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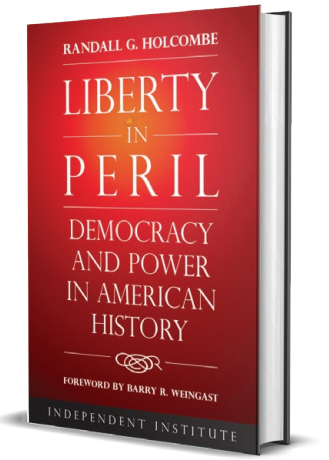

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Gordon Tullock, Praxeology, and the Qualities of a Natural-Born Misesian

PETER J. BOETTKE AND ROSOLINO A. CANDELA

Gordon Tullock was an economist's economist, or a "natural-born economist." For someone to be a "natural" at *doing* economics, not simply knowing economics, "is to suggest that he or she has intrinsic talents that emerge independent of professional training, education, and experience" (Buchanan [1987] 2001, 95). As D. N. McCloskey puts it, a "Natural understands economics the first time he hears it. The rest of us need repetitions at higher and higher levels, like a spiral staircase; the Natural does not; he gets the point at the bottom" (1992, 239). Using rational-choice theory, the natural-born economist is able to discern how individuals take actions consistent with their goals or how individuals "do their best" given the constraints they are facing at the moment of choice.

Does having been regarded by other economists as a natural also imply that Gordon Tullock was an economic imperialist, relentlessly applying the logic of *homo economicus* to all walks of life? For those familiar with the depth and breadth of Tullock's application of economic analysis to crime, law, politics, and history, it would seem

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obvious to answer this question in the affirmative. However, the term *economic imperialism* implies the injection of the notion of *homo economicus* to human decision making that is "unnatural" or beyond the realm of traditional economic analysis, such as applying the notion of *homo economicus* into the realm of nonmarket decision making. For example, economist Edward Lazear defines economic imperialism as "the extension of economics to topics that go beyond the classical scope of issues, which include consumer choice, theory of the firm, (explicit) markets, macroeconomic activity, and the fields spawned directly by these areas. The most aggressive economic imperialists aim to explain all social behavior by using the tools of economics. Areas traditionally deemed to be outside the realm of economics because they do not use explicit markets or prices are analyzed by the economic imperialist" (2000, 103).

Such a characterization of Tullock as a "natural-born economist" would imply, however, that he regarded *homo economicus* as an unorthodox model to understand human choice outside the realm of markets, including topics such as biology, crime, revolution, and war. However, he understood that the emergence of economics as an intellectual discipline occurred without any strong methodological divide from the other social sciences. As he put it, "Although we can see clearly from their [Adam Smith's and David Hume's] work, particularly, of course, Smith's *Wealth of Nations,* the origins of scientific economics, it does not appear that they felt that the distinction between economics and the rest of the social sciences was of any great importance. *The Wealth of Nations,* after all, contains chapters on military affairs, administration of justice, public works, and education. . . . With Hume and Smith, then, we see an 'economic' approach to a very large part of social behavior" ([1972] 2004, 7–8). What changed, therefore, during the late nineteenth century and early twentieth century was the common understanding held among economists about what it meant to *do* economics (see Boettke and Candela 2017).

An alternative way to interpret the depth and breadth of Tullock's contributions to economic science is to regard him as a praxeologist, or a "natural-born Misesian," in that he understood economic analysis to be the most developed subset of a broader and more general science of human action, one that traces the origins of all social phenomena back to individuals' goals. From this perspective, Tullock understood himself as part of a broader tradition of political economy tracing back to Adam Smith. For the natural-born Misesian, *homo economicus* already exists outside the realm of markets, but the role of the economist as a social scientist is to understand the institutional constraints within which the infinite variations of *homo economicus* are manifested.

In this paper, we argue that Tullock was not just a "natural-born economist" but more broadly a "natural-born Misesian." Our argument has two aspects. First, we contend that Tullock, like Ludwig von Mises, understood *homo economicus* broadly as *homo agens,* or acting man, for whom choice is open-ended, rather than as a Robbinsian maximizer, for whom choice is a close-ended maximization of given means and given ends. As Richard Wagner states, Tullock regarded the logic of choice "as only a point of analytical departure. It was never a destination, for Tullock was always a social theorist

who never reduced society to a representative agent" (forthcoming). Second, we argue that Tullock, as a natural-born Misesian, understood *homo economicus* to be a necessary though not a sufficient condition for understanding patterns of human decision making under alternative institutional arrangements. Taken together, these two views of Tullock's understanding of praxeology give us a perspective on the qualities of the natural-born Misesian.

