimal choice. These costs remain for the individuals participating in collective decisions, but also include bargaining costs and costs related to group size and diversity. Larger groups and heterogeneous groups will tend to have higher bargaining costs as they are more likely to lack consensus on fundamental issues.

Part III

The third part of *The Calculus* presents the analysis of decision-making rules. Buchanan and Tullock argue that "[a]ny rule must be analyzed in terms of the results it will produce, not on a single issue, but on the whole set of issues extending over a period of conceptually finite length (p. 116).

The analysis starts by stating that votes have economic value (otherwise, "'corruption' would be impossible," p. 117). If votes have economic value, they represent the "purchasing power" of a voter, and a market will tend to emerge. The participant in political decisions, therefore, follows economic motives.

Buchanan and Tullock analyze majority rule in great detail. One of the problems with it is that it can create negative-sum games. This means that the majority can use the rule to impose costs on the minority. It can make some individuals worse off as a consequence of the decision process driven by the preferences of the majority.

If the intensity of preferences varies among voters, then trade is possible:

> Potentially, the voter should enter into such bargains until the marginal "cost" of voting for something of which he disapproves but about which his feelings are weak exactly matches the expected marginal benefit of the vote or votes secured in return support for issues in which he is more interested (p. 141).

Trade could occur in the form of side payments or in the form of "logrolling" (votes exchange: *I vote for your preferable option if you vote for mine*). This solution can be Pareto efficient when all the voters participate in the decision. Logrolling takes place frequently in Western democracies. In spite of being Pareto efficient, logrolling can nevertheless lead to overspending: "Each individual in the group would be behaving quite rationally, but the outcome would be irrational" (p. 136).

Buchanan and Tullock propose unanimity to decide on the fundamental rule: the constitutional rule, or "the contract." Unanimity is the only decision rule that does not allow the exploitation of the minority by the majority, or vice-versa. It is the only rule that guarantees a symmetric allocation of the gains (or costs) among the individuals who participate in the decision process. Unanimity does not need to be applied to any single decision by the members of a social group. Day-to-day decisions can be taken by majority rule, qualified majority rule, etc., as long as the way these decisions are taken is consistent with the fundamental constitutional rule everybody has agreed upon unanimously. Unanimous agreement can emerge when trade is possible.

A powerful message that Part III of the *Calculus* conveys is:

> ... without side payments, there is nothing in any particular voting rule to insure that collective decisions will move the group to the Pareto-optimality surface or that such decisions will keep the group on the

> surface if it is once attained (p. 181).

> To make normative statements concerning whether or not government undertake “too much” or “too little” activity seems to be rather wasted effort unless one is prepared to suggest some possible modification in the organizational rules through which decisions are made, aside, of course, from the purely propagandist and nonscientific effect of such pronouncements (p. 201).

Part IV

Part IV of *The Calculus* discusses “democratic ethics and economic efficiency.” Buchanan and Tullock begin with a review of their methodology: positive economics, rather than normative ethics. Dismissing claims that their theory is pessimistic about human nature, they point out that it is actually optimistic, as it views politics as exchange, rather than conflict. The chapter continues with a discussion of negative externalities to free exchanges. The authors conclude that, using a cost-benefit analysis (rather than morality), there are instances when collective action might rationally be used to correct market failures. They also discuss direct vote-trading (as opposed to the indirect vote-trading of logrolling or legislative coalitions) from this same perspective.

In regard to special interests, pressure groups, and the constitution, the authors point out that there is an inverse relationship between the strength of pressure groups and the generality of legislation, and a self-reinforcing spiral: as pressure groups gain power, legislation becomes increasingly discriminatory, and as legislation becomes decreasingly general, pressure groups gain in power. In sum, special interests exploit the lack of a consumption-payment link, to advance the interests of their members (special interests) over the general (or public interest). The authors lament the early 20th century rise of special interest groups, which seek to profit from the extended range of collective action.

At the end, the book moves to philosophical considerations (treated as always from an economic perspective), as the authors discuss “the politics of the good society.” Eschewing romantic visions of government, yet tying in with their 18th century Enlightenment roots, the authors summarize the central question of the book: *viz*. whether it is possible to extend Adam Smith’s invisible hand from economics to politics.

