# Good Sports and Sore Losers: How Watching Sports Increases Perceptions of Election Legitimacy

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## Abstract

What makes people more likely to view electoral defeats as legitimate? In this paper I examine the influence of legitimating rituals, public behavior from competitors that signal that a competition was conducted fairly. Building on social learning theory, I predict that observing legitimating rituals in even ostensibly *apolitical* competitions increases perceptions of election legitimacy. I test my theory using televised team sports, a popular type of competition with frequent legitimating rituals. Two studies test the theory; a panel from before and after the 2020 election, and an experiment manipulating whether respondents are exposed to legitimating rituals. Panel evidence shows that sports watching predicted greater acceptance of election defeat in 2020. In my experiment I find exposing respondents to a legitimating ritual in the context of sports increases perceptions that an unrelated election loss was legitimate. I conclude by discussing the importance of rituals for perceptions of election legitimacy.

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# Introduction

Democracy relies on electoral losers peacefully accepting their defeats. Absent this willing (albeit unhappy) acceptance of electoral loss, governments are forced to use coercive force to induce compliance (Tyler 2006). If electoral losers do not believe an election was legitimate, democracies risk instability and potentially a violent struggle for power (Anderson et al. 2005; Moehler 2009). While in past American presidential elections supporters of the losing candidate have been more skeptical of the election processes than supporters of the winning candidate (Sances and Stewart 2015), prior to the 2020 election the vast majority of the losing party has always expressed belief that their opponent's win was legitimate (Jones 2016). This changed after 2020, when a majority of Republicans believed that Joe Biden did not win fairly (Griffin and Quasem 2021). The unprecedented level of skepticism towards the election results underscores the importance of understanding what promotes a belief among electoral losers that an unfavorable election outcome was nevertheless legitimate.

In this paper I introduce the concept of legitimating rituals, regular displays of public behavior that are an expected part of competition and which signal that the competition was legitimate. American election campaigns have rituals that serve to reinforce the idea that elections were conducted fairly. During a typical campaign for office there are debates between opposing candidates who shake hands at the end, a sign that their competition may be fierce, but the candidates see the other as worthy of respect. At the end of an election the defeated candidate gives a concession speech, congratulating his or her opponent. Finally, in the case of presidential campaigns the winner is inaugurated in a elaborate ceremony which affirms their status as the victor. In other competitions such as sports, there are similar rituals. Teams shake hands or exchange hugs with

their opponents, peacefully accept their losses, and give post-game press conferences which imply their defeat was legitimate.

Where are people exposed to legitimating rituals? Many Americans are largely disengaged from politics and pay little attention to political news (Krupnikov and Ryan 2022); at most, they might see a presidential candidate they support lose every four years. By contrast, people who watch sports typically see their preferred side lose multiple times in a single year. Sports feature a variety of rituals that promote a narrative that the superior team won fair and square (Sage 1998). People who watch sports typically see multiple losses, and legitimating rituals associated with those losses.

Sports are extremely popular in the United States. Sixty-two percent of Americans self-identify as sports fans, thirty-seven percent say they watch sports once a week or more, and twelve percent say they watch sports every day (Consult 2021). In America, of the top 100 most watched broadcasts of 2022, 94 were sporting events (Crupi 2022). Does watching legitimating rituals in sports increase perceptions that political competitions are legitimate as well?

I use social learning theory as a framework to understand how people who watch sports observe people performing the appropriate way to respond to losses in competition, and how the lessons of how to respond to losses can be extended to reactions to political competitions as well. Social learning theory establishes a set of requirements for people to learn from media and apply those lessons to novel situations. I argue that team sports leagues in the United States feature a variety of legitimating rituals which satisfy these requirements, and therefore watching such sports may influence perceptions of electoral contests. Two studies test the influence of legitimating rituals on beliefs that political defeats are legitimate. First, I use nationally representative panel data from before and after the 2020 election to measure how watching team sports moder-

ated reactions to the election outcome. Next, I test whether observing legitimating rituals specifically cause people to believe an election loss was the result of a fair process. I use a preregistered survey experiment to expose people to legitimating messages in both sports and politics, comparing the effect of each on perceptions that an election loss was legitimate.

My results indicate that, consistent with past research, perceptions of election legitimacy fell among supporters of the losing candidate after the 2020 election. Crucially, however, among those who watched team sports *more*, perceptions of legitimacy dropped significantly *less*. In my experiment, viewing legitimating rituals in politics and sports were *both* effective at increasing the perception that an election loss was the result of a fair process. Combined, the two studies show the importance of legitimating rituals in promoting beliefs that defeats in competition were the result of legitimate processes, including defeats in election competitions. Additionally, this study highlights the influence of watching sports on beliefs about political competitions. As an extremely popular genre of televised entertainment, sports appears to influence how viewers interpret other competitions, including political competition.

## Legitimating Rituals in Sports and Politics

The traditional explanation for why Americans view elections as legitimate argues that observing American democracy at work promotes acceptance of election losses (e.g. **?**Ginsberg and Weissberg 1978; Lukes 1975). This argument contends that American elections have well-established procedures which promote beliefs that elections are fair and which encourage trust in the political system. Observing the behavior of politicians and "the rituals surrounding their selection and accession to office" (Easton 1975, p. 446) increases support for the political system, independent

of which politician wins. Other work has argued that rituals in contexts which are not explicitly political, such as sports, promote and reinforce societal values (Dayan and Katz 1994). Despite these claims about the role of rituals in fostering support for the American political system, the nature and effectiveness of such rituals has received little empirical testing.

I define legitimating rituals as public behaviors that participants in a contest engage in, and which signal that the contest was conducted using a fair process. Legitimating rituals may include competitors publicly accepting an outcome that is unfavorable to them, signaling respect for their opponent, making statements endorsing the fairness of the competitive process in victory or defeat, or other similar actions. In electoral competition, examples of legitimating rituals include behavior such as debates with one's opponent(s) that feature formalized expressions of respect (handshakes, addressing one's opponent with a formal title, etc), concession speeches where the defeated candidate acknowledges their loss and congratulates their opponent, or speeches affirming the importance of adhering to democratic principles.

"Legitimating ritual" is a combination of two ideas: "Ritual", a behavior which follows a regular pattern and has symbolic aspects which draws attention to ideas which are significant to a society (Lukes 1975); and "legitimacy", a durable attachment to a system independent of the outcomes produced by that system (Easton 1965, 1975). Perceptions of legitimacy are rooted in perceptions of whether the procedure used to arrive at an outcome was fair (Tyler 2006). In the case of elections, I view perceived legitimacy as beliefs related to whether election processes were fair. The low levels of legitimacy among Trump's supporters after the 2020 election is reflected in their suspicion that there were many flaws in the voting process (voter fraud, fake ballots, voting machine issues, etc.) Therefore, legitimating rituals are patterned behaviors which promote the idea that a competition is legitimate; i.e. that the process for determining the winner was fair, in-

dependent of the outcome. I focus on the influence of legitimating rituals on perceptions of electoral losers. Supporters of winning candidate's need little help assuming that their candidate's victory was earned through fair processes. It is the belief among supporters of a losing candidate that their loss was disappointing but occurred via fair processes - "loser's consent" - which is crucial for functioning democracy (Anderson et al. 2005).

The effect of these rituals on perceptions of election legitimacy may have received little previous empirical testing because they were assumed to be a stable feature of the American political landscape. For example, a notable legitimating ritual is the concession speech after an electoral defeat. In a study of reactions to concession speeches, respondents who were told that a politician refused to concede had lower confidence that an election was conducted fairly. However, respondents who were told a politician conceded did not have significantly different beliefs about an election compared to the control group (Vonnahme and Miller 2013). Respondents in the control condition likely assumed that the defeated politician conceded even when they were not told that as part of an experimental manipulation, so one of the intended treatments had no effect. However, with Trump's rejection of these rituals, such assumptions might not hold today. While a majority of Trump supporters considered Biden's win to be illegitimate, more than half said they would change their view if Trump conceded (Pennycook and Rand 2021).

While some legitimating rituals were notably absent in the 2020 election campaign, other parts of American culture continue to show competitors peacefully and publicly accepting disappointing losses. The standard narrative used to cover sports is that the winning side deserved to win (Goldman and Papson 1998; Sage 1998). Sports teams regularly perform a variety of legitimating rituals to signal that they accept the outcome of a match, win or lose. For example, in the National Hockey League there is a traditional "handshake line" after every playoff series,

where the two teams shake hands with one another (Klein 2014). In addition to such unofficial traditions, sports leagues have implemented formal rules to promote the idea that losses are legitimate. In all major US team sports, media outlets have regulated access to talk to players and coaches after a match (Kraft 2021; Moritz, Siemsen and Kremer 2014). Players and coaches are limited in what they are allowed to say in post-game press conferences (Seifert 2016). To encourage gracious acceptance of loss, those who criticize officiating or question the fairness of the outcome often face fines or other penalties (e.g. Koreen 2023; McDaniel 2023). Similar efforts to promote beliefs that games are fair have existed since sports leagues were first created (Thorn 2011). These efforts from sports leagues appear to have largely been successful. Despite stereotypes of fans griping about referees, majorities of fans of every major sport approve of referee performance, with avid fans expressing even stronger approval (Affairs 2005; Silverman 2021). When post-game riots occur in North American sports they are more likely to be celebratory riots in response to winning rather than disappointed riots in response to losing (Lewis 2007).