Tullock: A Critical Link between Austrian Economics and Public Choice

Gordon Tullock was well known as the cofounder of public choice, along with his longtime collaborator, Nobel laureate James Buchanan. However, his development of public choice cannot be understood independently of the influence that Mises's book *Human Action* ([1949] 1966) had on his understanding of nonmarket decision making. Tullock was, like Mises, a transcendent economic scholar by adopting an understanding of human action that intersected the boundaries of several social sciences. His approach to the economic way of thinking cannot be understood outside the context of his educational and early professional background. Tullock began his academic training as a law student at the University of Chicago. The only course in economics that he ever attended was taught by Henry Simons,[1] but he was able to go to the class for only twelve of thirteen weeks before being drafted into the U.S. Army in 1943. Only after his return from Europe did he complete his Juris Doctorate, graduating in 1947. From 1947 to 1956, Tullock worked for the U.S. Department of State as a Foreign Service officer in China and Korea. His interests in the Far East led him to begin studies in Chinese at Yale University in 1949, when he first picked up a copy of *Human Action*. After reading it three times, Tullock said he was going to use the methodology of praxeology, outlined in the initial part of *Human Action,* to write a book about bureaucracy, which he eventually published in 1965 as *The Politics of Bureaucracy* (Levy and Peart 2017, 22–23). We return to Tullock's analysis of bureaucracy later in this essay, but before doing so, given the importance of *Human Action* and praxeology to Tullock's understanding of economics, we define the study of praxeology so as to develop the analytic framework for Tullock's understanding of rationality and spontaneous-order analysis.

Praxeology refers to the science of human action. The word *praxeology* comes from the Greek words *praxis,* meaning "action, habit or practice," and *logia,* meaning "theory or science." Praxeology begins from the a priori category of individual action and then develops the full implications of such action. Mises argued that praxeology was not new, nor was his insistence on the a priori nature of economics. In fact, Mises

1. Tullock also published the syllabus of the course in economics he had under Henry Simons at the University of Chicago Law School. See Simons 1983.

insisted that all good economics had been done in this way both prior to him and among his contemporaries. In other words, he counted economists from Adam Smith to Frank Knight as being in that same methodological tradition,[2] even if they did not always understand that, and it was this intellectual tradition that Tullock inherited, both from Henry Simons, who was a student of Frank Knight, and directly through his own reading of Mises.[3]

Mises's methodological position, which Tullock embraced, occupies a unique place that is at once both wholly aprioristic and radically empirical (Boettke and Leeson 2006). As Mises wrote, economics "does not strictly separate in its treatises and monographs pure science from the application of its theorems to the solution of concrete historical and political problems. *It adopts for the organized presentation of its results a form in which aprioristic theory and the interpretation of historical phenomena are intertwined*" ([1949] 1966, 66, emphasis added). From a Misesian perspective, inquiry into social phenomena can be divided into three parts. First, pure theory is the deductive or a priori core of praxeology, which in Hayekian language refers to "the pure logic of choice." At its core, praxeology is the study of the purposive application of means to ends by individual action. This is the basis of rational choice, according to which *homo economicus* is the origin of social phenomena such as money, prices, law, and other institutions, which originate from human action but are not of human design. This leads us to the second part of praxeology, applied theory, also known as "catallactics," which is that portion of praxeology that deals specifically with social interaction between individuals. It is the realm of spontaneous-order analysis, from which the unintended emergence of money, prices, and institutions can be traced back to human action. By combining the pure logic of choice with various subsidiary assumptions of a particular time and place, such as private property, prices, and profit-and-loss signals, the economist can explain the various manifestations of rationality under alternative institutional contexts. The third part, economic history, is where the analyst takes the arguments constructed in pure and applied theory and develops a framework of analysis that aids the empirical interpretation of events, thereby providing an economic assessment of those events. It is in this way, we contend, that Tullock understood *homo economicus,* both as a category of human action and as its empirical manifestation under alternative institutional contexts.

Tullock can be regarded as a critical link between Austrian economics and public choice. To emphasize this point, in an essay dedicated to Mises on the occasion of his ninetieth birthday Tullock commented, "It may seem odd to place an article originally designed for publication in a biological journal in a collection of articles to Ludwig von

2. For example, see Knight 1940.

3. As evidence of this common understanding among the Austrians and the early Chicago School, the tradition in which Tullock was educated, see, for example, *Human Action*, where Mises cited Knight on the procedure of economics with regard to methodology and rationality ([1949] 1966, 66 n. 24). On the shared methodological understanding among early neoclassicals in economics, see also Boettke and Candela 2017.

Mises. Among his other distinctions, Professor von Mises was among the first to point out that economics can be expanded to deal with many areas outside of its traditional scope. In my own case, my work in expanding economics into new areas was, in a real sense, begun by my reading of *Human Action*" (1971, 375).