> Can the pursuit of individual self-interest be turned to good account in politics as well as in economics? We have tried to outline the sort of calculus that the individual must undergo when he considers this question. We have discussed the formation of organization rules that might result from such a rational calculus (pp. 287-99).

They conclude that “something closely akin to constitutional democracy as we know it would tend to emerge from rational individual calculus” (p. 288).

How did *The Calculus* move Political Analysis Forward?

The strength of Buchanan and Tullock’s methodological contribution to politics lay in this: Economics is a positive science about means-ends relationships. It cannot give us the ends. By the same token, while traditional philosophy and political theory are silent on the questions of means, they do give us ends. The problem with pre-*Calculus* political analysis was that it utterly disregarded means, because it lived in a normative world (which may be a polite way of saying a fantasy world). Reality was dismissed, as "ought" became "can." Buchanan and Tullock move us forward, by offering an analysis of the world as it actually operates. We do see one shortcoming, as this assay is still sanguine about knowledge. Indeed, even if rational individuals think the government can correct market failure, there is a whole slew of difficulties with this argument. There is also a vast literature that questions the possibility that government interference will actually improve over (alleged) market failure: from Bastiat's seminal "what is seen and what is not seen" to Mises's dynamics of intervention, and from the Austrian knowledge problem to Demsetz's "Nirvana Fallacy." Surely the authors are aware of this. But *Calculus* is still heavy on Chicago, and light on Vienna. Its brilliant and ground-breaking insights can nonetheless use refining through the "Ikeda synthesis" of Vienna and Virginia, of the incentive problem and the knowledge problem.[4]

We wonder if, in some senses, *Calculus* goes too far in its economic analysis of the world, as it ends up sidestepping important normative considerations. For example, the analysis of pressure groups is spot-on (and somewhat depressing): the authors lament the rise of pressure groups in the first half of the 20th century, and the growth of government involvement to almost one third of the economy. One wonders how they feel about the growth of pressure groups in the second half of the 20th century ... The authors do express hope for change:

> ... we can also be somewhat optimistic, over the long run, regarding the prospects for securing some genuine improvements in political organization. If, in fact, the organization of special interests has advanced to the point at which no one interest can expect, in the long run, to secure differential advantage, the way may be open for some changes in the organizational rules themselves (p. 276).

Alas, "[i]t seems doubtful that American democracy has as yet reached this point of mutual recognition of the advantages to be secured from the requisite constitutional changes" (*ibid*.). Ultimately the hope for improvement

> ... must lie in the mutual consent of the special interests themselves for constitutional changes which will act so as to reduce the excessive costs that discriminatory legislation imposes on all groups over time .... It seems sheer folly to expect that the interest groups will, unilaterally and independently, exercise sufficient self-restraint, given existing rules. To expect them to do so amounts to expecting them to act contrary to their *raison d'être* (pp. 276-77).

It would seem that self-interest is a necessary but not sufficient condition for constitutional change. We are left with a need, expressed elsewhere by Buchanan, for a "genuine 'constitutional attitude'" that will trump "pragmatic, short-run utilitarian" considerations.[5]

We are still left with the problem of exploitation, as we examine the politics of the good society. What if a majority considers it rational to exploit a minority? To be sure, Buchanan and Tullock grappled with this problem earlier in the book (Chapter 4). Buchanan and Tullock ask:

[4] Sanford Ikeda, "How Compatible are Public Choice and Austrian Political Economy?" *Review of Austrian Economics*, 16 (2003): 63-75.

[5] James Buchanan, "Constitutional Restrictions on the Power of Government" [1981], in James Buchanan and R. D. Tollison, eds. *The Theory of Public Choice—II* (Ann Arbor: University of Michigan Press, 1984).

