

## The Emotional Cost of Partisanship

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We have no conflicts of interests to disclose.

We thank K. Danowski and E. Rosenthal for their work coding Study 1 diary entries. We also thank I. Aslarus for her helpful feedback during the early stages of this project. This research was supported by a Social Sciences and Humanities Research Council of Canada Banting Postdoctoral Fellowship (A.C.W), a Robert J. and Nancy D. Carney Institute for Brain Science Innovation Grant (O.F.H), and a National Institute of General Medical Sciences Center of Biological Research Excellence Grant (O.F.H). The funders had no role in study design, data collection and analysis, decision to publish or preparation of the paper.

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**Abstract**

Political polarization is increasingly recognized as a critical threat to individual and collective well-being. Prevailing frameworks suggest that political engagement diminishes well-being by evoking negative emotions, which act as chronic stressors. However, the relationship between politics and emotion has largely been investigated by relying on static snapshots of emotional reactions to political events, overlooking how well-being is impacted by the temporal dynamics of emotion. Across two longitudinal experience-sampling studies that include long-form ‘diary’ responses ( $N = 259$ , 1,781 observations), we examine how engaging with politically-polarizing events shapes daily affective experiences. Contrary to the notion that political engagement leads to sustained negative moods, we find that political engagement is characterized by heightened *affective instability*—i.e., frequent and large fluctuations in affective states—which, in turn, predicts lower well-being (i.e., greater anxiety). Politically-polarizing events are particularly destabilizing when they are highly salient and when individuals spontaneously engage with these events. While individuals on the ends of the political spectrum (i.e., strong partisans) do not exhibit more negative moods, they do show the greatest fluctuations in daily affect, characteristic of an unstable emotional life. By observing that political engagement is intimately tied to affective instability, this research reveals the emotional cost of partisanship. These findings open new avenues for understanding and mitigating the emotional and mental health consequences of political engagement in an era of deepening divides.

*Keywords:* politics, emotion, affect, affective dynamics, well-being, anxiety

### **The Emotional Costs of Partisanship**

On May 25<sup>th</sup>, 2020, George Floyd was murdered when Minneapolis police officer Derek Chauvin knelt on Floyd's neck for 9 minutes and 29 seconds. Hours later, bystander footage of Floyd's fatal encounter with police went viral, igniting national outrage and sparking mass protests against police brutality and racial inequality. This footage was the catalyst for the largest protests in U.S. history (Buchanan et al., 2020), protests that were not only emotionally charged, but also politically polarizing (Horowitz, 2021; Jackson & Newall, 2020). The public outcry laid bare deep societal divisions, exemplifying how political events can influence collective and individual well-being (American Psychological Association, 2024; Stanton et al., 2010; Van Bavel et al., 2024). Indeed, emerging research suggests that political engagement and partisan hostility comes with a psychological and emotional toll (Ford et al., 2023; Nayak et al., 2021; Roche & Jacobson, 2019; Smith, 2022). Although there is growing concern that political engagement amplifies discord and distress, the mechanisms through which political involvement undermines emotional functioning and well-being remain poorly understood. At a time when ideological divisions are deepening and outgroup animosity is surging, understanding how politics shapes our emotional and psychological well-being is crucial to mitigating its harmful effects and fostering a healthier civic climate.

Human well-being is intimately tied to our emotions, which serve as the bedrock of our social lives. We feel emotions like love, frustration, joy, and disgust whenever we are with others, and in many cases, because of others (Mesquita & Boiger, 2014). These emotions are not static, but continually unfolding and changing as we engage with the world around us (Larsen et al., 2009). In fact, changing emotions are a critical signal for responding adaptively to environmental changes (Frijda, 2007; Larsen, 2000; Scherer, 2009). However, not all temporal dynamics are conducive to well-being, as certain patterns of change are associated with mental health disorders

(Houben et al., 2015). For example, on one end of the spectrum, the persistence of negative mood states is characteristic of depression (Kuppens et al., 2010; Kuppens et al., 2012; Nelson et al., 2020; van de Leemput et al., 2014), and on the other end, rapid emotional shifts are a defining symptom of borderline personality disorder (American Psychiatric Association, 2022; D’Aurizio et al., 2023). In short, *how* emotions fluctuate offers a window into an individual’s mental health and well-being.

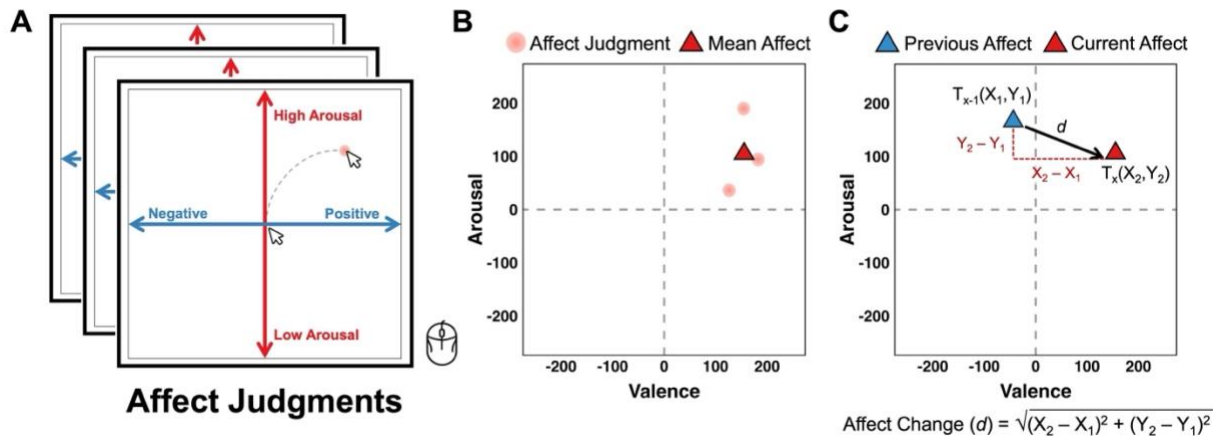
Despite the dynamic nature of emotion and its close link to well-being, research investigating the relationship between politics and emotion largely relies on static snapshots of individuals’ emotional reactions to political phenomena. For example, a subject may be asked to report the extent to which they feel various negative emotions after viewing political content, or to report their feelings towards different political groups (Iyengar et al., 2019). These approaches reveal that political phenomena evoke negative emotions that are associated with diminished well-being (Ford et al., 2023; Nelson, 2022), but they cannot address just how variably emotions unfold over time in response to political events. To better understand how political engagement impacts emotional functioning and psychological well-being, it is essential to examine how political events shape the *temporal dynamics* of people’s emotional experiences. One particularly useful approach for studying the temporal dynamics of emotion is to characterize changes in an individual’s core affect (FeldmanHall & Heffner, 2022; Frijda, 2007; Scherer, 2009), affective responses which vary along the dimensions of valence (i.e., pleasurableness) and arousal (i.e., intensity). These affective measurements can be used to quantify several distinct emotion dynamics, including *affective instability*, *variability*, and *inertia* (Houben et al., 2015).

Affective instability is a widely-used metric that reflects frequent, unpredictable changes in affective states from one moment to the next (Marwaha et al., 2014). Individuals with high

affective instability experience volatile emotional lives characterized by heightened reactivity to environmental stressors (Jahng et al., 2008). In contrast, affective variability captures the *breadth* of a person's affective experiences (Kuppens et al., 2007). Those with high levels of variability experience a wide affective range, including extreme emotions indicative of poor regulatory control (Kuppens & Verduyn, 2015). Finally, affective inertia reflects the degree of continuity between a person's past and present affective states (Kuppens et al., 2010). High levels of inertia signal that a person's emotional state has a tendency to remain consistent and is resistant to changes over time, which acts as a marker of emotional 'stickiness' or rigidity. Such stickiness is often seen in depression, when feelings of sadness persist even after the initial trigger has been resolved (Kuppens et al., 2012; van de Leemput et al., 2014). Examining how these different signatures of affective dynamics are evoked by political events can help deepen our understanding of the adverse effects of political engagement on well-being.

