"Did I really used to be like that?" Self-views and memory across the 2020 U.S. presidential election

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Abstract:
Self-views – or, how one perceives their own traits and values – change across social contexts. Yet, whether and how major societal events can alter self-views remains to be determined. In the current study (N = 193), we investigate whether a significant event – in this case, the 2020 U.S. presidential election – changes self-views. We also ask if the 2020 U.S. election acts similarly to an event boundary, and in turn impacts memory for self-views before the election (across an event boundary) vs after the election (within an event boundary). Including one timepoint before the election and three timepoints after it, we found that traits, values, and the valence of reported events changed more across the election than after it. When investigating memory for previous responses, we found that memory for ratings of values and the valence of events was worse across the election than after it, while memory for traits was unaffected. Our findings suggest that a) a significant event can substantially alter one's self-views, and b) that the impact of an event boundary on memory for self-views may differ depending on how relevant the remembered content is to the event. More broadly, the findings suggest that moments of major societal change can also change how we view ourselves.

Introduction

Although people subjectively experience a unitary identity (Jiang et al., 2020; Sedikides et al., 2023; Tippett et al., 2018), "the self" is also influenced by one's social environment. When social contexts change, corresponding aspects of ourselves come to the fore. For example, people see themselves and remember personal experiences differently depending on who they interact with and their interpersonal goals (Koban et al., 2021). To date, research on how social input shapes the self focuses primarily on "micro" social influences, such as how input from specific individuals impact self-views (Fazio et al., 1981; Meyer et al., 2019; Snyder, 1984). Could more "macro" social influences, such as a significant societal event, also impact self-views? This seems likely, given that social psychological accounts broadly suggest the social environment shapes the self (Martial et al., 2018; McConnell, 2011). Here, we used the 2020 U.S. presidential election as a context to examine whether significant societal events change self-views.

Why would a presidential election change the way one views oneself? Insight into this question comes from at least two areas of research. First, presidential elections impact multiple social and affective processes. For example, elections can increase feelings of stress, both before and after election day (Early et al., 2022; Stanton et al., 2010), and can alter affective processes such as reward sensitivity (Tashjian & Galván, 2020) and emotion regulation (Tashjian & Galván, 2018). In keeping with these findings, studies of affective forecasting for feelings about election outcomes (Lench et al., 2019; Levine et al., 2012) suggest that we tend to overweight the impact that these outcomes will have on our current emotional states (Wilson et al., 2003). In addition, neuroimaging studies demonstrate that brain regions implicated in self-reflection show 1) greater activity during the weeks leading up to a presidential election (Falk et al., 2012) and 2) neural synchrony across people with different political beliefs while they watch political content (Leong et al., 2020, Jacoby et al., under review). Together, these data suggest that a political election is a context well-positioned to change self-views, to the extent that engagement of processes associated with self-reflection contribute to changing how we perceive ourselves. In this regard, the 2020 U.S. presidential election was charged with existential rhetoric, such as the integrity of U.S. elections and the future of the country – issues that are likely relevant to one's self-views, or at the very least, their mental accessibility.

Second, a political election can be conceptualized as an "event boundary," a specific event that creates a clear contextual change. Indeed, political elections are often framed as denoting a stark change in society, heralding a "new era." Experimental research examining the influence of event boundaries on memory demonstrates that memory for information across an event boundary is less accessible than memory for information within an event (DuBrow & Davachi, 2013, 2016), and that event boundaries can influence long-term memory organization (Clewett et al., 2019; Radvansky & Zacks, 2017). However, none of this work has examined the impact of life events on the accessibility of certain autobiographical memories (D'Argembeau, 2020), or memory for previous self-views (Haslam et al., 2011). If macro-level events, such as a political election, operate similarly to context changes in traditional event boundary studies, it's likely that memory for self-views across the election will be impaired as compared to memory for self-views after the election. On the other hand, some work has demonstrated that if the information to be remembered is inherently associated with the event boundary, the boundary can actually enhance across-event memory (Wen & Egner, 2022). In the case of an election, one's previous traits and values may be made more salient by the event boundary, thus leading to better memory across the election than after it.

In the current study, we investigate these phenomena using the 2020 U.S. presidential election. We chose this event for several reasons: First, the 2020 U.S. election was nationally important, so we assumed that most, if not all, participants in the country were aware that it was going on. Second, the 2020 U.S. election was charged with existential rhetoric about the integrity of American elections and the future of the country, issues that are likely to impact one's traits and values, or at the very least, their accessibility in the mind.

Specifically, we tested whether the 2020 U.S. presidential election 1) changed self-views and 2) impacted the accuracy of memory for pre-election self-views, in a sample of participants living in the United States. Terms like self-views, self-knowledge, self-concept, and self-beliefs all refer to the ability to describe and conceptualize oneself from a third-person point of view (Meyer et al., 2019; Rouault & Fleming, 2020; Wagner et al., 2012; Wilson & Dunn, 2004). (This reflected "me" self is not to be confused with the "I" self, which pertains to one's first person sense of agency and conscious experience of the world (Christoff et al., 2011; James, 1890; Ochsner & Gross, 2005).) We use the term self-views here as we believe it most accurately describes what is captured through traditional measurements of self-evaluation.

