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From activism to the ballot box: mediating role of social change beliefs over time

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Introduction: In recent years, there has been a global escalation in social demonstrations and political crises, signaling widespread dissatisfaction with prevailing political systems. This discontent is mirrored in decreased electoral participation and highlights the urgent need for substantial reforms in political decision-making.

Methods: This study analyzes the longitudinal associations of participation in collective action with individual beliefs, emotions, voting behavior, and voting preferences in the context of Chile's constitutional plebiscite after the 2019 social unrest. Using a probability sample ($n = 4447$) we test two longitudinal mediation models using structural equation modeling. Specifically, we investigate the mediating roles of anger toward the political system and beliefs in social change between past participation in collective action and electoral participation.

Results: The findings reveal that past participation in collective action at Time 1 is significantly associated with electoral participation (both behavior and preference) at Time 3. This association is mediated exclusively by beliefs in social change at Time 3 but not by anger toward the system.

Discussion: We discuss how these findings highlight the role of collective action in shaping political engagement over time, advancing our understanding of the mechanisms linking protest participation to electoral behavior and informing strategies for democratic engagement.

KEYWORDS

collective action, voting behavior, voting preference, anger, social change beliefs, longitudinal analysis

Introduction

Social demonstrations, protests, and political representation crises have become increasingly frequent worldwide (Ortiz et al., 2022). Similarly, democracies face declining voter turnout in voluntary systems and rising invalid ballots in compulsory ones, reflecting widespread distrust in political institutions (Kouba and Lysek, 2019; Van Hiel et al., 2022). Protests provide a platform for citizens to voice their discontent, expressing demands, while expecting democratic resolutions from the political authorities (van Zomeren, 2020; Oser, 2022).

Research shows that protests influence electoral outcomes (Sáez-Vergara et al., 2022; Colombo et al., 2021). For instance, Wasow (2020) found that peaceful protests tend to favor the Democratic Party in the United States, while riots benefit the Republicans. Similarly, Gillion and Soule (2018) observed that protest ideologies influence partisan preferences, with liberal issues driving support for the Democrats and conservative issues driving support for the Republicans. In Europe, Bremer et al. (2020) established a connection between protest events and an increased likelihood of voting for non-incumbent candidates. Analyzing the 2019 protests in Chile and Bolivia, Castro and Retamal (2022) revealed that participation protests in deprived areas is associated with electoral setbacks for the incumbent parties in these neighborhood.

However, existing research presents three key limitations. First, most studies focus on WEIRD (Western, Educated, Industrialized, Rich, and Democratic) democracies, where protests are often short-lived and detached from electoral cycles. Second, most research examines activists, overlooking how protests shape electoral behavior in the general population. Third, previous studies employ cross-sectional designs. Therefore, not much is known about how protest participation and voting behavior are connected and the processes underlying this connection. This research addresses these gap by analyzing the longitudinal link between protest participation and voting in ongoing protests and upcoming elections in a non-WEIRD context, Chile.

In the present research, we focus on two possible explanations of how past participation influences voting behavior. On one hand, participation in protests might motivate beliefs that change is indeed possible. Thus, people who participated in protests evaluate social and political conditions more positively and this reflects in their voting behavior (Bou Zeineddine and Leach, 2021). Second, participation in protests can also increase the experience of anger, an approach-oriented emotion (Tausch et al., 2011) and this in turn could also influence voting behavior.

We examine whether collective action fosters social change beliefs and anger, which, in turn, influence voting likelihood (vs. abstention) and voting preferences in referendums (For vs. Against). This study addresses key gaps in the literature by analyzing the longitudinal dynamics of collective action, beliefs, emotions, and voting behavior during the 2019 Chilean social uprising. Beyond advancing globally inclusive political psychology, our findings contribute to public discourse on the role of protests in democratic governance, particularly amid social unrest in Chile and across Latin America.

Theoretical framework

Political behavior and voting preference

When analyzing electoral participation, it is essential to consider "voting behavior", which refers to the decision to vote or abstain. This aspect of voting yields valuable insights into turnout patterns (Blais and Daoust, 2020; Smets and Van Ham, 2013). In addition, it is also relevant to explore "voting preference", which concerns the reasons behind choosing a specific candidate or party or supporting a given social issue. These preferences reflect the choice of a specific option based on personal, ideological, or emotional factors (Van Hiel et al., 2022; Marcos-Marne, 2022; Pellegrini et al., 2022; Çakal et al., 2022) and are driven by psychological motivations that broaden our understanding of predicting electoral participation (Bornschier et al., 2021), particularly in the context of political referenda (Abrams et al., 2020). This analytical framework helps us understand how socio-psychological dynamics shape voting behaviors and preferences. To this end, existing research suggest that electoral behavior and preferences reflect emotional responses to social injustice and aspirations for social transformation (Grant et al., 2017; Abrams et al., 2020), amplified by participation in collective action (Becker et al., 2011; Becker and Tausch, 2015).

Individual consequences of participation in collective actions

Participation in collective action, defined as any effort to enhance a group's situation and power rather than favoring isolated individuals (Van Zomeren and Iyer, 2009), encompasses a spectrum of practices. These range from conventional methods, such as peaceful demonstrations, to more contentious tactics like confronting the security forces or damaging public property (Becker and Tausch, 2015; Tausch et al., 2011; van Zomeren, 2020).

While most research to date focuses on the antecedents of collective action and emerging line of studies show that participating in collective actions generates psychological and social changes in individuals, affecting their actions, emotions, and beliefs (Vestergren et al., 2018; Selvanathan and Jetten, 2020; Ulug and Acar, 2018; Carvacho et al., 2023) in the short, medium and long term (Vestergren et al., 2017). For instance, Pizarro et al. (2022) found that participation is associated with collective effervescence during demonstrations, characterized by intense emotional activation. Similarly, Becker and her colleagues show that individuals can experience both positive and negative emotions, including anger (Becker and Tausch, 2017), simultaneously as a result of participation (Becker et al., 2011). In a similar vein, research also shows that when participating in a protest individuals experience more anger when confronted with an adversarial outgroup, e.g., protesters from the opposing groups, police (Drury and Reicher, 2005, 2009) or government authorities (Becker and Tausch, 2015; Tausch et al., 2011).

Participation in collective action can also influence cognitive processes. After participating in collective action, individuals may show psychological changes associated with the belief that the world can change and that they can collectively bring about that change (Blackwood and Louis, 2012). Thus, experiences of participation in collective action can develop a sense of power to (re) shape the social world, specifically through intergroup dynamics in which members of subordinate groups challenge existing relations of domination (Drury and Reicher, 2009). In this way, participation in collective action can foster a sense of empowerment and collective agency (Ulug and Acar, 2018; Thomas et al., 2022).

Importantly, the psychological transformations triggered by collective action are not confined to the immediate context of mobilization. Instead, they often extend to broader political behaviors and attitudes. McAdam (1986) emphasized that experiences within social movements can redefine political identities, fostering a long-term perspective on the capacity for social change. These experiences not only affect perceptions of personal agency but also establish a connection between collective action and future political decisions, such as voting. This framework is particularly relevant to understanding how the 2019–2020 Chilean protests may have catalyzed a shift in beliefs about the possibility for structural reform, influencing electoral participation.

Anger and electoral behavior

Within a social-psychological framework, anger emerges as an intergroup emotion predictive of collective action participation

(Van Zomeren et al., 2008; Agostini and van Zomeren, 2021). Additionally, prior participation in collective actions can forecast future anger emotions toward outgroups (Becker and Tausch, 2015; Pizarro et al., 2022). For example, Becker and Tausch (2017) found that anger directed toward external groups, such as government authorities, significantly mediated the relationship between past and future participation in collective actions, indicating that such participation may heighten anger toward authorities, subsequently increasing the likelihood of future involvement. The intensified anger within collectives could significantly influence electoral participation, extending their influence beyond protests. This phenomenon is further elucidated by the escalation of conflicts and the pursuit of justice within collective actions (McLeod et al., 1999; Simon and Klandermans, 2001). Valentino et al. (2011), Van Zomeren (2016), and Van Zomeren et al. (2018) have noted that anger can catalyze political change and encourage participation in electoral processes. Additionally, anger has been linked to efforts to rectify normative transgressions (Fischer and Roseman, 2007).

Tausch et al. (2011) found that individuals angered by unfair treatment from government authorities are more inclined to participate and support actions within system boundaries, such as intending to vote in future elections. This research shows that individuals angered by government authorities still feel tied to the political system, likely motivating them to vote for changing established political authorities. Therefore, understanding how anger influences electoral participation is relevant for understanding the dynamic interplay between emotions generated in protest contexts and political decisions at the electoral level.

Providing further support for the link between anger and electoral behavior, Solak and her colleagues show that anger can also be directed toward the system itself, particularly toward aspects of the social structure (Solak et al., 2012). Consequently, anger motivate individuals to vote against the current government, politicians, and politics in general (Becker and Tausch, 2015; Garry, 2014; Van Zomeren et al., 2018; Valentino et al., 2009). Van Zomeren et al. (2018) suggest that voting, to some extent, reflects a form of collective action. Examining the extent to which anger toward the current government and politics different national contexts (the Netherlands, Israel, and Italy) van Zomeren and his associates found that anger toward politics, in general, was context-dependent, occurring in two out of the three case studies (the Netherlands and Israel). Anger directed at politics discouraged Dutch and Israeli participants from voting while motivating Italian participants to vote. This suggests that anger toward politics in general serves as an expression of political disaffection, deterring voting intentions in some contexts while fueling them in others. However, whether this role of anger as an antecedent of electoral behavior holds in other political contexts remains to be determined.

In the US, Valentino et al. (2011), analizing data from three elections, 1980, 2004, and 2008, have consistently found that anger (toward democratic and republican) positively and significantly influences voting. Valentino and his colleagues conclude that the motivational force of anger substantially boosts electoral participation. Similar findings regarding the predictive power of anger on electoral participation have been reported (Garry, 2014; Valentino et al., 2009; Vasilopoulos et al., 2019). The targets of anger may differentially affect voting propensity, which justifies empirical investigation.