Although Tullock regarded himself as directly influenced by Mises and Mises's praxeological approach, the strongest criticism of his own work, ironically enough, came from what he referred to as "the Reisman–Rothbard wing of Von Mises' [*sic*] followers."[4] Tullock's relationship with other Misesians—namely, Murray N. Rothbard—was somewhat tenuous, as demonstrated by Rothbard's ([1960] 2011) comments on a manuscript of *The Calculus of Consent* (Buchanan and Tullock 1962). In 1960, when Buchanan and Tullock began to circulate a manuscript of *The Calculus of Consent*,[5] among the individuals asked to read it was Dr. Ivan R. Bierly, a liaison officer working at the William Volker Fund. In a letter to Tullock dated September 26, 1960, Bierly mentioned his inability to read the manuscript due to time constraints, and so he had "forwarded it to a young man for whose judgement I have great respect";[6] this young man was Rothbard. The review was unsigned, but after reading it, Tullock inferred that it was authored by either Murray Rothbard or George Reisman: as Tullock mentioned in his letter to Bierly responding to the review, dated September 28, 1960, he and Buchanan had not originally sent the book to Rothbard and Reisman "largely because" they "had discussed the basic idea with both Reisman and Rothbard" and felt "that the conclusions of any other member of this school would be rather similar." Tullock went further, writing to Bierly: "As you know, although I am a great admirer of Von Mises, I feel that these people carry his basic position beyond its logical limits. *Since Von Mises himself does not object to our approach,* I am not terribly perturbed by their objections."[7]

Rothbard's main critique was to interpret Buchanan and Tullock's usage of the unanimity principle *not* as "an ideal toward which the government should be transformed" but as a "veneration of the status quo."[8] What Rothbard missed is that Buchanan and Tullock used the status quo as a point to begin the positive analysis of feasible institutional alternatives. Yet Rothbard interpreted the use of the status quo as an end state for which the unanimity principle is simply a means for government officials

4. Gordon Tullock to Ivan R. Bierly, September 28, 1960, James M. Buchanan Papers, C0247, Special Collections Research Center, George Mason University Libraries, Fairfax, Va.

5. According to an undated memorandum by Buchanan, the original manuscript title was "The Calculus of Consent: A Preliminary Analysis of Individual Constitutional Choice." Among those individuals on the distribution list for the memorandum were Buchanan's colleagues at the University of Virginia, including G. Warren Nutter, Ronald Coase, and Leland Yeager, as well as external readers, such as Charles Lindblom, Anthony Downs, Duncan Black, Otto Davis, Herbert Simon, Bruno Leoni, and Ivan Bierly (James Buchanan to Mrs. Batson, memorandum, James M. Buchanan Papers, C0247).

6. Ivan R. Bierly to Gordon Tullock, September 26, 1960, James M. Buchanan Papers, C0247.

7. Tullock to Bierly, September 28, 1960, emphasis added.

8. Murray N. Rothbard to Ivan R. Bierly, memorandum on "The Calculus of Consent" by James M. Buchanan and Gordon Tullock, August 17, 1960, James M. Buchanan Papers, C0247.

to implement and justify the status quo. Remarking in his review of the manuscript for *The Calculus of Consent,* Rothbard wrote:

> In fact, it is the political philosophy of the absolute veneration of the *status quo*, whatever that status happens to be. If, in short, we began at "zero point," with the government doing virtually nothing, and *then* we imposed a unanimity rule for any changes in government laws, the result would be approximately libertarian. But if we begin not at zero but at a point of Socialism, or of intervention, and *then* we require unanimous consent for changes, we are, in effect, permanently freezing the society in the mold of socialism or intervention or wherever the starting point happened to be.[9]

The positive political economy of reform must begin with the "here and now" and never with some imaginary starting state where opposition to change is nonexistent. By taking the status quo as given, Buchanan and Tullock were not attributing any normative weight to the status quo. All they were doing was insisting that the status quo "is what it is" and that it must be the starting point of any assessment of relevant alternatives. As we discuss later, this is also the procedure by which Tullock proposed institutional changes to bureaucracy, but only by first assessing the status quo that exists under the prevailing institutional incentives to which bureaucrats rationally respond.

In the unedited version of Rothbard's review, however, his main critique of Tullock and Buchanan was what he regarded as the misappropriated use of the unanimity principle, which, he stated, "actually turns out to be more of a support for the *status quo*—whatever the *status quo* happens to be—than a plea for principle."[10] This point is crucial to our argument in one particular respect. Given that Mises did not object to Tullock's employment of praxeology, we argue that Tullock's reading of Mises is a Hayekian reading, one in which rational choice and human intentionality are a necessary though not a sufficient condition for understanding the manifestation of rational human action in a particular time and place. We develop this argument in greater detail later in this essay.

From 1966 to 1990, Tullock was the editor of the journal *Public Choice,* but it is interesting to note that he first named the journal *Papers on Non-market Decision Making,* when it was first published at the Thomas Jefferson Center for Studies in Political Economy at the University of Virginia. Many of the early papers published in the journal were written for a series of small annual meetings initiated by Buchanan and Tullock in Charlottesville in 1963. In a letter written when public choice was in its infancy, Tullock had remarked to Buchanan, "I have had an idea which might be worth thinking about. Why not try to set up a committee on Praxeology (or some similar

9. Ibid., emphasis in original.

10. Ibid., emphasis in original.

phrase) in the Southern Economic Association?"[11] In the following sections, we develop Tullock's perspective on *homo economicus,* rationality, and spontaneous-order analysis.