We investigated two primary questions about how self-views, and memory for self-views, may change in response to a significant political event – in this case, the 2020 U.S. presidential election. First, we asked if self-views change more across a span of time that included the election than an equivalent span of time that did not. Because of the possible event boundary it created, we predicted that the presence of the election would lead to greater changes in self-views. Second, we asked whether memory of previous self-views was impacted by the election. If memory is better for self-views *before* the election, it would suggest that a significant event like the election made self-views related to the event more salient. On the other hand, if memory is better for self-views *after* the election, it would suggest that the event boundary-like nature of the election makes it more difficult to remember self-views across the boundary.

Methods

Transparency and openness

We report all sample size characteristics. All analyses were conducted using R version 4.2.2 (R Core Team, 2022). All data and analyses can be found on the project's github page. The model output for all analyses can be found on the project's OSF page. We report a post-hoc power analysis. This study was not preregistered.

Participants

193 participants completed all four surveys via the recruitment website Prolific. Only participants living in the United States were recruited. Participants consisted of 100 women, 79 men, and 14 other/not specified. Mean age was 49.08 (SD = 14.54), with a minimum age of 19 and a maximum age of 77. We also asked participants about their political leaning on a 0-100 scale, with 0 as very liberal and 100 as very conservative. Mean political leaning was 38.1, with approximately 58% of participants below a score of 50. All participants completed a consent form in accordance with the Columbia University Internal Review Board (IRB) in order to participate and were paid for their time at a rate of $6.50/hour.

Procedures

We asked participants to evaluate their self-views at 4 different time points surrounding the U.S. presidential election on November 3rd, 2020: Once before the election, on October 16th, and three times after the election, on November 8th, November 23rd, and January 7th, 2021. We also evaluated memory for one's self-views at previous time points. Qualtrics surveys were sent out on these dates, and participants had 3 days to respond. We hereafter refer to these four data collection timepoints as 2wks-pre, 1wk-post, 3wks-post, and 9wks-post, respectively.

It should be noted that the date our final survey was sent out, January 7th, was the day after the January 6th U.S. Capitol riot. The alignment of our final survey with the riot was coincidental. While the January 6th riot is certainly also considered a significant societal event, our focus remains on the effects of the election on November 3rd. We do, however, conduct some exploratory analyses to consider whether the events of January 6th are treated as an additional event boundary.

Questionnaires

There are nearly as many terms for the self as there are ways to measure it. Many previous studies of self-views use personality traits to define how one perceives oneself (Elder et al., 2023; Klein & Lax, 2010; Meyer et al., 2019; Ochsner et al., 2005), while other studies have used values (Van Bavel & Pereira, 2018). Finally, some work, especially work related to autobiographical memory, has relied on specific episodic memories as the core component of one's self-views, rather than the semantic knowledge captured by trait and value assessments (D'Argembeau, 2020; Haslam et al., 2011; Klein et al., 2002; Prebble et al., 2013). In the present study, we use all three (traits, values, and episodic memories) to measure the self across multiple dimensions and to investigate how semantic and episodic knowledge separately contribute to one's self-views.

For traits, participants were told "Please rate from 'not at all' to 'extremely' (1-7) how much you believe each of the below traits describes you." 20 traits were selected from a list of traits used in previous studies (Dumas et al., 2002; Meyer & Lieberman, 2018). Half of the traits were negative, and half were positive. For values, participants were asked "How central to your current personal identity are your beliefs about X?" with 28 values, such as abortion and the death penalty, listed and a 1-7 scale provided (Graham et al., 2011; Heiphetz et al., 2017). The question was specifically phrased to not be about the participant's actual beliefs, but to be about how strongly they care about each value. We also assessed memory for trait and value ratings from the previous time point on November 8th, to assess memory for a previous self across the election, and on November 23rd, to assess memory for a previous self after the election. (In other words, in the 1wk-post survey we asked participants to recall their self-views from the 2wks-pre survey, and in the 3wks-post survey, we asked participants to recall their self-views from the 1wk-post survey.) At these time points, participants were asked to think about themselves around the date that the previous survey was sent out, and to evaluate their traits and values at that time.

In addition to reporting semantic elements of one's self-views, we were also interested in how a significant event impacted individual memories, both related and unrelated to the event itself. At each time point, participants were told to "write down 3 events/activities that have happened to you or that you have participated in" since the previous time point (or, for the first time point, in the past month) for "personal" events unrelated to the election and to "write down 3 events/activities related to the 2020 U.S. presidential election that have happened" since the previous time point for "political" events related to the election. For each event, participants were asked to evaluate the valence (0-100) and the importance (1-7) of the event. Due to an error

in survey set-up, the valence scale had endpoints of 0 and 100, rather than 1 and 7, but valence and importance scores were always analyzed separately. At 3wks-post, we reminded participants of the events they reported at 2wks-pre, and asked them to report the valence and importance of the event as they currently perceive it at 3wks-post, and the valence and importance of the event as they previously perceived it at 2wks-pre. We did the same thing at 9wks-post with 3wks-post events.

