A Game Theoretic Analysis of Marbury v Madison: The Origins of Judicial Review

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Cover Page Footnote
I would like to thanks Professor Evans for his highly informative and engaging Game Theory & Politics course. I would also like to thank Professor Nemacheck for helping organize my oft-scattered thoughts. This paper is, in part, a product of their patience and guidance.

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Introduction to *Marbury v. Madison*

The Supreme Court of the United States is arguably one of the United States’ most powerful institutions despite its constitutional limitations. The Court and its nine justices have the authority to overturn any legislative action, once it is challenged. In the past fifty years, the Court has ruled on abortion laws, gay marriage, and many other significant political, social, and economic issues. Many assume that such powers were written into the very fabric of the Constitution, yet this is not the case. Despite our common understanding of the Court’s current powers, some lack the historical context to appreciate the string of strategic moves that Chief Justice John Marshall and his adversary—and cousin—President Thomas Jefferson made over two hundred years ago.

In the years immediately following the ratification of the United States Constitution, the Supreme Court had negligible influence in the country. Justices were forced to travel by carriage to different states and often settled simple discrepancies among local farmers. This, surely, is not the Court we know today. Presently, we know the Court almost exclusively for its ability to review legislature and rule it unconstitutional—a process known as *judicial review*.

In 1800, the Federalists lost both the presidency and their majority in Congress in a series of landslide victories to the Antifederalists. Lame duck President John Adams and his Federalist Congress decided to expand the Judiciary Act of 1793 and appoint several dozen federal judges in an effort to maintain Federalist power in the central government. The commissions for these “Midnight Judges” were given to Secretary of State John Marshall
to be issued as quickly as possible. Nonetheless, in what is often described as a race against the clock, several of the judges, among them William Marbury, were never given their commissions, as the government changed hands to the Anti-federalists. President Jefferson, upon taking office, immediately ordered his Secretary of State James Madison not to issue the remaining commissions. The waiting judges would never receive their positions. Of course, Jefferson’s disdain for the judiciary is well-documented. In 1820, he wrote in a personal letter, “the Judiciary of the US is the subtle corps of sappers & miners constantly working underground to undermine the foundations of our confederated fabric.”

In the wake of Jefferson’s decision, Marbury filed suit against Madison at the US Supreme Court and requested a *writ of mandamus*, an order for the government to properly perform its duties. According to Section 13 of the Judiciary Act of 1793, the Supreme Court had original jurisdiction over federal requests **writ of mandamus**. With the support of other Federalists, Marbury demanded that Jefferson hand over the commission, so he could become a Justice of the Peace in Washington, D.C. In a surprising turn of events, the Anti-Federalist Congress decided to disband the Supreme Court for their entire 1802 session.

After a full year, the Court met again, and within a few days Marshall declared that *Marbury v. Madison (1803)* would be heard. Marshall knew that Jefferson was a strict Anti-Federalist who did not want to see the powers of the judiciary expanded. Furthermore, he found it possible that Jefferson would simply ignore any ruling that wasn’t in his favor. After all, Jefferson did not issue the initial commissions in the first place, despite the legal murkiness of the situation. Thus, as he heard the case in the spring of 1803, Marshall found himself trapped between two difficult decisions—issue the mandamus and run the risk of being ignored by the executive, effectively destroying what little authority the Court had or yield to Jefferson and the executive branch, and similarly demonstrate the weakness of the Court.