Homo Economicus as *Homo Agens*

Did Tullock regard *homo economicus* as a point of analytical departure for analyzing the open-endedness of human choice under alternative institutional arrangements? Or did he see the world in the terms of a close-ended model of choice, in which individuals respond exogenously to constraints? What role did the logic of choice play in his empirical economic analysis? As we argue in this section, Tullock regarded himself as being squarely within the Misesian tradition, in which the logic of choice, that of *homo economicus,* is an inherent principle of action central to understanding the emergence of social phenomena yet whose manifestation is institutionally contingent.

In his textbook *The New World of Economics,* coauthored with Richard McKenzie,[12] Tullock argued that "[e]conomists begin their analysis of human behavior with the assertion that *human beings act* and do so with a purpose" (McKenzie and Tullock [1975] 2012, 8, emphasis original). Tullock quoted Mises in defining rationality as man's constant pursuit to remove a felt uneasiness, which Tullock regarded as the "ultimate foundation of economics as a discipline" (8). *Homo economicus,* from Tullock's perspective, is not to be regarded as, to quote Thorstein Veblen, "a lightning calculator of pleasure and pains" (1898, 389), but in a broader sense as *homo agens,* "rational in the sense that [people] are able to determine within limits what they want and will *strive to fulfill* as many of their wants as possible" (McKenzie and Tullock [1975] 2012, 8, emphasis added).

Rational choice simply recognizes that individuals are striving to achieve the best they can as they perceive it, given the context within which they are acting, rather than asserting that they achieve the best outcomes under complete information. "People do make mistakes mainly because they have incomplete information," Tullock acknowledged, "but this does not negate the assumption of rational behavior" (McKenzie and Tullock [1975] 2012, 9).[13] Moreover, to assume that rational behavior is purely materialistic is, for Tullock, also unjustified. Rational behavior simply implies that "individuals prefer more of whatever they want rather than less, and less of what they do

11. Gordon Tullock to James Buchanan, October 10, 1960, James M. Buchanan Papers, C0247.

12. Having acknowledged McKenzie as Tullock's coauthor, for the remainder of this paper we refer only to Tullock with regard to material from *The New World of Economics* simply for purposes of expediency.

13. Overlapping with what Tullock argued, Mises wrote: "It is a fact that human reason is not infallible and that man very often errs in selecting and applying the means. An action unsuited to the end sought falls short of expectation. It is contrary to purpose, but it is rational, i.e., the outcome of a reasonable—although faulty—deliberation and an attempt—although an ineffectual attempt—to attain a definite goal. The doctors who a hundred years ago employed certain methods for the treatment of cancer which our contemporary doctors reject were—from the point of view of present-day pathology—badly instructed and therefore inefficient. But they did not act irrationally; they did their best" ([1949] 1966, 20).

not want rather than more" (McKenzie and Tullock [1975] 2012, 9). From this standpoint, purely altruistic behavior is also rational—for instance, if Mother Teresa wanted to dedicate her life to the service of the poor, she would have preferred to do more of this activity rather than less of it because she regarded it as a "good." Tullock, as a praxeologist, took these subjective valuations as "part of the data we handle" as economists and assessed the means utilized by which human beings strive to actualize these ends (McKenzie and Tullock [1975] 2012, 10).

One might object at this point that Tullock, by incorporating all human action into the realm of rational choice, simply reduced rationality to a tautology: all human action is always and everywhere necessarily rational. This objection, however, would be a misunderstanding because Tullock applied *homo agens* as a category of action to render intelligible the decision calculus that individuals employ under particular circumstances of time and place. As Tullock put it, "[E]conomic theory, founded on rationality, *is at its best* when used to assess the directional changes in decisions when essential features of the environment . . . are altered" (McKenzie and Tullock [1975] 2012, 428, emphasis added).

A classic example of Tullock's use of comparative institutional analysis is his analysis of the unintended consequences of mandating airbags in automobiles. In 1987, Secretary of Transportation Elizabeth Dole required the mandatory installation of airbags in cars for the stated intention of reducing fatalities in automobile accidents. Given this mandate, what would the expected rational response among drivers be? It turns out that mandating safety devices such as seat belts, padded dashes, and air bags in effect lowers the private costs of driving more recklessly by reducing the expected total cost of an accident to those in the car. In weighing the expected costs and benefits of driving fast, running red lights, speeding, and switching lanes, drivers do not bear the full cost of their decision making. As a result of the policy, social costs will be expected to increase because some of individual drivers' private costs are spilled over onto other drivers as a negative externality, increasing the expected number of automobile accidents, which runs contrary to the policy's intentions. Tullock traced the unintended consequences of such a policy from the individual actions of rational but imperfect human actors, though not of any intended design. With humor and wit, he proposed that if the goal of government policy is to reduce recklessness and thus reduce the probability of accidents, "suppose the government were to require that a dagger be mounted on the steering column pointed at the driver's chest. Would the driver not be inclined to drive more safely?" (McKenzie and Tullock [1975] 2012, 40). Tullock employed this thought exercise not to recommend a particular policy but to illustrate the manifestation of rational action according to the cost–benefit structure perceived by individuals at a given time and place. Such a policy would certainly concentrate the costs of reckless driving onto the individual driver and therefore reduce the expected amount of automobile accidents.

