The Political Relevance of Irrelevant Events*

Ethan Busby
busby@u.northwestern.edu

James N. Druckman
druckman@northwestern.edu

Alexandria Fredendall
AlexandriaFredendall2015@u.northwestern.edu

Department of Political Science
Northwestern University
Scott Hall
601 University Place
Evanston, IL 60208

Abstract

Do events irrelevant to politics affect citizens’ political opinions? A growing literature suggests that such events (e.g., athletic competitions, shark attacks) shape political preferences, raising concerns about citizen competence. We offer a framework for studying these kinds of effects on preferences. Additionally, we present an experimental test of irrelevant event effects in a real world setting by exploring the impact of the 2015 College Football Playoff National Championship game. We study the game’s impact on multiple attitudes, mood, and the likelihood of public declarations. We also investigate the durability of irrelevant event effects. We find that irrelevant events can influence attitudes, mood, and public declarations. However, we also find that, when it comes to political attitudes, the irrelevant event effects appear to be short-lived. We conclude that, despite our demonstration of irrelevant event effects, it is premature to conclude such events play a substantial role in affecting citizens’ political opinions.

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Do events irrelevant to politics affect citizens’ political opinions? A growing body of work suggests that they do: daily climate fluctuations, shark attacks, and the outcomes of athletic competitions can shape citizens’ political preferences (e.g. Achen and Bartels 2002; Healy, Malhotra, and Mo 2010; Huber, Hill, and Lenz 2012; Bassi 2013; Zaval, Keenan, Johnson, and Weber 2014). For example, one widely cited study shows that wins in the 2009 National Collegiate Athletic Association basketball tournament\(^1\) led respondents from areas with winning teams to increase their approval of President Obama’s job performance by an average of 2.3 percentage points (and 5.0 percentage points among strong fans of the teams) (Healy, Malhotra, and Mo 2010). For many, the normative implications of such findings are troubling, as even the least stringent portrayals of how representative government should work presume that citizens base preferences on outcomes over which political actors have some control (see, for example, Mansbridge 2003; Healy and Malhotra 2013).\(^2\)

In this paper, we offer two contributions to this research. The first is a framework for studying these events. We outline the major components research in this area should incorporate to develop a clearer understanding of how such events influence individuals’ preferences. Secondly, we empirically apply this framework and replicate one of the more compelling demonstrations of an irrelevant event effect: how sporting events affect political evaluations (Healy, Malhotra, and Mo 2010). We do so with a novel study that combines the causal power of an experiment with the external validity of studying reactions to a real world event. We also build upon prior work by exploring the psychological mechanisms underlying irrelevant event effects.

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\(^1\) These were wins after the third and fourth rounds.

\(^2\) Most directly, the effects of irrelevant events are relevant for theories of anticipatory representation (Mansbridge 2003, 516–520) and retrospective voting (Healy and Malhotra 2013).
effects, the longevity of such effects, and the possibility of irrelevant effect contagion via social networks.

We start in the next section by detailing design elements that enable testing for irrelevant event effects; in so doing, we also present the details of our design. We then present our experiment and results. The results show that the outcome of an irrelevant event (i.e., 2015 College Football Playoff National Championship game) substantially shapes political and non-political opinions, mood, and public behaviors. However, we also find that the impact on political preferences is short-lived, disappearing one week later. We conclude that, despite demonstrations of irrelevant event effects, it remains unclear just how pervasive and impactful irrelevant events are when it comes to political opinions and behaviors. Indeed, our demonstration (and others) may be unique occurrences—as we discuss, more work is needed to determine whether or not that is the case.

The Study of Irrelevant Events

Studying the effects of irrelevant events on political opinions entails identifying a politically irrelevant event (e.g., a sporting event) experienced by individuals that causes them to shift their political attitudes (e.g., winning/losing teams leads to more/less support for the incumbent). The underlying psychology behind this effect is that the event changes individuals’ moods, which unknowingly influences their assessment of the current political landscape.\(^3\) Huber, Hill, and Lenz (2012, 731) explain:

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\(^3\) There are various different terms used for concepts related to affect and emotions. Here we use the term mood as it aligns with the foundational psychological research in this area (Schwarz and Clore 1983): it refers to a general state or feeling that lacks a clear referent, which is critical for irrelevant event effects (see the sixth point in Table 1). Specific emotions, on the other hand, inform us about the world around us but also suggest a likely cause. It is for this reason that we speak of positive and negative moods rather than discrete emotions (like happiness, sadness, etc.) (for a discussion, see Schwarz and Clore 2013).
Voters may lack the ability to isolate information about incumbent performance from unrelated information… In particular, individuals cannot mentally retain separate measures of incumbent performance and other outcomes. This “contamination” may also originate in the effect of emotional states on decision making. In particular, random events such as disasters may influence mood, which in turn influences how voters evaluate incumbents. Researchers have found that people often transfer emotions in one domain to evaluations and judgments in a separate domain…

In short, an irrelevant event generates a positive or negative mood which, in turn, leads individuals to have, respectively, more positive or negative assessments of the political world.

[Table 1 About Here]

Beyond this general approach, designing an irrelevant effects study is more difficult than it may initially appear. In Table 1, we list requisite design elements and how we incorporated them in our study. We present this table as a framework for studying these kinds of events, and we invite other researchers to apply and test the elements found in Table 1.

The first of these elements is to study an event that is outside the control (and viewed as outside of the control) of political leaders (Huber, Hill, and Lenz 2012, 731). This is not as straightforward as it seems: consider Achen and Bartels’ (2002) study of irrelevant events. The authors find that the occurrence of natural disasters ostensibly beyond the control of public officials (e.g., floods) led voters to become less supportive of those in office. Yet, Healy and Malhotra (2013, 296) point out that this reaction from voters could stem from holding

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4 Similarly, Healy, Malhotra, and Mo (2010, 12804) state “[v]oters who are in a positive state of mind on Election Day are likely to use their mood as a signal for the incumbent party’s success and access positive memories about the incumbent party and/or interpret past actions taken by the incumbent party more favorably. Additionally, positive emotions may cause voters to be more satisfied with the status quo… Those voters may then be more likely to choose the incumbent party in the election…”

5 We use the term “requisite” to mean design elements that should be considered in constructing a study. We do not mean to imply any single study needs to satisfy these elements if it is to offer insights into irrelevant event effects.
government officials responsible for preparation, mitigation and responses to natural disasters (e.g., provision of relief). If this is the case, the event may not be irrelevant to politics and political candidates (see Healy and Malhotra 2010). In light of this critique, for our study, we follow Healy, Malhotra, and Mo (2010) and focus on an athletic event. In their words, “[u]nlike aberrant weather, local sports outcomes are not something that citizens could expect government to prepare for nor to respond to…” (Healy and Malhotra 2013, 296; see also Healy, Malhotra, and Mo 2010, 12804). Specifically, we study the effects of the 2015 College Football Playoff National Championship game, played on January 12th, that pitted The Ohio State University (OSU) against the University of Oregon (UO). OSU won the game 42-20, and thus, importantly, OSU is the “winning school” and UO is the “losing school.”