We used these metrics of affective dynamics to test three (not mutually-exclusive) hypotheses of how political engagement could impact everyday affective experiences and psychological well-being. First, it is possible that political engagement has a destabilizing effect, such that people exhibit large fluctuations in affective states when engaging with political events. This would suggest that people who routinely engage with politics may experience an unstable emotional life marked by rapid changes in affect. Second, political engagement may increase affective variability, with people experiencing more extreme emotions when politically engaged, which may, in turn, undermine well-being. Finally, given that political events generally evoke negative emotions (Ford et al., 2023; Hoyt et al., 2018), it is possible that political engagement results in greater affective inertia, triggering negative moods that persist for hours, days, or even weeks (Roche & Jacobson, 2019).

To test these three accounts, we leverage a longitudinal experience sampling design to capture how the dynamics of people's day-to-day affective experiences are shaped by their engagement with politically-polarizing events. In Study 1, we assess the temporal patterns of participants' affect following the murder of George Floyd. During an eight-week period encompassing 23 data collection points, we measured affective responses using a dynamic affect grid (FeldmanHall & Heffner, 2022; Russell et al., 1989; Fig 1) and political engagement using naturalistic open-ended diary prompts. This allowed us to repeatedly record people's affective states to see how an affective state at one timepoint predicts affective states at subsequent timepoints, given whether individuals were engaging with the ongoing national discourse around racial inequality (Fig 2). We were then able to link these repeated measurements to metrics of well-being, particularly anxiety and depression. Given that ideologically-extreme individuals engage more with partisan news (Levendusky, 2013; Pew Research Center, 2020) and have stronger emotional reactions to political stimuli than their more moderate peers (Bakker et al., 2021; van Prooijen et al., 2015), we explicitly test in Study 2 whether strong partisans experience larger day-to-day affective shifts. By connecting the extremity of an individual's political beliefs with the dynamics of their everyday affect, we highlight an emotional cost of partisanship—one that may contribute to the diminished well-being of politically-polarized individuals.



**Figure 1 | Study 1: Affect Judgments.** *A)* During each study session, participants reported three events from their past two days and indicated how they felt about each event by clicking within a 500x500 pixel affect grid. *B)* We calculated the mean affect (valence and arousal) of these judgments as a measure of participants' affect at each timepoint. *C)* We measured the overall magnitude of participants' timepoint-to-timepoint changes in affect by calculating the Euclidean distance between participants' current valence and arousal ( $T_n$ ) and their valence and arousal at the previous time point ( $T_{n-1}$ ).

## Study 1

### Methods

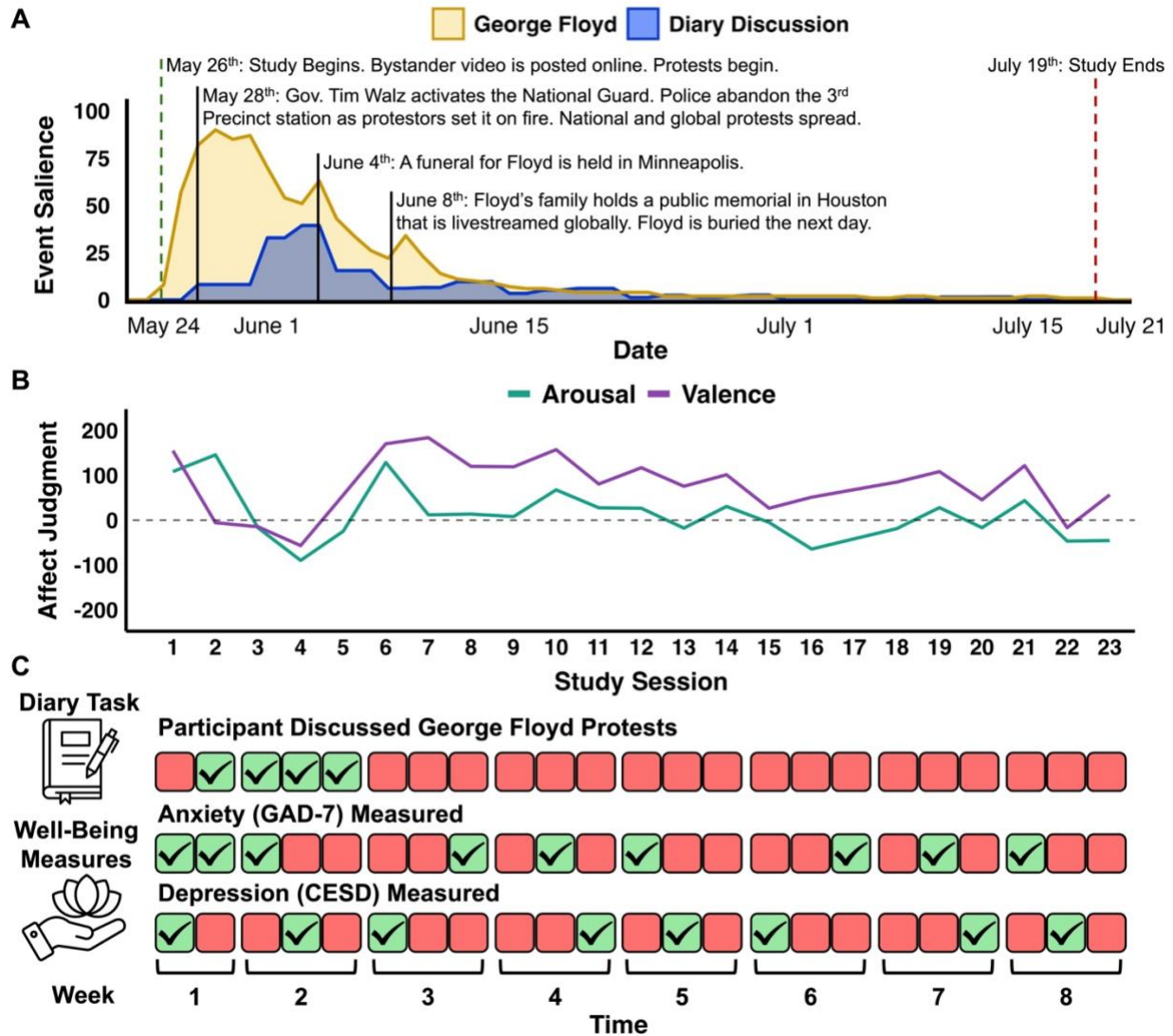
#### Participants

We recruited 138 United States residents from the Prolific online labor market, a sample size consistent with past work using longitudinal experience-sampling designs (Wrzus & Neubauer, 2023), including those investigating affect and well-being (Lenneis et al., 2024). We excluded participants who failed to complete at least two questionnaires ( $n = 25$ ), as affective dynamics cannot be assessed with data from a single timepoint. The final dataset consisted of 113 participants ( $M_{age} = 30.42$ ,  $SD_{age} = 9.98$ ; 69 Female, 43 Male; 71 White, 17 Asian, 13 Black, 6 Hispanic/Latinx, 6 Mixed/Other), all of whom received monetary compensation for their participation. All study procedures were approved by [Institution removed for blind review] Institutional Review Board, and all participants provided informed consent prior to their participation.

*Political Event Salience*

The 8-week time frame of Study 1 coincided with the rise and fall of national interest in politically-polarizing protests against police brutality and racial inequality (Fig 2A). To estimate the cultural salience of these protests, we used data from Google Trends ([google.com/trends](https://www.google.com/trends)) to quantify how frequently terms related to these protests were searched for in the United States during each study timepoint (Chykina & Crabtree, 2018). Specifically, we acquired a daily Google Trends search interest score for five search terms over the course of Study 1 (May 26 to July 19, 2020): “George Floyd”, “Riots”, “Protests”, “BLM”, and “Derek Chauvin.” Search interest scores reveal the proportion of Google searches for a given term, relative to the most searched-for term in the set (in our dataset, “Riots” on May 31). Therefore, higher scores indicate that a greater number of Americans searched for a term on a given day. The popularity of all search terms followed a similar trajectory, peaking around May 31, with search frequency diminishing considerably by mid-June. Here, we use the term “George Floyd” as our primary measure of event salience, as it was the most frequently-searched and represents a direct index of all events related to Floyd’s murder, subsequent protests, and politically-polarizing discourse surrounding both. Robustness checks reveal that all effects replicate when measuring event salience using the aggregated day-to-day popularity of all event-related terms (Supplementary Materials).