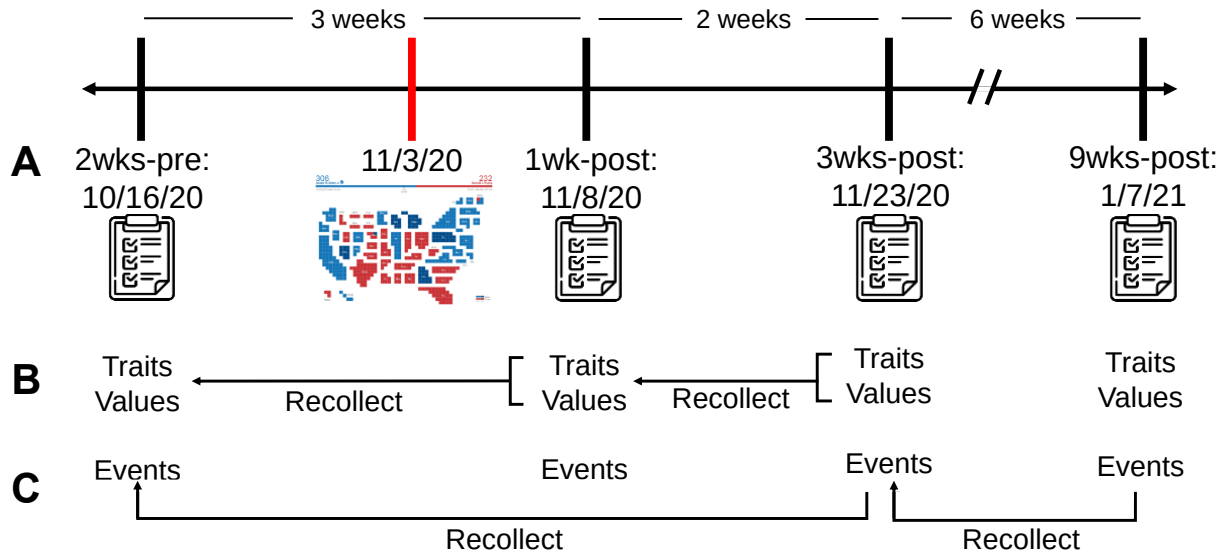

Figure 1: A) Surveys were sent out on four dates: October 16, 2020 (2wks-pre); November 8, 2020 (1wk-post); November 23, 2020 (3wks-post); January 7, 2021 (9wks-post). The first survey was sent out prior to the 2020 U.S. presidential election; the other three were sent after. The temporal distances separating 2wks-pre from 1wk-post and separating 1wk-post from 3wks-post are roughly equal, and thus were used to ensure our findings were not merely effects of absolute time elapsed. B) Traits and values were assessed at all timepoints. In addition, at 1wk-post, participants were asked to recall what their traits and values were at 2wks-pre. Similarly, participants were asked at 3wks-post to recall their traits and values at 1wk-post. C) Participants were asked to report episodic events at all timepoints, and were asked to evaluate their valence and their importance. At 3wks-post, participants were also presented with the memories they reported at 2wks-pre, and asked to indicate both the current valence/importance of those events, as well as what they recall the valence/importance of those events being at that time. The same was done at 9wks-post with the 3wks-post events.

Analyses

For our first question, we were interested in how self-views change between two time points across the election vs two time points after the election. To address this question, we created difference scores (absolute values) for trait and value ratings between every pair of time points, and calculated the cosine similarity of reported goals. We calculated differences and similarities between each set of time points, with three time points involving a comparison across the election (1wk-post—2wks-pre, 3wks-post—2wks-pre, 9wks-post—2wks-pre) and three time points involving a comparison after the election (3wks-post—1wk-post, 9wks-post—1wk-post, 9wks-post—3wks-post). Using Bayesian multi-level models, we compared differences/similarity scores across the election to those after the election. A post-hoc sensitivity analysis with this model using the *pwr* package in R (Champely, 2020) revealed that our sample size provided over 80% power to detect a medium-sized effect. We also followed up these models with models that were *not* agnostic to the direction of change, and that included political ideology as a predictor,

to investigate whether people's self-views were differentially affected by the election based on their political ideology.

For our second question, we were interested in how memory for one's self-views change between two time points. To evaluate this question, we created difference scores (absolute values) for traits and values in which we compared ratings at time t to memory of ratings at time t, as reported at time t+1. We were no longer comparing ratings themselves, but instead investigating how accurately people remember a previous self. We compared the difference scores across the election (1wk-post—2wks-pre) to difference scores after the election (3wks-post—1wk-post). Since we only asked participants to remember their ratings from the previous survey, and wanted to keep the length of time between surveys relatively consistent, we did not use the 9wks-post—3wks-post memory scores, since the length of time between 9wks-post and 3wks-post was substantially longer than the other comparisons.

We conducted similar analyses on the importance and valence of reported personal and political events. We created two difference scores (absolute values) each for valence and importance. First, we created difference scores for the valence and importance of each event between the participant's ratings at one timepoint and their ratings of *current* valence and importance for that event at a separate timepoint. We then compared those difference scores between the difference across the election (3wks-post—2wks-pre, i.e., across an event boundary) and the difference after the election (9wks-post—3wks-post, i.e., within an event boundary). We also created difference scores between valence and importance ratings at 2wks-pre and *memory* for 2wks-pre ratings at 3wks-post, and compared those differences to differences between 3wks-post ratings and *memory* for 3wks-post ratings at 9wks-post.

Finally, we also calculated changes in the content of personal events by measuring the semantic similarity of the texts, rather than the valence and importance ratings of the events. To calculate semantic similarity, we used the Sentence Transformers (SBERT) Python package (Reimers & Gurevych, 2019), which calculates the cosine similarity between text embeddings. We concatenated the text of the reported events for each participant at each timepoint, and compared the embedding to the embedding for that subject's concatenated events at another timepoint. This analysis gave us a score between -1 and +1 for each comparison, with more positive scores signifying higher similarity between events.