These findings highlight the complexity of how emotions generated in the context of protests, such as anger, can significantly impact voting behavior and preference. Anger generated in the context of protests, for instance, can motivate people not only to vote but also to vote for which cause to achieve social changes. Despite the significance role they play in shaping voting behavior, however, longitudinal research on emotions in collective action and voting context is scarce. Accordingly, we propose that participation in collective actions intensifies anger toward the system, which in turn leads people to participate in electoral processes.

Social change beliefs and electoral behavior

Beliefs related to social change, which involve individual perceptions about the feasibility and necessity of modifying the existing social structure, are linked to the propensity to promote social transformation. This social change can be progressive in orientation, but it can also manifest itself as reactionary (Becker, 2020; González et al., 2022; Thomas et al., 2022). Drawing from social identity theory, Abrams and Grant (2012) argue that engagement in riskier political behaviors depends on developing a social change belief structure (Tajfel and Turner, 1979). Drawing from social identity theory, Ellemers (1993) also argued that collective action is more likely when individuals see the potential to address status disparities between groups. Consequently, social change beliefs are conceptualized as socio-structural variables within the literature (Wright, 2008).

Participating in collective action, protests or other forms of collective action, can profoundly reshape individual beliefs concerning the social structure and one's capacity to influence it (Vestergren et al., 2017). These experiences, characterized by social interactions, have the potential to instill a more radical or progressive political orientation (Thomas et al., 2014). In this regard, protests, particularly those addressing issues of social injustice (Ortiz et al., 2022), offer direct exposure to the pertinent issues (Freel and Bilali, 2022; Van Stekelenburg et al., 2016) and foster solidarity around common causes (Pizarro et al., 2022; Fillieule, 2012; Thomas et al., 2022). Collectively, these processes reinforce the belief that meaningful social change is indeed possible.

Furthermore, political opportunity structures play a pivotal role in shaping social mobilization, as they create windows of opportunity through which actors can perceive their capacity to influence the political system (Tarrow, 1994). In this context, the Chilean constitutional plebiscite served as a convergence point to transform beliefs about social change into concrete actions, such as voting.

Beyond mere attendance, involvement in protests entails sense-making and the restructuring of worldviews, amalgamating collective experiences with critical reflections (Freel and Bilali, 2022; Klandermans, 2014; Wasow, 2020). This process of educational and political awareness-raising (Crouzé et al., 2023; Klandermans et al., 2008; Van Dyke and Dixon, 2013; Thomas et al.,

2022) can then foster greater receptivity to social change and the cultivation of a change- oriented ideology, overcoming fatalism and resistance to change (Corcoran et al., 2015; Osborne et al., 2019).

Protest experiences, which deepen beliefs in social change, may also enhance the willingness to engage in electoral processes, as they broaden the perspective on activism (Simon and Klandermans, 2001; van Zomeren, 2020). In line with this, Abrams et al. (2020) showed that social change beliefs are associated with electoral participation. This suggests that a greater propensity to vote is linked to the perception that voting can effect meaningful change; this "ideology of social change" can transform dissatisfaction into tangible political action (Abrams et al., 2020, p. 440). This relationship is supported by additional research which shows that social change beliefs can motivate voting (Abrams and Grant, 2012; Grant et al., 2017).

When individuals believe their vote can change the social structure, their inclination to participate increases significantly. This perspective reframes the perception of voting from a mere civic duty to an active tool for social change. Consequently, voter turnout reflects a collective aspiration toward a society that reflects the ideals and aspirations of the populace. Understanding these beliefs is relevant for analyzing the motivations underlying people's mobilization during moments of political flux, where they may support specific electoral options viewed as pathways to the desired change (Abrams et al., 2020). This perspective underscores how electoral participation, influenced by social change beliefs, serves as both an individual expression of political agency and a broader manifestation of collective aspirations.

Building on this idea, Abrams et al. (2020) further propose that individuals are more likely to support political movements or parties in electoral processes if they believe social change is achievable. Conversely, if individuals perceive social change as unattainable, they may abstain from elections, with only those who believe their vote could make a difference or contribute to social and political change choosing to vote. Abrams and Grant (2012), utilizing two representative samples, found that social change beliefs directly influence voting intention (i.e., voting preference) in favor of Scottish Independence. Another study led again by Abrams et al. (2020) yielded comparable results regarding the impact of social change beliefs on voter turnout. These findings imply that beliefs concerning social change can act as an antecedent of voting (Abrams and Grant, 2012; Abrams et al., 2020). Accordingly, we also hypothesize that participating in collective actions can foster and reinforce beliefs in the potential to effect societal change and reshape the social structure, consequently motivating individuals to engage in electoral processes and vote for specific options.

The current study

The social protests in Chile in October 2019 marked a historical turning point (Somma et al., 2021). These large-scale protests highlighted the structural problems that have accumulated societal unrest over recent decades (Mayol and Cabrera, 2018). These nationwide protests prompted President Sebastián Piñera to deploy the Armed Forces, which, in turn, led to serious human rights violations against the demonstrators. In response

to the day of protest on October 25, 2019, the Chilean political elite proposed the "Agreement for Social Peace and the New Constitution". This initiative led to a plebiscite in 2020, in which 80% of voters supported replacing the Constitution through a diverse Constitutional Convention (Meléndez et al., 2021). This national referendum offered voters two options: approve or reject the writing of a new constitution. The "approve" option, which signified the adoption of a new political system with new rules and norms, gained broad support, reflecting a collective desire for reform. The present study is developed in the political context described above, specifically during the second term of President Sebastián Piñera.

In the current research, we investigate the longitudinal influence of participation in collective action on people's beliefs, emotions, voting behavior, and voting preference. Broadly, we argue that those who have participated in collective action may experience greater levels of anger and develop a deeper ideology of social change, which may increase their likelihood of participating in elections and supporting political options aligned with their aspirations for social and political change (Abrams et al., 2020). Overall, we seek to understand how collective actions, through emotions and the expectations of social change, can incentivize electoral participation (both voting behavior and voting preference).

Hypotheses

Using data from a longitudinal survey in three waves, we analyze the relationship between participation in collective action and electoral turnout and voting preferences, focusing on the influence of emotions of anger and social change beliefs. We propose four hypotheses (see Figure 1).

Hypothesis 1: We hypothesize that participation in collective action at Time 1 (T1) will indirectly motivate voting behavior at Time 3 (T3) via social change beliefs at Time 2 (T2).
Hypothesis 2: Participation in collective action at T1 will motivate voting behavior at T3 via anger at T2.
Hypothesis 3: Participation in collective action at T1 will indirectly influence voting preference at T3 via social change beliefs in at T2.
Hypothesis 4: Participation in collective action at T1 will indirectly influence voting preference at T3 via anger at T2.

Method

Participants and procedure

We recruited a nationally representative sample of 4,447 adults, aged 18–75 (M_{age} = 48.77, SD = 15.42) as part of the Longitudinal Social Study of Chile (ELSOC) managed by the Center for Conflict and Social Cohesion (COES). The Center for Conflict and Social Cohesion (COES) implemented a four-stage stratified probability sampling design to select a representative sample. Forty cities in different regions of Chile were randomly selected and, within these, 1,067 blocks were randomly selected. Households
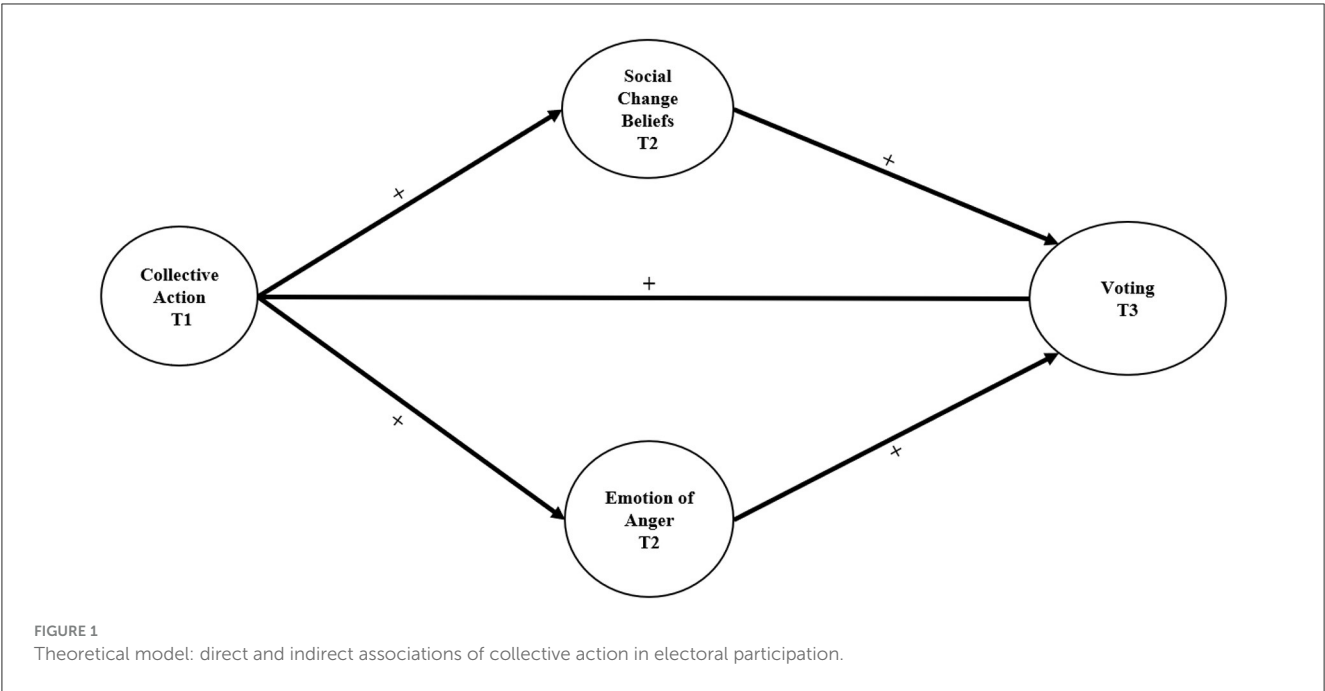
FIGURE 1
Theoretical model: direct and indirect associations of collective action in electoral participation.