"If property rights are carefully defined, should not the pure *laissez-faire* organization bring about the elimination of all significant externalities? ... On what rational grounds can the individual decide that a particular activity belongs to the realm of social as opposed to private choices?" (p. 45). Unfortunately, their calculus still relies on the relative costs of organizing decisions (whether voluntarily or coercively). Although the authors discuss special rules for the special case of "the creation or confiscation of human and property rights" (p. 78, see also p. 70), and conclude that the rational individual will want more restrictive rules governing those, we are still left with a problem: a majority (or a politically efficient minority) could still rationally organize to exploit others. The representative individual cannot predict *ex ante* if he will be in the winning or losing coalition, which would lead to general over specific constitutional rules (p. 74) from behind the Rawlsian veil of ignorance.[6] But, *ex post*, we see that there is no homogeneity of individuals. While still respecting the postulates of methodological individualism, utility maximization and rational choice, individuals are heterogeneous *ex post*: some are better at organizing than others, and some are more willing to exploit others through the political process. We thus see the need for constitutional *and* ethical constraints; any doubt about this should be easily dismissed by a simple observation of U.S. constitutional practice in the past century.

The Calculus, Institutional Economics and Development Economics

The economic analysis of politics as elaborated by Buchanan and Tullock in *The Calculus* has had ample influence on different fields (political economy, institutional economics, constitutional economics, law and economics, etc.). It was the origin of Public Choice. In one way or another these fields are linked to development economics. In fact, one can argue that most economics is development economics. Since the inception of systematic economic analysis by Adam Smith, economics has dealt with wealth creation to escape poverty. In this section we limit our discussion to the field of institutional economics as it relates to economic development, and how these two fields are linked to some ideas in *Calculus*.

The fundamental question in institutional economics has to do with why institutions work in some countries but fail in others. In other words, why in some countries the existing formal and informal institutions lead to prosperity, but in other countries perpetuate poverty. In their new book *Why Nations Fail*,[7] Acemoglu and Robinson argue that nations fail because they are incapable of generating inclusive institutions. In many developing countries institutions favor the minority and exclude the majority. To be clear, some powerful individuals (the minority) find it in their best interests to stick to the status quo, which is characterized by policies that benefit their political and economic interests. From Buchanan and Tullock we know that when few individuals in a group define the rules of the game, the rest of the society pays high external costs. In fact, *Why Nations Fail* and *The Calculus* seem to propose a similar argument, although through different methods: the importance of inclusion. *Why Nations Fail* is an empirical analysis, and

[6]John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971).

[7]Daron Acemoglu and James Robinson, *Why Nations Fail: The Origins of Power, Prosperity and Poverty* (New York: Random House, 2012).

it contains case studies of several countries. The authors show that less institutional inclusion leads to economic and political failure. Take the case of Botswana, for example. Acemoglu and Robinson argue that there were key features in the history of Botswana where institutional inclusion took place. One was the institution called *kgotla*. The *kgotla* was a local forum of discussion where participants directly deliberated on public matters. Botswana was a British protectorate (as opposed to a colonial territory). The British allowed local institutions like the *kgotla* to continue to exist. In other African countries these kinds of institutions did not survive the colonial period. The *kgotla* is inclusive; almost everybody in the village, town, or city is allowed to participate. In terms of *Calculus*, the *kgotla* has low external costs. We know also that it has high costs to reach agreements.

A key moment in the history of Botswana happened when diamonds were discovered in the 1960s. After negotiating the end of the protectorate, the first president of the country, Seretse Khama, convinced the leaders of the different tribes that diamonds would have to be used to benefit the country as a whole and not a particular region. To sum up, the argument that Acemoglu and Robinson make is that the development of pluralistic, inclusive institutions allowed Botswana to prosper and become a middle-income country in Africa, in spite of being landlocked, being very poor before independence, and having a territory almost half of which is covered by desert.

In our description of Part III of *The Calculus* we showed the importance of unanimity for Buchanan and Tullock. *The Calculus of Consent* is an abstract book. Its call for unanimity as the constitutional rule is a call for absolute inclusion. Broadly speaking, one can see that the book *Why Nations Fail* echoes an abstract proposition that Buchanan and Tullock developed 50 years ago.