**Figure 2 | Study 1 Design.** **A)** Study 1 began the day after George Floyd was murdered by Minneapolis police officer Derek Chauvin. We measured the saliency of the mass demonstrations that followed Floyd’s death using data from Google Trends and text from participants’ diary entries. Data from Google Trends revealed the amount of times the term “George Floyd” was searched as a proportion of the highest number of daily searches in our Google Trends dataset. Diary discussion scores reflect the proportion of participants who discussed the George Floyd protests. The saliency of these protests fluctuated over the course of Study 1, as did participants’ discussion of them, allowing us to capture the effect of event saliency and engagement on participants’ affect and well-being. **B)** One representative participant’s affect over the course of the study. The time axis is aligned with panel A, revealing a large shift in affect corresponding to the George Floyd protests. Participants reported their affective experiences three times a week, completing a total of (up to) 23 study sessions over an 8-week period. **C)** In addition to affect judgments, we collected text data from a freeform diary-writing task, as well as two measures of well-being from standardized questionnaires. Participants began each study session by completing a diary task in which they were asked to reflect and write about their last two days. For each timepoint, we assessed whether participants spontaneously discussed the George Floyd protests in their diary response (coded as a yes/no binary variable). The representative participant’s explicit discussions of the George Floyd protests are depicted with green checkmarks,

which appear to correspond with the large shift in affect shown in panel B. At select timepoints (once per week), participants also completed the GAD-7 and CES-D questionnaires, which measure anxiety and depression symptoms, respectively.

### ***Design and Procedure***

Participants completed (up to) 23 online questionnaires over the course of 8 weeks (May 26 to July 19, 2020). They began each questionnaire by writing a freeform ‘diary’ entry about their past two days (*Diary Task*). Next, from all the events participants wrote about, they selected three events and reported their feelings towards each event using a 500x500 affect grid (*Affect Judgments*). Depending on the questionnaire, participants concluded the study session by responding to questions assessing their anxiety and/or depression symptomology (*Psychological Well-Being*; Fig 2C).

### ***Materials and Measures***

**Diary Task.** Participants began each questionnaire by writing about their last two days. They were told that there was no right or wrong way to write their response, but were encouraged to be thoughtful and detailed, and indeed, descriptive statistics indicate that participants took this instruction seriously (word count: *Mean* = 181, *SD* = 165, *Median* = 134). Diary task instructions included prompts such as “What were the activities you engaged in, and the events that you found important?” and “What were the thoughts you had, and the emotions you experienced?”. Study instructions made no reference to politics or ongoing political events. Thus, all discussion of political events within diary entries were unprompted, reflecting a participant’s personal view that one or more political events were an important part of their past two days.

We used data from this freeform diary task to capture participants’ personal engagement with the George Floyd protests at each timepoint. Two trained undergraduate research assistants (URAs), blind to study hypotheses, judged whether participant diary entries discussed this politically-polarizing event. Prior to reading diary entries, URAs were provided information

detailing the murder of George Floyd and the global protests that followed. For each diary response, they were asked to judge whether a participant (based on their diary text) showed “engagement with the events surrounding the murder of George Floyd, the demonstrations and/or civil unrest that took place afterwards, and/or the general topics of police brutality and racism.” URAs provided a rating of “0” to diary responses (94.5% of diary entries) that made no reference to this event or related topics, a rating of “1” to diary responses (3.0% of diary entries) that referenced this event but did so briefly or with limited depth, and a rating of “2” to diary responses (2.5% of diary entries) that referenced this event in a manner that indicated strong engagement. We collapsed ratings of “1” and “2” to create a binary variable reflecting whether a participant provided an unprompted discussion of the George Floyd protests in a given diary entry. URA judgments showed almost perfect agreement (Cohen’s kappa = 0.86, 95% CI [0.80, 0.92]), disagreeing on only 2.3% of cases. Instances of disagreement were discussed by URAs until a consensus was formed.

**Affect Judgments.** Following each diary entry, participants picked three events they had just wrote about. For each event, they described the event in a few words (e.g., “called my mother”), and provided an affect judgment that reflected their feelings towards it. Affect judgments were made using a granular 500x500 pixel affect grid that captured emotional experiences on two dimensions: valence (pleasurableness, x-axis) and arousal (intensity, y-axis; Fig 1A). Participants were instructed on how to use the affect grid and then rated the pleasurableness (valence) and intensity (arousal) of their feelings regarding each event by clicking within the 500x500 grid, producing two ratings for every event (i.e., one on each dimension) that varied from -250 to +250. Thus, during each questionnaire, participants provided three affect judgments reflecting their feelings towards recent events that were important to them. We calculated the mean valence and

arousal of each participant's judgments as our measure of their affect at a given timepoint (Fig 1B), which we then used to quantify affective dynamics.

We quantified the overall magnitude of short-term changes in affect by calculating the Euclidean distance between a participant's self-reported valence and arousal at one time point ( $T_n$ ) and their valence and arousal at the preceding time point ( $T_{n-1}$ ; Fig 1C). We also captured longer-term affective dynamics using classic measures of affective instability, variability, and inertia, ensuring in all cases, as is common practice, that these measures were based on a minimum of three consecutive time points (Houben et al., 2015). Affective instability was calculated as the mean squared successive difference (MSSD) between consecutive timepoints for each participant within a given period (Jahng et al., 2008). Affective variability was calculated as the 95% confidence intervals of each participant's (two-dimensional) affective judgments for a given period. This approach extends canonical measures of affective variability in unidimensional judgments (Kuppens & Verduyn, 2015), to simultaneously account for variability in both valence and arousal. Affective inertia was calculated separately for the valence and arousal dimensions by taking the autocorrelation of each participant's valence and arousal judgments across time (Kuppens et al., 2010).

**Psychological Well-Being.** We used well-validated measures of anxiety and depression, measured weekly, to index well-being. Anxiety was assessed using the Generalized Anxiety Disorder Assessment (GAD-7), a seven-item instrument used to measure the severity of generalized anxiety disorder (Spitzer et al., 2006). Participants indicated how often they had been bothered by different anxiety-related symptoms (e.g., "worrying too much about different things") over the past week. Responses to GAD-7 items were provided on a 4-point scale that ranged from 0 (Not at all) to 3 (Nearly every day). Responses to all seven items were summed to create a GAD-

7 score for each participant, with higher scores reflecting greater anxiety. Depression was assessed using the Center for Epidemiologic Studies Depression Scale (CES-D), a 20-item measure of depressive symptomatology (Radloff, 1977). Participants reported how often they felt or behaved in ways connected to depressive symptoms (e.g., “I could not get going”) over the last week using a 4-point scale that ranged from 0 (Rarely or none of the time) to 3 (Most or all of the time). Responses to all twenty CES-D items were summed to create a CES-D score for each participant, with higher scores reflecting greater depression.

### *Statistics and Software*

All analyses were conducted in RStudio v2024.12.0+467 (Posit Team, 2024) with R v4.4.2 (R Core Team, 2024) with the exception of multilevel mediation models which were fitted in Stata v18 (StataCorp, 2023). Linear mixed-effects models, with maximal random effects where possible, were fitted to participant data using the lme4 package v1.1.35.5 with degrees of freedom estimated using the Satterthwaite method (Bates et al., 2015; Kuznetsova et al., 2017). Bonferroni correction was used to correct for multiple comparisons. Plots of participant data and model predictions were generated using the ggplot2 (v3.5.1; (Wickham, 2016) and ggeffects (v1.7.2; (Ludecke, 2018) packages, respectively.