After careful deliberation, Marshall and the Court reached a unanimous 4-0 decision (there were only six judges on the Court at the time, two of which were not present for the case). Marshall decided that although Jefferson *should* be required to hand over the commissions to Marbury and the rest of the ‘Midnight Judges,’ the
Supreme Court had no real authority to issue such a ruling. Marshall asserted that Marshall asserted, according to the Constitution, the Supreme Court only has original jurisdiction over “all cases affecting ambassadors, other public ministers and consuls, and those in which a state shall be a party. In all other cases, the Supreme Court shall have appellate jurisdiction.” Effectively, Marshall scolded Jefferson for breaking the law, but said that the Court was powerless to help Marbury. He declared Section 13 of the Judiciary Act of 1793 unconstitutional. In his own language, “a law repugnant to the Constitution is void, and that courts, as well as other departments, are bound by that instrument” and, further, “it is emphatically the province and duty of the judicial department to say what the law is.” Despite not getting the Federalist judges in office, Marshall managed to strengthen the Court’s powers in the long-run. A frustrated Jefferson, in a personal letter following the decision, retorted: “our peculiar security is in the possession of a written constitution. Let us not make it a blank paper by construction.” The author of that construction, of course, is Jefferson’s cousin—John Marshall. The tension between the relatives would only continue to rise. In a maneuver that changed the United States forever, Chief Justice John Marshall outdueled President Thomas Jefferson with a strategic move bound for the annals of history.

**Introduction to Game Theory**

Game Theory, a field developed in the early twentieth century by the famous mathematician John von Neumann, is the analysis of interactive decision making between two or more players in a strategic game. Often, people acquire experience with game theory by way of playing strategic games. For example, dating is often a strategic game, as players must calculate payoffs based on sets of decisions: Should one take their date to dinner? Bring flowers? Go to a movie? All such decisions result in varying payoffs based on how their opponent—in this case, their date—will react to such moves. Applying such concepts to a broader scale allows economists to analyze behavior within industries, politicians to consider constituents’ reactions to certain regulations, and athletes to predict their opponents’ move on the fly. All such applications
are starkly different, yet equally valid in their use of game theoretic analysis.

This paper will discuss terms such as game tree, rollback equilibrium, and payoffs. In order to use these terms fluidly, it will define these terms with the help of Dixit et al. In the appendix to this paper are three game trees. Dixit defines a game tree as “a representation of a game in the form of nodes, branches, and terminal nodes and their associated payoffs.” It is important to note that game trees denote sequential games, in which players move one at a time. A rollback equilibrium is a set of strategies “that remain after rollback analysis has been used to prune all the branches that can be pruned.” In its latter sections, this paper shall explain the rollback analysis of Marbury v. Madison in explicit detail. Next, it is essential to understand that a payoff is considered to be “the objective, usually numerical, that a player in a game aims to maximize.” Payoffs are the key to performing a proper rollback analysis of any game tree and will be discussed extensively in this paper. For the purposes of this analysis, the payoffs are calculated in “preference order”—meaning, each payoff is listed in ranking order of the player’s preferred outcome.

Prior Game-Theoretical Analysis of Marbury v. Madison

There is one major paper in the field that discusses Marbury v. Madison from a game theoretic perspective. The paper, by Robert Lowry Clinton, takes the stance that the Jefferson-Marshall battle was less a battle and more a “tacit political compromise between two figures who have most often been considered mortal enemies…not a ‘game’ with a clear winner and loser.” This concept is backed by Clinton’s structuring of payoffs. In preference order, Clinton considers Marshall’s decision to reject the mandamus and declare the Judiciary Act of 1793 unconstitutional as equally preferred between the two actors. He assigns it a three (the second highest preference). In turn, Clinton believes that Marshall’s highest payoff (a score of four) occurs when he issues the Mandamus and Jefferson complies. Both of these payoff structures indicate that Clinton gives more weight to the appointment of judges for both actors than to the restructuring of government authority—either in terms of executive expansion or establishment or judicial review.
Another relevant paper, written by Jack Knight and Lee Epstein, reaches beyond the scope of this paper; however, it still incorporates useful analysis of the Jefferson-Marshall battle. The authors widen the scope of the game to the point where Jefferson threatens Marshall with impeachment prior to the hearing of *Marbury v. Madison*. Knight and Epstein’s paper primarily focuses on the struggle for judicial supremacy, as suggested by its title, and simply uses Marshall versus Jefferson as a means of portraying that struggle. At multiple points leading up to *Marbury v. Madison*, Jefferson tried to force Marshall out of the Court. According to the paper, Jefferson viewed Marshall as a “subtly calculating enemy of the people” and a man “of strong political ambitions, capable of bending others to his will, determined to mobilize the power of the court by craftiness… and by making its opinion those of a conclave which he would dominate.”