How did Tullock respond to the claims made by behavioral economists that individuals are observed to act irrationally? Tullock's critique of behavioral economics

and the notion that human decision making is irrational overlapped with the Austrians' critique, particularly with respect to the notion that human rationality is a decision-making process that unfolds through time. As Mises wrote, "Only in one respect can acting be constant: in preferring the more valuable to the less valuable. If the valuations change, acting must change also. *Faithfulness, under changed conditions, to an old plan would be nonsensical. . . . In acting, which is necessarily in the temporal order,* there cannot be any question of such consistency. Acting must be suited to purpose, and purposefulness requires adjustment to changing conditions" ([1949] 1966, 103, emphasis added).

The main critique Tullock levied against behavioral economics is that its critique of *homo economicus,* a concept that is devoid of time, tells us nothing about actual human choice in time. He argued that very few, if any, behavioral economists take into account that errors made by entrepreneurs set up future profit opportunities in the market process, which create a process of *tendency* toward equilibrium. As he stated, "[E]stablished irrationalities set up their own feedback loops within the brain, at least to some degree, especially when the irrationalities are deemed consequential. Such feedback loops, both conscious and automatic, are part and parcel of the human brain's evolved construction" (McKenzie and Tullock [1975] 2012, 425).

The notion of rationality that behavioral economists critique is one of an end state, or a closed-ended model of choice, frozen in time. "Human decision making as a *process* is often denied (or is severely constricted)" by behavioral economists (McKenzie and Tullock [1975] 2012, 425, emphasis in original). Not only do very few economists actually believe that human beings are perfectly rational (McKenzie and Tullock [1975] 2012, 418), but also "the [behavioral economists'] use of perfect rationality as the standard for assessing the presence of irrationality is something of a methodological straw man, which is bound to be proven flawed" (McKenzie and Tullock [1975] 2012, 429). According to Tullock, by using a normative benchmark of *homo economicus* as a Robbinsian maximizer, in which means and ends are given, to evaluate decision making, behavioral economists define the very concept that they wish to explain out of existence. They are thus unable to evaluate how flesh-and-blood human beings *actually make decisions through time* or the process by which individuals *learn* from their mistakes.

> [C]ompetitive market pressures will tend to correct consequential errant decisions. The pressure might not press market outcomes to achieve some sort of competitive ideal in terms of welfare, but then achievement of some competitive ideal in the real world through the playing out of market forces is beside the point of mainstream analytics, as is the achievement of elusive equilibriums. Equilibriums will never likely exist in the real world because market, social, and physical environment forces *are always in motion and because market processes themselves, which are necessarily affecting people's rational tendencies and their opportunity sets, make equilibrium and any competitive ideal outcome moving targets.* (McKenzie and Tullock [1975] 2012, 434, emphasis added)

Tullock understood the market process not in terms of the "efficient market hypothesis," developed by the post–World War II Chicago School and critiqued by behavioral economists such as Robert Shiller, but as a dynamic process of discovery and adjustment through time, an understanding that was shared not only by Mises but also by early Chicago School economists such as Frank Knight and Henry Simons (see Simons 1983; Boettke and Candela 2017).

This understanding of the market process as a corrective mechanism of human errors, however, is completely absent from behavioral economics. As Tullock further pointed out, there "is no endogenous mechanism embedded in behavioral analysis for the subjects themselves to correct their decisions, aside from discovering their poor decisions through behavioralists' findings" (McKenzie and Tullock [1975] 2012, 441). Furthermore, "in behavioral research settings, irrationalities do not have built-in feedback loops that can give rise to corrections" (McKenzie and Tullock [1975] 2012, 441). Behavioral economists are quick to point out the mistakes that individuals make and then to evaluate the decisions that individuals ought to make through an irrelevant benchmark of perfect rationality and perfect markets, without ever evaluating how individuals can ever make correct decisions or learn from their errors! To put this another way, Tullock argued that in order to understand errors in individuals' decision making, we must first understand how individuals can ever be correct in their decision making in the first place: "[Behavioral economists] have criticized mainstream economists for sterilizing their economic analyses, but are not behavioralists doing the same? Behavioralists seldom consider how the prevalence of profitable opportunities embedded in the distribution of irrational choices" is a function of mistakes or how such mistakes generate changes in relative prices that guide decision making in the future, specifically by providing a feedback mechanism according to which individuals revise their decisions in the future as a consequence of their earlier mistakes (McKenzie and Tullock [1975] 2012, 431). Tullock further argued that without praxeology as "a general deductive theory of behavior" through time, there is no benchmark to understand human behavior:

> The question again is how much stock can be placed on evidence that comes in *snapshot form* and from artificial environments devoid of internal and external feedback loops, and representing a limited segment of potential experiences—especially when the surveys and experiments are not guided by *a general deductive theory of behavior,* other than that everything affects decisions, or perfect rationality is wrong on its face. Without *a general deductive theory,* there seems to be little or no basis for selecting the essential features to incorporate into the research surveys and the laboratory settings. (McKenzie and Tullock [1975] 2012, 427–28, emphasis added)

Let us take, for example, one critique that behavioral economists have levied against rationality based on prospect theory (see Kahneman and Tversky 1979).