## Reactions to Loss in Sports and Politics

How might legitimating rituals promote beliefs that elections are legitimate? Social learning theory provides a framework for understanding how people learn by observing the actions of others (Bandura 1977). People often model their own actions or beliefs after others (Gibson 2004). By observing admired "role models" and attempting to emulate their behavior, people learn the appropriate way to react to situations they encounter (Singhal et al. 2004; van Hoorn et al. 2016). Social learning theory has been applied to understand how people's beliefs, affect, and behavior are influenced by those they observe in mass media (Bandura 2002; Singhal et al. 2004).

Social learning theory suggests that four requirements must be satisfied for someone to learn from the behavior of others. First, one must observe the behavior of the model to be emulated (observation); second, one must retain information in a general form so that it can be applied to new situations (retention); third, one must translate the remembered concepts so they are applicable to a situation one faces (translation); and fourth, one must be motivated to follow the behavior of the model when the appropriate situation arises (motivation). Applied to a presidential campaign, social learning theory suggests that people will emulate the behavior of the politician they support. If the politician engages in legitimating rituals, they are serving as a model for their supporters to accept the election outcome, win or lose.

I theorize that legitimating rituals in ostensibly *apolitical* competitions promote perceptions of *political* competitions as legitimate. In other words, I test whether people who watch sports model the behavior they observe in sports, when reacting to other, *non-sports* competitions.

Legitimating rituals are a key part of televised sports games, so people who watch sports will frequently observe them. Even legitimating rituals that are not broadcast during the game are widely watched. For example, post-game shows of football matches are often more popular than any cable news program (Nielsen 2023). Rituals should also contribute to an easy-to-retain message of accepting defeat. Sports are presented using a narrative framework where the superior side won due to their virtues and the losing side accepted defeat (Sage 1998). Narratives are easier to remember than discrete pieces of information (Green, Brock and Kaufman 2004). People who watch sports are also highly motivated to emulate the behavior they see from sports figures. This is why athletes are so popular in advertising campaigns; athlete endorsements produce increased sales of the endorsed product, especially after the athlete wins a major match (Elberse and Verleun 2012; Coombs and Harker 2022).

Less clear is whether sports viewers can translate lessons from legitimating rituals in sports to political contests. However, other studies of sports have found that people appear to translate beliefs developed from watching sports to political attitudes. For example, positive sentiment towards Muslim soccer star Mohamed Salah translated to more positive sentiment towards Muslims in general among supporters of his team (Alrababa'h et al. 2021). Another example is the translation of the narrative of sports success to economic beliefs. Sports fans appear to translate the common sports narrative of effort leading to success to beliefs about economic advancement. Sports fans are more likely to believe that economic success is largely a product of hard work rather than unearned privilege (Thorson and Serazio 2018).

# 1 Hypotheses

In this study, I test whether legitimating rituals in sports promote beliefs among electoral losers that political contests as legitimate. Based on the social learning model, I predict that observing legitimating rituals in sports causes people to be more willing to believe that losses, including election losses, were the result of fair competition. People who see legitimating rituals see those whose behavior they are motivated to emulate peacefully accept defeats in competition. I expect that observing this behavior makes them more likely to accept defeats in other competitions. My theory has three observable implications which I describe in three hypotheses.

First, I hypothesize that people who view more legitimating rituals in sports will be more likely to perceive electoral defeat as legitimate. I assume that people who watch more sports will observe more legitimating rituals in sports. Someone who watches sports frequently receives a stronger "treatment" than someone who watches sports less frequently. People who watch more

sports will see more legitimating rituals and therefore be more willing to believe that a political loss was legitimate.

$H_1$: People who watch more sports will react less negatively to election losses than those who watch less sports

Second, I hypothesize that observing legitimating rituals associated with a political competition in which one's preferred side lost will increase perceptions that the competition was legitimate. This is a minimal test of the link between legitimating rituals and viewing political defeats as legitimate - if legitimating rituals in political competitions do not increase perceptions of election legitimacy, legitimating rituals in sports competitions are unlikely to increase election legitimacy either.

$H_2$: People who see a legitimating ritual associated with a political contest will perceive a defeat in that contest as more legitimate

Finally, I hypothesize that observing legitimating rituals associated with a sports competition will increase perceptions that a *political* competition is legitimate. If legitimating rituals in sports influence generalized beliefs about how to react to losses, their influence should extend to non-sports competitions. This is the stronger test of the link between legitimating rituals and perceiving election defeats as legitimate.

$H_3$: People who see a legitimating ritual associated with a sports contest will perceive a defeat in an unrelated political contest as more legitimate

# Design, Data and Measures

## Research Design

I test my theory in two steps. First, I use a panel with the same set of respondents from before and after the 2020 election to examine how people who watch sports more react to electoral defeat relative to people who watch sports less. I use measures of perceived legitimacy of the 2020 election to compare how perceptions of legitimacy changed over time. This approach using the same group of people before and after the election controls for any factors, measured or unmeasured, which have a stable influence on perceptions of election legitimacy.

Next, I use a preregistered survey experiment to directly test the effect of viewing legitimating rituals. In this experiment, all respondents learn about an election where their preferred side lost. Respondents are exposed to legitimating rituals in sports and politics, with respondents viewing a legitimating ritual in politics, sports, both, or neither. I compare how legitimate respondents in each condition perceive the election loss to be.

Combined, these two approaches provide an observational test of how people reacted in a real election with an experimental test which allows me to directly examine the causal influence of exposure to legitimating rituals.

## Panel Study

My first set of data comes from a set of nationally representative panel data collected by Amerispeak.[1] Respondents were recruited using address-based random sampling. Sports watching was recorded in the April 2021 wave. Vote intention was recorded in October 2020, with respondents reporting

[1] Demographics of panel respondents relative to United States population averages in Appendix A

who they planned to vote for in the upcoming election. Perceptions of election legitimacy were measured in both the October 2020 and April 2021 waves. This means I measure how fair people thought the presidential election was going to be shortly before it happened, as well as how fair people thought the election was once the results were known. Measuring perceptions both before and after the election enables me to test how perceived election legitimacy changed among the same set of survey respondents over time in response to the results of the election. In total, 2,625 people participated in both the pre- and post- election waves.

I operationalize perceived election legitimacy as a set of beliefs about how likely it was that fair or unfair processes occurred during the election. I use a five-item index tapping belief in a set of reasons why the election would be/was conducted fairly or unfairly. For example, whether some people voted more than once (unfair) or votes were accurately counted (fair).

Each question was measured with a four-point Likert scale, from "Very Likely" to "Not at all Likely". Items in this index did not correlate well together ($\alpha$ .42 before the election, $\alpha$ .68 afterwards). Democrats and Republicans vary in their level of concern regarding specific threats to the election process (Ansolabehere and Persily 2008; Park-Ozee and Jarvis 2021). The index can therefore be best thought of as an additive tally of different concerns, where people are more likely to be concerned about some flaws in the electoral process rather than others based on party. To avoid issues arising from between-subject variation in which threats to election fairness are considered more serious, I exclusively measure individual-level *changes* in perceptions of fairness from before to after the election.

I operationalize sports watching as as the extent to which people watched team sports. I selected team sports for two reasons. First, team sports have a clear losing side (unlike a sport like golf, where there is not a singular "loser"), so I expected that team sports would feature more le-

gitimating rituals. Second, I expected that people would have stronger positive feelings regarding sports teams that they watch compared to their feelings towards competitors in non-team sports. Therefore, I expected respondents who watched team sports to be more motivated to emulate the behavior of their favorite team, compared to respondents who watched sports with individual competitors.[2]

To measure sports watching, I used a list-frequency measure (de Vreese and Neijens 2016) asking how frequently a respondent watched each of the five most popular team sports in America (football, baseball, basketball, hockey, soccer) when that sport was in season. Response options were measured on a five-point scale from "several times a week or more" to "never". Watching each of the five team sports was strongly positively correlated with watching each of the others, forming an index with an $\alpha$ of .75.

## Experimental Study

In the experiment, I directly manipulate the legitimating rituals that respondents are exposed to and test how they influence perceptions of the fairness of elections. Specifically, in this experiment I test my theory using concession speeches. Concession speeches are an example of a legitimating ritual which is similar in sports and politics. I expose respondents to concession speeches in politics and sports, testing how they influence reactions to an election where the respondent's preferred candidate lost.