This appears to contradict directly Clinton’s supposition that Marshall and Jefferson made a relatively amicable, joint decision to establish judicial review. Knight and Epstein go so far as to say that “the new president had nothing but contempt for the new Chief Justice.” Furthermore, the paper states that Marshall knew that the Anti-Federalists wanted him impeached. If this were the case, it would strengthen Marshall’s fear of upholding the mandamus, and payoffs should be adjusted accordingly. This paper differentiates between two classes of motivations: the political and the institutional. To clarify, ‘political’ refers to the actors’ parties (Federalist and Anti-Federalist) and their goals, and ‘institutional’ refers to the actors’ goals and desires for the *long-term function* of the government. Knight and Epstein conclude that Jefferson preferred (1) that the judgeships be voided and (2) that the size of government be maintained or, preferably, reduced. On the other hand, Marshall preferred (1) that the Federalists fill the judgeships and (2) that the size of government be expanded and, more specifically, that the judicial branch bolster its authority. These distinctions are important and must be factored into a single payoff structure. Later, this paper shall discuss the parameters of preference for both Jefferson and Marshall and how the ‘political’ and ‘institutional’ goals are given weight in a payoff calculation.
A Novel Analysis of *Marbury v. Madison*

To properly review all aspects of this paper’s revised game tree for *Marbury v. Madison*, this paper will first describe the structure of the game trees attached in the appendices to this paper—Appendix A, Appendix B, and Appendix C. In analyzing the game between Jefferson and Marshall, this paper shows that they played the game with asymmetric information in which Marshall has complete information on the structure of the game—or, arguably, a second-mover advantage, which will be explained in greater detail—and Jefferson lacks a specific information set that is critical to the outcome of the game. First, this paper will look at the structure of the trees, then analyze the payoffs (which are identical in all three games) and, lastly, perform a rollback analysis of the game.

The game begins with Marbury’s decision to sue Madison for his commission. Jefferson has two choices: to issue the commissions to the remaining midnight judges or not to issue them. If he chooses to issue the commissions, then the game is complete, and Marshall has no further moves, since there are no rounds for a legal case. If, however, Jefferson does not issue the commissions, Marshall then has the opportunity to hear the case in the Supreme Court. Here, from Jefferson’s perspective at the beginning of the game, Marshall has two choices: issue the requested writ of mandamus or reject it. If Marshall rejects the mandamus, then it is apparent to all parties that the game would be over, for Jefferson would be satisfied with the decision and not take further action. On the other hand, if Marshall upholds the mandamus, Jefferson then has the option to either overrule the Court and ignore the ruling or uphold the mandamus, concede to the Court, and deliver the commissions. In either case, the game ends there. The third option for Marshall, denoted by the dotted line (to represent the asymmetric information set), is unbeknownst to Jefferson at the beginning of the game: Marshall can simultaneously reject the mandamus and rule that the Judiciary Act of 1793 was unconstitutional, or as he succinctly concluded his lengthy decision, “the rule must be discharged.”

The important claim here is that Jefferson lacked information from the beginning. Clinton, in his analysis, believes this is not the case: “it must appear less likely that Jefferson and...
Madison would have been incognizant of the alternatives available to the Court, and so less likely that Jefferson would have allowed himself to be outpointed by the chief justice in the situation.” In his paper, Clinton bases this conjecture off the fact that Charles Lee, part of Marbury’s representation in Court, remarked during the oral arguments, “Congress is not restrained from conferring original jurisdiction in other cases than those mentioned in the constitution.” This excerpt appears to envisage Marshall’s crafty decision; however, it does not support Clinton’s claim that Jefferson knew about the unconstitutionality of Section 13 of the Judiciary Act of 1793. In fact, this could only possibly support the notion that Charles Lee knew at the time, which, of course, means that during oration, Marshall and Jefferson may have learned of the opportunity to claim unconstitutionality for the first time. This paper makes no claim as to that fact; but this insight could have led to a supposed “second-mover advantage.” If Marshall and Jefferson both learned of the unconstitutionality at the same time (during oration), then the choice only presented itself during Marshall’s turn, which allowed him greater flexibility in his decision-making process and simultaneously limited Jefferson’s ability to make rational choices at the beginning of the game.