### *Transparency and Openness*

For both studies, we collected the full sample prior to data analyses and report all data exclusions, all manipulations, and all measures used. All measures and materials presented within Studies 1 and 2 can be viewed in the supplementary materials. Neither study was preregistered. All data and analysis scripts have been made publicly available at ([https://osf.io/3dyr7/?view\\_only=26700f15937444ab98f1bafadd1dac55](https://osf.io/3dyr7/?view_only=26700f15937444ab98f1bafadd1dac55)).

## Results

### *Politically-polarizing events evoke unstable negative affect*

First, we assessed how the cultural salience of a politically-polarizing event (i.e., the George Floyd protests) impacted the dynamics of participants' affect. Before testing our main hypotheses about longer-term affective dynamics, we first validated our method by measuring whether short-term changes in affect fluctuated as a function of day-to-day changes in the salience of George Floyd's murder and subsequent protests. We quantified the overall magnitude of short-term affective change as the Euclidean distance between a participant's valence and arousal at one time point ( $T_n$ ) and their valence and arousal at the preceding time point ( $T_{n-1}$ ; Fig 1C). As expected, a linear mixed-effects model reveals that greater national search interest for "George Floyd" was associated with a greater magnitude of affect change between study timepoints ( $b = 0.25$ , 95% *CI* [0.04, 0.47],  $t(237) = 2.30$ ,  $p = .022$ , *semi-partial*  $r^2 = .005$ ), even after controlling for affect and search interest at  $T_{n-1}$ . We observe similar effects when using other event-related search terms (Supplementary Materials). Further analyses probing how event salience shaped affect on the valence dimension reveals that participants' affect became more negative as searches for the term "George Floyd" increased ( $b = -0.41$ , 95% *CI* [-0.65, -0.17],  $t(167) = -3.34$ ,  $p = .001$ , *semi-partial*  $r^2 = .009$ ). Conversely, searches for "George Floyd" were not associated with movement towards either higher or lower arousal states ( $b = -0.07$ , 95% *CI* [-0.30, 0.16],  $t(73) = -0.63$ ,  $p = .532$ , *semi-partial*  $r^2 < .001$ ).

We next tested our main hypotheses concerning longer-term affective dynamics. First, we assessed the extent to which different measures of affective dynamics and mood were correlated over time. These analyses revealed minimal overlap between measures, with the exception of instability and variability which were moderately correlated (Supplementary Materials). Next,

leveraging a multi-week longitudinal design and the prolonged salience of the George Floyd protests (Fig 2A), we examined whether participants' affective experiences exhibited distinct temporal patterns across periods of high compared to low event salience. Specifically, we tested whether participants displayed greater affective instability, variability, and inertia during a two-week period when American's interest in the George Floyd protests was highest (May 26–June 7, a period containing 80% of all searches for “George Floyd” during the study's time frame), compared to the following six-week period when interest remained much lower (June 8–July 19). To ensure sufficient data for assessing affective dynamics across both periods, we excluded participants who completed fewer than three study sessions in either period, retaining a sample of 51 participants for this specific analysis. Despite these exclusions, sensitivity power analyses indicate that our retained sample ( $n = 51$ ) provided 80% power to detect a small-to-medium effect ( $d = 0.40$ ) for the conducted paired-samples  $t$ -tests.

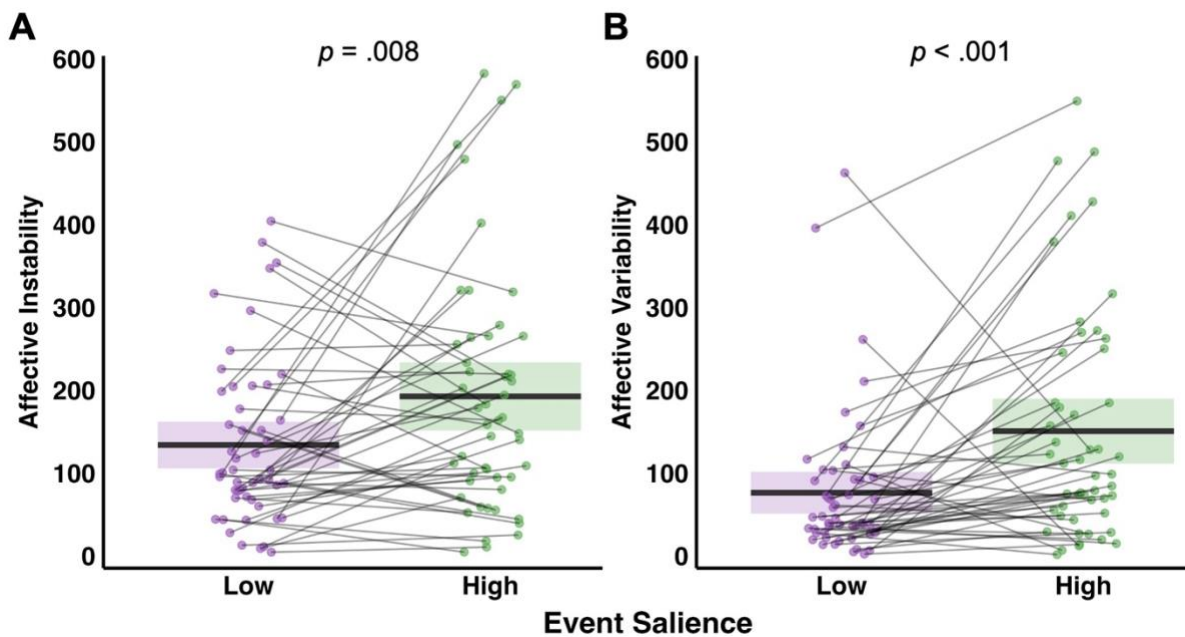
During the period when the George Floyd protests were most salient, participants displayed greater affective instability (Fig 3A) and variability (Fig 3B), compared to the lower-salience period (Table 1). These results were replicated when using the popularity of all event-related search terms to define periods of high versus low event salience (Supplementary Materials). Participants also exhibited less affective inertia on the valence dimension, but inertia on the arousal dimension did not reliably differ between periods. We also tested whether participants' general mood changed across periods of high compared to low event salience, where mood is operationalized as participants' mean valence and arousal for each period. Participants exhibited more negative valence but no significant changes in arousal during the period when the George Floyd protests were highly salient. However, unlike the effects above, the effect of negative mood

did not survive correction for multiple comparisons. In sum, participants' affect was less stable and more variable during the peak of America's interest in the George Floyd protests.

**Table 1 | Comparing Affective Experiences across Periods of High vs. Low Event Salience**

Affect Measure	<i>t</i>	df	<i>p</i>	<i>d</i>	95% CI for <i>d</i>	
					Lower	Upper
Instability	2.77	50	<b>.008</b>	0.39	0.10	0.67
Variability	3.80	50	<b>&lt; .001</b>	0.53	0.24	0.82
Inertia (Valence)	-2.88	50	<b>.006</b>	-0.40	-0.69	-0.12
Inertia (Arousal)	-1.83	50	.074	-0.26	-0.53	0.02
Mood (Valence)	-2.08	50	.043	-0.29	-0.01	-0.57
Mood (Arousal)	0.04	50	.969	0.00	-0.27	0.28

*Note.* Results of paired-samples *t*-tests comparing affective dynamics and mood across periods of high vs. low event salience. Only *p*-values in bold survive correction for multiple comparisons (Bonferroni-corrected threshold  $p = .008$  at  $\alpha = .05$  for six comparisons).



**Figure 3 | Study 1: Affective Dynamics Associated with Event Salience.** Solid black lines show the mean level of affective instability (Panel A) and variability (Panel B) during periods of low compared to high event salience. Boxes represent the 95% confidence intervals around these means. Dots represent participant-level affective instability and variability during periods of low (purple) vs. high (green) event salience. Lines connect within-participant datapoints.