This particular event also allows us to address a second design consideration in Table 1: to increase external validity, researchers should strive to use a “real world” event, such as the game we study, rather than a manufactured occurrence as is sometimes done in laboratory experiments (e.g., Huber, Hill, and Lenz 2012). An advantage of using a real world event is that it better mirrors voters’ experiences and includes dynamics such as a long-term commitment to a college sports team.

A third requisite is that the individuals purported to react to the event actually experience the event. For example, in our case, individuals living outside of the proximities of the two schools who had no interest in college football were unlikely to be influenced by the game outcome. These kinds of people did not experience the irrelevant event and will show no

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6 They (2013, 296) state, “one could write down a model of a rational voter who simply responds to any negative event by punishing the incumbent because he knows that some portion of any negative event may be a signal about the incumbent’s competence. Because it is costly to seek information that separates signal from noise, it could make sense to simply punish all politicians for negative events.”

7 That said, in the case of Huber, Hill, and Lenz (2012), the use of a manufactured event allowed the researchers to demonstrate that the effect stems more to individuals’ limitations than the complexity of the political world (see Huber, Hill, and Lenz 2012, 721).
systematic reactions to the event. In order to estimate the effects of irrelevant events, it is therefore important to include only individuals who experience the event. This coheres with Healy, Malhotra, and Mo’s (2010) focus on the effects of sporting events among fans, and their finding of larger effects among strong team supporters. In our study, we focus on students at the respective universities who, even if not football fans, likely were aware of and in-tune to the game due to the settings in which they found themselves. Specifically, we accessed each school’s public student directories and randomly selected approximately 1,800 students from each school to generate our sample.\(^8\)

Fourth in Table 1 is the identification of which political attitudes may be affected by the proposed event. Extant work studies how irrelevant events influence assessments of the status quo, particularly attitudes toward incumbent political leaders such as presidential approval (Healy, Malhotra, and Mo 2010; Huber, Hill, and Lenz 2012). This focus follows the psychological explanations for irrelevant event effects since the theory suggests mood from the event is contagious to assessments of the current state of affairs. Consequently, one of our central outcome measures is a standard presidential approval question (“How much do you disapprove or approve of the way President Obama is handling his job as President?”), measured on a 7 point fully-labeled scale with higher scores indicating increased approval. We also add another status quo assessment by asking respondents about the state of the present economy (“What do you think about the state of the economy these days in the United States?”) on 5 point fully-labeled scale with increasing scores indicating better assessments. We included this second

\(^8\) We did this by randomly generating brief letter strings and random numbers. We used the letter strings as the basis for name searches in the student directories; once we received a list of names for a given string of letters, we used the random numbers to select specific individuals to contact. We restricted the samples to undergraduate students.
measure as a way to tap into attitudes about the political and economic situation, both of which have political relevance and are candidates for change from irrelevant effects.

A fifth criterion is that researchers should demonstrate that the outcome of the event caused individuals to alter their attitudes. In our study, we do this by employing experiment (Huber, Hill, and Lenz 2012). For each school, we randomly assigned individuals in the sample to receive a survey assessing their opinions just before the football game and others to receive the same exact same survey just after the football game. This use of random assignment creates two samples (for each school) where factors that may influence political evaluations have been randomly sorted to allow for clear causal inferences. With this approach, we can infer that, within a given school, any differences in attitudes between the before and after groups is caused by the game itself (e.g., the team winning or losing) rather than some other confounding variable. Another advantage of our design is that we are able to assess both the impact of a negative event, by focusing on changes among the losing UO team, and a positive event, by focusing on the winning OSU team.

The sixth element in Table 1 suggests that the individuals sampled should not consciously connect the irrelevant event to their political attitudes. When individuals explicitly connect an event to a seemingly unrelated attitude, they tend to consciously correct for any irrelevant event effect and the mood contagion does not occur (Healy, Malhotra, and Mo 2010, 12806; also see Schwarz and Clore 1983; Healy and Lenz 2014; Druckman 2015). We were careful not to discuss the game and took steps to minimize the likelihood of respondents’ connecting their reaction to the game’s outcome to their expressed political attitudes. For example, we avoided discussing the game in our description of the study, inviting participants to

9 The main threat to this inference is if a notable political event occurred during the time between the before and after groups responded. Fortunately, for us, ostensibly, no such event occurred.
complete a survey about “about the political and social opinions of college students.” We made no mention of the football game in the survey, until the very end (after our central political measures). As a result, we suspect respondents did not intentionally correct for any contagion from the outcome of the game.

The seventh point returns to measurement. In the ideal, studies of irrelevant events isolate the process at work: how the irrelevant influences moods, which then presumably alter attitudes. If the event generates a negative mood, these negative feelings spread to political judgments, causing them to become more negative whereas a positive mood does the opposite. To measure mood, we include mood measures in the form of an abbreviated version of the Positive and Negative Affect Schedule (PANAS) (e.g. Watson and Clark 1994; Bassi 2013); the scale included four items that reflect a positive mood (enthusiastic, proud, interested, and elated) and nine items for a negative mood (afraid, worried, anxious, angry, bitter, hatred, contempt, resentful, sad). These items ask participants to indicate how much they are feeling specific things, and provides a preliminary glimpse into the moods of respondents before and after the game.

Finally, researchers studying irrelevant event effects can look beyond previously used measures to examine new areas where these events may influence individuals’ attitudes and behaviors. We extend prior research with three secondary outcome measures. We include a measure that could reasonably be considered relevant: student satisfaction with their university (measured on a 7-point fully labeled scale asking whether the student is unsatisfied or satisfied with the decision to attend the school, with higher scores indicating increased satisfaction) (see Athiyaman 1997; Mixon and Treviño 2005; Holmes 2009). The inclusion of this measure allows us to study whether an event can (possibly consciously) affect preferences connected to the event.
(e.g., athletic success creates a more positive immediate and celebratory atmosphere) in addition to seemingly unrelated political and economic assessments.