This turns out to be the single most important event in the game. This paper argues that had Jefferson known about Marshall’s third option, he would have readily chosen to issue the commissions in the first place.

In Appendices A, B, and C, the structure of the tree and the payoffs are exactly the same. In each appendix, however, the rollback analysis is changed, and, therefore, so is the final result of the game. In Appendix A, the tree is viewed from Jefferson’s perspective; in Appendix B, the tree is constructed based on how Jefferson would have acted if he had known about the missing information set; and in Appendix C, the game is shown as Jefferson and Marshall truly played it in 1803.

Now, because the payoffs stay the same in each Appendix, this paper will argue for the structure of the payoffs here. As you refer to the table in the bottom right corner of each appendix, you will see that the top letters refer to Jefferson (J) and Marshall (M). These correspond to the letters at every decision node. Furthermore,
the payoffs are ranked in preference order; a payoff of four is most preferable to the actor, while a payoff of zero is least preferable.

It is widely known that the Founding Fathers knew that their actions would set precedents far into the future. George Washington was once quoted as saying, “there is scarcely any part of my conduct which may not be hereafter drawn into precedent.” It is not hard to extrapolate from this quote that many of the framers, including Jefferson and Marshall, had a very similar mindset. It has been said that Marshall, in understanding the weight of his positions, “invented, in an era without precedent, the legal principle that form[s] the foundations of American constitutional and international law today.” At the time, our young democracy was just starting to establish precedents in every facet of government—and Marshall and Jefferson knew it.

With that in mind, a relatively incontestable payoff structure can be established, which allows us to continue with the rollback analysis of the game. Two items have been taken into consideration: first, that the two players care most about the long-term function of the government; and second, that the two players have different desires to appoint or not to appoint Federalist Justices of the Peace. The payoffs are listed according to preference order; thus, a zero is least preferable and a four is most preferable. The payoff tables are constant across all appendices and their tables.

Starting with Jefferson’s payoffs, a four is assigned to the outcome in which Jefferson does not issue the commissions and Marshall rejects the mandamus. This is Jefferson’s best payoff because the government does not expand its judicial or executive authority, and the Justices of the Peace are not issued their commissions. As mentioned before, Jefferson did not particularly like the judiciary branch; he is quoted as saying that “the judiciary bodies were supposed to the most helpless members of the government…experience, however, soon showed in what way they were to become the most dangerous.” Presumably, Jefferson’s “experience” — presumably his interaction with Marshall in Marbury v. Madison — demonstrated the strength of the Court. Jefferson’s next best outcome occurs when he issues the commissions (a value of three), in the first place. This payoff deviates from Clinton’s structure, and that is because in this outcome, Jefferson cedes the judgeships, but neither the executive
nor the judiciary are expanded. After that, Jefferson’s third best outcome (a value of two) happens when Jefferson does not issue the commissions, Marshall upholds the mandamus, and then Jefferson overrules Marshall’s verdict. This is good for Jefferson that the judges are not put into place, yet it is certainly worse than the previous outcome because the precedent is now set for the executive branch to have the authority to overrule the judiciary. In the long-term, the Supreme Court will be exceptionally weak, but the executive powers will have expanded. From Jefferson’s Anti-Federalist perspective, any imbalance or expansion of federal power is considered a negative outcome. Jefferson’s second worst outcome comes when he does not issue the commission, Marshall upholds the mandamus, and Jefferson yields to the Court (a value of one). This is a near-disaster for Jefferson because the justices of the peace are given their commissions, and the Supreme Court establishes authority over the executive branch. In doing so, the formerly weak Supreme Court is now a source of authority. Surely, Jefferson would have loathed this possibility. Lastly, Jefferson would have had the least preference for the true historical outcome (a value of zero). In this scenario, Jefferson does not issue the commissions, and then Marshall rejects the mandamus and concurrently establishes judicial review by declaring the Judiciary Act of 1793 unconstitutional. Here Marshall vastly expands the power of the judiciary and shifts the balance of power in government unlike any other outcome. Although the judges are not appointed, Jefferson still does not prefer to have the governmental structure reorganized and skewed toward the judicial branch.