I ran a preregistered online survey experiment on a sample of 1,009 United States respondents

[2] As a robustness test, in Appendix C I replicate my analysis from this study using other sets of sports as the independent variable of interest. There were no significant differences in results, regardless of which set of sports was used to operationalize sports watching.

recruited from the survey provider Forthright.[3] Respondents were recruited from all states except Florida due to the dependent variable measuring perceptions about an election in Florida. Because the survey evaluated perceptions of whether an electoral defeat was the result of fair processes and pure independents were expected to have weaker reactions to political defeats, all respondents recruited for the study identified as either Democrats or Republicans (including leaners).

Post-election concession speeches are a major legitimating ritual in politics, where the defeated candidate publicly acknowledges his or her defeat. Concession speeches from politicians have historically followed a rhetorical pattern which emphasizes re-framing losses and mitigating disappointment from supporters who may have invested large amounts of time, effort, and emotion into a campaign. Political losers have traditionally used the concession speech to praise democracy, thank those who worked on the campaign, and promise eventual victory in later elections (Corcoran 1994; Mirer and Bode 2015). Post-defeat press conferences among coaches and players are remarkably similar to post-defeat concessions by defeated politicians. Analysis of coaches' post-match comments after defeats in basketball (Llewellyn 2003) and football (Enterline 2010) found similar rhetorical patterns to those in political concessions - acknowledging the winner, identifying positives to take from the loss, and commiserating with the disappointment of supporters. While defeated coaches and defeated politicians talk about different competitions, their statements contain similar features. Both make it clear which side won while simultaneously cushioning the blow for those disappointed by the loss.

The design was a 2x2 experiment, with the first factor being assignment to watch a sports concession speech and the second factor being assignment to watch a political concession speech.

[3]Preregistration available at `https://aspredicted.org/blind.php?x=1TD_KY4`

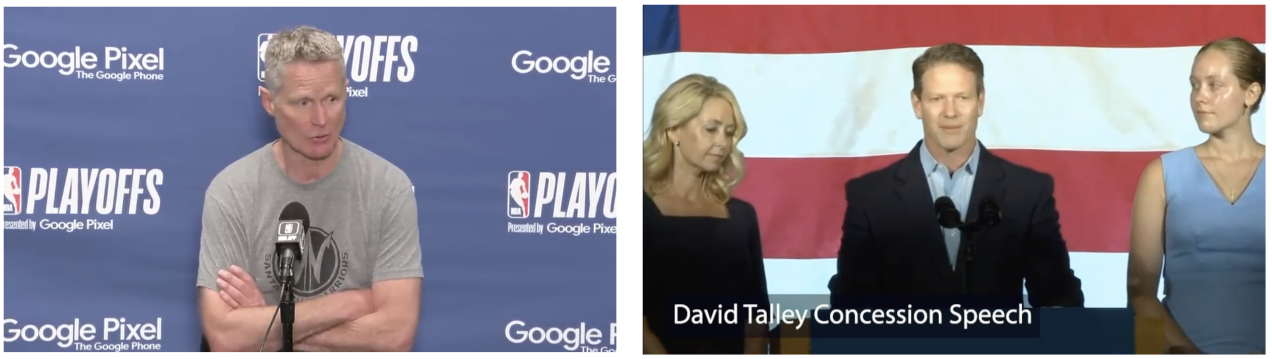
Therefore, there were four total conditions (sports concession and political concession, sports concession only, political concession only, no concessions), with roughly equal numbers of respondents in each.

The study procedure was as follows: First, all respondents answered an initial set of questions to measure covariates and verify their ability to hear audio and see video. Respondents in the sports concession condition then read about a recent basketball game and watched a video of part of the defeated coach's post-game press conference.[4] Then all respondents read a description of two candidates and those candidates' policy positions. The candidates were fictitious, but respondents were told they were the politicians who ran for mayor of Jacksonville Florida in the most recent mayoral election. Respondents were asked to select which candidate they preferred. To make respondents more attached to their preferred candidate, all respondents were asked to write about why they selected their preferred candidate. After selecting their preferred candidate and justifying their choice, all respondents were then told their preferred candidate had lost in a close election, and the other candidate was the winner.

Once all respondents had been told their preferred candidate had suffered an electoral defeat, respondents in the political concession condition watched a video of a politician give a concession speech. They were told this was the concession speech of the candidate they had just expressed support for. To bolster external validity, this was an edited version of the real concession speech given by candidate Daniel Davis after he lost the most recent election for mayor of Jacksonville.[5] Parts of Davis's speech were manipulated to fit the description of the election read by participants. Snippets of sound were generated using AI voice-cloning program Coqui.ai based

[4]Unedited video available at `https://www.youtube.com/watch?v=ahxLPIPC7vI`

[5]Unedited video available at `https://www.youtube.com/watch?v=YhHi_2AEPfM`




(a) Sports Concession Treatment (b) Political Concession Treatment

Figure 1: Screenshots from Experimental Treatments

on Davis's vocal patterns. The name of the actual election winner who Davis congratulated in his speech was changed to be the name of the candidate respondents were told won the election. All respondents then answered questions about whether they believed the Jacksonville mayoral election was conducted fairly. To test whether the manipulations were successful, respondents answered questions asking which candidate won the Jacksonville election and which video(s) they watched. Finally, respondents answered a set of manipulation checks and were debriefed about the real Jacksonville mayoral election.[6] The manipulations were successful. Respondents successfully identified the candidate they had been told won the election and remembered which video(s) they watched ($p < .001$).

Crucially, this experimental design ensures that **all** respondents learn about an election, select a preferred candidate, and be informed that their preferred candidate lost that election. The only differences between conditions consist of which concession speeches each respondent watched.

[6]Respondents were also asked at the end of the survey if they had family or friends from Jacksonville, with the preregistered intent to drop these respondents from analysis since they were more likely to know about the real election and not be influenced by the treatment. In experimental design, removing respondents based on post-treatment variables can distort estimates if those variables are affected by the treatment (Montgomery, Nyhan and Torres 2018; Mutz 2021). I noted this risk in the preregistration but anticipated this post-treatment question would be unrelated to the treatment. However, respondents in the treatment conditions were significantly more likely ($p < .01$) to say they had friends or relatives in Jacksonville. Therefore, I did not exclude any respondents based on their response to this question.

Regardless of which candidate they picked, the respondent was informed that the other candidate won the election. For those assigned to the political concession condition, the audio in that speech congratulated the candidate respondents were told won the election.

To measure whether respondents viewed the electoral defeat as legitimate, I used an expanded version of the perceived election legitimacy measure used in the panel data. This eight-item index asked respondents whether they believed various fair or unfair processes happened during the election. All questions were measured on a four- point Likert scale from "very likely" to "not at all likely". Questions were coded so higher numbers represented increased belief the election was legitimate. For example, "votes were accurately counted" would be a belief the election process was fair while "some people voted more than once" would be a belief the process was unfair. This index held together well ($\alpha$ .84), indicating that various concerns about the procedures in the Jacksonville election were positively correlated with one another.

To analyze the experiment, I used regression with heteroskedasticity-robust (HC2) standard errors (Lin 2013). I included the following pre-registered covariates: education, age, and Trump feeling thermometer. Age and education were provided as demographics by the survey company. Trump feeling thermometer was measured at the beginning of the survey by asking respondents to rate Trump on a 100-point feeling thermometer. Therefore, per the preregistration, perceived election legitimacy was modeled using the following equation:

$$PerceivedElectionLegitimacy \sim \beta_1 PoliticalConcession + \beta_2 SportsConcession + \beta_3 Education + \beta_4 Age + \beta_5 TrumpFeelingThermometer + \varepsilon$$

# Results

## Changes in Perceived Legitimacy in the 2020 Election

I first use the panel data to test Hypothesis 1, that supporters of a losing candidate who watch more sports will perceive an electoral loss as more legitimate. For ease of interpretation, I first display several figures showing how perceptions of the legitimacy of the 2020 election changed over time among different groups. In figure 2, I show how perceptions of election legitimacy changed among those who supported the losing candidate (Trump) versus those who did not.