An additional measure builds on recent work that shows “emotional states can be transferred directly from one individual to another… [with] positive messages appearing to be more contagious than negative” (Coviello, Sohn, Kramer, Marlow, Franceschetti, Christakis, and Fowler 2014, 1, 4). This suggests that mood can be detected in social networks and social media; those consuming that social media alter their moods in response to the posts they read (Coviello, Fowler, and Franceschetti 2014, Coviello, Sohn, Kramer, Marlow, Franceschetti, Christakis, and Fowler 2014). In line with this research, we asked respondents the following:

We are interested in how your friends react to your feelings. If you use Facebook, are you willing to post about how you currently feel on your Facebook page and include a link to our study?

yes no

If you are willing to post, you can simply post comments about how you feel with the following statement:

“I am posting this as part of my participation in a study by researchers at XXXX. If you would like to participate in a part of that study you can follow this secure and encrypted link: XXXX. Participation would entail completing a brief survey and you would then be entered into a drawing for one of twenty $25 gift cards to Amazon.”

Our goal here was to assess the likelihood of someone posting (e.g., does the nature of one’s mood affect the likelihood of posting?) and then to evaluate contagion if people followed the provided link and responded to our survey after reading our participants’ Facebook posts.

Our final additional measure came a week after the initial survey. We re-contacted all of the participants who completed our initial time 1 survey for a follow up time 2 survey, which repeated three dependent measure questions (presidential approval, evaluation of the economy, and university satisfaction). This allows us to assess if irrelevant effects endure. We lack strong expectations for these duration measures as past work on over-time opinion dynamics offers
mixed results (e.g., Lecheler and De Vreese n.d.). We offer the results of these measures as a first look into the persistence of irrelevant event effects.

Following these guidelines as outlined in Table 1, we implemented an experiment around a widely watched sporting event with samples of individuals who were quite likely to be affected. With these individuals and this event, we predict that comparisons between the pre and post OSU (winning team) groups should show increased positive mood, decreased negative mood, increased approval and economic assessments, and increased school satisfaction. We expect the reverse trend for Oregon (losing school). We have no clear predictions about Facebook posting or over-time durability as these factors have not been previously studied with irrelevant events.

We recognize that in many ways, we are maximizing the likelihood of finding an effect from the game. Indeed, we are focusing on a major event (one of the most watched sporting events of the year), a clearly relevant sample of respondents who are akin to strong fans (even if not football fans, the campus atmosphere and school reaction is unavoidable), and a young sample where movement in political attitudes is more likely given that their political opinions are not crystalized (Sears 1986). Moreover, the particular event on which we focus is not only a major one but was also the first of its kind, as it was inaugural College Football Playoff National Championship game. Thus, our study should be seen as a clear causal evaluation of what is possible in terms of primary and secondary effects, not necessarily what is typical. In short, it may be the case that the effects we observe will not replicate on smaller, less prominent, or qualitatively different kinds of events. Rigorous testing of different kinds of events is needed to determine what kinds of effects are produced by what kinds of events. We later discuss what inferences can be made from extant irrelevant effect studies and our study (as presented here).
Experimental Procedure

The design of our experiment is as described in the prior section: we randomly assigned (randomly sampled) students from each school (winning OSU and losing UO) to receive an invitation to complete a survey before or after the game. We sent the initial before-game invitations on January 10th, 2015—two days prior to the game. As mentioned, the e-mailed invitation asked individuals to participate in a survey aimed at understanding “the political and social opinions of college students.” We sent two reminders and informed recipients that they had to complete the survey (at the link provided) by January 12th. The brief survey contained the aforementioned outcome and mood measures, as well as some basic demographics. We sent an analogous invitation (and reminders) to the post-game groups the day after the game and told these respondents that they had to complete the (same) survey by January 15th. Participants in the pre- and post-game groups were all informed that they would receive a $5 Amazon gift card for completing the survey. The timing of these invitations allowed us to focus on a narrow slice of time around the game.

We also informed participants they would be invited to complete a second survey one week after their original participation. When we sent invitations for follow-up/time 2 survey, we informed respondents they would receive an additional $2 gift card for completing the time 2 survey.10 As mentioned, the follow-up included our three main outcome measures (presidential approval, assessment of the economy, and satisfaction with the school), and a question asking if respondents watched the football game. For our time 1 surveys, 10.77% (87/808) responded in the pre-game OSU condition, 13.04% (109/836) responded in the post-game OSU condition, 10.40% (105/1010) responded in the pre-game UO condition, and 11.22% (113/1007) responded

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10 The initial invitation for the pre-game condition follow-up was sent on January 17th while the invitation for the post-game follow-up was sent on January 20th.
in the post-game UO condition. \(^ {11}\) The respective response rates at time 2 were: 66.67% (58/87), 63.30% (69/109), 52.38% (55/105), and 53.98% (61/113).

The focus of our analyses is within school: comparing pre-game to post-game groups to assess whether the game’s outcome influence attitudes. We cannot draw meaningful inferences between schools since students are not randomly assigned to attend the different schools, and students from each school undoubtedly differ from one another in important ways. As a result, our predictions center on comparisons between pre- and post-game groups of respondents. As mentioned, we expect, given the OSU victory over UO, a shift in the positive direction for OSU and a shift in the negative direction for UO.

Notably, our design assumes the respondents experienced the championship game and its outcome in some way. One way to gauge is this with a question we included at the very end of our survey that asked respondents whether they planned to watch (pre-game) or had watched (post-game) the game. We found that 86% (N = 183) of OSU respondents and 84% (197) of UO respondents reported watching the game. \(^ {12}\) This leaves roughly 15% who did not report watching

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\(^ {11}\) Our overall sample was 60% female and 77% white. The average party identification score, on a 7-point scale with higher scores indicating a move towards being a Republican, was 3.34; the average family income was just below the $70,000-$99,999 range; and the average age was 21.06 years old. We assessed the success of random assignment (within schools) with logit models comparing these co-variates, finding balance across conditions, within schools.

