



2021

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Recommended Citation

Romero, Oscar (2022) "The Irrationalness of Game Theory," *Res Publica - Journal of Undergraduate Research*: Vol. 26

Available at: <https://digitalcommons.iwu.edu/respublica/vol26/iss1/10>

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The Irrationalness of Game Theory

Abstract

In February 1909, at a time where political scientists were confused as to their purpose to society, the Right Honorable James Bryce highlighted the three most important criteria for effective research of political science at the fifth annual meeting of the American Political Science Association. He declares that political scientists “1) must be critical, 2) must beware of superficial resemblances, and 3) must endeavor to disengage the personal or accidental from the general causes at work” (numbers added) (8). These specific criteria ensure that any political science research conducted leads society to increase its understanding of the laws that govern themselves. Decades later, a new theory has taken political science by storm; relying on mathematical theories used by economists to explain why citizens and institutions act the way they do.

The Irrationalness of Game Theory

By: Oscar Romero

In February 1909, at a time where political scientists were confused as to their purpose to society, the Right Honorable James Bryce highlighted the three most important criteria for effective research of political science at the fifth annual meeting of the American Political Science Association. He declares that political scientists “1) must be critical, 2) must beware of superficial resemblances, and 3) must endeavor to disengage the personal or accidental from the general causes at work” (numbers added) (8). These specific criteria ensure that any political science research conducted leads society to increase its understanding of the laws that govern themselves. Decades later, a new theory has taken political science by storm; relying on mathematical theories used by economists to explain why citizens and institutions act the way they do. This new “scientific” theory is called rational choice theory. As Donald P. Green and Ian Shapiro recalled, rational choice theorists generally accept 5 main assumptions: “1) rational action involves utility maximization, 2) certain consistency requirements must be part of the definition of rationality, 3) each individual maximizes the expected value of his own payoff, 4) the relevant maximizing agents are individuals, and 5) their models apply equally to all persons under study” (numbers added) (14-17). Rational choice sprung up other theories that use its basic concepts, such as game theory mentioned by Robert Lowry Clinton.

Clinton introduces the concept of game theory by using the infamous Supreme Court case *Marbury v. Madison* (1803). In his analysis, he, first, “reconstruct[s] the *Marbury* situation as a two-person, nonzero-sum game with Marshall and Jefferson as players” (289). This will make it easier to demonstrate that the two players have a goal to compete in a rational manner

when the stakes are high. However, because it is difficult to arrive at any estimates of cardinal utility for the two players, Clinton only attempts to judge “the *relative* merits of the outcomes for each” (292), basing those relative merits on their ties to their institutions. For example, President Jefferson would highly prefer judicial review of Congress over judicial review of the executive due to his interests as head of the executive department. Finally, before commencing the game, he assumes that “each of the players was aware of the options available to the other” (293-4), where for a player to act rationally they must have full and complete information. By establishing these rules, the players of the game will make strategic decisions to maximize their expected payoffs.

Clinton’s rationale for game theory in this respect is his belief that this method of analysis will “illuminate structural features of the situation that may lead to better understanding” of why the players acted in the way that they did (295), removing any possibility that a player has been tricked by the other. Also, Marshall’s willfulness to play the game Clinton established is based on the assumption that *Marbury* had no firm legal basis and was rather an “exercise of ‘will’ rather than ‘judgment’”(295), since his decision did not state an exclusive power in the judiciary to invalidate laws that either Congress or the executive makes. Additionally, there is a reason to believe that President Jefferson also favored “judicial review over Congress, *in principle*” (296) by the fact that “Marbury’s counsel stressed the provision’s constitutionality, during oral arguments ... at least two weeks before the final decision” (297). Because of these historical facts, Clinton would argue, the decisions Jefferson and Marshall took that resulted with the *Marbury* decision was rationally supported by game theory, and the paths that they decided to not take are “at least plausible applications of existing law” (300).