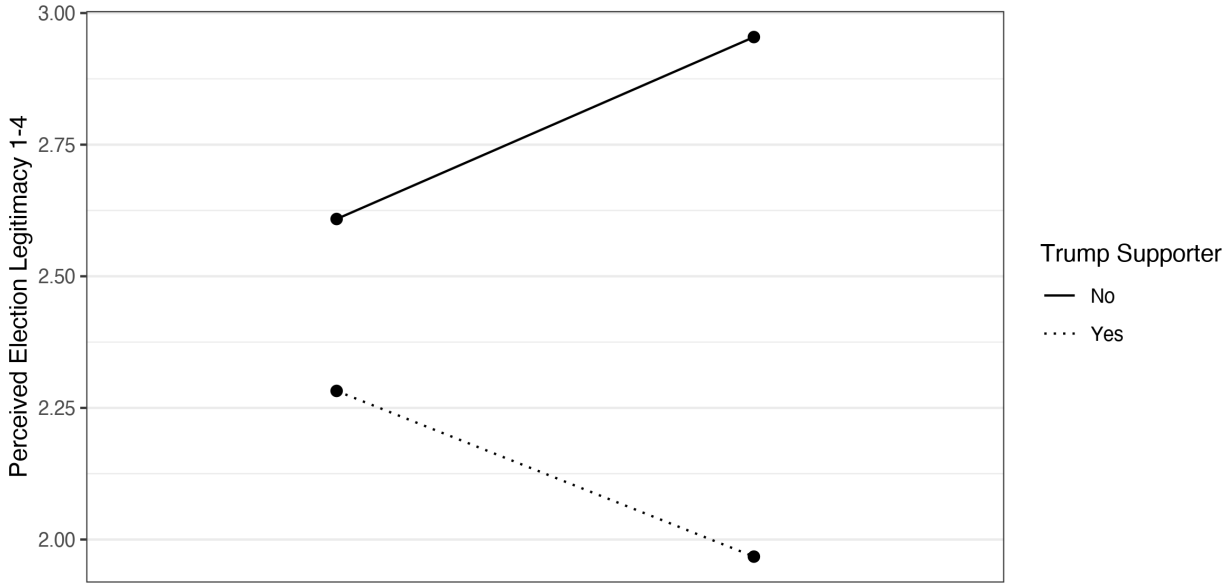



Figure 2: Perceptions of 2020 Election Legitimacy by Wave and Candidate Support

As figure 2 demonstrates, perceptions of election legitimacy decreased among Trump supporters, while it increased among other respondents. This pattern is consistent with existing work finding that perceptions of election legitimacy decrease among supporters of a losing candidate, but increase among the rest of the public (Sances and Stewart 2015; Daniller and Mutz 2019).

Figure 3 shows how reactions to the election varied depending on the level of sports watch-

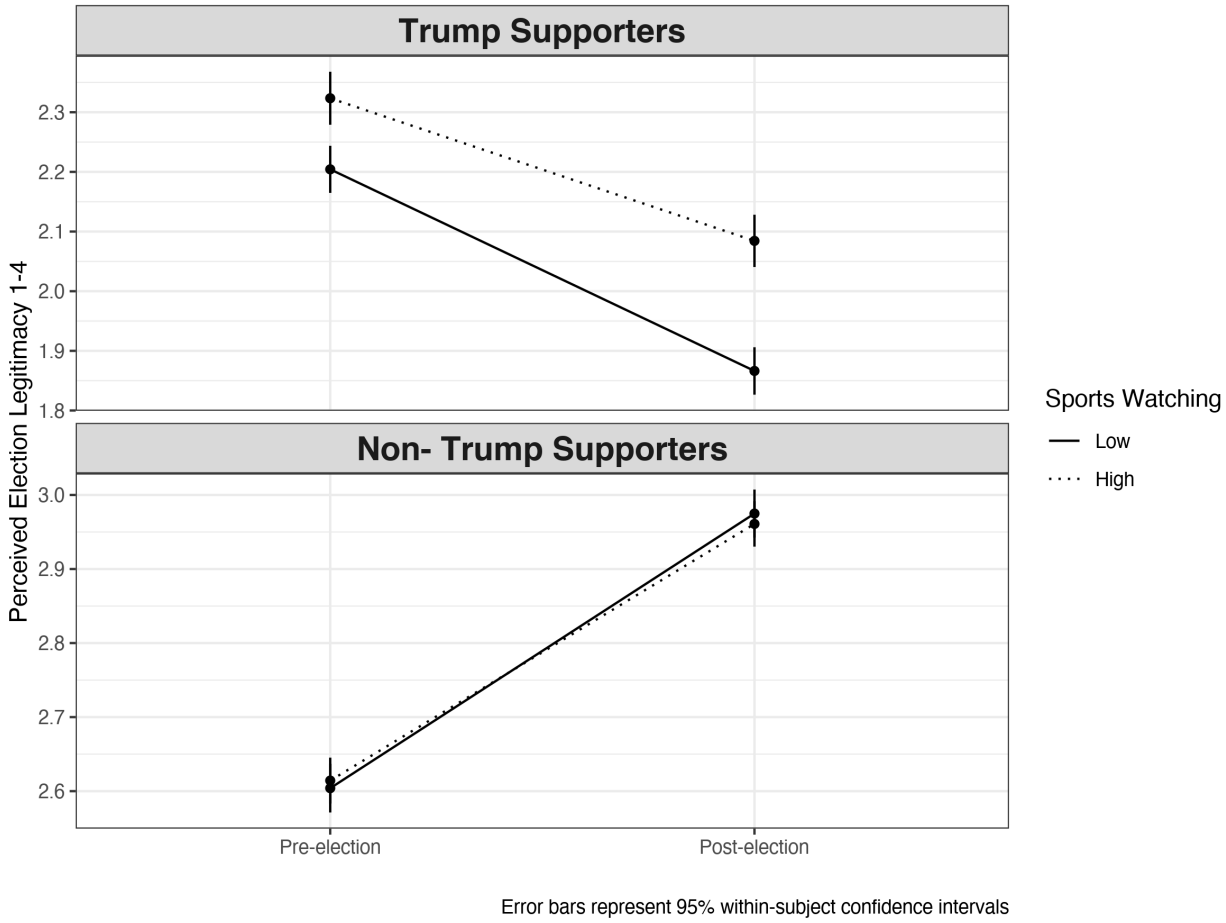



Figure 3: Perceptions of 2020 Election Legitimacy by Wave and Candidate Support

ing. In this figure, I divide respondents by their level of reported sports viewing. I show those in the top 1/3 of sports watching ("high" sports watchers) reacted to the election compared to those in the bottom 1/3 of sports watching ("low" sports watchers).

The top panel shows the relationship between wave, sports watching, and election legitimacy among Trump supporters (electoral losers). In the pre-election wave, Trump supporters who were high sports watchers were .12 points higher on the 1-4 election legitimacy scale than Trump supporters who were low sports watchers. In other words, they had higher expectations the election *would be* fairly conducted, prior to knowing the outcome. In the post-election wave, Trump supporters who were high sports watchers were .22 points higher in perceived election legitimacy.

This means that the gap in perceptions increased once Trump supporters learned their candidate lost. Sports watchers were more likely to see the loss as legitimate.

The bottom panel shows the relationship between wave, sports watching, and election legitimacy among those who did *not* support Trump. These respondents increased perceptions of election legitimacy after the outcome of the 2020 election was known. However, there was not a significant difference in perceived election legitimacy by level of sports watching. In the pre-election wave, high sports watchers were .01 points higher; in the post-election wave, high sports watchers were .01 points lower.

In summary, figure 3 demonstrates that legitimating rituals matter for supporters of the losing candidate. However, they appear to have no relationship to changes in perceived election legitimacy among supporters of the winning candidate.

To test Hypothesis 1, I model the change in election legitimacy using a panel regression model with individual-level fixed effects. This approach has the advantage of eliminating the need to control for time-invariant individual characteristics such as age, race, and any other stable personal characteristics (Allison 2009). Since sports watching was only measured at one point in time and a fixed effect approach controls for all time-invariant predictors, I interact my predictors (Trump support and sports watching) with the wave variable. Table 1 models the relationship between wave, Trump support, sports watching, and perceptions of election legitimacy.

The results in table 1 quantify the pattern demonstrated in figure 3. Perceptions of election legitimacy rose among respondents who did not support Trump (winners) by .349 points on the 1-4 scale. By contrast, perceptions of election legitimacy fell by .662 points for Trump supporters (losers) relative to non-Trump supporters. Among those who supported the losing candidate, higher levels of sports watching were significantly positively associated with increased percep-

Table 1: Change in Perceived Election Legitimacy

| | Model 1 |
|---|---|
| Wave | $0.349(0.013)^{***}$ |
| Wave x Trump Supporter | $-0.662(0.022)^{***}$ |
| Wave x Sports Watching | $-0.001(0.013)$ |
| Wave x Trump Supporter x Sports Watching | $0.062(0.024)^{**}$ |
| N | 2.625 |

All models use within-person fixed effects; sports watching measured in standard deviations
* p $<$ .05, ** p $<$ .01, *** p $<$ .001

tions of election legitimacy. A one-standard deviation increase in sports watching would predict a .062 point increase in perceptions of election legitimacy ($p < .01$). Among those who did not support the losing candidate, there was no significant relationship between watching sports and changes in perceptions of election legitimacy.

One potential concern is that the observed patterns in changes in perceived election legitimacy are caused by some other variable which is correlated with sports watching. While surveying the same set of respondents before and after the election removes the influence of any constant variables whose influence is constant over time, there may be other variable(s) which both predict a respondent's level of sports watching and which moderate changes in perceptions of the election pre- to post-election. In Appendix D I test how robust my findings are to two sets of variables which are correlated with sports watching. The first set of variables is political media consumption. Sports are often broadcast on networks which also broadcast news programs, so people who watch more sports on television also tend to watch more news on television. The second set of variables is demographics. While sports are broadly popular across a variety of demographics, there are still demographic differences between who is more likely to watch sports.