\(^ {12}\) Participation in the post-game wave of the survey could have been influenced by the game itself, making individuals who are especially affected by the game or committed to the team more or less likely to respond (e.g., for OSU, stronger fans may have felt extreme feelings that generated a greater, relative likelihood to respond, whereas for UO fans, stronger fans may have been less likely to respond due to the loss and more negative mood; in other words, emotional state, which may correlate with commitment to the team, could affect likelihood of response). If this occurred than differential patterns of response across the pre- and post- game groups could bias the causal inferences from our data. As we cannot evaluate the individuals who did not participate in our study, we cannot directly assess this claim. That said, we do have suggestive evidence that commitment to one’s team was not variant in the pre- and post-surveys. Specifically, we found no significant differences between the pre- and post-game conditions, for each school, in terms of our measures of likelihood of watching the game. For OSU, both the pre and post-game conditions registered 86% watching while for UO, the pre-game condition reported 83% watching and the post-game condition reported 85% watching. We also asked respondents, at the end of the survey, how many games they had attended and how many games they had watched on television or the internet. OSU respondents reported attending 2.59 (std. dev. = 2.95; N = 182) and UO respondents reported 2.55 (2.54; N = 195). Neither school showed significance differences in attendance across the pre- and post-game groups. In terms of watching, OSU’s average was 8.45 (6.0; 182) and UO’s average was 7.79 (5.68; 196). In both cases, the post-game
the game; however, it is likely that they still experienced it through their social networks, roommates, the atmosphere on campus, etc. Moreover, we performed our analyses excluding individuals who did not report watching the game, and we find that the results reported below hold on this subset of participants.

Results

We begin by exploring whether the game had an effect on approval of Obama, economic assessments, and satisfaction with one’s university.\textsuperscript{13} Since we can only compare the pre- and post-game conditions within schools, we display the results for each school separately in Tables 2 and 3, respectively for OSU and UO. The columns report the mean scores for each condition as well as the percentage change across groups, with asterisks indicating statistical significance (using a one-tailed test since we have directional predictions.)

[Tables 2 and 3 About Here]

We find clear evidence that the irrelevant event influenced opinions for both the OSU and the UO respondents. When it comes to presidential approval, we see a significant 6.42\% increase in support (on the 7-point scale), due to the game, among OSU respondents, compared with a similarly sized 6.29\% decrease for UO respondents. (The pre-game OSU-UO difference reflects that the UO sample was more Democratic: 64.50\% of the UO sample versus 44.57\% of the OSU sample.)\textsuperscript{14} Interestingly, the negative outcome for UO influenced reactions despite an overall

\textsuperscript{13} These approval measure required respondents provide a response at time 1; the other measures occurred early on the survey and thus also had nearly perfect item-response rates.

\textsuperscript{14} For OSU and UO, the impact of the game is about equal to a 0.8 point shift on the party identification scale.
stellar season of reaching the finals: the immediate availability of the game’s outcome seemed to overwhelm longer term reactions about the season (see Huber, Hill, and Lenz 2012).\textsuperscript{15}

The OSU results for the evaluation of the economy match the approval results (6.8% shift; recall that measure was on a 5-point scale). However, while the UO results for the economy are in the expected direction, they do not reach statistical significance. As mentioned, extant work largely focuses on incumbent politician evaluations, rather than assessments of the economy. Our mixed results accentuate the need for future work to delve into the sources of possible differences and why some status quo assessments may be affected while others are not (and whether that depends on whether the event is positive or negative).

Finally, we find substantial effects on satisfaction with one’s university with OSU respondents becoming 8.28% more satisfied, and UO respondents becoming 13.43% less satisfied. As mentioned, the UO effect, across the dependent variables, is interesting as it suggests that a single loss for a school that boasted great football success (e.g., coming in second in the nation) could still vitiate school satisfaction (akin perhaps to a “silver medal effect” where those in second place feel worse than those in third place since the counter-factual of winning is more accessible; see Medvec, Madey, and Gilovich 1995). We are unaware of any prior work that directly documents the impact of a major sporting event on university satisfaction; however, our results are consistent with Mixon and Treviño (2005, 101–102) who explain: “college/university graduation rates are significantly influenced by football success… football appears to (perhaps) expand a university’s/college’s opportunity set and provide students with a respite from the psychic costs associated with college life.” This suggests that the game itself is

\textsuperscript{15} The symmetry in our results (i.e., similar effects from a win or loss) are analogous to Healy, Malhotra, and Mo’s (2010) analysis of football game effects: they find the effect of a team going 2-0 (two wins and no losses) compared to going 1-1 to be the same as the effect of going 1-1 compared to 0-2.
relevant to one’s college experience as it improves the collegiate atmosphere. In sum, events appear to be able to affect opinions irrelevant to one domain (politics) while also influencing attitudes in a relevant domain.

**Mood**

As explained, the posited mechanism by which irrelevant event effects work is a change in mood in either a positive or negative direction. This shift is contagious, affecting seemingly irrelevant opinions. As quoted above: “‘contamination’ may also originate in the effect of emotional states on decision making. In particular, random events such as disasters may influence mood, which in turn influences how voters evaluate incumbents” (Huber, Hill, and Lenz 2012, 731). We sought to isolate the mood effects by using the PANAS measures of various emotions and feelings, which asked respondents to rate on five point scales the extent to which they are presently feeling a host of different positive and negative affective terms (see above for the exact items measured). We see these items are reflecting a larger, underlying mood; as a result, we look at them in groups of items rather than individually. We created an aggregate (average) measure of the positive mood measures and the negative mood items (the alphas for both measures are .85, although the inter-item covariance is notably higher for the positive terms) (see Bassi 2013, 22).