Results

Do self-views change in response to a significant event?

Traits

At each time point, we asked participants to evaluate themselves on a list of 20 traits on a 1-7 scale. We calculated the absolute difference between traits between each time point. We then used these difference scores in a multi-level model with random slopes and intercepts for each participant and with trait comparison as a repeated measure.

Overall, trait ratings changed more when the two timepoints were across the election than when they were both after the election ($B = 0.056$, $SE = 0.015$, $p < 0.001$), meaning that self-views were impacted by presence of the election (*Figure 2A*). While the absolute amount of time elapsed between surveys also predicted survey-to-survey differences ($B = 0.058$, $SE = 0.01$, $p = 0.002$), our results held true when including all comparisons, as well as when including only two timepoint comparisons matched for relatively similar lag lengths (1wk-post—2wks-pre vs 3wks-

post—1wk-post) (B = 0.058, SE = 0.020, p = 0.004) (*Figure 2B*). Interestingly, the results also held when comparing 9wks-post—2wks-pre to 9wks-post—1wk-post (B = 0.047, SE = 0.019, p = 0.01), suggesting that the differences in trait judgments after the election were not temporary, but remained – albeit weaker – up to two months later.

We next ran a model with non-absolute differences between trait judgments and included political ideology as a predictor. We did not find a main effect of political ideology (B = -0.0001, SE = 0.0005, p = 0.727) or an interaction between political ideology and comparison type (B = -0.0001, SE = 0.0008, p =0.831). This finding suggests that the impact of the election on changing one's perceptions of their traits was not dependent on one's politics.

Finally, we ran another model with non-absolute differences between trait judgments in order to determine whether the election impact the tendency to endorse certain types of traits (positively valenced vs negatively valenced) as self-descriptive more than others. We found an interaction between trait valence and comparison type: self-ascriptions of negative traits decreased across the election as compared to after the election, but ascriptions of positive traits roughly stayed the same (B = .124, SE = .026, p < 0.0001). This finding suggests that people may use a significant event such as an election as an opportunity to break with negative self-views.

Values

We next conducted an identical analysis for 28 different values (also on a 1-7 scale) that are often implicated in politics. A list of the values and their average change between timepoints can be found in Table 2. We found that, just like trait judgments, value judgments changed (in terms of absolute differences) more across the election than after the election (B = 0.180, SE = 0.046, p < 0.001) (*Figure 2C*). Again, this effect was found when all comparisons were included, as well as when just lag-matched 1wk-post—2wks-pre and 3wks-post—1wk-post were included (B = 0.293, E = 0.054, p < 0.001) (*Figure 2D*). We again also found that absolute time elapsed predicted survey-to-survey differences (B = 0.29, SE = 0.03, p < 0.001).

Interestingly, when we added political ideology into our model, we did not find any effects of ideology (B = 0.003, SE = 0.002, p = 0.077) or interactions between ideology and comparison type (B = -0.002, SE = 0.003, p = 0.459). This suggests that the changing importance of the values to one's self-views was not dependent on one's politics.

We also investigated whether the amount of change in self-endorsement of traits and values was similar across participants. A correlation between changes in trait and value endorsement would suggest that different dimensions of self-views respond similarly to significant events in a particular person, while no correlation might suggest that the significant event in question – a political election – was more important for one dimension over the other. We calculated the Manhattan distance for each participant by summing the absolute value of the differences for all trait ratings and all value ratings. We found a trending correlation of changes in self-endorsements of traits and values (R = 0.133, p = 0.065), with the 1wk-post—2wks-pre and 3wks-post—1wk-post comparisons driving the effect (R = 0.179, p = 0.013). Thus, individuals who more strongly changed their self-views about traits also more strongly changed their self-views about values, suggesting a global change in self-views across the two dimensions.

Events

Finally, we investigated how the reported importance and positivity of events – both political and personal – changed across each timepoint. At each timepoint, participants reported events and rated each event's importance (on a 1-7 scale) and valence (on a 0-100 scale, with 0 labeled as negative and 100 labeled as positive). In addition, at 3wks-post and at 9wks-post, we also presented participants with events reported in a previous survey (events at 2wks-pre for 3wks-post survey, events at 3wks-post for 9wks-post survey), and asked them to evaluate how positive and important they currently perceived each event. By comparing these two ratings, we can get a sense of how much one's perceptions of specific episodic memories changed across time.

For positivity, using a Bayesian multi-level model, we found a main effect of comparison type, where the absolute differences of positivity ratings were larger across the election than after it (B = 6.72, SE = 1.75, 95% CI = [3.19, 10.13], *Figure 2E*). This suggests that the valence of memories changes more as a result of a significant event. We also found an interaction between comparison type and event type (personal vs political), where the election impacted positivity ratings more for political events than for personal events (B = 9.99, SE = 2.40, 95% CI = [5.31, 14.69]), although ratings for both types of events were significantly impacted by the election. We did not find a similar effect for ratings of event importance (*Figure 2F*). While political events were rated as overall more important than personal events, there was no difference between ratings when comparing across the election to after it (B = 0, SE = 0.08, 95% CI = -0.16, 0.15]). This suggests that while the nature of how events are remembered – in terms of valence – may change in response to a significant event, their importance for one's life is unaffected.