***Political Engagement Destabilizes Affect***

While these results suggest that highly-polarizing and culturally-salient events are reflected in people's affective dynamics, they do not explicitly tether participants' affect to their *personal* engagement with political events. Therefore, to assess the emotional impact of political engagement within our sample, we drew upon data from a freeform diary-writing task administered throughout the study, assessing whether participants provided a spontaneous and unprompted discussion of the George Floyd protests (coded as a binary yes/no variable). Therefore, while the Google search interest data from the previous set of analyses captures the cultural salience of these polarizing protests, participants' discussions of these protests in their diary entries reflect their personal engagement with this event.

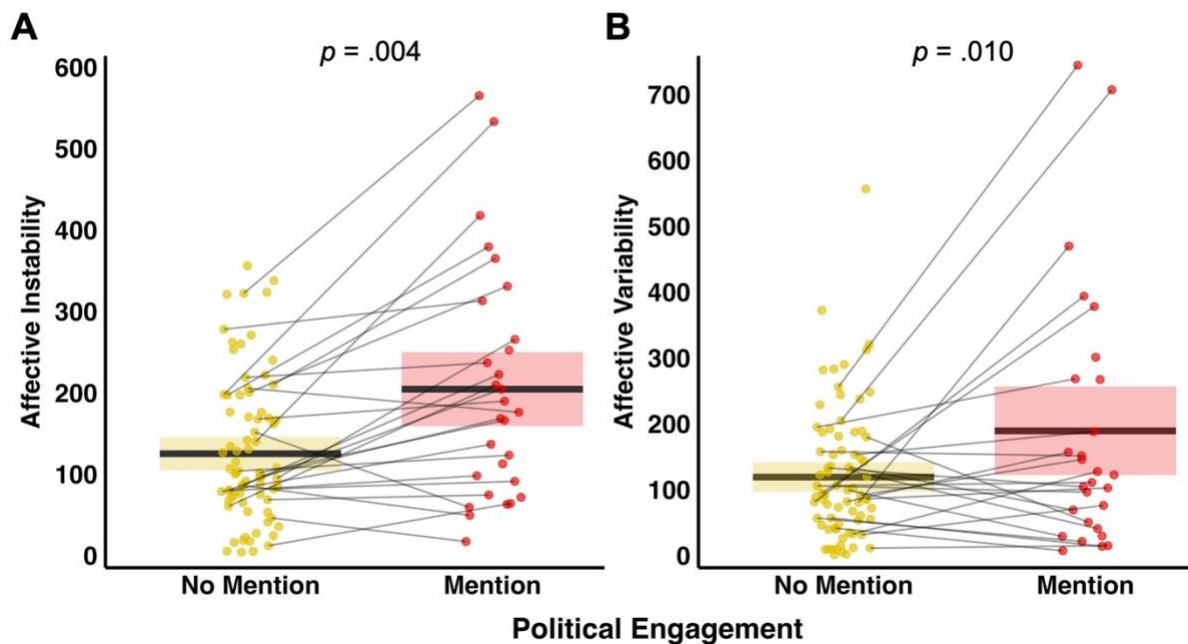
Mirroring our approach with Google search data, we first validated that we could predict the overall magnitude and direction of participants' day-to-day changes in affect based on their personal engagement with politically-polarizing protests. Remarkably, nearly half of the sample (42%,  $n = 47$ ) organically mentioned the George Floyd protests in one or more diary entry. When explicitly mentioning the George Floyd protests in their diary entry, participants exhibited larger changes in affect ( $b = 0.32$ , 95% *CI* [0.15, 0.50],  $t(20) = 3.73$ ,  $p = .001$ , *semi-partial*  $r^2 = .012$ ), and greater movement towards negative affective states ( $b = -0.46$ , 95% *CI* [-0.70, -0.21],  $t(38) = -3.85$ ,  $p < .001$ , *semi-partial*  $r^2 = .019$ ), fully replicating the analyses using Google search frequency. In a similar vein, political engagement was not associated with movement towards either higher or lower arousal states ( $b = 0.10$ , 95% *CI* [-0.10, 0.31],  $t(41) = 0.98$ ,  $p = .334$ , *semi-partial*  $r^2 = .001$ ). In short, participants' everyday affective experiences were associated with their personal engagement with political events, as they experienced larger affective shifts—predominantly to more negative affective states—when politically engaged.

We next assessed how political engagement relates to affective dynamics. We measured political engagement on a week-to-week basis, capturing whether a participant spontaneously discussed the George Floyd protests in their diary response within a given week. We then used this measure to predict the temporal dynamics of participants' affect (i.e., instability, variability, and inertia) during the same time frame, allowing us to link participants' affective dynamics to their personal engagement with a politically-polarizing event. Linear mixed-effects models (each predicting a distinct component of affective dynamics) reveal that participants exhibit greater affective instability (Fig 4A) and variability (Fig 4B) when politically engaged (Table 2). However, only the association between political engagement and affective instability survives multiple comparison correction. Participants did not exhibit greater affective inertia on either the valence or arousal dimensions when politically engaged. We additionally tested whether participants' mean valence or arousal during each week (i.e., their mood) was associated with the George Floyd protests being top of mind. Contrary to our expectation, political engagement was not associated with more negative valence or greater arousal. Therefore, rather than evoking persistent negative moods, political engagement is associated with distinct patterns of affect change—marked by high instability—which suggests that affective destabilization could explain why political engagement lowers well-being.

**Table 2 | Political Engagement as a Predictor of Affective Dynamics and Mood**

Affect Measure	Estimate	95% CI	<i>t</i>	df	<i>p</i>	$R_{sp}^2$
Instability	0.79	[0.29, 1.28]	3.16	30	<b>.004</b>	.030
Variability	1.68	[0.47, 2.89]	2.78	28	.010	.066
Inertia (Valence)	-0.15	[-0.63, 0.32]	-0.64	41	.528	.002
Inertia (Arousal)	-0.26	[-0.77, 0.26]	-0.99	304	.321	.003
Mood (Valence)	-0.15	[-0.34, 0.03]	-1.76	33	.088	.009
Mood (Arousal)	0.07	[-0.13, 0.28]	0.70	34	.492	.002

*Note.* Results of linear mixed-effects models, each predicting a distinct affective measure based on political engagement. All models included a random intercept and a random slope for political engagement, with the exception of the model predicting inertia on the arousal dimension for which this random slope was removed in order to allow the model to converge. Only the *p*-value in bold survives correction for multiple comparisons (Bonferroni-corrected threshold  $p = .008$  at  $\alpha = .05$  for six comparisons).  $R_{sp}^2 = \text{semi-partial } r^2$ .



**Figure 4 | Study 1: Affective Dynamics Associated with Political Engagement.** Solid black lines depict the predicted magnitude of affective instability (Panel A) and variability (Panel B) from our mixed-effects model when participants did versus did not mention the George Floyd protests in their diary entry. Boxes represent the 95% confidence intervals around these estimates. Dots represent participant-level affective instability and variability when they did (red) versus did not (yellow) discuss the George Floyd protests in their diary response. Lines connect within-participant datapoints.