We present the results in Table 4. As expected, we find notable mood effects. When it comes to positive mood, we observe a sizable increase from the pre- to post-game OSU groups, with a magnitude of 9.2%; on the flip side, we see a 7% decline in positive mood measures among the UO respondents (both changes are statistically significant). When it comes to negative mood, we see a significant increase among the UO respondents of 7.2%. The change for OSU
respondents is not significant but moves in the anticipated direction (e.g., fewer negative feelings post-game).\textsuperscript{16}

These results add to the extant literature insofar as some prior work—such as Healy, Malhotra, and Mo (2010)—speculates but does not have the relevant data to document changes in mood from irrelevant events. The data we use here do not allow us to rigorously examine the way the changes in mood give rise to the influence of irrelevant events on political attitudes. However, these data suggest the possibility of such a relationship and provide preliminary, supportive evidence.\textsuperscript{17}

\textit{Facebook Posts}

A growing literature documents the transference of one person’s emotions and moods to other individuals through inter-personal interactions (a phenomenon referred to as emotional contagion); this can occur in face-to-face interactions or via social media platforms like Facebook (Bond, Fariss, Jones, Kramer, Marlow, Settle, and Fowler 2012; Coviello, Fowler, and Franceschetti 2014; Coviello, Sohn, Kramer, Marlow, Franceschetti, Christakis, and Fowler 2014). In keeping with this literature, we designed our study to determine whether moods induced by irrelevant effects can be transmitted via social media to those who may not have

\textsuperscript{16} In keeping with the foundation and existing research of irrelevant events effects, we prefer the positive-negative grouping of these items. Grouping them in other ways, such as the three category system of Affective Intelligence Theory (Marcus, Neuman, and MacKuen 2000), still uncovers effects from the game in expected ways (i.e., a win is associated with higher levels of enthusiasm). The only difference using that conceptualization is that the game produces changes in aversion, but not in anxiety. This seems sensible given the context. Also, note that Bassi (2013) finds more notable effects on positive mood.

\textsuperscript{17} We cannot establish the mediating role of mood without making untenable and untestable assumptions about our mood measures (see Bullock and Ha 2011 for discussion). Despite this, some suggestive evidence comes from a finding that, for OSU, when we regress presidential approval on experimental condition, the condition is significant. When we add our mood measures, the experimental condition variable falls to insignificance while the positive measure is significant and the negative one is just short of significance (using a two-tailed test). The UO results are less clear as the addition of the mood measures leads all of the variables to be insignificant (including the condition dummy which is otherwise significant).
experienced the irrelevant event effect (e.g. had no interest in the game or were uninfluenced by the outcome).

[Table 5 About Here]

To do this, we asked respondents to post “how they felt” on Facebook, along with a link to a survey. This would have allowed us explore if moods among different groups spread (i.e., emotional contagion). Unfortunately, only a small number of people agreed to post their feelings and, more importantly, we received very few responses from those who may have seen the Facebook posting and followed the link to take the survey. This made it impossible for us to study contagion. Nonetheless, we can use the data to explore the possibility of mood contagion by reporting, by condition, the percentage of respondents who stated they posted how they felt on Facebook. Note these data are all self-report data we cannot verify; thus, we have little idea whether individuals actually posted. With that limitation in mind, we report postings, by condition, in Table 5.

We find one notable finding in this table: the post-game OSU respondents were significantly more likely to report posting than the pre-game OSU respondents. That the result only occurred among the group with elevated positive mood compliments Coviello, Sohn, Kramer, Marlow, Franceschetti, Christakis, and Fowler’s (2014, 4) finding that positive messages appear to be more contagious than negative ones. Taken together, the results suggest that positive moods generate more posts and could spread more as a result. Of course, the results are preliminary at best, but highlight the need for more work along these lines—the potential for the spread of irrelevant event effects through mood is clear and could vastly enhance the overall impact of such events.
We also looked within condition to see if those with more (less) positive (negative) mood were more (less) likely to post. The sample sizes of those posting are so small that these data are only suggestive. However, they show that for the pre-OSU group and both UO groups, those who posted registered higher positive and lower negative mood than those who did not post. The post-OSU group registered similar mood responses between those who did and did not post, perhaps reflecting hitting a near ceiling on positive mood (recall their overall score is 3.49 on a 5-point scale, and while there is room for higher scores, it may realistically be an empirical high-point).

**Durability**

As mentioned, one important area of irrelevant events effects deals with their durability. Do irrelevant effects endure with the potential to shape such things as voting decisions? Or are they better thought of as brief blips in opinions that, unless very uniquely timed, likely do not have a major impact on behaviors? Past work offers a mixed picture: for example, in their study of the impact of local temperatures on beliefs about global warming, Egan and Mullin (2012, 804) report that effect is short-lived: “under typical circumstances, the effects of temperature fluctuations on opinion are swiftly wiped out by new weather patterns [i.e., other events].” On the flip side, Healy, Malhotra, and Mo (2010, 12805) suggest that college football games can influence vote choice when they are played ten days prior to the election (i.e., the effects last at least 10 days; however, note that may be a uniquely long-lasting effect as voters may have reached their candidate choice roughly in that time period prior to the anticipated election). To

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18 More generally, work on the persistence of attitude change on political issues offers a mixed portrait with some work showing quick decay (e.g., Gerber, Gimpel, Green, and Shaw 2011; Hill, Lo, Vavreck, and Zaller 2013) and other work suggesting greater stability (Coppock and Green 2015). For a general review, see Lecheler and de Vreese (n.d.).
further study durability, as mentioned, we conducted a follow-up survey one week after the initial survey, re-measuring our three central outcome measures.

In our study, there are two outcomes to consider concerning the durability of the effect: the irrelevant effect endures or it does not. In either case, the difference between the pre-game and post-game conditions, at time 2 (T2), will shrink, likely to insignificance. This is the case because, for us, all participants will have experienced the event by time 2 (i.e., by the follow up survey, the time 1 (T1) pre-game group experienced the game outcome as the post-game group). Given this scenario, the key test involves the direction of that movement. If the irrelevant event effect sustains, the T2 means should be similar to (e.g., not significantly differ from) the T1 post-game mean. In other words, the time trend for the post-game group should be flat and the trend for the pre-game group should be movement towards the post-game T1/T2 value (the post-game T1 and T2 values would be very similar). This would suggest that the game produced the same long-term effect on both groups of respondents.

On the other hand, if the irrelevant effect evaporates, the opposite dynamic should occur. Even though the pre-game conditions will have experienced the irrelevant effect (i.e., the game), its effect will have faded. Thus, the T2 means should be similar (e.g., not significantly differ from) the T1 pre-game mean. The pre-game group should show a flat time trend and the post-game group should move towards the pre-game responses.