We additionally analyzed personal events by the semantic similarity of the text. If our self-views are at least partially made up of specific events, then we would expect reported personal events to be more semantically similar when self-views are changing less. This is exactly what we found. When concatenating the text of the three reported events and comparing the similarity of the text's semantic vector across each timepoint, we find that events are less similar across the election than after it (B = -0.026, SE = 0.008, p = 0.001). When we compare just 1wk-post—2wks-pre to 3wks-post—1wk-post, we find a similarly sized effect, although it is not significant (B = -0.024, SE = 0.013, p = 0.073).

Finally, we ran two sets of exploratory Bayesian models with non-absolute differences between event valence and importance ratings. In the first model, we sought to determine if events were rated as more or less positive or important as a result of the election. We found that personal events were rated as more positive across the election, but on average did not change after the election (B = 10.48, SE = 2.17, 95% CI = [6.24, 14.68]). We found no effect of the election on the reported valence of political events. For event importance, we found that the reported importance of all events decreased over time, but that for personal events, reported importance decreased more after the election than across it (B = -0.40, SE = 0.21, 95% CI = [-0.81, 0.01]). In the second model, we investigated whether political ideology impacted changes in event valence and importance ratings. We did not find that political ideology impacted the reported valence of either political or personal events. For event importance, we found that conservatives overall rated political events as decreasing in importance more than liberals did (B = -0.62, SE = 0.28, 95% CI = [-1.17, -0.06]). There was no interaction with whether or not the election occurred between timepoints, and there was no effect of political beliefs on the reported importance of personal events.

To summarize our findings on reported events, we found that the valence ratings of reported personal events and the valence ratings of reported political events changed more across

the election than after the election, in line with our hypothesis. In addition, we found that valence ratings for political events changed more than for personal events. We did not, however, find an effect of event importance. Importance ratings for reported personal and reported political events did not change more based on the presence of the election, contrary to our hypothesis. In line with our finding for event valence, we also found that the semantic similarity of reported events was lower across the election. Finally, we explored whether event ratings became more or less positive, and more or less important. We found that valence ratings and importance ratings for personal events interacted with the presence of the election, but that political events did not.

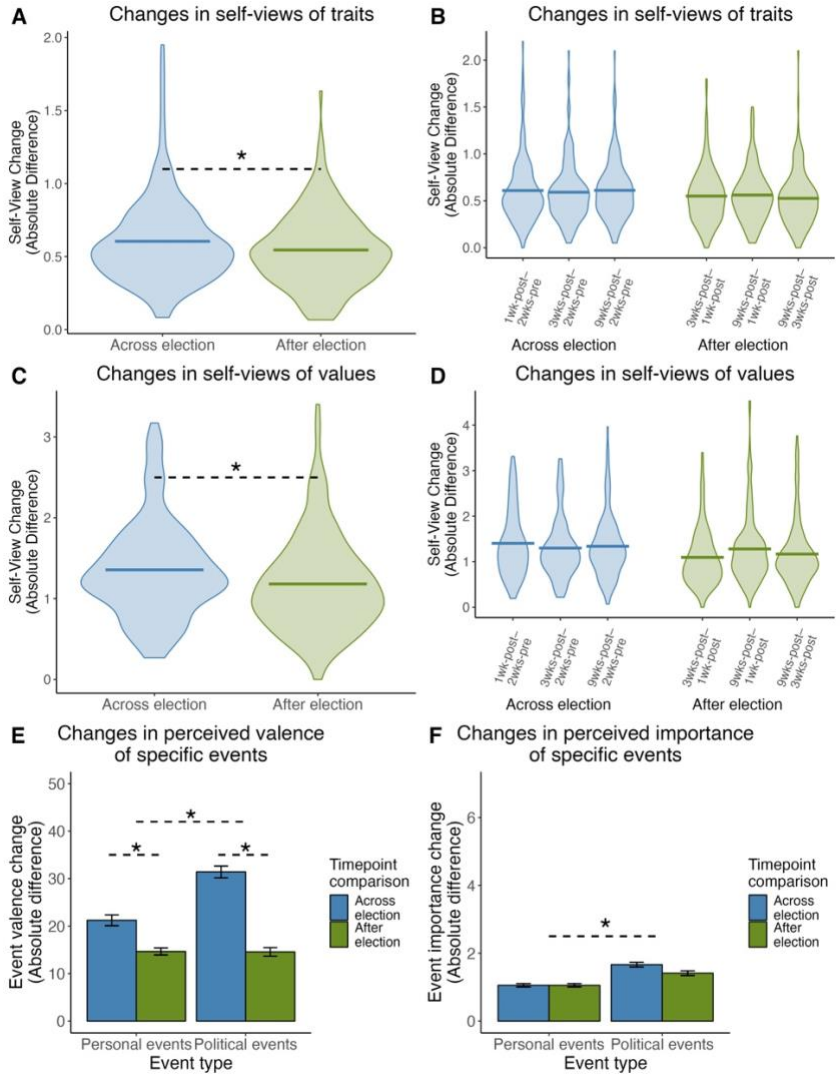

Figure 2: A) Overall, traits changed more across the election than after the election. B) Individual comparisons of trait changes. C) Overall, values changed more across the election than after the election. D) Individual comparisons of value changes. E) The reported valence of both personal and political events changed more across the election than after the election, but this effect was exacerbated for political events. F) The reported importance of political events changed more than it did for personal events, but was unaffected by the election. * indicates $p < 0.05$.

Is memory for previous self-views impacted by a significant event?