I use the method of Cinelli and Hazlett (2020) to establish bounds on how significant a po-

tential variable would have to be to substantively change my results. To select variables to test I used demographics which past work has found predict differing levels of sports watching (Norman 2018; Wann et al. 2001), and interacted these demographics with the wave variable to see which predicted not only differences in sports watching, but changes in perceptions to election legitimacy. A variable more than twice as predictive of both team sports watching and changes in perceived election legitimacy as any tested would be required to negate the relationship between watching team sports and changing to increase perceptions of election legitimacy. While sports watching was positively associated with watching news on TV, the relationship between watching sports and changes in perceptions of election legitimacy among Trump supporters was much stronger than it was for other media consumption. These findings suggest that the results are fairly robust to model selection.

Overall, the results of this panel analysis show that for people who supported the losing candidate in an election, those who watched more sports were more likely to believe the loss was legitimate. However, this data cannot not test the proposed mechanism; namely, that it was observing legitimating rituals in sports which accounts for relationship between sports watching and reaction to electoral loss. I turn to my experimental findings to directly examine the effect of observing legitimating rituals.

## Effect of Legitimating Rituals

I use an experiment to test hypotheses 2 and 3, that legitimating political rituals increase perceptions that a political loss was legitimate and that legitimating sports rituals increase perceptions that a political loss was legitimate. To test the hypotheses I compare the differences in means

between the two factors (exposed to legitimating ritual in politics and exposed to legitimating ritual in sports), adjusted based on the covariates included in the preregistered model. To test hypothesis 2, that respondents who saw the political concession would consider the election more fair, I compare the mean for the pooled political concession conditions versus the pooled political no-concession conditions. To test hypothesis 3, that respondents who saw the sports concession would consider the election more fair, I compare the mean for the pooled sports concession conditions versus the pooled sports no-concession conditions. Figure 4 displays the covariate-adjusted marginal means for those who saw a political concession speech versus those who did not, and those who saw a sports concession speech versus those who did not. In other words, it compares means across the pooled conditions grouped by whether respondents saw the political concession speech in the first panel and grouped by whether respondents saw the sports concession speech in the second panel.

Hypothesis 2 and hypothesis 3 are both supported. In line with past research on the influence of concession speeches on perceptions of procedural fairness in policy formation (Esaiasson, Arnesen and Werner 2023), people who watched a defeated politician concede believed that politician's loss was legitimate ($p < .001$). More notably, watching a concession speech in sports - an area ostensibly unrelated to politics - *also* caused people believe that the politician's loss was fair ($p < .05$). This indicates that the political concession speech was more effective than the sports concession speech at making people view the election loss as legitimate. But critically, and supporting hypothesis 3, that the sports concession speech significantly increased perceptions of legitimacy.

Effect sizes were calculated based on the preregistered model, including covariates. Respondents who watched a sports concession speech had perceptions of election fairness that were .08

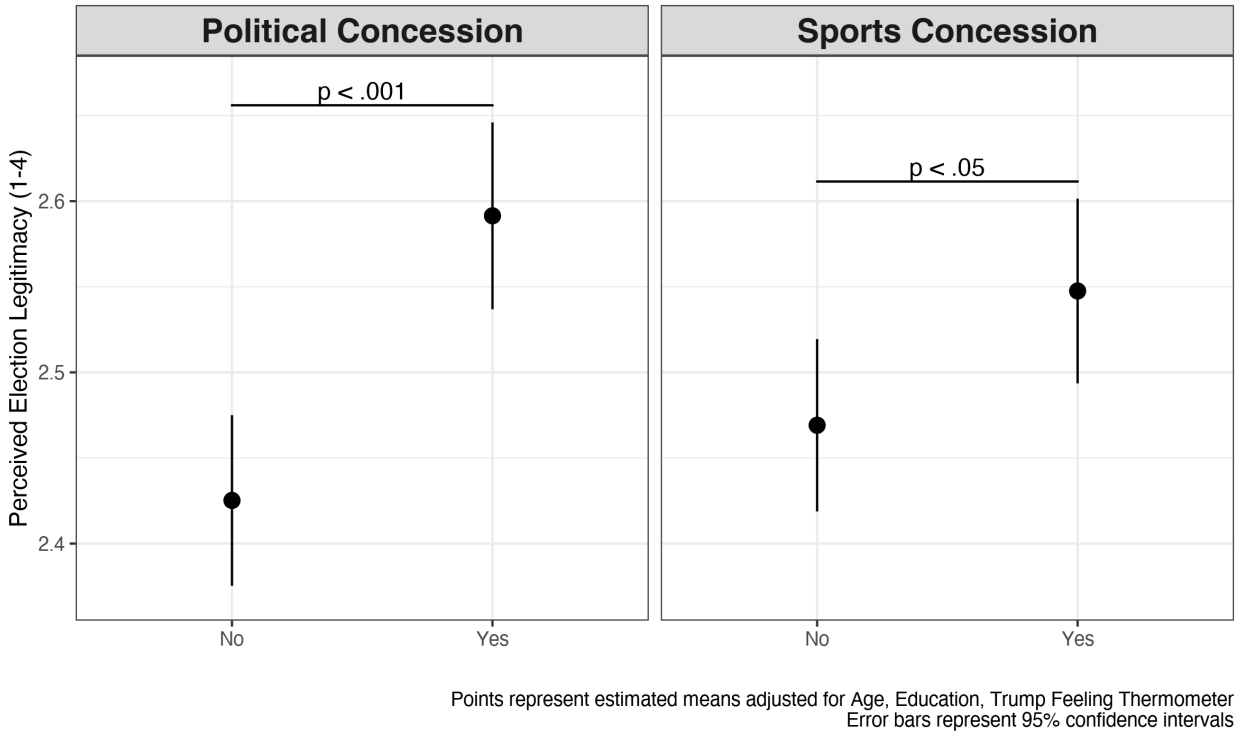



Figure 4: Effect of Political Concessions and Sports Concessions

points higher on the 1-4 scale than those who did not, equivalent to an increase of .13 standard deviations. Respondents who watched the political concession speech were on average .16 points higher than those who did not on a 1-4 scale ($p < .001$), equivalent to an increase of .26 standard deviations. How substantively large are these effects? While the .13 standard deviation increase for the sports concession speech may not seem large, that is in many ways a remarkable increase. There are many more sports games, sports losses, and sports concession speeches than there are in widely-watched political elections. Furthermore, the political concession speech was directly tied to the specific electoral defeat, while the sports concession speech was about a completely different contest.

The fact that the effect of the sports concession speech was half as large as the political concession speech speaks to the power of entertainment media to influence political attitudes. The

sports concession speech was about an entirely unrelated contest to the Jacksonville election. It made no reference to politics or anything that would conventionally be thought of as a political topic. The speech did discuss why the team lost and why that loss was legitimate, commiserated about the frustration of defeat, and encouraged team supporters that the team would be back next year. In other words, it resembled a political concession speech even though it was about a different topic. Consistent with past work on the surprising effectiveness of general "good loser messages" (Esaiasson, Arnesen and Werner 2023), the general message about being a good loser was sufficient for the sports concession to influence political beliefs.

In Appendix I, I perform an additional analysis (not preregistered) where I include an interaction between the sports concession and political concession conditions in the model. If this interaction is negative, that would imply that legitimating rituals in sports only influence political attitudes in the absence of legitimating rituals in politics. However, I observe a positive, but not statistically significant, interaction. The significant effect of the sports concession combined with the lack of a negative interaction between the two factors implies that observing legitimating rituals has an additive effect, where additional "dosage" increases perceptions of legitimacy after a loss.

# Discussion

This work makes two significant contributions. First, I develop the concept of legitimating rituals. I argue that signals that competitions are conducted fairly increase perceptions of election legitimacy, even signals in non-election contexts. Existing work on the relationship between media and perceptions of elections has largely focused on the role of partisan media (Daniller and Mutz

2019; Grant et al. 2021) or one-time messages from notable politicians endorsing the legitimacy of an election (Clayton and Willer 2023; Wuttke, Sichart and Foos 2023). Work on advertising, including messages in ostensibly apolitical "entertainment" media, suggests that messages have short-term effects (Gerber et al. 2011; Paluck et al. 2015). I instead examine the influence of observing repeated behaviors in competitions, rather than one-off messages.

The concept of legitimating rituals is different from existing concepts such as norms in several ways. First, rituals may or may not be formal requirements with enforcement mechanisms if a competitor violates them. Norms are informal and do not have formal enforcement mechanisms. Second, norms may or may not be public behavior, while legitimating rituals are behavior that is broadcast to the public. Finally, norms are typically considered to be consequential only in the relevant domain, while in this paper I demonstrate that legitimating rituals influence beliefs about other competitions.