Although Clinton's rationale for game theory is commendable, it contains critical problems that violate Bryce's criteria for political science research decades earlier. For starters, Clinton's simplification of *Marbury* by establishing a two-person, nonzero-sum game violates Bryce's third criterion of the personal cause. Clinton assumes that those specific players are the ones disturbing all calculations in the case, the ones calling the shots of where the judiciary will go. In reality, there is a strong possibility that more than two players are part of the game. As Clinton readily admits, for at least a decade the Democratic-Republicans in Congress had "urged the Court to overturn acts of Congress, and the justices had repeatedly declared their intention to do so whenever confronted with an appropriate case" (Footnote 8 pg293). If Clinton believes that the real players in *Marbury* are the ones that are "not (technically) part to the suit" (Footnote 3 pg289), what rationale would put him into making such simplicity to two players? However, it will also be erroneous to believe that *Marbury* and Madison are the only players in the case because they are (technically) part of the suit since there exist many more players than the two characters. Perhaps the Jefferson-Marshall players make attractive competitors, but its simplification of having only two players is inaccurate. A realistic analysis of the *Marbury* case must analyze the historical environment the case took place, for perhaps the decision may have been as a result of something more than simply the acts of President Jefferson and Chief Justice Marshall.

Secondly, Clinton neglects Bryce's second criterion of superficial resemblances to another level when his theory relies on the players knowing all the options available to the other player. If the *Marbury* players had possessed complete information about all the options each player had, then one could argue that the equilibrium outcome, where both parties got an even amount of favorability, was indeed rational. Unfortunately, no player has complete information

about anything, resulting in the perfect equilibrium to fall apart. As Green and Shapiro highlights, “once one allowed for the possibility ... that [players] lack perfect information about [their options], the high equilibrium result collapsed” (57). When a rational choice theorist assumes that all individuals have complete information about their options, they argue that the individuals will consistently make the same options, in a sense believing that the options taken in the past will be replicated if the same evidence and options are presented in the near future. According to Bryce decades earlier, this is an inaccurate assumption for a political scientist to make. Even if individuals pertained most of the information about their options, other environmental factors may change the individual’s rational choices, however much that degree of change is. For a rational choice theorist to mingle with the concept of historical parallels threatens the duty of political science to discover truths about society. A much better use of time for rational choice theorists is to explain why individuals have acted the way that they did without using the assumption that the individuals know everything there is about their choices; at the very least those assumptions should be heavily based on concrete facts instead of distant data.

Finally, Clinton disregarded Bryce’s most important criterion of all: political scientists must be critical, which includes having his conclusions tested and replicated by other political scientists by applying it to the real world to determine its reliability. When Clinton estimates the cardinal utility by the relative merits of the two players, he denies other political scientists from replicating or testing out his conclusions. He states their perspectives on the options he proposes but neglects to count on the environmental factors the two players were in that could have been a key factor in their favorability to a choice over another. In addition, because of his failure to explain his reasons for why the players would judge their options in the way that he states, other political scientists will be unable to accurately replicate his study. As is the characteristic of

rational choice theory in general, Green and Shapiro communicate the fact that their “explanations of such [issues] lie within non-empirically measurable methods” (Vlahiotis 2). Clinton’s research lacks any measurable method for other political scientists to replicate his analysis of *Marbury*; instead, relying on “imagin[ary] data consistent with [his] conceivable rational choice account” (Green & Shapiro 55). As Bryce mentioned decades earlier, if the research lacks concrete facts, and is therefore untestable, they become “comparatively lifeless” (4).

The purpose of Bryce’s criteria is to ensure that political scientists can “understand what has happened, and to conjecture, though seldom to predict, what will happen hereafter” (6). Since political science is a combination of experimental science and progressive science, political scientists must rely on studies that explain past experiences and adds new ones to their great understanding of human society. This requires political scientists to understand each other’s works and critic or improve on them by ways of replication. As mentioned before, Clinton’s three standards to his game theory analysis fail to follow Bryce’s criteria that ensure the research’s applicability to the real world. Although the theory’s contents are rational, they lack rational application to the real world and to the study of political science.

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