Traits

In addition to assessing one's self-views at each time point, we also asked participants about their self-views at the previous timepoint. By comparing ratings at timepoint *t* with memory for those same ratings at timepoint *t+1*, we can evaluate how well people remember a previous self, and if memory for a previous self is affected by a significant event. Specifically, we compared memories for 2wks-pre self at 1wk-post to memories of 1wk-post self at 3wks-post. We excluded 9wks-post from these analyses because data was collected at a significantly more distant timepoint than the others, which likely impacted memory.

For trait ratings, we found that the overall absolute difference between reported trait ratings and memory for trait ratings was approximately 1.5, or approximately 21% of the total range of response, and was significantly above 0 ($p < 0.001$). This finding suggests that in general, memory for a previous self is far from perfect. When looking at trait valence, we also observed a present-self bias: Participants remembered a previous self as slightly less positive than they actually were, and more negative than they actually were ($B = -1.623$, $SE = 0.071$, $p < 0.001$). However, there was no effect of comparison type (memory across vs memory after the election) on the absolute magnitude of these differences ($B = -0.004$, $SE = 0.050$, $p = 0.936$; *Figure 3A*). There was also no interaction between comparison type and trait valence ($B = 0.079$, $SE = 0.101$, $p = 0.436$). Trait memory was not impaired or enhanced by a significant event. Memory was also not impacted by political ideology, nor was it impacted by an interaction between political ideology and comparison type. Overall, our results suggest that memory for one's traits was not meaningfully different across the election (1wk-post—2wks-pre) vs after the election (3wks-post—1wk-post).

Values

We completed an identical analysis for the value assessments. Here, we again found that memory for one's values at a past timepoint differed from participants' reported values at that time by approximately 20% of the range of assessment. Contrary to our trait findings, however, but in line with our hypotheses, memory for value ratings was slightly better for ratings after the election (within an event boundary) than for ratings across the election (across an event boundary) ($B = 0.152$, $SE = 0.065$, $p = 0.021$), meaning that differences were smaller for the 3wks-post—1wk-post comparison than they were for the 1wk-post—2wks-pre comparison (*Figure 3B*). Value ratings changed more across the election, and memory for those value ratings was worse, suggesting that the election may have acted as an event boundary, as memory across the election was worse than memory after the election. In addition, we again found that political ideology did not impact memory, with both conservatives and liberals demonstrating roughly equal memory differences that reflected comparable impact by the election ($B = 0$, $SE = 0.002$, $p = 0.822$).

Events

We also assessed participants' memory for the valence and importance of events they reported at a previous timepoint. Specifically, we calculated the difference between participants' positivity/importance scores at 2wks-pre and their memory for their 2wks-pre ratings at 3wks-psot. We then compared this difference to an identical difference score between 9wks-post and 3wks-post using a Bayesian multi-level model. Interestingly, the way that participant memory for

events was impacted by the election was very similar to how the assessments themselves were impacted by the election. Specifically, we found an effect of comparison type (B = 6.94, SE = 1.86, 95% CI = [3.25, 10.50]), demonstrating that participants' memory for the positivity of an event was worse when remembering across the election than after it (*Figure 3C*). In addition, we found the same interaction with event type (political vs personal), where memory for event positivity did not differ after the election, but was worse for political events than personal events across the election (B = 9.18, SE = 2.33, 95% CI = [4.57, 13.77]).

Memory for the importance of an event was not impacted by the election (B = 0.06, SE = 0.08, p = 0.45). Memory for the importance of political events was worse than the memory for the importance of personal events (B = 0.44, SE = 0.11, p < 0.001), but we did not find an interaction between comparison type and event type (*Figure 3D*). Similar to our results for actual event importance and positivity changes, these results suggest that a significant event, such as the 2020 election, makes it more difficult to remember the nature of specific episodes from before that event. This result contrasts with our findings for values memory, which imply that the significant event makes previously reported values more salient, and therefore better remembered.

Since we reminded participants of the events that they provided at the previous timepoint, we could not also ask participants to recall the text of the event. This precludes us from being able to conduct an event similarity analysis akin to the one done for changes to self-views.