Second, I show how watching sports influences beliefs about election legitimacy. Watching entertainment television programs affects a variety of politically-relevant attitudes such as perceptions of the criminal justice system (Mutz and Nir 2010), attitudes towards international relations (Lenart and McGraw 1989), support for capital punishment (Holbert, Shah and Kwak 2004), and belief in the possibility of economic advancement (Kim 2023). After being largely neglected as a source of political beliefs (Gift and Miner 2017) or viewed as apolitical shocks to public mood (Healy, Malhotra and Mo 2010), recent work has found that watching sports influences a variety of political attitudes as well (e.g. Alrababa'h et al. 2021; Thorson and Serazio 2018). The influence of watching sports on perceptions of election legitimacy adds to this line of research.

Sports may be particularly influential for two reasons. First, sports are extremely popular

in the United States. One third of advertisements seen on TV are seen during sports programs (Crupi 2021). Second, sports are broadly seen as non-political. Partisans interpret media and events through the "perceptual screen" of their party affiliation (Campbell et al. 1960; Zaller 1992). However, sports are watched by large numbers of Americans of all parties (Consult 2021). Even when sports networks are accused of being partisan, this does not appear to damage viewership of the network (Peterson and Muñoz 2022). People may be more easily persuaded by media which runs counter to their party messaging if the media is not overtly political.

There are several limitations of this study. First, it is unclear to what extent my findings generalize to future elections. In the first study, I observe patterns of reacting to the 2020 election which are in line with my experimental findings. However, the 2020 election was highly anomalous, with a losing candidate who refused to concede (Wooley and Peters 2021). Whether the observed patterns generalize to other elections where normal legitimating rituals are followed remains to be seen. However, in the experimental test the politics and sports legitimating rituals had an additive effect on perceptions of election legitimacy. Legitimating rituals in sports may help even when normal legitimating rituals in politics are followed.

With Trump planning a 2024 presidential run however, United States elections may continue to have one or more candidates who refuse to adhere to traditional legitimating rituals.

In the first study, one concern is that people who watch more sports differ along some important dimension compared to people who watch less sports. While I test the influence of demographics and media consumption as potential moderators correlated with sports consumption, it is impossibly to test every possible variable. There may be unmeasured psychological characteristics which are associated with sports watching and which moderate reactions to election losses.

In the second study, I examine an election which respondents knew nothing about. Therefore,

their attitudes about the election were more malleable than they would be in a more typical election. The effect of sports messages may be considerably smaller if attitudes about an election are crystallized. Respondents also saw the sports concession speech shortly prior to seeing information about the Jacksonville election. It is unclear how long the effects of watching sports concession speeches would last in a more realistic context. On the other hand, respondents are only exposed to a single "treatment", which does not account for the effect of numerous treatments from years of watching sports. Additionally, respondents likely felt less motivated to emulate the behavior they saw in the videos than if they had actually been supporters of the politician or sports figure.

Finally, the experiment does not manipulate the requirements for social learning outside of observation. For example, I do not compare the effectiveness of legitimating rituals from those one is more or less motivated to follow (for example, an athlete one one's own team versus an athlete from a rival team).

What do this paper's findings imply for politics? One lesson is that rituals matter for promoting perceptions of legitimacy. After the violence of January 6, Republicans spoke out against how Trump's refusal to concede the election undermined American democracy. Since, however, they have largely refrained from criticizing Trump's violations of standard democratic behavior (Mascaro 2023). Politicians who go against democracy see strikingly little electoral punishment (Graham and Svolik 2020). If Americans do not see the rituals of democracy repeatedly enacted, commitment to the system itself may decline.

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# Appendix A Panel Information

## A.1 Recruitment

Data was collected by Amerispeak/NORC at the University of Chicago. Using address-based probability sampling, interviews were conducted in either English or Spanish according to respondent preference. Respondents could choose to be interviewed online or by telephone. In total, 2,759 people participated in both the pre- and post- election waves of the panel.

## A.2 Survey Dates

- Pre-election: October 6 - October 30, 2020
- Post-election: April 6 - May 17, 2021

## A.3 Demographics

Table 2 shows demographics of respondents who participated in both waves of the panel, relative to demographics of the United States population.

Table 2: Respondent Demographics Relative to Population Benchmarks

| | Panel Respondents | US Population, Feb 2020 |
|---|---|---|
| **Income** | | |
| Less than $30,000 | 19.9 | 17.5 |
| $30,000 to $74,999 | 40.7 | 33.1 |
| $75,000 to $124,999 | 24.4 | 24.6 |
| More than $125,000 | 15.0 | 24.9 |
| **Age** | | |
| 18 - 34 | 17.5 | 29.3 |
| 35 - 49 | 26.7 | 24.3 |
| 50 - 64 | 28.9 | 24.9 |
| 65+ | 26.9 | 21.5 |
| **Race/Ethnicity** | | |
| Non-Hispanic White | 73.1 | 62.8 |
| Non-Hispanic Black | 7.7 | 11.9 |
| Hispanic | 12.2 | 16.7 |
| Non-Hispanic Asian/Pacific Islander | 2.9 | 6.4 |
| Non-Hispanic Others | 4.1 | 2.2 |
| **Education Status** | | |
| Less than High School | 2.5 | 9.8 |
| High School or Equivalent | 16.3 | 28.2 |
| Some College/Associate Degree | 38.0 | 27.7 |
| Bachlor's Degree | 24.1 | 21.8 |
| Graduate Degree | 19.2 | 21.4 |
| **Household Ownership** | | |
| Owner Occupied | 70.2 | 67.5 |
| Renter Occupied/Other | 29.8 | 32.5 |
| **Children in Household** | | |
| With 1+ Under 18 Years | 27.2 | 33.1 |
| Without Children Under 18 | 72.8 | 66.9 |
| **Marital Status** | | |
| Currently Married | 54.9 | 52.6 |
| Separated/Divorced/Widowed/Single | 45.1 | 47.4 |
| **Sex** | | |
| Male | 49.2 | 48.3 |
| Female | 50.6 | 51.7 |

*Note:*
Percentages for panel respondents represent unweighted proportions of the respondents who participated in both waves of the panel. Population benchmark calculated based on Census Bureau Current Population Survey, February 2020. Percentages for each demographic may not sum to 100 due to rounding error.

# Appendix B Panel Question Wording

## B.1 Perceived Election Legitimacy

Questions 1, 2, 3, and 5 were asked on a Likert of "[Very likely, Somewhat likely, Not too likely, Not at all likely]". Question 4 was asked on a Likert of "[Very confident, Somewhat confident, Not too confident, Not at all confident]". Brackets indicate differences between in question wording between the pre/post election waves. Question 4 was reverse coded so that higher values of the index represented greater confidence in the 2020 election process.

- In the [upcoming/] presidential election, how likely is it that some votes [will be/were] cast by people who were not eligible to vote?
- In the [upcoming/] presidential election, how likely is it that some people who [are/were] eligible to vote [will be/were] prevented from doing so?
- In the [upcoming/recent] presidential election, how likely is it that some people [will vote/voted] more than once?
- How confident are you that the votes across the country [will be/were] accurately counted?
- How likely is it that foreign interference [will affect/affected] the outcome of the US presidential election?

## B.2 Watching Team Sports

"When each sport is in season, how frequently do you watch? [Several times a week or more, Once a week, A few times a month, Once or twice a year, Never]"

- Football
- Basketball
- Baseball
- Soccer
- Ice Hockey

# Appendix C Testing Alternative Sets of Sports

In this section, I redo my analyses from Study 1 using different sets of sports. I compare the original set of team sports I use in Study 1 (football, baseball, basketball, hockey, soccer; $\alpha$ = .75) to a set of "zero-sum sports" (football, baseball, basketball, hockey, soccer, tennis, boxing/mma; $\alpha$ = .78) to a set of "all sports" (football, baseball, basketball, hockey, soccer, tennis, boxing/mma, auto racing, golf; $\alpha$ = .80).

Table 3: Change in Perceived Election Legitimacy

| | Team Sports | Zero-sum Sports | All Sports |
|---|---|---|---|
| Wave | 0.349 (0.013) *** | 0.349 (0.013) *** | 0.349 (0.013) *** |
| Wave x Trump Supporter | −0.662 (0.022) *** | −0.661 (0.022) *** | −0.664 (0.022) *** |
| Wave x Sports Watching | −0.001 (0.013) | −0.003 (0.013) | −0.007 (0.013) |
| Wave x Trump Supporter x Sports Watching | 0.062 (0.024) ** | 0.065 (0.025) ** | 0.072 (0.024) ** |
| N | 2625 | 2625 | 2625 |

* p < .05, ** p < .01, *** p < .001

Trump Supporter/Wave are binary

Perceived Election Legitimacy measured on a 1-4 scale

Sports Watching measured in standard deviations

All models use within-person fixed effects

Table 3 replicates table 1, comparing the coefficients when using team sports, zero-sum sports, or all sports to operationalize sports viewing. As the table illustrates, regardless of which sets of sports are used in the models, the patterns of changes in perceptions of election legitimacy are very similar.

# Appendix D Sensitivity Analysis

## D.1 Sensitivity to Demographics

Instead of modeling only the relationships between watching team sports, perceptions of election fairness, and trump support, these models include demographics which are correlated with watching sports (Wann et al. 2001).