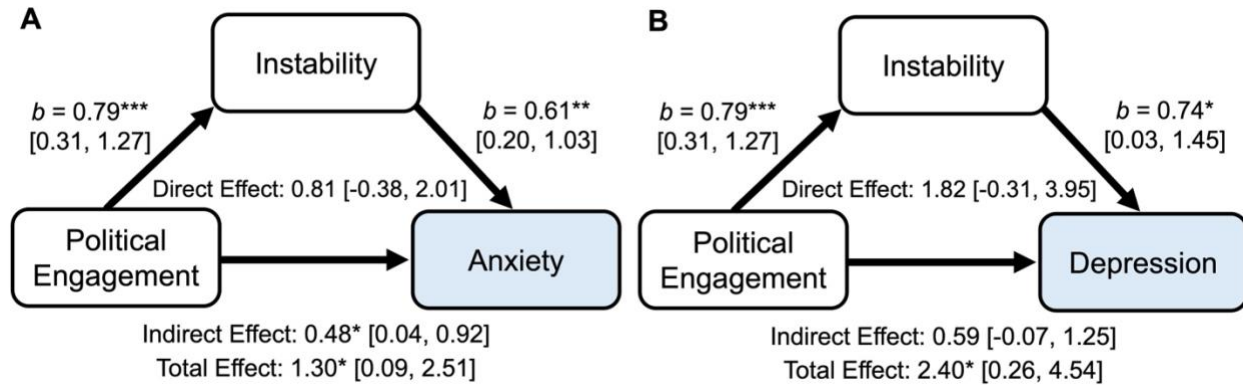
*Affective Instability, Evoked by Political Engagement, Reduces Well-Being*

Given the known link between affective instability and decreased well-being (Houben et al., 2015), the natural next question is to test whether affective instability serves as the mechanistic pathway underlying the relationship between political engagement and diminished well-being. We used well-validated measures of anxiety (GAD-7; Spitzer et al., 2006) and depression (CES-D; Radloff, 1977), measured weekly, to index well-being. Having already documented that political engagement robustly predicts affective instability, we used multilevel mediation models to test the hypothesis that affective instability, evoked by political engagement, is the key driver of diminished well-being (Fig 5).

A multilevel mediation model using anxiety to index well-being revealed that participants report greater anxiety when politically engaged (total effect:  $p = .036$ ; Fig 5A). We also identified a significant indirect effect ( $p = .032$ ): political engagement was associated with greater affective instability, which, in turn, predicted greater anxiety. After accounting for affective instability, political engagement no longer predicted anxiety (direct effect:  $p = .182$ ), leaving affective instability as the sole significant predictor ( $p = .004$ ) and providing evidence of full mediation. In other words, affective instability appears to be a key mechanism by which anxiety increases during political engagement.

We next performed the same multilevel mediation analysis using depression as an index of well-being (Fig 5B). Mirroring what we observed for anxiety, participants reported more severe symptoms of depression when politically engaged (total effect:  $p = .028$ ). Furthermore, political engagement no longer predicted depression after accounting for affective instability (direct effect:  $p = .095$ ), which remained a significant predictor of depression ( $p = .040$ ). However, unlike with anxiety, the mediational pathway was only marginally significant (indirect effect:  $p = .083$ ).

Together, our findings suggest that people exhibit increased anxiety when engaging with politics because political engagement is affectively destabilizing. At the same time, our results hint at the possibility that the same affective mechanism explains why people exhibit increased depression during political engagement, though this link is less robust.



**Figure 5 / Study 1: Multilevel Mediation Analyses.** Results of multilevel mediation analyses assessing a mediational pathway in which political engagement increases anxiety (Panel A) and depression (Panel B) by increasing affective instability. The direct, indirect, and total effects from each model are shown above, as are effects depicting the relationship between political engagement and affective instability and affective instability and well-being. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

## Study 2

Research suggests that individuals on the ends of the political spectrum (strong partisans) engage more frequently with political content (Barberá & Rivero, 2015; Bor & Petersen, 2022) and harbor greater hostility towards their political opponents (Finkel et al., 2020; Iyengar et al., 2019)—often to the detriment of their own well-being (Nelson, 2022; Van Bavel et al., 2024). Yet, little is known about how the strength of political attitudes shapes everyday affective experiences. Having identified that political engagement destabilizes day-to-day affect, it stands to reason that individuals with stronger, more polarized political beliefs might have less stable emotional lives.

Data from our first study illustrate large individual differences in the degree to which they were politically engaged: 15% of participants who discussed the ongoing protests did so in four or

more diary entries, while 55% only mentioned the protests once in the entire eight-week period. However, because we did not measure political attitudes in Study 1, it remains unclear whether strong partisans experience larger affective swings in their day-to-day lives. In Study 2, we directly measured political attitudes in order to connect the strength of participants' political beliefs to their everyday affective experiences, thereby uncovering the affective profile of politically-polarized individuals across the political spectrum.

## **Method**

### ***Participants***

We recruited 370 individuals to complete a brief pre-screening questionnaire on Prolific. Due to our interest in characterizing the affective profile of political partisans, we only invited individuals to participate in Study 2 if they self-identified as a Democrat or Republican, *and* reported more positive feelings towards their own political party. From this initial set of 370 participants, we recruited 121 participants who met these criteria to complete Study 2. All participants endorsed English as their first language and possessed at least a 99% approval rating on Prolific. As in Study 1, we excluded participants ( $n = 13$ ) who completed only an initial questionnaire, leaving data from 108 participants ( $M_{age} = 41.84$ ,  $SD_{age} = 11.21$ ; 66 Female, 38 Male, 4 Other; 50 Democrats, 58 Republicans; 70 White, 11 Asian, 12 Black, 10 Hispanic/Latinx, 5 Mixed/Other).

### ***Design and Procedure***

Participants completed a pre-screening questionnaire, responding to items assessing their political affiliation and feelings towards different political groups. We administered the pre-screening questionnaire on May 10, 2024. Next, participants completed two additional questionnaires two days apart. These questionnaires were administered between May 11, 2024 and

May 19, 2024. Study 2 followed a similar procedure as Study 1. Participants began each questionnaire by writing about their past two days (*Diary Task*), summarized how they felt during this period using the affect grid (*Affect Judgments*), and completed items measuring their anxiety symptomology (*Psychological Well-Being*) and political attitudes (*Political Attitudes*).

### ***Materials and Measures***

**Diary Task.** The diary task presented to participants in Study 2 was the same as that administered to participants in Study 1. However, based on our interest in participants' political attitudes and the lack of a coinciding highly salient and politically-polarizing event, we did not analyze participants' diary entries in Study 2.

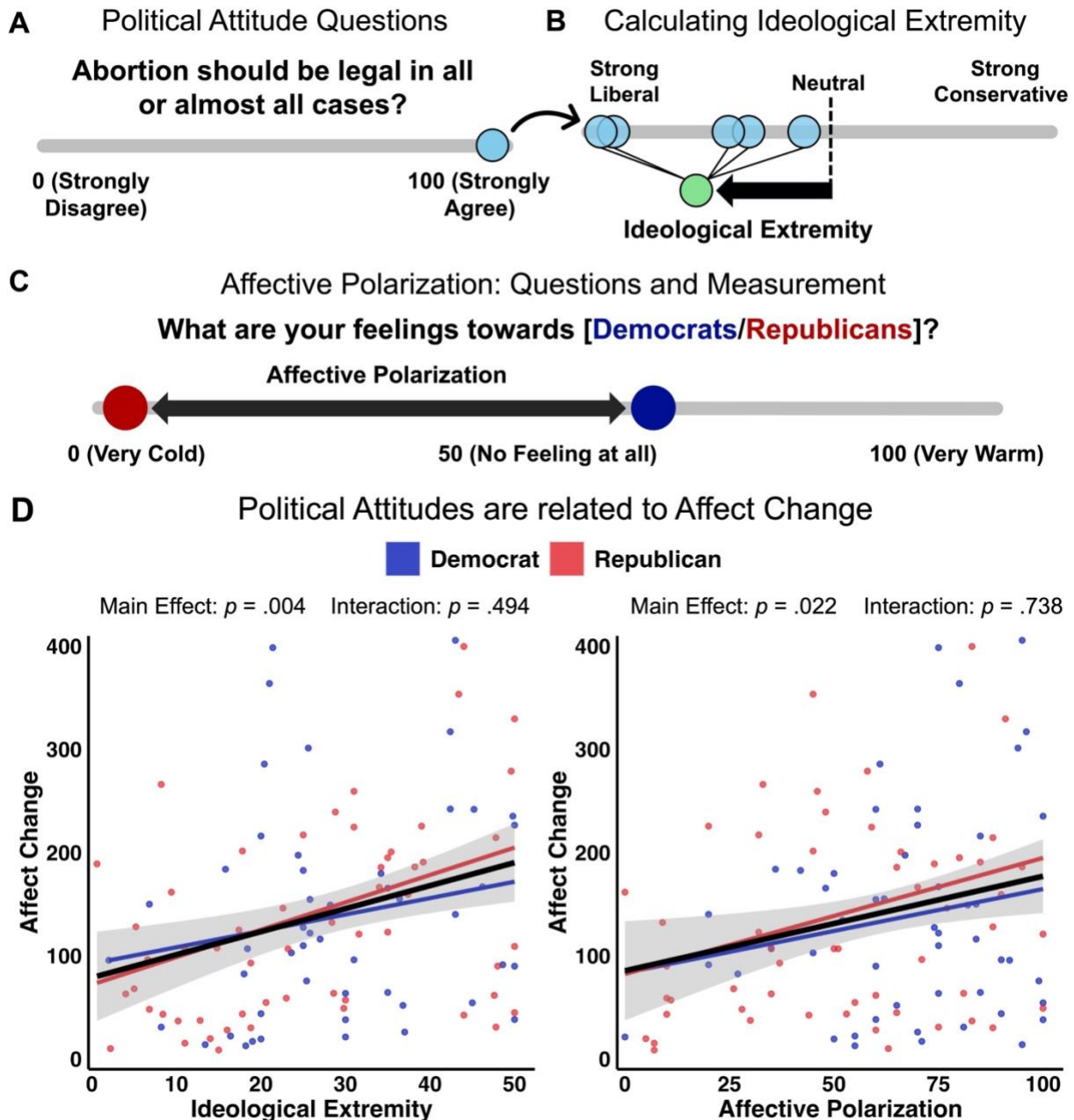
**Affect Judgments.** Affect judgments in Study 2 were elicited in the same manner as Study 1, with one exception: participants in Study 2 were not asked to select three events from their diary entry, but were instead asked to report how they generally felt over the past two days using the affect grid. Thus, participants in Study 2 provided a single affect judgment during each questionnaire that summarized their recent feelings.