TABLE 1 Selective attrition analysis for time 2.

Variable	b	95% CI lower	95% CI upper	P-value
Intercept	0.581	0.040	1.13	0.036
- PAC_{T1}	−0.221	−0.312	−0.129	0.000
- BSC_{T1}	−0.003	−0.111	0.103	0.957
- EA_{T1}	0.185	0.083	0.286	0.000

b represents unstandardized regression coefficients.

p, the p-value; CI, the 95% confidence interval; PAC_{T1}, participation in collective action at time 1; BSC_{T1}, beliefs in social change at time 1; EA_{T1}, the emotion of anger at time 1.

The 95% confidence intervals provide a range within which we can be reasonably sure that the true effect lies.

TABLE 2 Selective attrition analysis for time 3.

Variable	b	95% CI lower	95% CI upper	P-value
Intercept	−0.670	−1.24	−0.113	0.019
- PAC_{T1}	−0.213	−0.318	0.111	0.000
- BSC_{T1}	−0.034	−0.141	0.073	0.530
- EA_{T1}	−0.017	−0.086	0.123	0.743

b represents unstandardized regression coefficients.

p, the p-value; CI, the 95% confidence interval; PAC_{T1}, participation in collective action at time 1; BSC_{T1}, beliefs in social change at time 1; EA_{T1}, the emotion of anger at time 1.

The 95% confidence intervals provide a range within which we can be reasonably sure that the true effect lies.

were then randomly selected within these blocks and, finally, one resident over 18 years of age was selected in each household. Participation was voluntary, with participants providing written informed consent.

Since 2016, participants have completed household surveys on a yearly basis and receive a monetary incentive for their participation. In Wave 1 (2018), there were 3,417 participants; in Wave 2 (2019), 2,740 participants; and in Wave 3 (Data collection was postponed in 2020. Hence 2021), 2,730 individuals. To assess potential bias due to attrition, analyses were conducted to evaluate the presence of selective attrition (see Table 1 for selective attrition analysis at T2 and Table 2 for selective attrition analysis at T3).

The survey was administered implemented annually through face-to-face interviews using the Computer-Assisted Personal Interviewing (CAPI) method. This technique involves direct interaction between the interviewer and respondent, with both engaging in the interview process via a computer or mobile device. Specialized CAPI software guides the interview, ensuring consistency and facilitating the collection and recording of participants' responses in a structured manner.

Measures

Participation in collective action

We used three items to measure how often individuals had engaged in various forms of activism over the past 12 months (Chayinska et al., 2021):

"Using social media to express public opinions", "Attending peaceful marches or demonstrations", and "Signing letters or petitions in support of a cause". Responses were collected on a five-point Likert scale, which ranged from 1 ("Never") to 5 ("Very often"). A latent variable representing participation in collective action was constructed from these items. This variable was measured at T1, and it constitutes the main predictor factor in the hypothesized model (see Figure 1).

Emotion of anger toward components of social structure

We assessed anger by two items focusing on aspects of the social structure that generate anger (adapted from Tausch et al., 2011):

"Current levels of inequality in Chile" and "The cost of living in Chile" on a 5-point intensity scale, ranging from 1 ("Nothing") to 5 ("A lot"). This variable was measure at T1 and T2.

Social change beliefs

This variable was assessed by a single item participants were asked to report to what extend they agree or disagree with the following statement "Social change is possible" (Jiménez-Moya et al., 2019; 1, "Strongly disagree"; 5, "Strongly agree"). This variable was measure at T1 and T2.

Voting behavior

We assessed voting behavior by asking respondents whether they had voted in the 2020 national referendum election. The response options were "Yes, I voted", "No, I did not vote", and "I was not old enough to vote". Responses were coded as binary variables (Van de Vyver et al., 2018): voted vs. did not vote. The response *I needed to be older to vote* was treated as missing data in the analysis. Among the participants, 294 (17%) did not vote, while 1,454 (83%) did.

Voting preference

Participants who confirmed their participation in the plebiscite were asked to specify their choice. The response options were: 1 = Approve, 2 = Reject, 3 = Null, and 4 = Blank. For analytical purposes, values were recorded to create a binary indicator: 2 for "Approve" (the reference category) and 1 for "Reject". Responses categorized as "Null" (0.6%) and "Blank" (0.4%) were treated as missing data.

Political orientation

Participants' political orientation was measured on a scale from 1 to 11, where 1 signifies a left-wing orientation and 11 signifies a right-wing orientation. According to Meléndez et al. (2021), political orientation is associated with voting preferences.

Educational level

The educational level was categorized into 10 distinct levels, starting from "No studies" and extending to "Postgraduate studies", enabling a comprehensive assessment of participants' educational backgrounds. This variable is treated as continuous in the analysis (González et al., 2022).

Sex

Gender was recorded in two categories: "Male" (1) and "Female" (2), with "Female" designated as the reference group (Malmberg and Christensen, 2021).

Age

The average age of participants was 48.77, with ages ranging from 19 to 92. The age distribution was segmented into four groups:

18–29 years ($n = 398$), 30–49 years ($n = 1,266$), 50–64 years ($n = 1,097$), and 65 years and older ($n = 656$). Age is a relevant variable in the study of political participation (Serra and Smets, 2022).

Variable selection and statistical control

All available items measuring participation in collective action, beliefs about social change, and the emotion of anger were included in the analysis. No items were excluded based on their statistical association with the dependent variables or their psychometric performance. These decisions were theory-driven and consistent with prior studies in social and political psychology. We also confirm that no alternative items were available in the dataset to measure these constructs beyond those already included.

To account for potential confounding variables, we statistically controlled for political orientation, educational level, gender, and age. Including these control variables helped to adjust the models and improve the accuracy of the estimated associations among the key variables. To assess the robustness of the findings, we also estimated models without control variables. The main effects of anger and social change beliefs remained statistically significant and consistent in direction (see Tables 3, 4). No alternative models with different sets of control variables were estimated that produced contradictory results.

Finally, in all estimated models testing the main hypotheses, we also controlled baseline levels of anger and beliefs about social change measured at Time 1 (T1).

Results

Analytical strategy

We employed a longitudinal SEM (Structural Equation Modeling) to capture how attitudes and behaviors evolve over time.

TABLE 3 Total, specific indirect, and direct associations from participación in collective action T1 to voting behavior T3 (model without control variables).

Estimated route	b	95% CI lower	95% CI upper	p
Total	0.509	0.390	0.628	0.000
Total indirect	0.022	−0.006	0.051	0.045
Specific indirect 1				
- $PAC_{T1} \Rightarrow BSC_{T2} \Rightarrow VB20_{T3}$	0.017	−0.004	0.038	0.033
Specific indirect 2				
- $PAC_{T1} \Rightarrow EA_{T2} \Rightarrow VB20_{T3}$	0.005	−0.017	0.028	0.537
Direct				
- $PAC_{T1} \Rightarrow VB20_{T3}$	0.486	0.358	0.614	0.000

b represents unstandardized regression coefficients.
p, the p-value; CI, the 95% confidence interval; $VB20_{T3}$, denotes voting behavior at time 3; PAC_{T1}, participation in collective action at time 1; BSC_{T2}, beliefs in social change at time 2; EA_{T2}, the emotion of anger at time 2.
The 95% confidence intervals provide a range within which we can be reasonably sure that the true effect lies.

TABLE 4 Total, specific indirect, and direct effects from participación in collective action T1 to voting preference T3 (model without control variables).

Estimated route	b	95% CI lower	95% CI upper	P-value
Total	0.358	0.210	0.506	0.000
Total indirect	0.120	0.034	0.206	0.000
Specific indirect 1				
- $PAC_{T1} \rightarrow BSC_{T2} \rightarrow VP20_{T3}$	0.053	0.020	0.086	0.000
Specific indirect 2				
- $PAC_{T1} \rightarrow EA_{T2} \rightarrow VP20_{T3}$	0.067	−0.011	0.145	0.027
Direct				
- $PAC_{T1} \rightarrow VP20_{T3}$	0.238	0.066	0.409	0.000

b represents unstandardized regression coefficients.

p, the p-value; CI, the 95% confidence interval; VP20T3, voting preference at time 3; PAC_{T1}, participation in collective action at time 1; BSC_{T2}, beliefs in social change at time 2; EA_{T2}, the emotion of anger at time 2.

The 95% confidence intervals provide a range within which we can be reasonably sure that the true effect lies.

We used MPlus version 8.8 (Muthén et al., 2017) with the WLSMV estimator. The WLMSW estimator is recommended for binary dependent variables and non-normal distributions (Brown, 2023; DiStefano and Morgan, 2014; Kline, 2023). We evaluated the model fit via Chi-square, CFI, TLI, RMSEA, and SRMR indicators, with specific cut-off points for large samples (Hu and Bentler, 1999). Cut off values for good model fit for these fit indices are CFI $\geq$ 0.95, TLI $\geq$ 0.95, RMSEA $\leq$ 0.06, and SRMR $\leq$ 0.08 (Kline, 2023).

Preliminary analyses

We examined the means and standard deviations of the observed variables and estimated a measurement model for the latent variables, participation in collective action at T1 and anger emotion at T1 and T2 (see Table 5). This model fits satisfactorily, $\chi^2_{(29)} = 109.518$, $p < 0.001$, RMSEA = 0.029 [95% CI: (0.027, 0.040)], CFI = 0.980, TLI = 0.969, and SRMR = 0.025. We then estimated a correlation matrix for all variables in the model (see Table 6). All correlations between the variables: voting behavior in the 2020 referendum at T3, voting preference in the 2020 election at T3, participation in collective action at T1, anger emotion at T1, anger emotion at T2, social change beliefs at T1 and social change beliefs at T2, were significant ($p < 0.001$).