According to prospect theory, choices at best involve prospects, or options with assigned probabilities to outcomes, or at worst decisions made with immense uncertainties. As a result, the subjective valuation of monetary losses will be weighted more heavily than equal monetary gains (McKenzie and Tullock [1975] 2012, 397). In other words, the positive subjective value of a $100 gain will seem less to the individual than the prospect of losing $100. When losses are involved, people tend to be risk seeking, but when gains are involved, people tend to be risk averse. Therefore, according to behavioral economists, individuals will favor gambles involving losses rather than losses with certainty, and they will incur more costs to avoid a loss of $100 than they will incur to obtain a gain of $100. Therefore, this observed continuity in decision making, according to behavioral economists, is evidence of irrationality. However, Tullock pointed out how previous errors in decision making "can affect *with time* the relative value of, say, the sure-thing option and the prospect option. The division of the subjects' choices between the two options is treated as a given with *no implication for future choices,* even if the subjects in the experiment knew that the vast majority of the subjects made wrong choices. Presumably, the minority of subjects who made the right choices are not deemed sufficiently rational, intelligent, or creative to take advantage of all of the subjects who make the wrong choices" (McKenzie and Tullock [1975] 2012, 432, emphasis added).

By emptying rational choice of any notion of any learning through time, behavioral economists conclude that public policy is required to nudge people to make "correct" decisions. Ironically, however, the normative benchmark according to which the behavioral economists judge decision making to be "rational" is the neoclassical model of perfect rationality that they are attacking. Although seemingly contrary to their purpose, the neoclassical notion of rationality, in which individuals do not choose but respond perfectly to constraints, is consistent with the notion that behavioral economists can use public policy to nudge individuals to make "better" decisions as they see fit, whether with respect to encouraging saving or to eating healthier diets. Such policies presume that nudges can impose a uniformity in decision making as if experts can externally assign a utility function to individuals. This is nothing more than the model of Robbinsian maximization of given means and given ends in another guise, where both the means and the ends are presumed to be assigned and given by experts. As Tullock emphasized, "if any adjustment" of human choice "is permitted, it is the behavioralists themselves who assume the role of choice architects for all others . . . as the behavioralists themselves seem desirable (or the behavioralists themselves believe that the subjects deem desirable)" (McKenzie and Tullock [1975] 2012, 441).

To summarize, according to Tullock, rational choice is an open-ended point of theoretical departure, not a single-exit point of destination. Individuals are always rational in the sense that they are constantly striving to achieve their goals, yet imperfectly so. However, the institutional environment fosters different kinds of learning and adjustment, which creates a tendency among individuals to take actions consistent with their goals. What behavioral economists miss, fundamentally, is that without any notion of

choice through time, institutions become irrelevant to understanding the manifestation of rationality in time and place. It is for this reason that rational choice is a necessary though not a sufficient condition for understanding its empirical manifestation.

A Tullockian Reading of Mises Is a Hayekian Reading

In 2006, as a testament to Gordon Tullock's development of the discipline of praxeology, the Fund for the Study of Spontaneous Order at the Atlas Research Foundation presented him with the Lifetime Achievement Award (Boettke 2008a). This event is, at first glance, surprising in two respects. First, as we pointed out earlier, Tullock has been known, first and foremost, for his masterful ability to unflinchingly apply the notion of *homo economicus* to all walks of life, not for his spontaneous-order analysis (see Buchanan [1987] 2001). Second, many self-described Misesians might reject the labeling of Tullock as a "natural-born Misesian" given that they regard Mises as arguing that spontaneous-order analysis neglects and undercuts the way in which social phenomena arise directly and deliberately from intentional, rational action.

Given that the influence of Austrian economics on Tullock comes from Mises, not from Hayek, it is quite interesting that what resonated with Tullock in his reading of *Human Action* was not only the centrality of purposive human action to explaining social phenomena but also the concept of unintended consequences. As Tullock stated, "I read the book [*Human Action*] actually three times and during that time I came to the conclusion that I was going to write a book about bureaucracy on the same kind of self-interested motives on the part of the participants as economics. *He* [Ludwig von Mises] *did not maintain that it also led to good results even though it did in economics*" (quoted in Levy and Peart 2017, 23, emphasis added).

