

Motivated Reasoning and Bias in Sports Scandals: A Survey Experiment*

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Abstract

Does motivated reasoning lead to bias in favor of the home team or against a rival team when evaluating sports scandals? We address this question via an online survey experiment. After describing a scenario in which an NFL player tested positive for steroids and was suspended for four games without pay, we asked respondents to evaluate the appropriateness of the penalty. The offender was alternately described as playing for the respondent's self-reported favorite team, the major rival of that team, or simply "in the NFL." Relative to the control group, there is no evidence of positive bias toward the favorite team. However, we find that respondents are significantly less lenient when assessing a penalty applied to the rival team. Moreover, the magnitude of this effect increases as respondents care more about professional football. These findings help shed light on public reactions to scandals such as "Deflategate" involving the New England Patriots.

*We are grateful to Claire Adida for the inspiration to do an online survey as a homeschooling activity, and to COVID-19 for giving us the opportunity to work on this project together. Julian has written up his own separate report for this project to share with his teacher and classmates; it conveys the results without using boring terms like "conditional average treatment effect." Family and friends who want a copy should contact us.

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1 Introduction

In January 2015, the New England Patriots and quarterback Tom Brady were accused of intentionally deflating footballs during a playoff game against the Indianapolis Colts. After an investigation, the National Football League (NFL) announced that it would suspend Brady for four games, and the Patriots would be fined and lose two draft picks. Federal Judge Richard Berman overturned Brady's suspension, but it was later reinstated by an Appeals Court, and Brady missed four games at the start of the 2016 regular season.

Initial reactions to “Deflategate,” as it came to be known, ran the gamut—from calls for the Patriots and coach Bill Belichick to be banned from the Super Bowl (Jones, 2015; Newberry, 2015), to dismissing the scandal as “phony” or the “dumbest sports controversy ever” (Downey, 2015; Kory, 2015). Polarized reactions continued after the decision was overturned and then reinstated by the courts. Most amusingly, after the initial court decision, a Dunkin' Donuts in Maine posted on its roadside letterboard sign “Judge Richard Berman gets free coffee for life.”

The Patriots, of course, are a polarizing team—much loved in New England, but with many detractors throughout the rest of the country. What role might bias in favor of the home team, or against a bitter rival, play in public reactions to sports scandals such as Deflategate? Motivated reasoning—arriving at a conclusion that one wants to be true, even if it does not comport with the facts—is a well-known phenomenon in social psychology and cognitive science (Kunda, 1990). Motivated reasoning is a particularly influential factor in the formation of political opinions, especially in the increasingly polarized U.S. partisan landscape (Slothuus and De Vreese, 2010; Bolsen, Druckman and Cook, 2014). In the world of professional sports—which many Americans are vastly more passionate about than politics—motivated reasoning seems likely to influence opinion formation as well.

To examine the role of home-team and rival-team bias in public attitudes toward sports scandals, we conducted an online survey experiment. The experiment described a hypothetical scenario in which a wide receiver—from the respondent's favorite team, from a rival team, or with no team

specified—tested positive for steroids and received a four game suspension. We asked respondents for their assessment of the appropriateness of this penalty. We hypothesized that the favorite team treatment would make respondents more likely to say the penalty was too harsh and the rival team treatment would make them more likely to say it was too lenient. We further hypothesized that the magnitude of effects would depend on how much respondents care about professional football.

We find evidence of bias only against the rival team, not in favor of the home team. Respondents were no different in their assessment of the penalty when applied to a wide receiver “in the NFL” versus one from their self-reported favorite team. This result holds regardless of how much respondents care about football. However, when the player is affiliated with a rival team, respondents are less lenient in their assessment of the penalty. This effect is conditional on how much respondents care about football: we find null effects among the least passionate group, and large effects among the biggest fans.

2 Research Design

On April 6, 2020, we fielded a short survey to 502 U.S.-based respondents recruited via Amazon.com’s Mechanical Turk (Berinsky, Huber and Lenz, 2012; Boas, Christenson and Glick, 2020). Following a few introductory demographic questions, the survey asked three questions about football. A first question asked how much respondents cared about professional football, on a 1–7 Likert scale ranging from “Not at all” to “Crazy fan.” The distribution of this variable was bimodal, with the largest share caring not at all, and the next largest group choosing 5 out of 7, while 23% of respondents placed themselves in the top two categories.

To measure respondents’ favorite team, the next survey question asked “Regardless of how much you care about football, if you had to root for an NFL team, which one would it be?” All 32 NFL teams were listed as options. We considered assigning home teams more indirectly, based on a respondent’s city or state of residence, but there are too many states without a team as well as several cities with more than one, and not everyone roots for the local team. Asking respondents to

explicitly name their favorite team may have had the effect of depressing “favorite team” treatment effects, but other approaches would have induced measurement error.

Using each respondent’s self-reported favorite team, we identified its major rival using the KnowRivalry database (Tyler and Cobbs, 2017), which is based upon online surveys of each team’s fans.¹ Teams and their corresponding rivals are listed in Table 1. Since the Raiders technically moved to Las Vegas after the completion of the 2019 season but have not started playing there, we referred to them as the “Las Vegas (ex-Oakland) Raiders.” Due to a coding error in the survey, the New York Jets’ rival was left blank, so we omit the 13 Jets fans from the analysis, leaving 489 valid responses.