Voting behavior

We tested two hypotheses about voting behavior and its longitudinal association with collective action participation via social change beliefs and anger. The first hypothesis (H1) predicts that participation in collective action at T1 would influence voting behavior at T3 via social change beliefs at T2. The second hypothesis (H2) predicts that participation in collective action at T1 would be related to voting behavior at T3 via anger at T2. In this and the next model, unstandardized regression coefficients are reported.

TABLE 5 Factor loadings, means, and standard deviations of items in a three-factor confirmatory factor analysis.

	X (SD)	Collective action T1	Emotion of anger T1	Emotion of anger T2
1. Collective action 1_{T1}	1.89 (0.68)	0.674***		
2. Collective action 2_{T1}	1.53 (1.03)	0.527***		
3. Collective action 3_{T1}	1.40 (0.68)	0.589***		
5. Emotion of anger 1_{T1}	4.25 (0.82)		0.798***	
6. Emotion of anger 2_{T1}	4.37 (0.63)		0.783***	
7. Emotion of anger 1_{T2}	3.94 (1.35)			0.647***
8. Emotion of anger 2_{T2}	4.16 (1.03)			0.746***
9. Social change beliefs$_{T1}$	4.14 (0.53)			
10. Social change beliefs$_{T2}$	3.99 (0.54)			

X denotes mean and SD denotes standard deviation.

Significance levels are indicated as *** $p < 0.001$.

Our model had an excellent fit to the data as evidenced by $\chi^2_{(43)} = 123.246$, $p = 0.000$, RMSEA = 0.028 [95% CI: (0.022, 0.033)], CFI = 0.977, TLI = 0.951, and SRMR = 0.021. We report the associations between the model variables and the control variables can be found in the Table 6. Accordingly, the results supported H1 only. Participation in collective action at T1 was positively associated with social change beliefs at T2 ($b = 0.170$, $p < 0.001$) which in turn was positively associated with voting behavior at T3 ($b = 0.103$, $p < 0.01$; see Figure 2). We found no significant association between past participation in T1 and anger at T2 ($b = 0.110$, $p = 0.112$) and neither between anger at T2 and voting behavior at T3 ($b = 0.021$, $p = 0.756$). As for the indirect associations, the results revealed that collective action participation at T1 was indirectly associated with voting behavior at T3 via social change beliefs at T2 ($b = 0.018$, $p < 0.05$, 95% CI: (−0.001, 0.036)] only. Therefore, no evidence was found to support the relationship proposed in Hypothesis 2 (see Table 7).

In sum, we found a strong link between participation in collective actions and the social change beliefs, which in turn, greatly increases the likelihood of engaging in electoral processes. These findings highlight the central role of psychological motivations in predicting electoral behavior. The results regarding voting preferences are shown below.
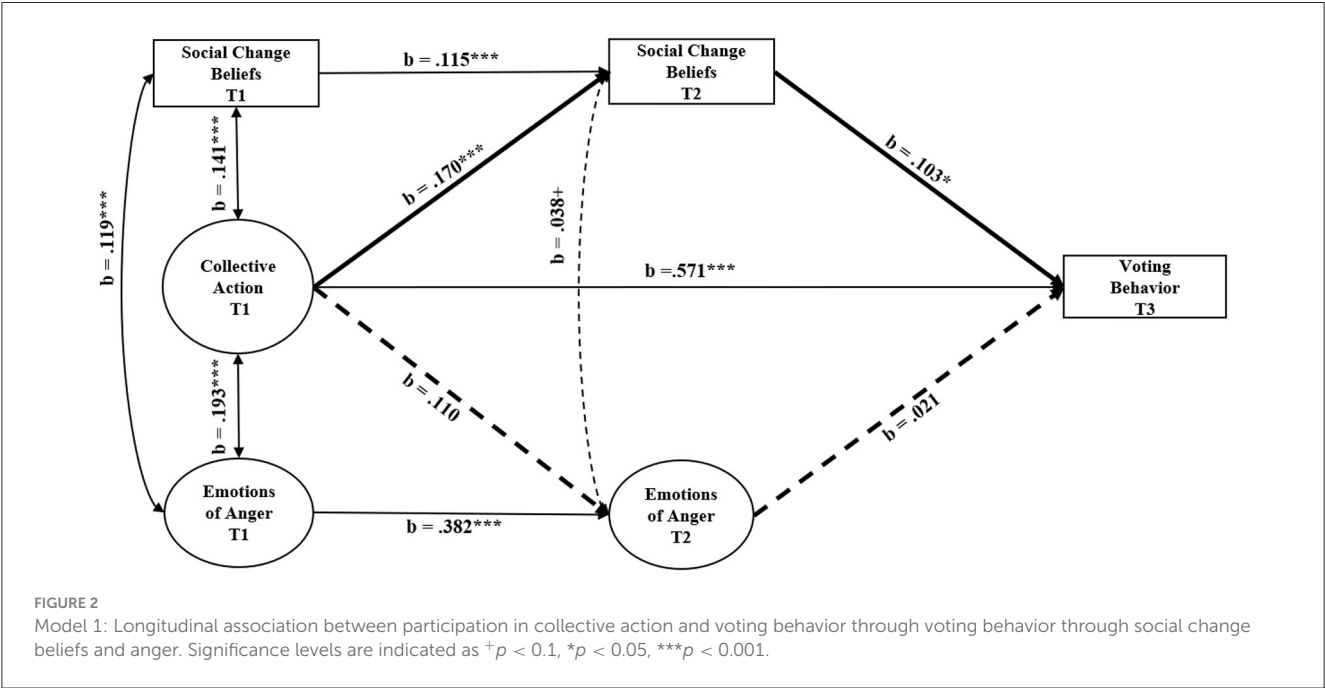
Voting preference

The third hypothesis (H3) postulated that participation in collective action at T1 would be associated with voting

TABLE 6 Correlation matrix for model variables including the dependent variable voting behavior.

	1	2	3	4	5	6	7	8	9	10
1. Voting behavior$_{T3}$	-	0.012	0.466***	0.131***	0.181***	0.083***	0.186***	0.018	0.220***	−0.150***
2. Voting preference $_{T3}$		-	0.334***	0.336***	0.401***	0.195***	0.299***	−0.030	0.006	−0.543***
3. Collective action$_{T1}$				0.293**	0.267***	226***	257***	0.002	0.477***	0.300***
4. Emotion of anger$_{T1}$			-		0.267***	0.214***	0.125***	−0.078*	0.043*	−0.255***
5. Emotion of anger$_{T2}$				-		0.441***	0.152***	0.151***	−0.056	0.109***	−308***
6. Social change beliefs$_{T1}$					-		0.166***	−0.077***	0.056***	−0.098***
7. Social change beliefs$_{T2}$						-		0.046**	0.122***	−0.119***
8. Sex							-		0.075***	−0.031**
9. Age								-	−0.369***	0.097***
10. Educational level									-	−0.041**
11. Political orientation										-

Significance levels are indicated as *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

FIGURE 2
Model 1: Longitudinal association between participation in collective action and voting behavior through voting behavior through social change beliefs and anger. Significance levels are indicated as $^+p < 0.1$, *$p < 0.05$, ***$p < 0.001$.

preference at T3 via social change beliefs and anger at T2.

This model also showed a satisfactory fit, as indicated by $\chi^2_{(43)}$ = 174.026, $p = 0.000$, $RMSEA = 0.035$ [95% CI: (0.030, 0.041)], $CFI = 0.964$, $TLI = 0.923$, and $SRMR = 0.032$. The associations between the model variables and the control variables can be found in Table 6. Concerning the direct associations (see Figure 3), participation in collective action at T1 was positively associated with social change beliefs at T2 ($b = 0.177$, $p < 0.001$), mirroring the pattern of results concerning voting behavior. Additionally, the data revealed again that participation in collective action at T1 was not significantly associated with the emotion of anger at T2 ($b = 0.087$, $p = 0.236$). However, both social change beliefs at T2 ($b = 0.240$, $p < 0.001$) and emotion of anger at T2 ($b = 0.355$, $p < 0.001$) were significantly and positively associated with voting preferences

at T3 (see Figure 3). This pattern of associations contrasts with the previous model, in which only the influence of social change beliefs was statistically significant.

Specific indirect effect (see Table 8) conclusively supported Hypothesis 3, indicating that beliefs in social change at T2 significantly mediated the relationship between collective action at T1 and voting preferences at T3 [$b = 0.042$, $p < 0.001$, 95% CI (0.012, 0.073)]. However, Hypothesis 4 (see Table 8) was not supported as we did not find a significant influence of participation in collective action at T1 and voting preferences at T3 via anger at T2.

In both models, social change beliefs were significantly associated with voting behavior and voting preferences, making them a relevant predictor of electoral participation (Abrams et al., 2020). Furthermore, in both models, social change beliefs

at T2 significantly mediated the relationship between collective action participation at T1, electoral participation at T3 and voting preferences, highlighting their relevant role as catalysts in transforming collective action into electoral behavior. Anger on the other hand, only resulted to be a significant predictor of voting preferences (see Figure 3), suggesting that emotion of anger may be an essential driver of Voting Preference in contexts of substantial political change.

These findings highlight the role of social change beliefs as a consistent bridge between participation in collective action and electoral participation, encompassing voting behavior and preferences. In contrast, the influence of the emotion of anger varied across different electoral measures; while anger did not

significantly mediate when voting behavior was the dependent variable, its direct association turned out to be significant when the dependent variable was Voting Preference, indicating that the emotion of anger predicts specific preferences, rather than predicting the act of voting or abstaining.