What Tullock understood from Mises, particularly from Mises's application of praxeology to the study of bureaucracy, is that *homo agens* is a necessary though not a sufficient condition for understanding the results of human action. The "natural-born Misesian" understands that context matters and that there is a gap between individuals' intentions and outcomes, a "gap" that is filled by institutions' filtering process. "All theorems of economics," including the invisible-hand theorem, Mises argued, "are necessarily valid in every instance in which all the assumptions presupposed are given. Of course, *they have no practical significance in situations where these conditions are not present*" ([1949] 1966, 66, emphasis added). Mises, therefore, as well as Tullock, understood that the invisible-hand process that generates unintended yet beneficial social outcomes is institutionally contingent, meaning that it is dependent on the enforcement of private-property rights under the rule of law as well as on profit-and-loss signals revealed through money prices. Tullock's extension of the Misesian framework emphasized the "dark side" of social processes, wherein incentives are perverse and information is distorted (Boettke 2008b). Therefore, Tullock understood that the best reading of Mises was a Hayekian reading. As Hayek himself stated, "[W]hat was a priori

was only the logic of individual action, but the moment that you passed from this to the interaction of many people, you entered into the empirical field" of institutional analysis (1994, 72).[14]

To illustrate our point, let us return to Tullock's writing of his book *The Politics of Bureaucracy*. "One of Tullock's primary contributions," as Buchanan noted in his foreword to the book, "lies in his ability to put flesh and blood on the bureaucratic man, to equip him with his own power to make decisions, to take action" (Buchanan 1965, 4). This contribution is not only ironic but also central to Tullock's theory of rationality in nonmarket settings, particularly bureaucracy. The irony is that although many have criticized the employment of rational choice as unrealistic in explaining human behavior, much of administrative theory prior to Tullock was based on the view of man as the very caricature being criticized, that of a mindless automaton (Buchanan 1965, 4). Tullock himself emphasized this point:

> In many respects, my view of human nature is more "idealistic" than that which will be taken, I am sure, by some of my critics. Many people seem to think that man is a small machine. If given a task he will simply go ahead and perform it in a completely mechanical manner. By contrast, I think that every man is an individual with his own private ends and ambitions. He will carry out assigned tasks only if this proves to be the best way of attaining his own ends, and he will make every effort to change the tasks so as to make them more in keeping with those objectives. A machine will carry out instructions given to it. A man is not so confined. (1965, 32)

The task of analyzing bureaucracy, according to Tullock, "is somewhat akin to that of the political economist," (1965, 122)—that of understanding institutional details of time and place in order to understand the manifestation of rational action at that particular time and place. By employing an open-ended model of rational choice featuring *homo agens* rather than the close-ended version featuring *homo economicus,* Tullock was able to assess the "irrationality" of a nonmarket setting, or why bureaucracies often fail to accomplish their stated goals. He did so by taking the private ends of bureaucrats as given and assessing the incentive incompatibilities and knowledge problems inherent to such an institutional arrangement. In short, Tullock argued, the problem of bureaucracy is the absence of economic calculation or the inability to communicate and assess the performance of a bureaucratic organization via money prices and profit and loss signals. Because of this, the rational outcome within this environment is to base the "success" or "merit" of individuals, who seek promotion and power, on nonmonetary criteria.

14. See also Hayek 1937 and F. A. Hayek, "F. A. Hayek: Nobel Prize–Winning Economist," transcript of an oral history interview conducted in 1978 under the auspices of the Oral History Program, University of California at Los Angeles Library, copyright 1983, Regents of the University of California.

According to Tullock, employees of a bureaucracy, like employees of a private firm, "act in ways that advance their careers" (1965, 29). The central problem of the head of any hierarchy, which includes both bureaucracies and private firms, is the principal–agent problem. The head must coordinate the interactions of his subordinates so that they reach decisions that he would have reached "if he should have possessed as much information about the particular situation requiring decision as they do" (1965, 141). Although the internal organization of bureaucracies and private firms operates like islands of planning, in "a governmental hierarchy, the problem of knowledge is much more difficult than it is in business organization" (1965, 68), even if we assume the best of intentions among actors within the bureaucracy.

Tullock illustrated the limitations the U.S. Army faces in allocating spare parts to military vehicles. Despite the army's efforts to standardize and minimize the types of vehicles and the parts required for their assembly, "the problem of spare parts for army vehicles has, at times, seemed to be almost insoluble" (Tullock 1965, 162). This allocative task is not a technological problem, for if it were, it would be solved easily by replacing bureaucratic decision making with the use of computers. The use of computers would eliminate some of the problem between intermediaries at the top and bottom of the army's organizational command: the "computer will receive information from the lowest level and it will send orders direct to each depot" (163). Yet, as Tullock pointed out, the army would still have inadequate inventories because the fundamental problem is one of communicating *economic* knowledge—namely, knowledge about the relative scarcity of spare parts. Therefore, the problem's resolution "is *impossible* to achieve through the mechanism of an organized hierarchy" rather than by means of the efficiency of the market mechanism (161, emphasis added).