Final Remarks

Moving from theory to practice, *The Calculus* offered a foundation for two seminal fields in political economy. While Public Choice theory is about in-period decisions, or the choice within rules, the related field of Constitutional Political Economy is about choice amongst rules. While Buchanan and Tullock did not invent economic analysis of constitutions, they spurred a resurgence and formalization of the field. Their contractarian approach complements the parallel evolutionary methodology.[8] U.S. constitutional history can be explained through a combination of *Calculus*-type contractarianism and Hayekian evolutionary theory, or in other words, of interest and ideology.[9] With Buchanan and Tullock, we can emphatically dismiss class-based interest *à la* Charles Beard,[10] and focus instead on

[8]Stefan Voigt explains that "whereas Buchanan is clearly leading the contract notion of the constitution, Hayek (e.g. 1973, 1976, 1979, 1988) is almost as clearly leading the notion of the constitution as the result of cultural evolution" ("Positive Constitutional Economics: A Survey," *Public Choice*, 90 [1997], p. 28). He refers to F. A. Hayek, *Law, Legislation and Liberty*, 3 vols. (Chicago: University of Chicago Press, 1973, 1976 and 1979) and F. A. Hayek, *The Fatal Conceit: The Errors of Socialism* (London: Routledge, 1988). See also, of course, F. A. Hayek, *The Constitution of Liberty* (Chicago: University of Chicago Press, 1960).

[9]See Russell Hardin, *Liberalism, Constitutionalism and Democracy* (Oxford: Oxford University Press, 1999).

[10]Charles Beard, *An Economic Interpretation*

methodological individualism. Thus, the U. S. Constitution of 1787 represented an ideology of limited government (even if there was a dispute over the appropriate structure to preserve liberty, *i.e*. a strong central government to check the states, or vice-versa).[11] It also represented a desire for unfettered interstate commerce from Northern commercial interests and Southern agricultural interests. Mutual interest and mutual ideology foundered over the question of slavery and tariffs, leading to the Civil War—and with it an end to slavery, of course, but also a *de facto* end of federalism. In a two-punch *Calculus*-Hayek story, the federal apparatus that emerged from the Civil War allowed for two things: first, the political implementation of a new ideology (Progressivism), and second, the special interest groups that fed on, and fed, the growing national government. The American constitutional landscape from Progressivism to the present continues with both stories. From the interest perspective, special interests continue to dominate the political landscape, and the federal government with which they are dancing an unhealthy tango now controls half or more of the economy. From the ideological perspective, Americans seem quite content to ignore constitutional constraints and use the state as "the great fiction through which everybody tries to live at the expense of everybody else" (Frédéric Bastiat).

The Calculus of Consent contained truly groundbreaking economic and political theory when it was published in 1962. Anthony Downs characterized the work as a "brilliant and significant contribution" to the field in his 1964 review.[12] Indeed, the work had momentous implications for those scholars engaged in the study of leadership. In the social and political mindset of the times in which they were writing, a religious-like faith was accorded political leaders by the constituency, and a near-blind belief that the brilliant minds leading the country were focused on realizing policies for the general social welfare. Buchanan and Tullock, however, had no such illusions. They characterized the political actor as a rational self-interested individual no different from the average individual participating in a market exchange, and subject to the same incentives. "Politics is no longer viewed as a system in which elites regulate the unwashed masses' excesses."[13] In this sense, *The Calculus of Consent* was indeed a radical work of scholarship, harkening back to an Aristotelian vision of egalitarian leadership.

We feel very privileged to have benefited so enormously from the influences of both James Buchanan and Gordon Tullock while pursuing our graduate studies at George Mason University. Their revolutionary insights irrevocably changed the scholarly conversations of public choice, institutional economics, economic development, and political philosophy.

of the Constitution of the United States (New York: Macmillan and Co., 1913).

[11]J. Hummel, "The Constitution as Counter-Revolution: A Tribute to the Anti-Federalists," *Free Life: The Journal of the Libertarian Alliance*, 5 (4) (2007): 1-10.

[12]*Journal of Political Economy*, 72 (February 1964), p. 87.

[13]Robert Tollison, "Foreword" to James M. Buchanan and Gordon Tullock, *The Calculus of Consent* (Indianapolis: Liberty Fund, 1999), p. x. This is a separate Liberty Fund edition, published as vol. 3 of *The Collected Works of James M. Buchanan*.