Discussion

In the present research, we examined the longitudinal relationship between participation in collective action and electoral participation, including voting behavior and preferences. Specifically, we examined how beliefs about social change and anger

TABLE 7 Total, specific indirect, and direct associations from participación in collective action T1 to voting behavior T3.
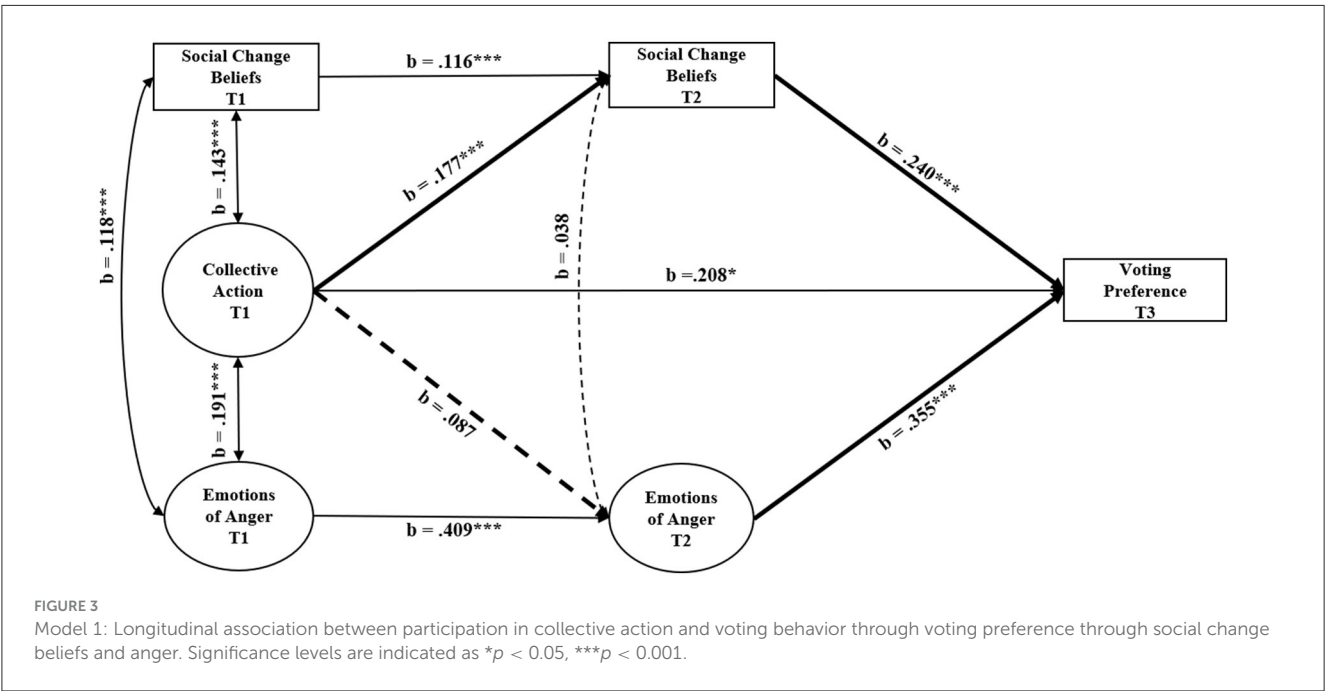
Estimated route	b	95% CI lower	95% CI upper	p
Total	0.591	0.419	0.763	0.000
Total indirect	0.020	−0.005	0.045	0.041
Specific indirect 1				
- $PAC_{T1} \Rightarrow BSC_{T2} \Rightarrow VB20_{T3}$	0.018	−0.001	0.036	0.014
Specific indirect 2				
- $PAC_{T1} \Rightarrow EA_{T2} \Rightarrow VB20_{T3}$	0.002	−0.016	0.021	0.752
Direct				
- $PAC_{T1} \Rightarrow VB20_{T3}$	0.571	0.393	0.749	0.000

b represents unstandardized regression coefficients.

p, the p-value; CI, the 95% confidence interval; $VB20_{T3}$, voting behavior at time 3; PAC_{T1}, participation in collective action at time 1; BSC_{T2}, beliefs in social change at time 2; EA_{T2}, the emotion of anger at time 2.

The 95% confidence intervals provide a range within which we can be reasonably sure that the true effect lies.

TABLE 8 Total, specific indirect, and direct effects from participación in collective action T1 to voting preference T3.

Estimated route	b	95% CI lower	95% CI upper	P-value
Total	0.282	0.071	0.492	0.001
Total indirect	0.073	−0.003	0.150	0.013
Specific indirect 1				
- $PAC_{T1} \Rightarrow BSC_{T2} \Rightarrow VP20_{T3}$	0.042	0.012	0.073	0.000
Specific indirect 2				
- $PAC_{T1} \Rightarrow EA_{T2} \Rightarrow VP20_{T3}$	0.031	−0.037	0.099	0.244
Direct				
- $PAC_{T1} \Rightarrow VP20_{T3}$	0.208	−0.013	0.430	0.015

b represents unstandardized regression coefficients.

p, the p-value; CI, the 95% confidence interval; $VP20T3$, voting preference at time 3; PAC_{T1}, participation in collective action at time 1; BSC_{T2}, beliefs in social change at time 2; EA_{T2}, the emotion of anger at time 2.

The 95% confidence intervals provide a range within which we can be reasonably sure that the true effect lies.

FIGURE 3
Model 1: Longitudinal association between participation in collective action and voting behavior through voting preference through social change beliefs and anger. Significance levels are indicated as *p < 0.05, ***p < 0.001.

toward social structures indirectly influence electoral behavior and preferences. The evidence showed that that participation in collective action is indirectly associated with voting behavior, mediated by beliefs in social change (Hypothesis 1). Similarly, results also showed that participation in collective action was indirectly associated with voting preferences via social beliefs (Hypothesis 3). Surprisingly, we did not find any effects of participation in collective action on voting behavior via anger (Hypotheses 2) or on voting preference (Hypothesis 4) via anger again. These findings suggest that beliefs in social change, rather than emotional responses such as anger, play a central role in linking collective action to electoral engagement. We discuss these results below as they relate to research on emotion and coping pathways to collective action and social change.

Participation in collective action as a promoter of an ideology of social change

Participation in collective action has been consistently shown to influence psychological motivations (Becker and Tausch, 2015; Zhu et al., 2022). Past research has shown that past participations is associated with believing in social change (Vestergren et al., 2017). This connection can be explained by participants' increased exposure to recruitment tactics of social organizations and political movements (Klandermans, 2014), as well as to social movement narratives that link collective action with expectations of social change and perceptions of success or failure (Carvacho et al., 2023; Freel and Bilali, 2022). In our research we found that a history of active participation in protests and demonstrations is linked to stronger beliefs in social change. These results replicate and extend existing research in several ways. First, we show that the association between past participation and intentions to participate in future action does not solely depend on perceiving past participation as successful. Second, our results further show that anger may not always be relevant to motivate individuals to engage in collective action. This finding alone has important implications for research on collective action. To date, most research that supports the role of anger in motivating collective action relies on cross-sectional data. Perhaps, future research can address this via longitudinal studies.

Furthermore, participation in collective actions not only catalyzes beliefs in the possibility of change but also reinforces the perception that transformation of the social structure is attainable. As McAdam (1986) argued, participation in social movements can reconfigure individuals' political identities, fostering a long-term orientation on social change. This transformation occurs as individuals engage repeatedly in activism, altering their perceptions of personal and collective agency over time.

These mechanisms align with the findings from Crouzé et al. (2023), who contend that protest participation fosters reflection on agency, responsibility, and power. In this sense, collective action can act as a crucible for psychological change—redefining individual beliefs and social norms (Louis et al., 2016; Thomas et al., 2014)—and cultivating an ideology of social change that counters fatalism and resistance to change (Abrams et al., 2020; Corcoran et al., 2015; Jost et al., 2017). We discuss these issues more in detail below.

Social change beliefs and voting behavior and preference

The influence of social change beliefs is not limited to attitudes—they translate into concrete political behaviors. In our analysis, a strong longitudinal association emerged between these beliefs and both voting behavior and preference for political change. According to Abrams et al. (2020), the belief that voting can produce meaningful change can convert dissatisfaction into actions. Likewise, Abrams and Grant (2012) showed that these beliefs influence voting intention, and the selection of electoral options perceived as system-altering. This suggests that political ideology linked to change—fueled by collective action—plays a foundational role in how individuals navigate electoral contexts. Particularly, such beliefs are key to understanding why people choose reformist or transformative alternatives over status quo options, such as voting for a new constitution.

Given the growing interest in the intersection between social movement participation and political emotions, it is worth considering how beliefs about social change might be intrinsically linked to feelings of hope. Although we did not directly measure hope, it is plausible that collective action evokes political hope, which then gets embedded in beliefs about change. Van Zomeren (2021) highlights the motivational role of positive emotions, such as hope, in political engagement, emphasizes that hope—unlike anger or fear—encourages sustained engagement, planning and reinforces the belief in the possibility of societal transformation. This emotional dimension complements the cognitive aspects of social change beliefs, suggesting that rational evaluations and affective experiences drive political engagement.

Indirect longitudinal association between collective action and voting preference via social change beliefs

Our findings offer evidence of a temporal and indirect pathway between protest and preference for electoral change. Individuals who participate in collective action are more likely to internalize beliefs in change, which in turn influence their voting preferences.

These beliefs indirectly mediate the relationship between collective action and electoral participation over time (Vestergren et al., 2017). Those who engage in collective action develop and reinforce an ideology of social change and vote for options that promote essential changes in the social structure. In addition, ongoing participation in collective actions can enrich and reinforce beliefs in social change, allowing individuals to evaluate the effectiveness of their collective efforts and consider constructive strategies in the face of radical alternatives (Louis et al., 2020).

This ongoing engagement can lead to participation in other policy arenas, expanding influence in different organizations and spaces of power (Louis et al., 2016) and facilitating a broader understanding of conflict that encompasses both institutional and non-institutional actions (Simon and Klandermans, 2001; Medel et al., 2023). The ideology of social change, rooted in individual experiences derived from participation in collective actions, is reinforced through active participation in social movements, significantly influencing electoral decisions at critical moments.