[Figure 1 About Here]

We limit our analyses of over-time effects only to those who responded at T2; otherwise, we would be comparing distinct T1 and T2 samples (i.e., the T2 sample would be a subset of T1).¹⁹ In Figure 1, we present the results for presidential approval. The figure shows that the

¹⁹ The results presented in this section are robust to the use of multiple imputation techniques that allow us to simulate responses of all time 1 participants. See the Appendix for more details.
irrelevant event effect apparent at T1 disappears a week later. Specifically, the OSU pre-game group shows insignificant (and in fact negative) change over-time, moving from a 4.22 average to a 3.98. Thus, that this group at T2 had experienced the victory had no ostensible impact on their approval score. In contrast, the post-OSU group significantly declined from a 4.93 average to 4.03, thereby suggesting that the post-game impact disappeared and a week later, the group converged to the pre-game average. These data show a flat trend line for the pre-game group and a movement (from T1 to T2) of the post-game group towards the pre-game group; as discussed earlier, we take this as an indication of the fleeting nature of irrelevant effects. We see the same pattern of results for UO. The pre-game UO group slightly declines from 4.74 to 4.6, and the fact that this difference is nowhere near significance suggests that the loss had no detectable lasting effect. Conversely, the post-game UO group, which demonstrated a drop in approval after the initial loss, significantly increased to an average score of 4.57 (approaching the pre-game T1 score). The impact of the loss appears to have faded.\textsuperscript{20} In sum, irrelevant effects matter but only in the short-term.

[Figure 2 About Here]

When it comes to economic evaluations, the over-time analyses are most relevant for the OSU since we did not find an initial T1 effect (from the loss) for UO. Figure 2 reveals an OSU dynamic akin to what we found with presidential approval: the pre-game group shows no

\textsuperscript{20} We note three other dynamics for presidential approval. First, the T1 effects, in the smaller data we use here, continue to be significant for each school. Second, if we instead used the T1 scores from the full sample, the results would be statistically the same. Third, the over-time correlations are consistent with our result. Specifically, for OSU, the T1-T2 pre-game condition correlation is .58 while the post-game condition correlation is .45 (i.e., the blip at T1 for the post-game condition vitiates the over-time correlations). The respective correlations for UO are .50 and .38. These are only suggestive, however, as they are not significantly different from one another. We also note that these over-time correlations are relatively low compared to American National Election Study panel data that shows reliability correlations in the .80-.90 range. We suspect our lower correlations reflect that our data come from a very young population who have not crystalized their opinions as well as the fact that the survey occurred outside of an election context when people may be more attentive and consistent in their political opinions.
significant change, suggesting the win they experienced in the interim did little over time. The post-game group exhibits a significant decline from 3.45 to 3.1. Again, then, we see the initial post-game increase due to the win deteriorates a week later, converging toward the T1 mean. The line for the pre-game group remains flat while the post-game group declines towards the (T1) pre-game responses. For UO, as mentioned, there was no T1 effect; over time, we see both the pre- and post-groups actually significantly become more positive about the economy. This runs counter to any lingering effects from the loss. What drives the increase is not clear. Overall, our economic assessments results again show that the irrelevant event effect is short-lived.

[Figure 3 About Here]

Finally, we look at the over-time impact on university satisfaction: an attitude that, as explained, may be relevant to the game outcome. Figure 3 shows quite a distinct pattern from our political attitude results. The OSU post-game increase at T1 largely sustains at T2, only marginally (and insignificantly) declining from 5.88 to 5.79. The OSU pre-game group demonstrates movement towards greater satisfaction, moving from 5.5 to 5.7. While this change falls short of statistical significance, the OSU results, overall, are suggestive that the win increases satisfaction, which endures. In contrast to the earlier findings, the post-game group remained constant over time while the pre-game group showed some signs of increasing towards the post-game levels. This would be consistent with the aforementioned discussion of how an athletic victory provides psychic benefits to students which they enjoy for some time (as the celebratory atmosphere may itself last). The UO over time changes, for both the pre- and post-

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21 As with presidential approval, the OSU post-game significant decline holds if we instead use T1 data from all T1 respondents. For UO, when we use all T1 respondents, the post-game condition movement is significant but the pre-game movement is not. Also, consistent with the above results the T1 difference is significant for OSU among the T2 respondents only (but not with the UO respondents). Finally, the T1-T2 correlations are consistent with our findings of fading effects: for OSU pre-game it is .46 and for post-game .38, and for UO the respective correlations are .53 and .37.
group, fall short of significance, but there is a movement towards a convergence such that the post-game decline evaporates. It could well be that a win has a lasting impact on satisfaction while a loss’s effect are only short term. More work is needed, however, given our findings are not strong enough to offer a definitive conclusion.\textsuperscript{22}

In sum, it appears that the effects of irrelevant events on political attitudes are akin to brief blips rather than enduring changes. In some ways, this may be surprising given we are studying one of the most watched sporting events with clearly affected samples (e.g., presumably the campus atmosphere differs depending on if the team wins the National Championship).

Indeed, the changed atmosphere may even endure for a few weeks; yet, if so, that is not sufficient to prolong the immediate irrelevant event effect. Given that the conditions seemed ripe for an enduring effect, our finding suggests the fragility of irrelevant event effects.

Interestingly, however, the impact of related attitudes—university satisfaction for the winning school—may endure, suggesting differential effects depending on the connection of the event to the attitude at hand. All of that said, we emphasize the need for future work on the durability of irrelevant effects: it has received scant attention (although see Egan and Mullin 2012), and clearly could vary depending on the event, population, attitude, etc.\textsuperscript{23} Indeed, for the

\textsuperscript{22} If we instead use T1 data from all respondents, the OSU pre-game group is just short of a significant increase, while the post group continues to demonstrate virtually no change (thus the results support the idea of an enduring post-game effect). The UO pre-game group shows no significant change (i.e., no effect of the loss), while the post-game group exhibits a significant increase, suggesting that indeed the loss effect diminishes. The T1 effect among only T2 respondents is significant for UO and just short of significance for OSU. The T1-T2 correlation for the OSU pre-game group is .24 and is .33 for the post-game group (consistent with a post-game effect enduring). The respective UO correlations are .42 and .32 (consistent with the post-game effect diminishing).