From Marshall’s perspective, the payoffs are almost perfectly reversible. Marshall’s most preferable outcome is to establish judicial review (a value of four). As mentioned earlier, Marshall was a staunch advocate of the Supreme Court and of Federalist ideologies, thus the establishment of judicial review is his best outcome. Next, he would prefer that Jefferson not issue the commissions, then Marshall would uphold the mandamus, and finally Jefferson would agree to issue the commissions (a value of three). This is Marshall’s second-most preferred outcome because the power of the judiciary is respected by Jefferson and the judgeships are issued. Next, Marshall would prefer that Jefferson issue the commissions in the first place (a value of two). In this
scenario, the Court’s power is not expanded, but the justices of the peace are given their commissions. Marshall’s second-to-least preferable outcome occurs when Jefferson does not issue the commissions, and Marshall rejects the mandamus (a value of one). The Supreme Court does not gain authority and the judgeships are not issued—both poor outcomes for Marshall. However, this is still better than the least preferable outcome, which occurs when Jefferson does not issue the commissions, Marshall upholds the mandamus, and then Jefferson overrules the Court (a value of zero). In this scenario, the judges are not appointed, and the Court becomes effectively obsolete by way of executive expansion. It is true that some Federalists may have seen this as a partial win due to the increase in executive authority and overall government influence, but Marshall, as a member of and advocate for the Supreme Court, certainly would not have preferred this outcome.

With the payoffs established, this paper moves to review the rollback analysis of the three different game trees in the appendices to this paper. In all three appendices, Jefferson’s payoff is the first number in the set, and Marshall’s payoff is the second number. For example, in set (3,2), Jefferson receives the three and Marshall receives the two. The same goes for set (1,3), where Jefferson receives the one, and Marshall receives the three.

In Appendix A, the game tree has been structured from Jefferson’s point of view. As mentioned earlier, the dotted line denotes an information set that Jefferson does not have at the start of the game. From Jefferson’s perspective, starting with the last decision node, Jefferson knows that he would choose to overrule the mandamus, resulting in payoff (2,0). This line has been bolded to symbolize the selected choice, and any non-bolded lines have effectively been pruned from the game tree. Then Jefferson believes that Marshall is choosing between “Uphold $\rightarrow$ Overrule” and “Reject,” for a payoff of zero or one respectively. Here Jefferson believes Marshall will choose to reject, for it would result in a higher payoff for Marshall. Finally, Jefferson is deciding between “Issue” for a payoff of three or “Don’t Issue $\rightarrow$ Reject” for a payoff of four. Obviously, Jefferson will choose the higher payoff and opt to not issue the commissions and wait for Marshall to reject the mandamus. With the information that Jefferson has available to him, this is a highly rational decision.
However, with full information given to both players, the outcome of the game would change. In Appendix B, the game tree has been changed to reflect a game played with symmetric information. In this game, the first part of the rollback analysis remains the same. Jefferson would choose to overrule Marshall for outcome (2,0). Then, rationally, Marshall would choose to reject the mandamus and concurrently establish judicial review by way of declaring the Judiciary Act of 1793 unconstitutional for outcome (0,4). For Jefferson, the decision is now between issuing the commissions for outcome (3,2) and not issuing the commissions and receiving (0,4). In this scenario, Jefferson would clearly choose set (3,2) and opt to issue the commissions from at the commencement of the game.

Finally, in Appendix C, is the game as played in reality. In this version of the game Jefferson does not know that Marshall can establish judicial review, so he will operate with the same rationality as Appendix A. He believes that he is choosing between “Issue” for payoff (3,2) and “Don’t Issue → Reject” for payoff (4,1). However, as previously discussed, Marshall is either granted a second-mover advantage via oral arguments, or he skillfully develops a new move and carefully conceals information about the move from Jefferson. Regardless of how or when Marshall accesses the information, Jefferson will choose to not issue the commissions and pursue outcome (4,1)—his best and most preferable choice. Then, Marshall will decide to reject the mandamus and establish judicial review and the game ends with payoff (0,4). In this way, Jefferson is quickly shifted from picking between his most preferable and second-most preferable choice, to receiving his least preferable payoff. Unbeknownst to the players at the time, the ramifications of Jefferson’s lack of information would be monumental to the establishment of today’s Supreme Court and would forever change the course of American history.