**Psychological Well-Being.** Given the robust association between affective instability and anxiety (but not depression) in Study 1, we solely measured participants' anxiety symptomology in Study 2. Participants completed the GAD-7 (Spitzer et al., 2006) in both questionnaires. Since our primary focus was on the relationship between political attitudes and day-to-day affect, we report analyses exploring the association between political attitudes and anxiety symptomology in the supplement.

**Political Attitudes.** Participants responded to multiple questions probing their political attitudes, allowing us to measure ideological extremity and affective polarization (Fig 6A-C). During the first questionnaire, participants stated their level of agreement with five political

statements (see supplementary materials) by positioning a slider on a 101-point scale that ranged from “0” (Strongly Disagree) to “100” (Strongly Agree). In doing so, they provided their attitudes regarding five politically-polarizing issues (abortion, immigration, climate change, gun control, and racism). We measured participants ideological extremity using their responses to these items. Responses were recoded onto a “0” (Strong Liberal Attitude) to “100” (Strong Conservative Attitude) scale depending on whether agreement with a statement was associated with a liberal or conservative ideology. Following this recoding, we calculated the extent to which participants’ mean rating diverged from a neutral (“50”) midpoint. Thus, ideologically-extreme participants consistently expressed strong liberal or strong conservative attitudes, while participants with lower levels of ideological extremity expressed more moderate (or ideologically-inconsistent) attitudes. Participants also stated their feelings towards the Democratic and Republican parties using a 101-point scale that ranged from “0” (Very cold or unfavorable) to “100” (Very warm or favorable). These questions were administered in a pre-screening questionnaire one day before the first questionnaire in Study 2. Following past work (Iyengar et al., 2019), we measured participants’ level of affective polarization by calculating the absolute difference between their feelings towards the Democratic and Republican parties. Thus, participants showing high levels of affective polarization endorsed feeling considerably more warmth towards their political ingroup compared to the outgroup, while those showing low levels of affective polarization felt similarly towards both political parties.





**Figure 6 | Study 2: Politically Polarized Partisans Exhibit Larger Affective Shifts.** Responses from a Democrat participant are depicted in Panels A-C for illustration. **A)** Participants were asked to state their level of agreement with five political statements, each of which reflected their attitudes regarding five politically-polarizing issues. Responses were made by positioning a slider on a 101-point scale that ranged from 0 = Strongly Disagree to 100 = Strongly Agree. **B)** Responses to each question were recoded onto a 0 = Strong Liberal to 100 = Strong Conservative scale, based on whether agreement with a statement was associated with a liberal or conservative ideology. Following this recoding, we measured each participant's ideological extremity by calculating how strongly their mean rating diverged from a neutral midpoint. Thus, larger values reflect stronger ideologically-consistent attitudes regarding five politically-salient topics. **C)** Participants stated their feelings towards Democrats and Republicans using a 101-point scale that ranged from 0 = Very cold or unfavorable,

to 100 = Very warm or favorable. Affective polarization was measured by calculating the difference between ratings of Democrats and Republicans, with larger values reflecting more polarized feelings. **D)** Both ideological extremity (left) and affective polarization (right) were positively associated with affect change. Black lines represent the predicted values of affect change at each level of ideological extremity and affective polarization. Shaded regions reflect the 95% confidence intervals around these estimates. Colored lines display these associations for Democrats (Blue) and Republicans (Red) independently. Dots reflect data from individual participants.

## Results

We first checked whether our sample was, in fact, skewed towards the extreme ends of the political spectrum. While there was variability, the sample contained enough politically-polarized participants to test our hypothesis: 33% of our sample had an ideological extremity score of at least 35 (out of 50), endorsing strong political attitudes that consistently aligned with either a liberal or conservative ideology. Similarly, 36% of our sample rated their political in-party at least 75 points higher than their political out-party on a 101-point feeling thermometer. The average ideological extremity of the sample was 27.46 ( $SD = 13.79$ ), while the average affective polarization score was 59.56 ( $SD = 27.36$ ).

We next tested whether ideological extremity is associated with day-to-day changes in affect. Confirming our predictions, greater ideological extremity corresponds with larger day-to-day changes in affect (Fig 6D), even when controlling for affect at T<sub>1</sub> (Table 3). In contrast, ideological extremity was not associated with mood (i.e., mean valence or arousal). These results mirror those from Study 1, suggesting that strong partisanship, like political engagement, is not associated with persistent negative moods but rather large affective swings characteristic of an emotionally-unstable life. We observed the same pattern of results when using affective polarization as our measure of partisan strength: greater affective polarization predicted larger day-to-day affective shifts, but again was not related to mood. These effects were observed on both sides of the political aisle, as political affiliation (Democrat or Republican) did not predict affect change ( $b = 0.02$ , 95%  $CI [-0.40, 0.43]$ ,  $t(104) = 0.08$ ,  $p = .939$ ), or interact with measures of

partisan strength to predict changes in affect (both  $P$ s > .1). Taken together, our findings suggest that amid deepening political divides, the emotional costs of politics are experienced not as persistent negative moods, but as larger day-to-day fluctuations in affect.

**Table 3 | Political Attitudes as a Predictor of Day-to-Day Affect**

Variable	Estimate	95% CI	$t$	df	$p$	$R^2$
Ideological Extremity (IV)						
Affect Change	2.16	[0.71, 3.61]	2.95	104	.004	.080
Mean Valence	-0.29	[-1.82, 1.23]	-0.38	106	.706	.001
Mean Arousal	-0.01	[-1.36, 1.34]	-0.02	106	.988	<.001
Affective Polarization (IV)						
Affect Change	0.87	[0.13, 1.62]	2.32	104	.022	.050
Mean Valence	-0.35	[-1.12, 0.41]	-0.92	106	.360	.008
Mean Arousal	0.29	[-0.39, 0.96]	0.85	106	.400	.007

**Note.** Results of linear regressions predicting affect change, mean valence, or mean arousal using either ideological extremity or affective polarization (separate models). Regressions predicting affect change also included  $T_1$  valence and  $T_1$  arousal as predictors.  $R^2$  reflects the *semi-partial*  $R^2$  in the case of affect change on account of these models including multiple predictors and the *overall*  $R^2$  in the case of mean valence and arousal on account of these models including a single predictor.