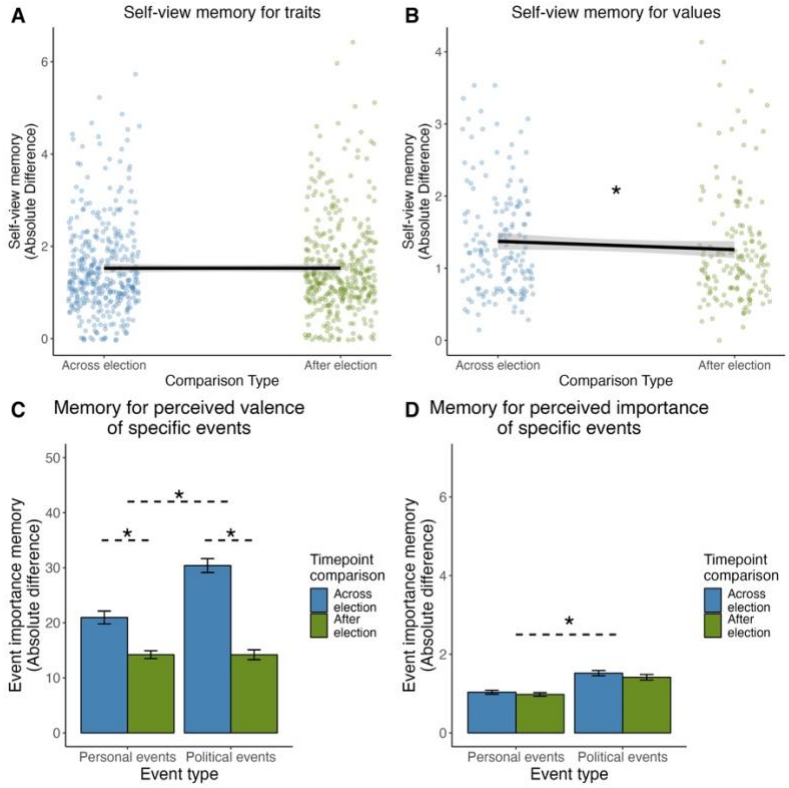

Figure 3: A) Traits-memory was the same when remembering a timepoint before the election and when remembering a timepoint after the election. B) Memory for values was worse for before the election than for after the election. C) Memory for the valence of both personal and political events was worse across the election than after the election, but this effect was exacerbated for political events. D) Memory for the

importance of political events was worse for political events than it was for personal events, but was unaffected by the election. * indicates $p < 0.05$.

Discussion

Who one was five years ago is likely not exactly who one is today. Each of us is constantly changing. Typically, these changes occur gradually, over long periods of time (Jiang et al., 2020; Sedikides et al., 2023). But it's possible that these changes can occur more quickly, in response to specific – and significant – events. In the present study, we investigated whether the self-views of people living in the United States changed as a result of the 2020 U.S. presidential election. We also asked how the 2020 U.S. election impacted memory for previous self-views. We found that people's self-views changed more across the election than after it. Similarly, memory for a previous self's values was worse across the election than after it, while there was no difference for traits. Finally, we found that episodic information – in this case, memory for specific events – was treated differently from the semantic information of traits and values. We discuss each of these findings in turn below.

We hypothesized that a significant event would change one's self-views more so than would be expected if no significant event was present. This is exactly what we found. Traits, which have historically been the primary way self-views have been assessed (Elder et al., 2023; Klein & Lax, 2010; Meyer & Lieberman, 2018), and values, which have also been used but much less frequently (Van Bavel & Pereira, 2018), both changed more when comparing self-ratings made at two time points across the 2020 U.S. election than when comparing two time points after the 2020 U.S. election. Furthermore, the amount that each participant's self-rated traits and values changed were correlated, strengthening our findings and suggesting a more global change in self-views that aren't limited to one particular dimension. This finding is in line with previous laboratory experiments, which demonstrate changes in self-views in response to a new experience (Harris et al., 2016; Meyer et al., 2019).

As such, our work demonstrates that it's possible for acute and immediate changes in self-views to occur in response to a significant event. Indeed, research on self-esteem has demonstrated that threat and rejection can have immediate impacts on certain components of self-views, such as self-esteem (Heatherton & Vohs, 2000; Leary & Downs, 1995). One reason for the immediate change in the current study may be that one's self-views are a reflection of one's environment (Klein, 2010; McConnell, 2011). If the environment changes abruptly, as it did after the 2020 U.S. election, then one's self-views may subsequently change abruptly as well. This interpretation is in line with models of one-shot learning (Gershman & Daw, 2017; Metcalfe, 2017), which suggest that we can learn from stimuli after a single experience, even if that learning contradicts long-standing beliefs.

However, our work goes further than previous laboratory studies by assessing self-views as long as nine weeks following the self-changing experience. In our study, participants' traits and values were still significantly different nine weeks after the election, demonstrating that self-views may not be as resistant to change due to external events as some have hypothesized (Sui & Humphreys, 2015; Wang et al., 2016). Previous studies of personality traits have similarly demonstrated long-term stability (Soldz & Vaillant, 1999; Watson & Walker, 1996), although crucially, some work suggests that life experiences can impact stability (Vaidya et al., 2002). The experience in our study, the 2020 U.S. presidential election, might be more likely to cause a long-lasting change to the self for several reasons. First, we can again consider the environmental explanation. A relevant and significant event is more likely to be embedded in our environment

many weeks later than a hypothetical event conjured in the lab is. In the case of the 2020 U.S. election, the impacts of a new president – a nationwide event that occurs at most once every four years – as well as the historically atypical response of the outgoing president – kept the event in the news, and consequently in the minds, of the general population for quite a while. Another reason for a long-lasting change may be entirely internal. If self-views are at least partially based on episodic memories (Haslam et al., 2011), then it's possible that a realistic and significant event is simply more memorable than one conjured in the lab. In the lab, once the memory of the event wears off, so too does the change in the self, whereas in our study, the memory of the election persisted far beyond its initial occurrence.

Aside from changes in self-views, we also hypothesized that memory for self-views would be less accurate when remembering a timepoint across the election (2wks-pre—1wk-post) than when remembering one after it (3wks-post—1wk-post), with roughly an equal amount of time between the comparison timepoints. This hypothesis was based on decades of work suggesting that memory for information across an event boundary is worse than memory for information within an event boundary (DuBrow & Davachi, 2013, 2014; Radvansky, 2012). In addition, if our memories for previous self-views are biased by current self-views, then it stands to reason that memories would be less accurate for self-views that are more different from current ones. In line with these hypotheses, we found that values-memory was better when remembering a timepoint after the election (within an event) than when remembering a timepoint before the election (across the event boundary).