The final question of the survey administered the experiment. The text read as follows:

Imagine that a wide receiver [for the *favorite team* / for the *rival team* / in the NFL] tested positive for anabolic steroids for the first time. When confronted with the evidence, he said he had gotten poison ivy and had been using steroid cream. He received a 4-game unpaid suspension. In your opinion, the player:

1. Should never have been penalized
2. Should have been penalized for fewer games
3. Received the appropriate penalty
4. Should have been penalized for more games
5. Should have been banned from the NFL

Respondents were randomized to receive one version of the text in brackets, with “in the NFL” serving as the control condition. For the favorite team and rival team conditions, the name of the corresponding team was inserted. The scenario mentioned that the player claimed to have been using steroid cream to treat poison ivy in order to create room for doubt about the appropriateness

¹These data can be consulted at www.knowrivalry.com. We defined the major rival as the team with the highest aggregate rival score. For the main rival of the Washington Redskins, for which there was insufficient survey data, we used the Dallas Cowboys, the NFL team whose fans were most likely to name the Redskins as *their* top rival.

Table 1: NFL Teams and Major Rivals

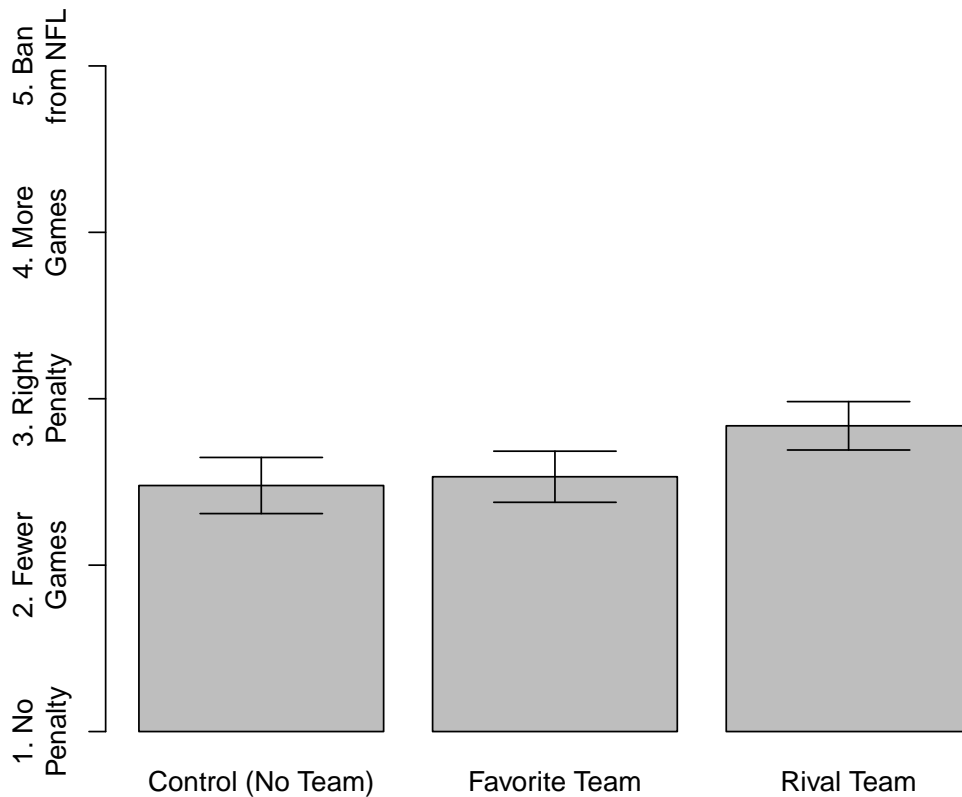
Team	Rival
Arizona Cardinals	Seattle Seahawks
Atlanta Falcons	New Orleans Saints
Baltimore Ravens	Pittsburg Steelers
Buffalo Bills	New England Patriots
Carolina Panthers	New Orleans Saints
Chicago Bears Green	Bay Packers
Cincinnati Bengals	Pittsburg Steelers
Cleveland Browns	Pittsburg Steelers
Dallas Cowboys	Philadelphia Eagles
Denver Broncos	Las Vegas (ex-Oakland) Raiders
Detroit Lions	Green Bay Packers
Green Bay Packers	Chicago Bears
Houston Texans	Indianapolis Colts
Indianapolis Colts	New England Patriots
Jacksonville Jaguars	Tennessee Titans
Kansas City Chiefs	Las Vegas (ex-Oakland) Raiders
Las Vegas (ex-Oakland) Raiders	Denver Broncos
Los Angeles Chargers	Las Vegas (ex-Oakland) Raiders
Los Angeles Rams	San Francisco 49ers
Miami Dolphins	New York Jets
Minnesota Vikings	Green Bay Packers
New England Patriots	New York Jets
New Orleans Saints	Atlanta Falcons
New York Giants	Philadelphia Eagles
New York Jets	New England Patriots
Philadelphia Eagles	Dallas Cowboys
Pittsburgh Steelers	Baltimore Ravens
San Francisco 49ers	Seattle Seahawks
Seattle Seahawks	San Francisco 49ers
Tampa Bay Buccaneers	Carolina Panthers
Tennessee Titans	Houston Texans
Washington Redskins	Dallas Cowboys

Source: www.knowrivalry.com (Tyler and Cobbs, 2017)

of the penalty. The midpoint of the scale corresponds to the NFL’s standard penalty for a first-time positive doping test.