This finding of an indirect longitudinal association opens new possibilities for future research. Future studies could investigate how participation in conservative movements—those that seek to preserve traditional structures (Jost et al., 2017)—might similarly shape voting preferences toward the restoration of conservative systems, in contrast to progressive movements that advocate a new social structure (Becker, 2020; González et al., 2022; Osborne et al., 2019; Thomas and Osborne, 2022).

The role of anger

This section explores the unexpected findings concerning the role of anger in mediating the relationship between collective action and electoral participation. While anger was initially hypothesized as a key mediator, our data suggest a more nuanced and context-dependent relationship. To better understand the unexpected non-significant role of anger, we now examine its relationship with collective action and how context may shape its influence.

Participation in collective action and anger

Contrary to previous studies that reported associations between collective action participation and increased anger toward authorities (Becker and Tausch, 2017; Pizarro et al., 2022), our findings revealed null results in both voting behavior and preference models. These results align with other research that observed weak or non-existent links between these variables (Cakal et al., 2016; Wlodarczyk et al., 2017).

A plausible explanation for the lack of association is that individuals who engage in sustained activism and develop broader activist identities may experience lower levels of anger and more frequent positive emotions (Louis et al., 2016; Van Zomeren, 2021). This pattern could be particularly salient in protracted struggles, where factors such as perceived protest efficacy, social support, symbolic victories, and identification with broader movements (Louis et al., 2020), which may attenuate anger toward systemic structures.

Context also plays a crucial role. In repressive environments, for instance, anger may shift from diffuse structural targets (e.g., economic systems) to specific agents (e.g., police or politicians; Drury and Reicher, 2000). Moreover, fear may override or dampen anger, thus altering its potential impact on behavior (Miller et al., 2009).

Anger and its longitudinal association with voting

Although anger did not significantly mediate the relationship between collective action and voting behavior, it was directly associated with voting preferences, particularly those favoring structural change. This finding supports prior research linking anger to electoral motivations, such as the desire for structural change, making it a strong motivator in critical voting decisions (Van Zomeren, 2016; Van Zomeren et al., 2018).

Electoral events framed around structural reform often amplify emotional engagement among voters (Valentino et al., 2011), which can intensify affective responses during electoral campaigns (Hernández et al., 2021). In our case, individuals expressing greater anger toward social structures were more likely to favor transformative voting options, such as referenda for drafting a new constitution.

Although this emotional intensity does not necessarily affect the overall decision to vote, our study found that people who experience higher levels of anger toward elements of the social structure tend to participate more actively in voting on specific issues, such as referendums to draft new constitutions. Importantly, the effects of anger vary by national context. Van Zomeren et al. (2018) found that in countries like the Netherlands and Israel, anger at past government policies did not significantly influence voting intentions, whereas in Italy, general political anger fueled desires for radical change, increasing voting intentions. This variability suggests that the general emotion of anger toward politics may stimulate voting intention, as opposed to anger directed specifically toward past government policies. Our findings resonate with this variability: general anger regarding inequality or living costs appears to influence preference for change, though not overall voter turnout. This reinforces the importance of identifying the specific targets of political anger—whether diffuse or focused—in understanding its relationship to electoral participation (Van Zomeren et al., 2018).

The mediating role of anger

The absence of a mediating role for anger also suggests a broader phenomenon: political disaffection. Our hypothesis that anger would mediate the relationship between collective action and electoral behavior was not supported, highlighting the need for future studies with alternative designs and measurements. This lack of significant mediation of anger could be interpreted as an indication of political disaffection, in line with theories proposing that contextual contingencies affect the influence of anger emotion on voting (Van Zomeren et al., 2018). Depending on contextual factors, anger may encourage or suppress political participation. The emotion of anger directed at social and economic structures (Solak et al., 2012) may, for example, evolve into other negative emotions such as contempt—especially when change appears unattainable. This, in turn, could inhibit voting or channel engagement into non-electoral, more radical forms of action (Louis et al., 2020; Tausch et al., 2011). Taken together, these findings underscore complexity of emotional drivers in political behavior and point to the importance of further research on both negative and positive emotions emerging from collective action (Van Zomeren, 2021; Asún et al., 2020).

Limitations, strengths, and future studies

This section critically evaluates the methodological and contextual limitations of the study, situates its contribution within the context of the WEIRD bias in psychological research, and outlines directions for future scholarships in social and political psychology.

Despite its strengths, some limitations must be considered. A key strength is the large and diverse adult sample, which enhances generalizability—consistent with Abrams et al. (2020) call to test large-scale models of collective action.

To strengthen internal validity, latent variable modeling was used to control for measurement error. However, our dependent variable was assessed only once and in binary form (Van de Vyver et al., 2018), limiting the application of longitudinal mediation models, for example, random intercept cross-lagged panel model (Hamaker et al., 2015). Although some attrition occurred, design features helped mitigate its impact. Results remain robust due to the large sample size, which reduces bias and preserves diversity. Logistic regressions showed that higher anger at Time 1 predicted dropout at Time 2, while collective action participation increased continued engagement. Beliefs in social change were not associated with attrition, lending support to the validity of the proposed mediation model. Additionally, the inclusion of key control variables (e.g., gender, age, education) and advanced statistical methods further strengthen internal validity.

Future research could examine how psychological motivations might mediate the relationship between collective action and electoral participation. This focus is relevant because existing literature has often dissociated these two forms of political action, electoral participation and collective actions (Van Zomeren, 2016). Incorporating culturally specific variables will deepen the understanding of electoral dynamics and social movements.

Lastly, the findings call for integrative theoretical models in political psychology. Such models should account for the interplay between cognitive and emotional factors related to collective action, electoral psychology and applied contexts. This would offer a more comprehensive understanding of how individuals process political information, particularly that emerging from protest events (Bremer et al., 2020), and how such experiences shape political behavior and engagement (Crouzé et al., 2023).

Overall, this study underscores the pivotal role of cognitive appraisals—particularly social change beliefs—in translating collective action into electoral engagement. While anger may energize certain voting preferences, beliefs about agency and transformation appear to be more stable motivators. These insights challenge emotion-centered models of political behavior and invite new integrative approaches that consider the interplay of cognition, emotion, and context.

Conclusion

In conclusion, this study offers novel insights into the psychological mechanisms linking collective action to electoral behavior, particularly within non-WEIRD sociopolitical contexts.

Participation in collective action was found to indirectly influence both voting behavior and voting preference, primarily through the mediating role of social change beliefs. Although anger did not mediate these relationships, it nonetheless played a significant direct role in shaping preferences for political transformation. These findings emphasize the intertwined roles of cognition and emotion in political decision-making.

These findings are particularly relevant in a global context marked by frequent protests and crises of political representation

(Kouba and Lysek, 2019; Van Hiel et al., 2022). The results advance our understanding of how collective action can foster a broader ideology of change and encourage engagement with democratic processes. This is especially relevant in contexts marked by political distrust and high levels of mobilization—such as Chile and other Latin American countries—offering broader implications for political culture across diverse global contexts.

In Latin America, historical legacies of colonialism, authoritarianism regimes, and persistent social inequality shape distinct forms of political engagement, where collective action often reflects both resistance to institutional failures and demands for authentic democratic participation (Çakal et al., 2025). By focusing on a Latin American context, this study addresses a major gap in social and political psychology, which remains disproportionately focused on WEIRD populations (Henrich et al., 2010). Future comparative research should examine how cultural narratives, protest traditions, and historical legacies of authoritarianism shape the relationship between collective action and electoral engagement—especially in regions such as Africa, Latin America, and Southeast Asia. These studies would provide much-needed cross-cultural validation of current models.

Taken together, the present findings underscore the urgency of developing political models that resonate with the lived experiences of citizens navigating unequal and dynamic democracies.

Data availability statement

Publicly available datasets were analyzed in this study. This data can be found here: https://dataverse.harvard.edu/dataverse/elsoc.

Ethics statement

The studies involving humans were approved by the Longitudinal Study on Conflict and Social Cohesion in Chile (ELSOC) has ethical approval in all its waves from the Scientific Ethical Committee of Social Sciences, Arts and Humanities of the Pontifical Catholic University of Chile dated June 8, 2016, and Protocol ID 160129004. The Ethics Committee approval was renewed on January 6, 2021. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

VJ-B: Writing – original draft, Writing – review & editing, Conceptualization, Investigation. RG: Conceptualization, Data curation, Supervision, Writing – review & editing. HC: Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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References

Abrams, D., and Grant, P. R. (2012). Testing the social identity relative deprivation (SIRD) model of social change: the political rise of Scottish nationalism. *Br. J. Soc. Psychol.* 51, 674–689. doi: 10.1111/j.2044-8309.2011.02032.x

Abrams, D., Travaglino, G. A., Grant, P. R., Templeton, A., Bennett, M., and Lalot, F. (2020). Mobilizing IDEAS in the Scottish referendum: predicting voting intention and well-being with the identity-deprivation-efficacy-action-subjective well-being model. *Br. J. Soc. Psychol.* 59, 425–446. doi: 10.1111/bjso.12355

Agostini, M., and van Zomeren, M. (2021). Toward a comprehensive and potentially cross-cultural model of why people engage in collective action: a quantitative research synthesis of four motivations and structural constraints. *Psychol. Bull.* 147, 667–700. doi: 10.1037/bul0000256

Asún, R. A., Rdz-Navarro, K., and Tintaya Orihuela, M. (2020). Por qué surgen los estallidos sociales? Emociones, redes interpersonales, rituales y participación en protestas. *Ultima Década* 28, 5–40. doi: 10.4067/S0718-22362020000200005

Becker, J. C. (2020). Ideology and the promotion of social change. *Curr. Opin. Behav. Sci.* 34, 6–11. doi: 10.1016/j.cobeha.2019.10.005

Becker, J. C., and Tausch, N. (2015). A dynamic model of engagement in normative and non- normative collective action: psychological antecedents, consequences, and barriers. *Eur. Rev. Soc. Psychol.* 26, 43–92. doi: 10.1080/10463283.2015.1094265

Becker, J. C., and Tausch, N. (2017). "A dynamic model of engagement in normative and non-normative collective action: psychological antecedents, consequences, and barriers," in *European Review of Social Psychology, Vol. 26* (Routledge), 43–92. doi: 10.1080/10463283.2015.1094265

Becker, J. C., Tausch, N., and Wagner, U. (2011). Emotional consequences of collective action participation: differentiating self-directed and outgroup-directed emotions. *Person. Soc. Psychol. Bull.* 37, 1587–1598. doi: 10.1177/0146167211414145

Blackwood, L. M., and Louis, W. R. (2012). If it matters for the group then it matters to me: collective action outcomes for seasoned activists. *Br. J. Soc. Psychol.* 51, 72–92. doi: 10.1111/j.2044-8309.2010.02001.x

Blais, A., and Daoust, J. F. (2020). *The Motivation to Vote: Explaining Electoral Participation.* Vancouver, BC: UBC Press.