In most event boundary studies, the boundaries are typically perceptual, such as backgrounds or scenes that create a visual event context for presented stimuli (Ezzyat & Davachi, 2011; Horner et al., 2016; Pettijohn et al., 2016). Our study demonstrates that the effects found in these studies can be recapitulated in more complex environments and over longer timescales. A significant event, such as the 2020 U.S. election, creates an entirely new context that is significantly different from the context before the event. As a result, memories of self-views from a different context will be worse than memories for self-views in the same context. It's also possible that a significant life event can put psychological distance between a current self and a past self (Bleidorn et al., 2018; Schwaba et al., 2023), particularly because a significant event likely leads to greater changes in self-views. Feeling more distant from a previous self makes it more difficult to simulate that previous self (Trope & Liberman, 2010). If remembering something requires some degree of simulation (Schacter et al., 2008), then a more distant self would be more difficult to remember.

However, it should be noted that we only found this effect for values; for traits, memory was unimpacted by the presence of the election. It's possible that trait-memory was unaffected by the 2020 election because traits were less relevant to the events involved in the election than values were (Levine et al., 2021). Event boundaries can conflict depending on the task at hand (DuBrow & Davachi, 2013; Johnson & Keil, 2014); perhaps the election created a new context for one's values, but not for one's traits. If this were the case, then we would not expect to see a difference in trait-memory based on the presence of the election, which is exactly what we found. On the flip side, we can also frame our values-memory result as memories were *enhanced* post-election. With the election cast as an existential dilemma for the US, people's political beliefs and values were frequently deemed more relevant around this time. Emotionally salient information is more likely to be remembered (Dunsmoor et al., 2015; LaBar & Cabeza, 2006; Ochsner & Schacter, 2000), and therefore, self-views that were emotionally salient immediately

after the election – namely, one's values – might be better remembered, while traits go unaffected.

These theories are in line with our findings on memory for events. Specifically, memory for the valence of political events was worse across the election than memory for the valence of personal events was. Political events were certainly more relevant to the boundary in this study, so it would make sense for those types of events to be more greatly affected by the creation of a new context. One reason that we only found this effect for event valence and not for event importance might be that participants' memory for emotions associated with specific events is biased by their current emotions about the event (Levine, 1997; Levine et al., 2001).

It is also possible that episodic memory and semantic memory are differentially impacted by a significant event, given that memory for traits was unaffected by the election, and the across-election impairment was far larger for episodic memories than it was for values-memory. The vast majority of previous work on event boundaries has focused on episodic information (Zacks, 2020), and has often demonstrated the same pattern we found in our study: cross-boundary memory is worse than within-boundary memory (DuBrow & Davachi, 2013; Radvansky, 2012). However, the impact of event boundaries on semantic information is far less clear in the memory literature. Future work should aim to directly compare episodic and semantic information in the context of event boundaries. It's possible that in some contexts, episodic memory is more impaired by an event boundary than semantic memory is.

The potential separability of observed effects for self-relevant episodic and semantic memories also speaks to a long-standing question about how important episodic information is for semantic self-views (Haslam et al., 2011; Prebble et al., 2013; Sani, 2010). Previous work in lesion patients suggest that a sense of self can be maintained without the ability to form or recall specific episodes (Halilova et al., 2020; Klein et al., 1996, 2002; Klein & Nichols, 2012; Rathbone et al., 2009). Our results are consistent with these findings, and extends them to previous self-views. Future work could address this question directly by asking participants to conjure specific episodes that justify their memory for previous trait and value ratings. A lack of correspondence between these two types of memories might imply that previous self-views are sufficiently semanticized so as to not rely on memories of specific episodes.

There are several limitations of this study. First, there is only one timepoint before the election, and three after it. Ideally, there would have been equal numbers of data collection points pre- and post-election to ensure that the effects we found are because of the election, and not an artifact of the number of times the participant has taken the survey. Due to timing constraints, we were not able to collect data from more than one timepoint before the election. However, given that there is far less change in self-views post-election, including at a timepoint six weeks after the previous one, we believe that the increased change in self-views across the election is indeed a result of the election. Aside from collecting more data, future work should seek to test the generalizability of our findings. Our sample was evenly split across gender and had a much larger age range and more uniform age distribution than many studies of this type, so we anticipate our results would generalize across these components of identity. However, the event we investigated was a political event; it remains to be seen if other sorts of "macro" level events would elicit the same effects. It should also be noted that this study was very much focused on an American context, with all participants living in the U.S., and the event of interest being particularly relevant for that population. Perceptions of elections, and their effects on self-views, may differ by country. Future work may wish to systematically compare our effects across countries with different electoral politics and systems.

While social psychology has long investigated how interpersonal influences and "micro" environments impact perceptions of self, far less work has been devoted to how a "macro" influence, such as a significant societal event, might alter self-views. We used the 2020 U.S. presidential election to examine how self-perceptions of present and past traits, values, and episodic events change in response to a significant event. In line with our hypothesis, we found that all three components of self-views changed more across the election than after it, and that these changes were maintained up to nine weeks later. This finding suggests that self-views can be meaningfully altered in response to a significant event. In addition, we found a memory impairment for values and episodic events across the election as compared to after it. We tentatively interpret these findings as evidence that memory for episodic and semantic information that comprise self-views are differentially impacted by a societal event boundary, and that the relevance of the information to the boundary itself may be an important factor. Further investigation is needed to disentangle the importance of semantic and episodic information in forming an ever-changing self-concept.

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