The lure of monetary profit and the avoidance of monetary loss, communicated through the price mechanism, Tullock argued, would directly incentivize the military high command and the supply officers under them to do two things. Market prices would guide equipment maintenance by disciplining military officers to economize on costs through the elimination of excessive inventories and, more importantly, by directing the allocation of spare parts to their most urgent uses, which are communicated through the buying and selling of spare parts across different motor pools. Through such an accounting technique, the military high command would not only meter and monitor the performance of their subordinates tasked with maintaining a well-equipped army in a more efficient manner but also align the interests of their subordinates with the military's stated goal, which is to provide national defense. Tullock's point is neither to advocate a prescription for the privatization of national defense nor to claim that individuals are motivated solely by monetary profit. Rather, his aim is to provide a description of rationality as it operates without economic calculation to communicate knowledge between bureaucratic superiors and their subordinates.

In nonprofit settings, such as a bureaucracy, the absence of economic calculation to communicate economic knowledge via money prices implies that subordinates to the head of a bureaucracy will act more opportunistically to achieve advancement and

promotion, thus undermining the stated goals of the bureaucracy. This happens not because of individual irrationality within bureaucracy. In both profit and nonprofit settings, individuals act consistently with their goal, which is to increase their utility, both monetary and nonmonetary. As we have emphasized throughout this paper, this assertion does not imply that individuals never make errors in their decision making; otherwise, institutions would be irrelevant. Rather, the manifestation of rationality will be contingent on the selection criteria of comparative institutional arrangements. Given the absence of monetary profit and loss signals to align the interests of individuals in a bureaucracy, the system will select for individuals who are able to increase their superiors' nonmonetary utility. The unintended consequences will be that the individuals who are most successful at climbing the bureaucratic ladder will be unscrupulous, skilled at flattering their superiors and communicating only knowledge that will not undermine their advancement and promotion.

Tullock argued that "in a bureaucracy, factual information tends to flow from the top down instead of from the bottom up" (1965, 70). The reason for this is that the subordinates tasked to act on the superior's behalf will always have more specific knowledge of a particular problem, and it will be impossible for their superiors to know all the relevant facts. This knowledge problem is only magnified by the size of the bureaucracy and the number of subordinates assigned to a particular bureaucrat. Moreover, the knowledge problem inherent to bureaucracy is also enhanced by intelligent bureaucrats, who will one day occupy senior positions in the bureaucracy, allocating relatively more time and resources to pleasing these superiors rather than spending their time and resources gathering and communicating information relevant to the superior's goals and the bureaucracy's stated goals. "If [the bureaucrat] should fail to do this," Tullock argued, "or if he should think mostly of his 'duty,' and, thereby, be led into disagreement with his less perceptive superiors, he will fail to advance in the hierarchy" (1965, 75). For Tullock, the Hayekian knowledge problem of plan coordination and the Misesian problem of economic calculation within nonmarket settings are flip sides of the same coin.

Tullock's proposal for reform was not to change the players of the bureaucratic game on the presumption that a different set of players will generate a different set of outcomes. Rather, recognizing the politics of bureaucracy as an institutional problem, not a behavioral one, he demanded an institutional solution, one that will align the incentives of bureaucratic actors with those of the bureaucracy's stated goals. This alignment would include the radical reduction of the size and scope of bureaucracies—namely, by delegating many tasks performed by unelected bureaucracies to elected governments at the most local level possible. Although a highly imperfect solution compared to a market mechanism, the reduction and assignment of bureaucratic tasks under federalism would reduce the knowledge problem among voters. Given the degree of rational ignorance among voters, the only hope for generating greater accountability among politicians is by minimizing the costs of metering and monitoring of political performance among voters.

To conclude, the policy implication of Tullock's analysis is that the greatest hope for a free society is to craft institutions that limit political actors to behave like *homo economicus,* with no choice but to enforce the rules of the game consistent with the rule of law. Without the ability to coordinate individual ends through the guiding force of money prices, bureaucratic actors will have neither the knowledge nor the incentives to act consistently with bureaucracy's stated goals. Instead, the rational outcome is that bureaucratic actors will advance their careers by increasing their superiors' nonmonetary utility through flattery, deception, and the opportunistic withholding of knowledge inconsistent with promotion. Tullock's great gift as a natural-born Misesian was his ability not only to illustrate the deductive universality of rational human action but also to show its empirical universalizability under alternative institutional arrangements.

Conclusion

There is both a science and an art to economic analysis. The science of economics analyzes how fallible but capable individuals do their best under particular institutional constraints. The art of economics, however, uncovers those institutional constraints for *understanding* how in each particular case individuals attempt to do their best. Gordon Tullock was a "natural-born" economist not just because of his relentless pursuit of the logic of *homo agens* but also because of his artful ability to masterfully understand the particular constraints of time and place faced by the individuals under analysis. This characterization might give the impression that Tullock was simply an "armchair economist," routinely applying the logic of choice to individuals without particular knowledge of the social, legal, historical, and political context under analysis. However, such a judgment of Tullock's scholarship would not do justice to the great depth and breadth of his interdisciplinary contribution to praxeology, the science of human action.

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