\textsuperscript{23} On its face, our fading effects contradict Healy, Malhotra, and Mo. (2010) football results as those endure for at least 10 days. To extent that was the case with their result (see Fowler and Montagnes 2015 who challenge Healy, Malhotra, and Mo’s football result), the difference likely stems from their focus on an election season where individuals were apt to form candidate preferences in an on-line processing mode, given the anticipated vote. In other words, roughly 10 days before an anticipated election may be the point in time when people settle on a candidate choice; our results are not comparable since there was no anticipated election for which individuals may have been attempting to arrive at a vote choice (see Healy, Malhotra, and Mo 2010: 12805). Also, our result is consistent with Healy, Malhotra, and Mo’s (2010) NCAA basketball result: they found strong effects among strong supporters of their teams and documented the effects 1 to 4 days after the game (see also Egan and Mullin 2012).
same reasons that our study may have maximized the likelihood of finding irrelevant event effects (e.g., the young sample, clearly connected to the irrelevant event, who likely had un-crystallized opinions), we may have also minimized the likelihood of finding effects that endure.

**Discussion**

We provided a detailed rubric for how to study irrelevant event effects. We then offered some of the clearest evidence to date that events undeniably outside the domain of politics can affect political opinions. This can occur both among those for whom the event has positive implications and for those who experience negative reactions. In addition to these main effects, we showed that a possible mediator of the effect are changes in mood, that an event can influence relevant attitudes (i.e., university satisfaction), and that an event can generate behaviors that could contribute to social diffusion (via Facebook postings).

For many, our results are likely troubling as citizens base preferences on events wholly outside the realm of politics, thereby making democratic accountability difficult (e.g., how should representatives respond when preferences are influenced by factors outside of their control?). Yet such a conclusion is premature, to say the least, as it is important to contextualize our findings. First, as explained, our study design likely maximized the likelihood of finding an effect: we focused on one of the most watched sporting events of the year, a population for whom the event was clearly relevant (as mentioned, even if not football fans, students at each school would be influenced by the campus atmosphere), and a fairly short time period after the event. Moreover, our population is one where political attitudes are not well formed and thus influence is more likely to occur (Sears 1986), and we did not link our attitudinal measures to behavioral outcomes such as vote choice. Our result is best seen as showing a “possibility,” rather than likelihood.
Second, we found that, at least in the political domain, the irrelevant event effects seem to be short-lived. This raises the question of whether these effects are any more than blips that are unlikely to affect election outcomes, unless precisely timed at the point in which voters are arriving at candidate preferences (see above note regarding the timing of Healy, Malhotra, and Mo 2010). Third, those studying irrelevant event effects face a serious sample selection problem. There are a near infinite number of events that could potentially influence individuals’ moods and, subsequently, their political opinions. We focused on a hugely relevant event for the population under study, and a unique one given it was the first ever College Football Playoff National Championship game. Thus, our study provides little insight to the role prominence and importance determine how these findings may replicate (e.g., will they even replicate with the second—non inaugural—Championship game?). Future research is needed to convincingly demonstrate what kinds of events produce irrelevant events effects—what amount of prominence is needed, how perceived importance affects to the durability of the effects, etc. It may be these effects are seldom and fleeting.

Fourth, regardless of the empirical nature of our study, we sought to offer a blueprint for studying irrelevant event effects. Indeed, Table 1 outlined a number of features that may be necessary for an event to politically matter and these features are likely not often met (i.e., outside political control, experienced by individuals, political connection outside conscious awareness, and mood mediation). Consequently, just as one could conclude that our (and others’) results are problematic for democratic accountability, one could also argue that the conditions under which irrelevant event effects occur are rarely met and even when realized, the effect is short-lived. This latter perspective would cohere with a much more optimistic portrayal of democracy and citizen competence (i.e., irrelevant events are not particularly impactful).
Clearly, much more work is needed to reach an understanding of the role of irrelevant event effects in democracies. Scholars need to isolate what makes an event impactful, when it will matter, among whom, and for how long—and compare that effect to the many other factors that shape preferences (Druckman and Lupia 2015). Moreover, if effects do occur, are there conditions under which they influence larger groups via social diffusion? Does the timing of the irrelevant effect shape whether its influence endures (e.g., events during elections may last longer given greater motivation to form candidate preferences, or may be more fleeting given the information environment)? How does the nature of the larger political rhetorical environment interact with irrelevant event effects? These and other questions need to be addressed if we are to understand the role and potential relevance of politically irrelevant events.

24 Also, Ashworth and Bueno de Mesquita (2014) argue that a statement about democratic performance requires an assessment of the interaction between voters and politicians, something not studied here.
References


<table>
<thead>
<tr>
<th>Design Requisite</th>
<th>Our Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elected officials <em>cannot influence</em> the event: there could be no reasonable action taken by elected officials that could affect the event’s occurrence, nature, or outcome.</td>
<td>The 2015 College Football Playoff National Championship game, pitting The Ohio State University against the University of Oregon.</td>
</tr>
<tr>
<td>The event should be an occurrence in the <em>real world</em>.</td>
<td>The game occurred on January 12, 2015.</td>
</tr>
<tr>
<td>Individuals under study must <em>experience</em> the event.</td>
<td>Undergraduate students at the competing schools (University of Oregon and The Ohio State University).</td>
</tr>
<tr>
<td>Effects on (status quo) <em>political and economic attitudes</em>.</td>
<td>• Presidential approval.</td>
</tr>
<tr>
<td></td>
<td>• Evaluation of the economy.</td>
</tr>
<tr>
<td>Clear causal inference that the event affected individuals’ political attitudes.</td>
<td>An experiment that randomly assigns respondents from each school to • a pre-game survey, or • a post-game survey. Changes between average pre-game and average post-game attitudes indicate a causal effect of (losing/winning) the game.*</td>
</tr>
<tr>
<td>The event’s connection to political attitudes should be <em>outside of the individuals’ conscious awareness</em>.</td>
<td>Survey advertised as a study of the “social, economic, and political attitudes of college students” (no mention of the football game).</td>
</tr>
<tr>
<td>Mood mechanisms</td>
<td>Positive and Negative mood measured with the PANAS scale.</td>
</tr>
<tr>
<td>Secondary effects</td>
<td>• Relevant opinions: satisfaction with university.</td>
</tr>
<tr>
<td></td>
<td>• Social Contagion: posting on Facebook</td>
</tr>
<tr>
<td></td>
<td>• Durability: Re-measurement one week after the game.</td>
</tr>
</tbody>
</table>

*This assumes no other events that could influence political preferences occurred during the course of the game, which is ostensibly the case for our study.
Table 2: Effects on Ohio State (Winning Team) Respondents