**Implications**

The analysis of the strategic interaction between Jefferson and Marshall, as discussed above, provides us with a multitude of insights as basic as rethinking *Marbury v. Madison* and as deep as bettering our understanding of the inner workings of the American
government. First, this analysis offers a better understanding of Marshall, Jefferson, and the entirety of the *Marbury v. Madison* decision. This paper argues that Jefferson was not necessarily ‘outfoxed’ by Marshall in their interaction, but that Marshall could have been granted a second-move advantage. Furthermore, this paper can help us better understand inter-institutional relationships and strategies. As detailed above, it is clear that governmental bodies communicate both explicitly and implicitly and, in doing so, help shape the future of policy in the United States. In studying interactions such as Jefferson and Marshall’s in the early nineteenth century, we can better understand our current government and the way that politicians connect in the political sphere. Similarly, this analysis presents demonstrable evidence that even non-elected officials, such as Supreme Court justices, often strategize in a way that is most characteristic of elected officials. In this analysis, Marshall clearly understood that he was pitted against Jefferson and decided to play a political game in which the Supreme Court was to come out on top. Lastly, and perhaps most importantly, this paper provides insight into the decision-making process of Supreme Court justices. In analyzing Marshall’s strategic choices throughout the course of the game, we can see that he was explicitly influenced by his environment. He clearly considered that Jefferson and the Anti-Federalists were his opponents and countered Jefferson accordingly. This fact is not to be taken lightly. If we extrapolate this understanding into modern-day politics, then it is important to recognize that Supreme Court justices can be manipulated by their environment. Their decisions are not made in a vacuum—if enough pressure exists, it is possible to alter their verdicts and thus influence the entire nation.

Ultimately, the purpose of the presented paper is to encourage a rethinking of the strategic interaction between Marshall and Jefferson. This paper posits that Jefferson and Marshall were acutely aware of the fact that their decisions were an important indicator to future generations about how the government should and would function. They both desired, primarily, to uphold their institutional agenda and were only secondarily concerned with the true outcome of *Marbury v. Madison* in regard to the justices of the peace. Whereas Jefferson ended up with his least favorable outcome, however, Marshall became a historic champion of the
supreme Court. He very well may remain the figure in whose shadow judges will forever dwell. Marshall’s victory over Jefferson in 1803 has long defined the supreme Court, and, with lessons learned from this paper, we know that the highly unstable and manipulable environment in which we all live will influence the future of decision-making in the Court.
Appendix A

<table>
<thead>
<tr>
<th>J = Jefferson</th>
<th>M = Marshall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue</td>
<td>3</td>
</tr>
<tr>
<td>Reject</td>
<td>0</td>
</tr>
<tr>
<td>Uphold</td>
<td>1</td>
</tr>
<tr>
<td>Uphold, Overrule</td>
<td>2</td>
</tr>
</tbody>
</table>

Appendix B

<table>
<thead>
<tr>
<th>J = Jefferson</th>
<th>M = Marshall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue</td>
<td>3</td>
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<tr>
<td>Reject</td>
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</tr>
<tr>
<td>Uphold, Overrule</td>
<td>2</td>
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</tbody>
</table>
Notes

2 In other words, a *writ of mandamus* is a request for a federal official to fully complete his duties as member of the government. In this case, Madison was not ‘performing his duties’ in that he refused to deliver commissions which had already been signed, sealed, and were marked for delivery.
3 The Supreme Court of the United States, 16 Yale L.J. (1907)
5 “Marbury v Madison, 5 U.S. 137 (1803).” Justia Law.
7 The Papers of Thomas Jefferson, Volume 41: 11 July to 15 November 1803 (Princeton University Press, 2014), 346-8
9 Ibid.