Bornschier, S., Häusermann, S., Zollinger, D., and Colombo, C. (2021). How "us" and "them" relates to voting behavior—social structure, social identities, and electoral choice. *Compar. Polit. Stud.* 54, 2087–2122. doi: 10.1177/0010414021997504

Bou Zeineddine, F., and Leach, C. W. (2021). Feeling and thought in collective action on social issues: toward a systems perspective. *Soc. Pers. Psychol. Comp.* 15:e12622. doi: 10.1111/spc3.12622

Bremer, B., Hutter, S., and Kriesi, H. (2020). Dynamics of protest and electoral politics in the Great Recession. *Eur. J. Polit. Res.* 59, 842–866. doi: 10.1111/1475-6765.12375

Brown, T. A. (2023). *Confirmatory Factor Analysis for Applied Research.* New York, NY: Guilford Press.

Çakal, H., Altinişik, Y., Gökcekuş, Ö., and Eraslan, E. G. (2022). Why people vote for thin-centred ideology parties? A multi-level multi-country test of individual and aggregate level predictors. *PLoS ONE* 17:e0264421. doi: 10.1371/journal.pone.0264421

Cakal, H., Eller, A., Sirlopú, D., and Pérez, A. (2016). Intergroup relations in Latin America: intergroup contact, common ingroup identity, and activism among indigenous groups in Mexico and Chile. *J. Soc. Issues* 72, 355–375. doi: 10.1111/josi.12170

Çakal, H., Sirlopú, D., and Smith-Castro, V. (eds.) (2025). *The Political Psychology of Social Unrest in Latin America.* Abingdon: Routledge.

Carvacho, H., González, R., Cheyre, M., Rocha, C., Cornejo, M., Jiménez-Moya, G., et al. (2023). When social movements fail or succeed: Social psychological consequences of a collective action's outcome. *Front. Psychol.* 14:1155950. doi: 10.3389/fpsyg.2023.1155950

Castro, F., and Retamal, R. (2022). *Does Electoral Behavior Change After a Protest Cycle? Evidence from Chile and Bolivia.*

Chayinska, M., Miranda, D., and González, R. (2021). A longitudinal study of the bidirectional causal relationships between online political participation and offline collective action. *Comp. Hum. Behav.* 121:106810. doi: 10.1016/j.chb.2021.106810

Colombo, F., Ferrara, A., Vassou, F.-M., Bernardi, F., and Dinas, E. (2021). From the streets to the voting booth: The electoral effect of grassroots mobilization against the far-right. *Public Opin. Q.* 88, 1032–1043. doi: 10.1093/poq/nfae 039

Corcoran, K. E., Pettinicchio, D., and Young, J. T. (2015). Perceptions of structural injustice and efficacy: participation in low/moderate/high-cost forms of collective action. *Sociol. Inq.* 85, 429–461. doi: 10.1111/soin.12082

Crouzé, R., Godard, L., and Meurs, P. (2023). Learning democracy through activism: the global climate strike movement and Belgian youth's democratic experience in times of environmental emergency. *Soc. Mov. Stud.* 23, 1–16. doi: 10.1080/14742837.2023.2184792

DiStefano, C., and Morgan, G. B. (2014). A comparison of diagonal weighted least squares robust estimation techniques for ordinal data. *Struct. Eq. Model. Multidiscip. J.* 21, 425–438. doi: 10.1080/10705511.2014.915373

Drury, J., and Reicher, S. (2000). Collective action and psychological change: The emergence of new social identities. *Br. J. Soc. Psychol.* 39, 579–604.

Drury, J., and Reicher, S. (2005). Explaining enduring empowerment: a comparative study of collective action and psychological outcomes. *Eur. J. Soc. Psychol.* 35, 35–58. doi: 10.1002/ejsp.231

Drury, J., and Reicher, S. (2009). Collective psychological empowerment as a model of social change: researching crowds and power. *J. Soc. Issues* 65, 707–725. doi: 10.1111/j.1540-4560.2009.01622.x

Ellemers, N. (1993). The influence of socio-structural variables on identity management strategies. *Eur. Rev. Soc. Psychol.* 4, 27–57. doi: 10.1080/14792779343000013

Fillieule, O. (2012). The independent psychological effects of participation in demonstrations. *Mobiliz. Int. Quart.* 17, 235–248. doi: 10.17813/maiq.17.3.h10631822v65820l

Fischer, A. H., and Roseman, I. J. (2007). Beat them or ban them: the characteristics and social functions of anger and contempt. *J. Pers. Soc. Psychol.* 93:103. doi: 10.1037/0022-3514.93.1.103

Freel, S. H., and Bilali, R. (2022). Putting the past into action: How historical narratives shape participation in collective action. *Eur. J. Soc. Psychol.* 52, 204–222. doi: 10.1002/ejsp.2813

Garry, J. (2014). Emotions and voting in EU referendums. *Eur. Union Polit.* 15, 235–254. doi: 10.1177/1465116513514780

Gillion, D. Q., and Soule, S. A. (2018). The impact of protest on elections in the United States. *Soc. Sci. Quart.* 99, 1649–1664. doi: 10.1111/ssqu.12527

González, R., Chayinska, M., Plaza, A., Bargsted, M., and Miranda, D. (2022). A longitudinal examination of the factors that facilitate and hinder support for conservative and progressive social movements. *Eur. J. Soc. Psychol.* 52, 1031–1046. doi: 10.1002/ejsp.2893

Grant, P. R., Bennett, M., and Abrams, D. (2017). Using the SIRDE model of social change to examine the vote of Scottish teenagers in the 2014 independence referendum. *Br. J. Soc. Psychol.* 56, 455–474. doi: 10.1111/bjso.12186

Hamaker, E. L., Kuiper, R. M., and Grasman, R. P. (2015). A critique of the cross-lagged panel model. *Psychol. Methods.* 20, 102–116. doi: 10.1037/a0038889

Henrich, J., Heine, S. J., and Norenzayan, A. (2010). The weirdest people in the world? *Behav. Brain Sci.* 33, 61–83. doi: 10.2139/ssrn.1601785

Hernández, E., Anduiza, E., and Rico, G. (2021). Affective polarization and the salience of elections. *Elect. Stud.* 69:102203. doi: 10.1016/j.electstud.2020.102203

Hu, L. T., and Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria vs. new alternatives. *Struct. Eq. Model. Multidiscip. J.* 6, 1–55. doi: 10.1080/10705519909540118

Jiménez-Moya, G., Miranda, D., Drury, J., Saavedra, P., and González, R. (2019). When nonactivists care: group efficacy mediates the effect of social identification and perceived instability on the legitimacy of collective action. *Group Proc. Intergr. Relat.* 22, 563–577. doi: 10.1177/1368430217751631

Jost, J. T., Becker, J. C., Osborne, D., and Badaan, V. (2017). Missing in (collective) action: Ideology, system justification, and the motivational antecedents of two types of protest behavior. *Curr. Dir. Psychol. Sci.* 26, 99–108. doi: 10.1177/0963721417690633

Klandermans, B., Van der Toorn, J., and Van Stekelenburg, J. (2008). Embeddedness and identity: how immigrants turn grievances into action. *Am. Sociol. Rev.* 73, 992–1012. doi: 10.1177/000312240807300606

Klandermans, P. G. (2014). Identity politics and politicized identities: identity processes and the dynamics of protest. *Polit. Psychol.* 35, 1–22. doi: 10.1111/pops.12167

Kline, R. B. (2023). *Principles and Practice of Structural Equation Modeling.* Guilford Publications.

Kouba, K., and Lysek, J. (2019). What affects invalid voting? A review and meta-analysis. *Govern. Oppos.* 54, 745–775. doi: 10.1017/gov.2018.33

Louis, W. R., Amiot, C. E., Thomas, E. F., and Blackwood, L. (2016). The "activist identity" and activism across domains: a multiple identities analysis. *J. Soc. Issues* 72, 242–263. doi: 10.1111/josi.12165

Louis, W. R., Thomas, E. F., McGarty, C., Lizzio-Wilson, M., Amiot, C. E., and Moghaddam, F. M. (2020). The volatility of collective action: Theoretical analysis and empirical data. *Polit. Psychol.* 41, 35–74. doi: 10.1111/pops.12675

Malmberg, F. G., and Christensen, H. S. (2021). Voting women, protesting men: a multilevel analysis of corruption, gender, and political participation. *Polit. Policy* 49, 126–161. doi: 10.1111/polp.12393

Marcos-Marne, H. (2022). The effects of basic human values on populist voting. An analysis of 13 European democracies. *Polit. Behav.* 44, 1863–1881. doi: 10.1007/s11109-021-09689-8

Mayol, A., and Cabrera, A. (2018). *Frente Amplio en el momento cero.* Santiago: Editorial Catalonia.

McAdam, D. (1986). Recruitment to high-risk activism: the case of Freedom Summer. *Am. J. Sociol.* 92, 64–90.