Included variables: Age, Sex, Race, Education, Income. All variables were measured pre-election and interacted with the wave variable, with the same individual-level fixed effects. So the sensitivity model was:

*Perceived Election Legitimacy* $\sim$ *Team Sports*Wave + Race*Wave + Income*Wave + Sex*Wave + Education*Wave*

Outcome: $\Delta$ *Perceived Election Legitimacy (Trump Supporters)*

| Treatment: | Est. | S.E. | t-value | $R^2_{Y\sim D\|\mathbf{X}}$ | $RV_{q=1}$ | $RV_{q=1,\alpha=0.05}$ |
|---|---|---|---|---|---|---|
| *wave:team sports* | 0.012 | 0.007 | 1.694 | 0.3% | 5.3% | 0% |
| df = 972 | | *Bound (1x wave:female)*: $R^2_{Y\sim Z\|\mathbf{X},D}$ = 3.1%, $R^2_{D\sim Z\|\mathbf{X}}$ = 2.1% | | | | |

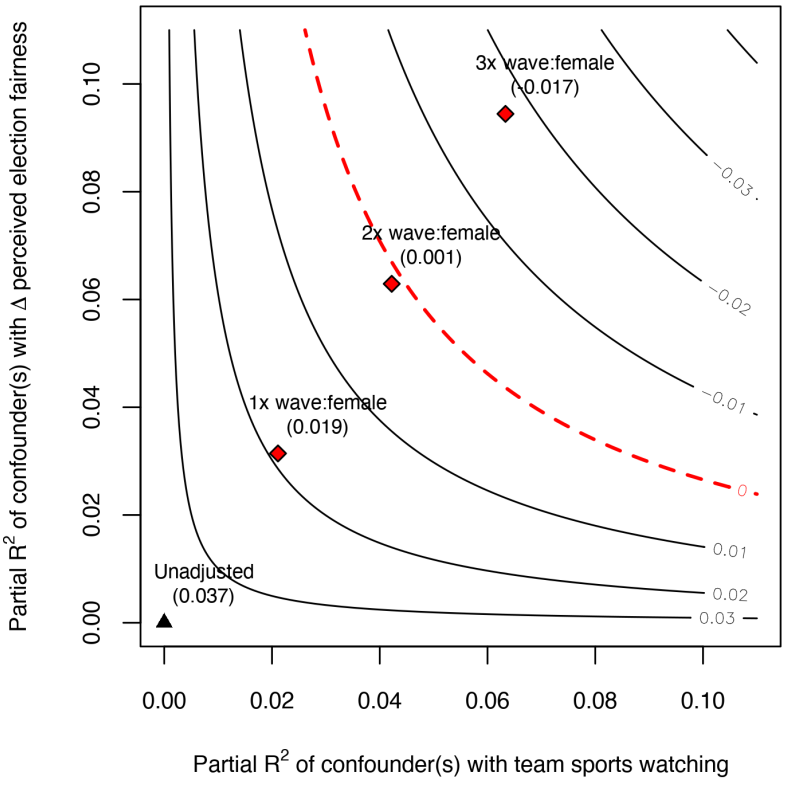


Figure 5: Sensitivity to Demographics (Trump Supporters)

## D.2 Media consumption among sports viewers

Another potential concern is that while sports viewers do not differ along demographics that predict different reactions to the election, people who watch more sports have a different news media diet than people who watch less sports.

In the post-election wave, I used a program-list measurement (Dilliplane, Goldman and Mutz 2013), asking people whether they watched 48 popular television news programs. I grouped these news programs into a set of categories based on the network they were broadcast on. Notably, there was one program on Newsmax, a network which became popular in the wake of the 2020 election due to its coverage claiming the election was stolen from Trump.

- **Fox News programs:** America's Newsroom with Bill Hemmer and Dana Perino, America Reports with John Roberts and Sandra Smith, The Five, Fox and Friends, Fox News at Night, Hannity, The Ingraham Angle, Justice with Judge Jeanine, Life Liberty & Levin, Outnumbered, Special Report with Brett Baier, The Story with Martha MacCallum, Tucker Carlson Tonight, Your World with Neil Cavuto
- **MSNBC News Programs:** The 11th Hour with Brian Williams, All In with Chris Hayes, The Beat with Ari Melber, Deadline: White House, The Last Word with Lawrence O'Donnell, The Rachel Maddow Show, The Reidout with Joy Reid
- **CNN News Programs:** Anderson Cooper 360, CNN Tonight with Don Lemon, Cuomo Prime Time, Erin Burnett Out Front, The Lead with Jake Tapper
- **Broadcast News Programs:** 60 Minutes, ABC World News Tonight with David Muir, CBS Evening News with Nora O'Donnell, CBS this Morning, Face the Nation, Good Morning America, Meet the Press, NBC Nightly News with Lester Holt, PBS NewsHour, The Today Show, The View
- **Newsmax Programs**: Greg Kelly Reports

I use the same sensitivity approach as I did for the demographics. In this case, the variable most strongly positively associated with the independent and dependent variable was watching CNN. Among Trump supporters, including the media consumption variables did not change the strength of the relationship between sports watching and changes in perceptions of election legitimacy. None of the media consumption variables substantively changed the relationship between watching team sports and changes in perceptions of election fairness.

Outcome: Δ Perceived Election Legitimacy (Trump Supporters)

| Treatment: | Est. | S.E. | t-value | $R^2_{Y\sim D\|\mathbf{X}}$ | $RV_{q=1}$ | $RV_{q=1,\alpha=0.05}$ |
|---|---|---|---|---|---|---|
| *wave:team sports* | 0.022 | 0.007 | 2.947 | 0.9% | 9% | 3.1% |
| df = 972 | | | | *Bound (1x wave:cnn watching)*: $R^2_{Y\sim Z\|\mathbf{X},D}$ = 0.9%, $R^2_{D\sim Z\|\mathbf{X}}$ = 0.2% | | |

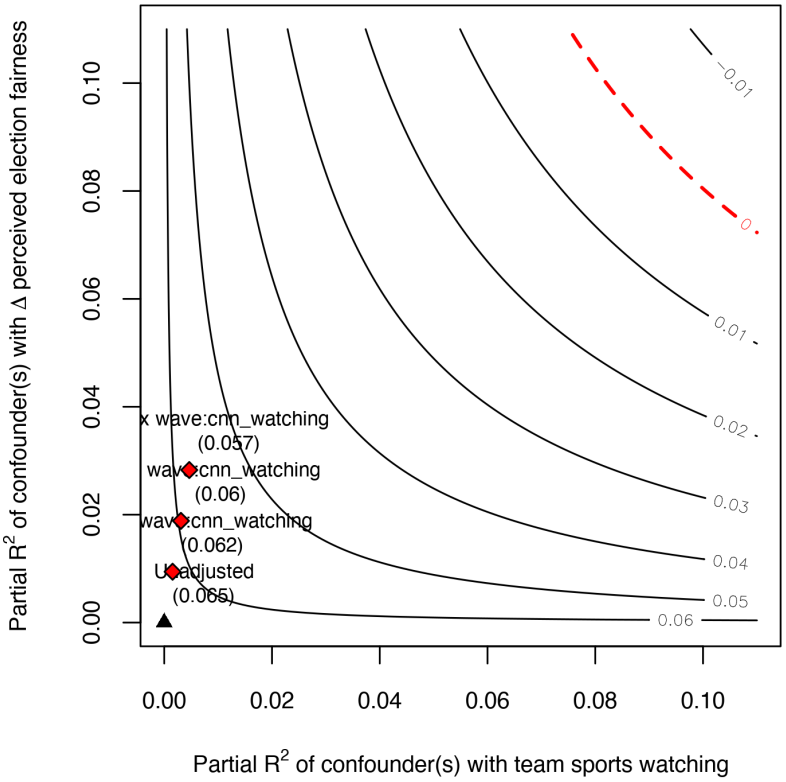


Figure 6: Sensitivity to Demographics (Trump Supporters)

# Appendix E Text of Experimental Treatments

Respondents saw video treatments, available here:

**Political Concession:** `https://www.youtube.com/watch?v=YhHi_2AEPfM`

**Sports Concession:** `https://www.youtube.com/watch?v=ahxLPIPC7vI`

The edited versions of the video treatments that respondents saw are available at `https://osf.io/rcezp/files/osfstorage`

Transcripts of the language used in the video are below.

## E.1 Political concession speech

All text spoken by Daniel Davis. Brackets indicate where audio was manipulated, with the speaking congratulating the candidate the respondent did not select as their preferred choice.