<table>
<thead>
<tr>
<th></th>
<th>Pre-Game</th>
<th>Post-Game</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidential approval</td>
<td>4.18</td>
<td>4.63</td>
<td>6.42%*</td>
</tr>
<tr>
<td>(7-point scale)</td>
<td>(std. dev. = 1.61; N = 87)</td>
<td>(1.84; 109)</td>
<td></td>
</tr>
<tr>
<td>Evaluation of the</td>
<td>3.04</td>
<td>3.38</td>
<td>6.80%**</td>
</tr>
<tr>
<td>economy</td>
<td>(1.05; 86)</td>
<td>(1.10; 109)</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with</td>
<td>5.35</td>
<td>5.93</td>
<td>8.28%**</td>
</tr>
<tr>
<td>university</td>
<td>(1.69; 84)</td>
<td>(1.63; 104)</td>
<td></td>
</tr>
</tbody>
</table>

**p ≤ .01, *p ≤ .05, for one-tailed tests.

Table 3: Effects on Oregon (Losing Team) Respondents

<table>
<thead>
<tr>
<th></th>
<th>Pre-Game</th>
<th>Post-Game</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidential approval</td>
<td>4.56</td>
<td>4.12</td>
<td>-6.29%*</td>
</tr>
<tr>
<td>(7-point scale)</td>
<td>(1.50; 105)</td>
<td>(1.78; 113)</td>
<td></td>
</tr>
<tr>
<td>Evaluation of the</td>
<td>2.71</td>
<td>2.57</td>
<td>-2.80%</td>
</tr>
<tr>
<td>economy</td>
<td>(1.03; 105)</td>
<td>(.94; 113)</td>
<td></td>
</tr>
<tr>
<td>Satisfaction with</td>
<td>5.24</td>
<td>4.30</td>
<td>-13.43%**</td>
</tr>
<tr>
<td>university</td>
<td>(1.56; 102)</td>
<td>(1.75; 107)</td>
<td></td>
</tr>
</tbody>
</table>

**p ≤ .01, *p ≤ .05, for one-tailed tests.

Table 4: Effects on Mood

<table>
<thead>
<tr>
<th></th>
<th>Pre-Game Positive Mood</th>
<th>Post-Game Positive Mood</th>
<th>Pre-Game Negative Mood</th>
<th>Post-Game Negative Mood</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSU</td>
<td>3.03</td>
<td>3.49**</td>
<td>1.82</td>
<td>1.71</td>
</tr>
<tr>
<td></td>
<td>(1.03; 83)</td>
<td>(1.00; 103)</td>
<td>(.70; 83)</td>
<td>(.68; 103)</td>
</tr>
<tr>
<td>UO</td>
<td>2.78</td>
<td>2.43**</td>
<td>1.80</td>
<td>2.16**</td>
</tr>
<tr>
<td></td>
<td>(1.00; 98)</td>
<td>(.89; 107)</td>
<td>(.72; 98)</td>
<td>(.79; 107)</td>
</tr>
</tbody>
</table>

**p ≤ .01, *p ≤ .05, for one-tailed tests.
Table 5: Facebook Posting

<table>
<thead>
<tr>
<th></th>
<th>Pre-Game Percentage Posting</th>
<th>Post-Game Percentage Posting</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSU</td>
<td>7.3%</td>
<td>15.5%*</td>
</tr>
<tr>
<td>UO</td>
<td>9.5%</td>
<td>9.4%</td>
</tr>
</tbody>
</table>

**p ≤ .01, *p ≤ .05, for one-tailed tests.

Figure 1: Presidential Approval Over Time
Figure 2: Evaluation of the Economy Over Time

![Graph showing the evaluation of the economy over time with data points for Econ T1 and Econ T2, indicating significant differences between UO Pre and Post, OSU Pre and Post.](image)

Figure 3: Satisfaction with University Over Time

![Graph showing the satisfaction with university over time with data points for Coll Sat T1 and Coll Sat T2, indicating significant differences between UO Pre and Post, OSU Pre and Post.](image)

**p ≤ .01, *p ≤ .05, for one-tailed tests of T1 vs. T2**
Appendix

Analysis of T2 response rates

As mentioned in a note, we assessed the determinants of response at time 2 to see whether respondents at time 2 were a biased subset of our overall sample. If this were the case, it would pose a problem for causal inference about durability. We used logit models, with response at time 2 coded as 1 and nonresponse at time 2 coded as 0, regressed against our measured covariates.

Our analyses, available upon request, show different response rates at time 2 across the two schools. Compared to the UO respondents, the OSU respondents tend to be somewhat more likely to respond at time 2; holding the other variables constant, the predicted probability of a respondent from OSU responding at time 2 is 0.70 and for UO, it is 0.58. This is not a problem for us, however, since we focus on within school and not across school dynamics.

Thus, more important are the within school results. We find that the only statistically significant variable is statistically is party identification, and when we look within schools to see if party identification matters at OSU and UO, we find that the relationship only persists at OSU. We do not see this as a problem since, unlike party extremity, identification itself has no theoretical connection with decaying effects from irrelevant effects (i.e., extremity may affect likelihood of response). As intimated the above note, the key variable was the mood response to the game, as different response rates at time 2 according to mood might create patterns that appear to show decay or persistence. However, we find no evidence that suggests mood drove response rates at time 2 responses.

Multiple Imputation Analysis for T2

As noted in a footnote, in addition to the logit models just described, we used multiple imputation to account for missing data at time 2. Using the multiple imputation procedures available in Stata, we performed 200 imputations to estimate the missing values at time 2. These imputation procedures predicted the time 2 responses as a function of school, pre/post-game assignment, demographic characteristics, the mood measures, the number of games watched, if the participants saw the championship game, and the responses to the main dependent variables at time 1.

Using these procedures, the result of the durability analyses are the same as presented in the paper, with only minor changes in statistical significance (e.g., going from p<0.01 to p<0.05). This is not unexpected, given the uncertainty multiple imputation introduces into the statistical estimates (i.e. the standard errors and associated tests of significance).

The only notable difference between the results as presented and multiple imputation analyses is that the increase in college satisfaction for the post-game UO group is statistically significant at the p<0.05 level (1-tailed) (for comparison, see figure 3 for the non-imputed results). This
suggests that college satisfaction among UO students may increase with the passage of time, supporting the conclusions as written in the text. If anything, the non-imputed analyses we rely on in the main paper present a more conservative view of this point.

More detailed results, including the Stata code used to generate the imputed dataset, are available from the authors by request.