3 Results

Figure 1: Appropriateness of Penalty by Treatment Condition

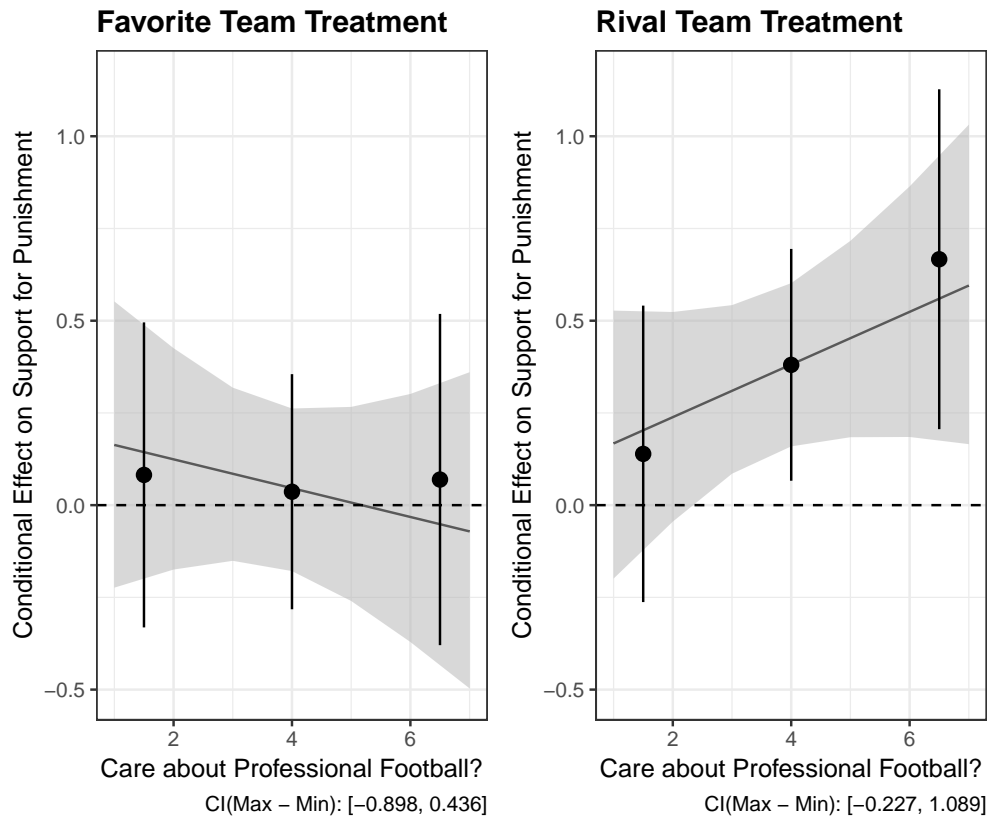


Bars show mean response by treatment condition, with 95% confidence intervals.

Mean assessment of the appropriateness of the penalty by experimental condition are summarized in Figure 1. In general, respondents were inclined to be lenient on the offender, perhaps because of the room for doubt created by the poison ivy excuse; the average response for all groups was less than 3 (“received the appropriate penalty”). There is no significant difference in responses between the control group, for whom no team was specified, and the group that was told the player was from their favorite team. However, we do find evidence of bias against the rival

team. Here, respondents were significantly less lenient in their assessment of the appropriateness of the penalty.

Figure 2: Conditional Average Treatment Effects by Caring About Football



The diagonal line shows the conditional average treatment effect based on a linear interaction; the shaded area is its 95% confidence interval. Vertical lines and points show average treatment effects and 95% confidence intervals in terciles of the conditioning variable.

As hypothesized, we also found that the magnitude of treatment effects varies based on how much one cares about professional football. Conditional average treatment effects are summarized in Figure 2. We report effects based on a linear treatment interaction as well as simple mean differences in terciles of the conditioning variable to test for possible nonlinearity. The left-hand panel shows that the null effect of the favorite team treatment holds regardless of how much respondents care about football. For the rival team treatment, effects are null for those who care little about football (1–2 on the 7-point scale), but those who care a medium amount (3–5) or a great deal (6–7) are significantly harsher on a player from the rival team. The increase in support for punishment is

approximately linear, with the group that is most passionate about football showing the most bias against the rival team.

4 Conclusion

The results of this study suggest what New Englanders have long known: when characterizing the Deflategate penalty as unfair, they were merely stating an honest, unbiased opinion, and anyone who said otherwise was solely driven by their hatred of the Patriots. On the other hand, if this happens again to Tom Brady with the Buccaneers, he'll definitely be guilty.

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