### General Discussion

There is growing concern that deepening political divides harm individual and collective well-being (American Psychological Association, 2024; Van Bavel et al., 2024). Current frameworks posit that political engagement evokes negative emotions, which act as chronic stressors that harm well-being (Ford et al., 2023; Hoyt et al., 2018). Under this framework, an implicit assumption is that fluctuations in an individual's affective experiences reflect short-term reactivity to political engagement, which cumulatively compound with repeated exposure. Here, we offer an alternative account for understanding the impact of political engagement on well-being: political engagement gives rise to rapid and significant changes in affect, triggering longer-

term affective instability that results in worsened well-being. Indeed, past work has shown that the temporal dynamics of affect are a key component of mental and emotional health (Houben et al., 2015; Kuppens et al., 2010; Kuppens et al., 2007; van de Leemput et al., 2014). Taking inspiration from this past work, we characterize how political engagement impacts longer-term affective dynamics, and in turn, how these dynamics mechanistically shape well-being.

Across two longitudinal studies, we characterize the affective consequences of political engagement. In contrast to the prevailing narrative (Ford et al., 2023; Hoyt et al., 2018), periods of political engagement are *not* marked by decreases in mood, but rather by frequent and large affective fluctuations that are characteristic of high affective instability: 1) As the salience of politically-polarizing events increases, so too does affective instability; 2) When an individual engages with politically-polarizing events, their affect becomes more unstable, which predicts greater anxiety; 3) The stronger an individual's partisan beliefs, the more their day-to-day affect fluctuates. These large fluctuations in affect have real costs. Corroborating existing work on the maladaptive consequences of affective instability (D'Aurizio et al., 2023; Houben et al., 2015; Yen et al., 2004), we find evidence that affective instability is the pathway by which political engagement increases anxiety. Therefore, as cross-party animosity rises, and divisive politics become more prevalent (Finkel et al., 2020; Gentzkow et al., 2019), our work highlights the emotional costs of politics on individuals' mental and emotional health.

Political engagement is an essential part of any healthy democracy. Thus, understanding the psychological processes by which political engagement lowers well-being is critical for mitigating its adverse effects and cultivating a healthier civic climate. Our findings provide key insights towards these goals. First, the impact of politics is not limited to discrete emotional reactions to political events, like anger or despondence. Instead, political engagement destabilizes

affect, which in turn drives increased anxiety. This suggests that interventions targeting affective instability may be particularly effective at reducing the psychological costs of political involvement. Second, we identify the affective profile of the individuals who are most vulnerable to the emotional costs of politics: people with strong partisan beliefs experience larger day-to-day changes in affect compared to their more moderate peers. This may prove valuable for identifying individuals who are most likely to benefit from interventions—those on the extreme ends of the political spectrum.

As political polarization intensifies, so do concerns about its psychological toll (American Psychological Association, 2024; Van Bavel et al., 2024). By capturing how affective dynamics are shaped by engagement with salient and polarizing political events, we demonstrate how affective instability plays a pivotal role in undermining well-being by increasing anxiety. Our results therefore provide insight into the emotional costs of political engagement, and offer a mechanistic account of how affective dynamics underlie the relationship between politics and emotional health.

### **Statement of Limitations**

Our findings were derived from a sample of American residents recruited through the online research platform Prolific. While generally more representative than a sample of college undergraduates, this recruitment method potentially limits the generalizability of our results, particularly to populations from non-Western, educated, industrialized, rich, and democratic societies. Second, while multilevel mediation analyses suggest that political engagement heightens anxiety by increasing affective instability, the longitudinal experience sampling data used in our research is correlational. Such an approach allows us to capture participants' unprompted engagement with a real-world political event over time, but does not allow a direct causal test of

how political engagement influences day-to-day affect or psychological well-being. Finally, although we observe associations between distinct measures of political polarization and day-to-day affective shifts (Study 2), measures of event salience and political engagement in Study 1 focused on a single political event—the murder of George Floyd and subsequent civil unrest. Although we expect our findings to generalize to other politically-polarizing events, including those outside of the United States, the generalizability of our findings to different political events (e.g., elections) and political systems (e.g., multi-party systems) remains an open question.

**Table 4 | Assessment of Limitations**

<b>Dimension</b>	<b>Assessment</b>
<i>Internal validity</i>	
Is the phenomenon diagnosed with experimental methods?	No
Is the phenomenon diagnosed with longitudinal methods?	Yes
What possible artifacts were ruled out?	We cast doubt on the possibility that the relation between event salience and day-to-day affect was due to the selection of event-related terms, showing consistent findings across five popular search terms. We also cast doubt on the possibility that the relation between political engagement and affective instability was an artifact of unassessed events coinciding with political engagement by linking short-term changes in affect to the day-to-day salience of the George Floyd protests. Finally, we ruled out the possibility that the relation between political attitudes and affect change was an artifact of participants' partisan leanings.
<i>Statistical validity</i>	
Was the reliability of the dependent measure established in this publication or elsewhere in the literature?	We used well-validated measures of affect, affective dynamics, and well-being. Additionally, we ensured strong interrater reliability in assessments of political engagement and good reliability among political attitude items.
Was the statistical power at least 80%?	We did not conduct a priori power analyses. However, we conducted simulated post-hoc power analyses assessing statistical power provided by our mixed-effects model examining the association between political engagement and affective instability. These analyses suggest that, given the observed data, sample size, and model, we had 83% power to detect a significant effect ( $\alpha = .05$ , two-tailed). Additionally, sensitivity power analyses indicated that two-tailed paired-samples <i>t</i> -tests comparing affective dynamics across periods of high compared to low event salience provided 80% power to detect a small-to-medium effect ( $d = 0.40$ ).
Were the distributional properties of the variables examined and did the variables have sufficient variability to verify effects	Yes
<i>Generalizability to different methods</i>	
Were different experimental manipulations used?	No experimental manipulations were used. However, we used different measures to assess affective dynamics (instability, variability, and inertia), well-being (anxiety and depression) and political polarization (ideological extremity and affective polarization). Moreover, we measured both population-level interest and personal engagement when examining the relation between political events, affect, and well-being.

**Table 4 | Assessment of Limitations (Continued)**

<b>Dimension</b>	<b>Assessment</b>
<i>Generalizability to field settings</i>	
Are the methods artificial?	Our experience sampling design was useful for garnering naturalistic assessments of participants' day-to-day affect and engagement with real-world political events. However, asking participants to break from their normal routine in order to provide these assessments within an online survey is fairly artificial. Second, our measure of event salience reflected the frequency of Americans' Google searches and thus was not impacted by artificial aspects of study design.
<i>Generalizability to times and populations</i>	
Are the results generalizable to different years and historic periods?	This was not tested. While we expect our results to generalize, changing political landscapes may shape the relationship between political engagement, day-to-day affect, and psychological well-being.
Are the results generalizable across populations (e.g., different ages, cultures, or nationalities)?	This was not tested. While our samples were heterogenous with regards to age, gender, and household income, they were homogenous in other ways (e.g., nationality). While we expect our results to generalize to different populations, particularly those exhibiting deep political divides, our results may differ across cultures.
<i>Theoretical limitations</i>	
What are the main theoretical limitations?	We find evidence that political engagement is not marked by decreases in mood, but rather by frequent and significant affective shifts characteristic of affective instability. Furthermore, multilevel mediation analyses suggest that political engagement increased participants' anxiety by destabilizing their day-to-day affect. However, our data is correlational, preventing direct tests of the causal influence of political engagement on day-to-day affect and well-being. As such, it is possible that affective instability or diminished well-being prompted participants' to engage with ongoing political events. While the tight link between population-level interest in ongoing protests and participants' day-to-day affect supports the influence of politics on affect and well-being, the lack of direct causal evidence for this causal pathway reflects a limitation of the present work.



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