> Thank you so much. I called [David Talley/Thomas Dobson] earlier and congratulated him on being Mayor Elect of Jacksonville. I have said many times in public occasions that [David/Thomas] loves Jacksonville. There's no doubt in my mind that he does. And I just want to let you know I'm going to do everything I can to make sure Mayor Elect [Talley/Dobson] is successful in making Jacksonville the best Jacksonville it can be. I love my city. I will never stop loving my city. I'm going to serve my city till the day I die. It's just not going to be in the form that I thought it might be 24 hours ago. And that's okay. I talked to Rebecca and the kids earlier and obviously we're still kind of in shock of the results. And I want to make sure that we understand that this doesn't define us as a family. I did exactly what I know I was supposed to do. I was living life with purpose, caring about the citizens of Jacksonville. And what we're going to do next is make sure that Mayor Elect [David Talley/Thomas Dobson] is successful doing the exact same thing.

## E.2 Sports concession speech

All text spoken by Steve Kerr.

> First of all I want to congratulate the Lakers. They played a hell of a series; it's a great, great team. I want to congratulate Darvin and his staff; I thought they coached a brilliant series. Darvin has done an amazing job this year. You know in his rookie year as a coach he's pretty much seen it all and you know, you can see his poise and just his nature on the sidelines; how important that's been for their team given everything that that they've been through to get to this point. And so congrats again to Darvin and the staff and and their team of course. LeBron and A.D. are just brilliant players, they controlled the series. I thought we had our chances. To me the series came down to games one and four, and the Lakers outplayed us in the key stretches of those games, you know down the stretch and that's really the difference. But the better team won so congrats to them and good luck to them moving forward.

# Appendix F Experimental Study Question Wording

## F.1 Feeling Thermometer Covariate

"Please rate the following politicians on a thermometer that runs from 0 to 100 degrees. Rating above 50 means that you feel favorable and warm, and rating below 50 means that you feel unfavorable and cool. [Donald Trump/Joe Biden]"

## F.2 Candidate Selection

"If you were voting in this election, which candidate would you vote for? [Thomas Dobson (Republican)/David Talley (Democrat)]"

## F.3 Perceieved Election Fairness

"In the Jacksonville mayoral election, how likely is it that the following happened? [Very likely, Somewhat likely, Not too likely, Not at all likely]"

- [David Talley/Thomas Dobson] won fair and square
- People voted who were not eligible to vote
- Votes were accurately counted
- Some people who were eligible to vote were prevented from doing so
- Some people voted more than once
- Absentee votes were discarded by partisans
- Voting machines were rigged to favor one side
- Unexpected long lines at polling places caused people not to vote

# Appendix G Further Experimental Results

## G.1 Table of Experiment Results

Table 4: Effect of Legitimating Rituals on Perceived Election Legitimacy

| | Perceived Election Legitimacy |
|---|---|
| Sports Concession | 0.078(0.038)* |
| Political Concession | 0.166(0.038)*** |
| Trump Feeling Thermometer | −0.004(0.000)*** |
| Age | −0.001(0.001) |
| Education | 0.007(0.010) |
| Num.Obs. | 1009 |

* p < .05, ** p < .01, *** p < .001

## G.2 Raw Means by Condition

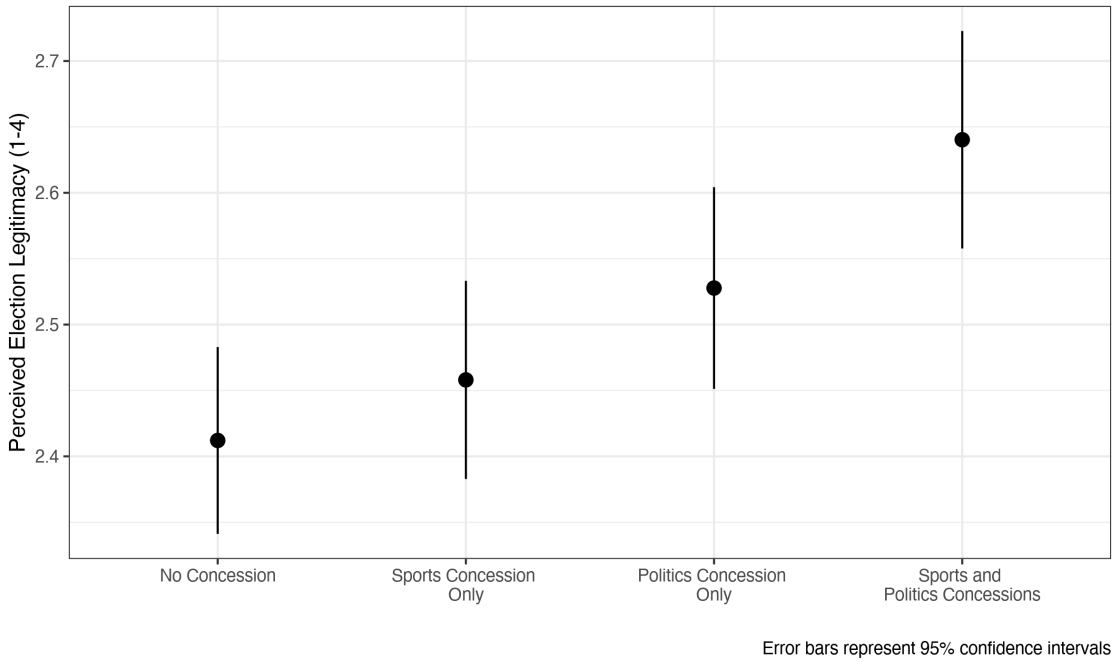


Figure 7: Experiment Means by Condition, Unadjusted for Covariates

# Appendix H Attention Checks

"Who won the recent Jacksonville Mayoral Election?"

Table 5: Percent Responses by Winner Name

| | David Talley (Democrat) | Thomas Dobson (Republican) |
|---|---|---|
| David Talley (Democrat) | 5.1 | 85.3 |
| Jacob Bridges (Democrat) | 1.9 | 4.6 |
| Jeff Marshall (Republican) | 3.5 | 2.8 |
| Thomas Dobson (Republican) | 89.5 | 7.3 |

"Which videos did you watch?"

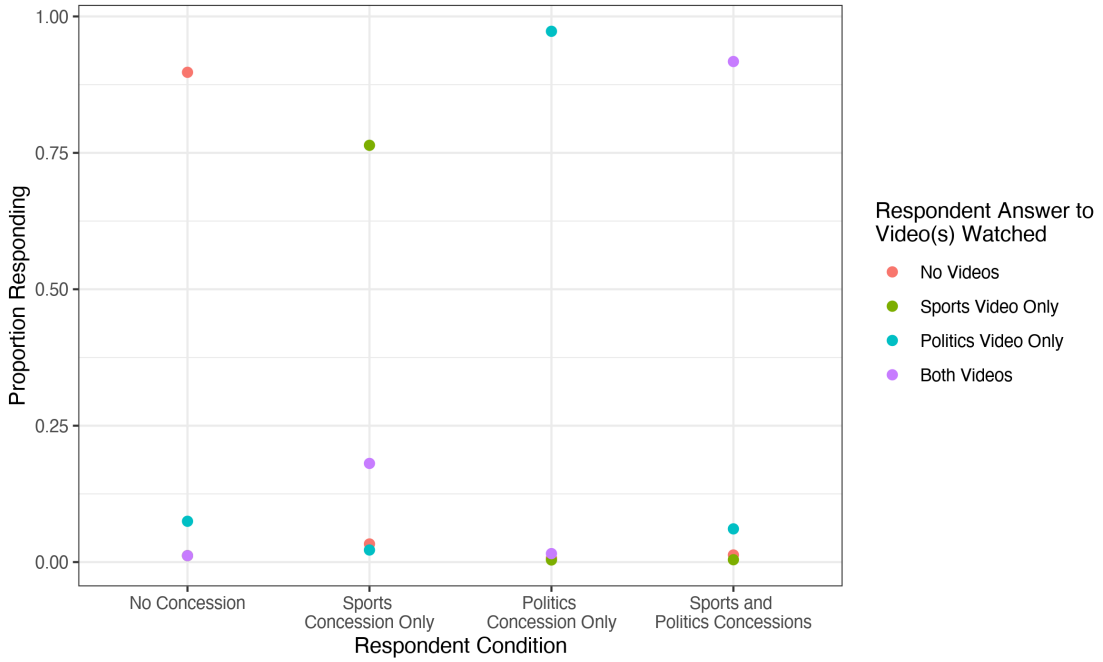


Figure 8: Percent Responses by Condition

# Appendix I ANOVA Model

This is an alternate model of the experimental results, which tests for an interaction between the sports and political concession conditions.

| Effect | DFn | DFd | F | p | p<.05 | ges |
|---|---|---|---|---|---|---|
| political_concession | 1 | 1002 | 19.552 | 1.09e-05 | * | 0.01900 |
| sports_concession | 1 | 1002 | 4.366 | 3.70e-02 | * | 0.00400 |
| trump_therm | 1 | 1002 | 70.305 | 0.00e+00 | * | 0.06600 |
| age | 1 | 1002 | 0.561 | 4.54e-01 | | 0.00056 |
| education | 1 | 1002 | 0.552 | 4.58e-01 | | 0.00055 |
| political_concession:sports_concession | 1 | 1002 | 2.794 | 9.50e-02 | | 0.00300 |