McLeod, J. M., Scheufele, D. A., and Moy, P. (1999). Community, communication, and participation: the role of mass media and interpersonal discussion in local political participation. *Polit. Commun.* 16, 315–336. doi: 10.1080/105846099198659

Medel, R. M., Somma, N. M., and Donoso, S. (2023). The nexus between protest and electoral participation: Explaining Chile's exceptionalism. *J. Lat. Am. Stud.* 55, 705–732. doi: 10.1017/S0022216X2300032X

Meléndez, C., Rovira Kaltwasser, C., and Sajuria, J. (2021). Chile 2020: pandemia y plebiscito constitucional. *Revista Ciencia Polít.* 41, 263–290. doi: 10.4067/S0718-090X2021005000114

Miller, D. A., Cronin, T., Garcia, A. L., and Branscombe, N. R. (2009). The relative impact of anger and efficacy on collective action is affected by feelings of fear. *Group Process. Intergr. Relat.* 12, 445–462. doi: 10.1177/1368430209105046

Muthén, B. O., Muthén, L. K., and Asparouhov, T. (2017). *Regression and Mediation Analysis Using Mplus.* Los Ángeles, CA: Muthén and Muthén.

Ortiz, I., Burke, S., Berrada, M., and Saenz Cortés, H. (2022). *World Protests: A Study of Key Protest Issues in the 21st Century.* Cham: Springer Nature, 185.

Osborne, D., Jost, J. T., Becker, J. C., Badaan, V., and Sibley, C. G. (2019). Protesting to challenge or defend the system? A system justification perspective on collective action. *Eur. J. Soc. Psychol.* 49, 244–269. doi: 10.1002/ejsp.2522

Oser, J. (2022). How citizenship norms and digital media use affect political participation: a two-wave panel analysis. *Media and Communication* 10, 206–218. doi: 10.17645/mac.v10i3.5482

Pellegrini, V., Salvati, M., De Cristofaro, V., Giacomantonio, M., and Leone, L. (2022). Psychological bases of anti-immigration attitudes among populist voters. *J. Appl. Soc. Psychol.* 52, 449–458. doi: 10.1111/jasp.12871

Pizarro, J. J., Zumeta, L. N., Bouchat, P., Włodarczyk, A., Rimé, B., Basabe, N., et al. (2022). Emotional processes, collective behavior, and social movements: a meta-analytic review of collective effervescence outcomes during collective gatherings and demonstrations. *Front. Psychol.* 13:974683. doi: 10.3389/fpsyg.2022.974683

Sáez-Vergara, R. S., Godoy, M., and Pavlic, R. D. (2022). Democracy in tumultuous times: protests, pandemic and plebiscite in Chile. *Econ. Polít.* 9, 101–146. doi: 10.15691/07194714.2022.009

Selvanathan, H. P., and Jetten, J. (2020). From marches to movements: building and sustaining a social movement following collective action. *Curr. Opin. Psychol.* 35, 81–85. doi: 10.1016/j.copsyc.2020.04.004

Serra, L., and Smets, K. (2022). "Age, generation, and political participation," in *The Oxford Handbook of Political Participation*, eds. M. Giugni, and M. Grasso (Oxford, UK: Oxford University Press).

Simon, B., and Klandermans, P. G. (2001). Toward a social psychological analysis of politicized collective identity: conceptualization, antecedents, and consequences. *Am. Psychol.* 56, 319–331. doi: 10.1037/0003-066X.56.4.319

Smets, K., and Van Ham, C. (2013). The embarrassment of riches? A meta-analysis of individual- level research on voter turnout. *Elect. Stud.* 32, 344–359. doi: 10.1016/j.electstud.2012.12.006

Solak, N., Jost, J. T., Sümer, N., and Clore, G. L. (2012). Rage against the machine: the case for system-level emotions. *Soc. Person. Psychol. Comp.* 6, 674–690. doi: 10.1111/j.1751-9004.2012.00456.x

Somma, N. M., Bargsted, M., Disi Pavlic, R., and Medel, R. M. (2021). No water in the oasis: the Chilean Spring of 2019–2020. *Soc. Mov. Stud.* 20, 495–502. doi: 10.1080/14742837.2020.1727737

Tajfel, H., and Turner, J. C. (1979). "An integrative theory of inter-group conflict," in *The Social Psychology of Inter-group Relations*, eds W. G. Austin and S. Worchel (Monterey, CA: Brooks/Cole), 33–47.

Tarrow, S. (1994). *Power in Movement: Social Movements, Collective Action, and Politics.* Cambridge, UK: Cambridge University Press.

Tausch, N., Becker, J. C., Spears, R., Christ, O., Saab, R., Singh, P., et al. (2011). Explaining radical group behavior: developing emotion and efficacy routes to normative and nonnormative collective action. *J. Person. Soc. Psychol.* 101:129. doi: 10.1037/a0022728

Thomas, E. F., Duncan, L., McGarty, C., Louis, W. R., and Smith, L. G. (2022). MOBILISE: a higher-order integration of collective action research to address global challenges. *Polit. Psychol.* 43, 107–164. doi: 10.1111/pops.12811

Thomas, E. F., McGarty, C., and Louis, W. (2014). Social interaction and psychological pathways to political engagement and extremism. *Eur. J. Soc. Psychol.* 44, 15–22. doi: 10.1002/ejsp.1988

Thomas, E. F., and Osborne, D. (2022). Protesting for stability or change? Definitional and conceptual issues in the study of reactionary, conservative, and progressive collective actions. *Eur. J. Soc. Psychol.* 52, 985–993. doi: 10.1002/ejsp.2912

Ulug, Ö. M., and Acar, Y. G. (2018). What happens after the protests? Understanding protest outcomes through multi-level social change. *Peace Conflict J. Peace Psychol.* 24, 44–53. doi: 10.1037/pac0000269

Valentino, N. A., Brader, T., Groenendyk, E. W., Gregorowicz, K., and Hutchings, V. L. (2011). Election night's alright for fighting: the role of emotions in political participation. *J. Polit.* 73, 156–170. doi: 10.1017/S0022381610000939

Valentino, N. A., Gregorowicz, K., and Groenendyk, E. W. (2009). Efficacy, emotions, and the habit of participation. *Polit. Behav.* 31, 307–330. doi: 10.1007/s11109-008-9076-7

Van de Vyver, J., Leite, A. C., Abrams, D., and Palmer, S. B. (2018). Brexit or Bremain? A personal and social analysis of voting decisions in the EU referendum. *J. Commun. Appl. Soc. Psychol.* 28, 65–79. doi: 10.1002/casp.2341

Van Dyke, N., and Dixon, M. (2013). Activist human capital: Skills acquisition and the development of commitment to social movement activism. *Mobiliz. Int. Quart.* 18, 197–212. doi: 10.17813/maiq.18.2.82x535l5112m91qv

Van Hiel, A., Van Assche, J., Haesevoets, T., De Cremer, D., and Hodson, G. (2022). A radical vision of radicalism: political cynicism, not incrementally stronger partisan positions, explains political radicalization. *Polit. Psychol.* 43, 3–28. doi: 10.1111/pops.12785

Van Stekelenburg, J., Klandermans, B., and Akkerman, A. (2016). Does civic participation stimulate political activity? *J. Soc. Issues* 72, 286–314. doi: 10.1111/josi.12167

Van Zomeren, M. (2016). Building a tower of babel? Integrating core motivations and features of social structure into the political psychology of political action. *Polit. Psychol.* 37, 87–114. doi: 10.1111/pops.12322

Van Zomeren, M. (2020). *Political and psychological processes in political action. En Oxford Research Encyclopedia of Politics.* Oxford, Reino Unido: Oxford University Press.

Van Zomeren, M. (2021). Toward an integrative perspective on distinct positive emotions for understanding political action. *Polit. Psychol.* 42, 375–393. doi: 10.1111/pops.12795

Van Zomeren, M., and Iyer, A. (2009). Introduction to the social and psychological dynamics of collective action. *J. Soc. Issues* 65, 645–660. doi: 10.1111/j.1540-4560.2009.01618.x

Van Zomeren, M., Postmes, T., and Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research

synthesis of three socio-psychological perspectives. *Psychol. Bull.* 134, 504–535. doi: 10.1037/0033-2909.134.4.504

Van Zomeren, M., Saguy, T., Mazzoni, D., and Cicognani, E. (2018). The curious, context-dependent case of anger: explaining voting intentions in three different national elections. *J. Appl. Soc. Psychol.* 48, 329–338. doi: 10.1111/jasp.12514

Vasilopoulos, P., Marcus, G. E., Valentino, N. A., and Foucault, M. (2019). Fear, anger, and voting for the far right: evidence from the November 13, 2015 Paris terror attacks. *Polit. Psychol.* 40, 679–704. doi: 10.1111/pops.12513

Vestergren, S., Drury, J., and Chiriac, E. H. (2018). How collective action produces psychological change and how that change endures over time: a case study of an environmental campaign. *Br. J. Soc. Psychol.* 57, 855–877. doi: 10.1111/bjso.12270

Vestergren, S., Drury, J., and Hammar Chiriac, E. (2017). The biographical consequences of protest and activism: a systematic review and a new typology. *Soc. Mov. Stud.* 16, 203–221. doi: 10.1080/14742837.2016.1252665

Wasow, O. (2020). Agenda seeding: how 1960s Black protests moved elites, public opinion and voting. *Am. Polit. Sci. Rev.* 114, 638–659. doi: 10.1017/S000305542000009X

Wlodarczyk, A., Basabe, N., Páez, D., and Zumeta, L. (2017). Hope and anger as mediators between collective action frames and participation in collective mobilization: the case of 15-M. *J. Soc. Polit. Psychol.* 5, 471. doi: 10.5964/jspp.v5i1.471

Wright, S. C. (2008). "Strategic collective action: social psychology and social change," in *Blackwell Handbook of Social Psychology: Intergroup Processes*, R. Brown and S. Gaertner (Malden, MA: Blackwell Publishing), 409.

Zhu, A. Y. F., Chan, A. L. S., and Chou, K. L. (2022). Psychological transformation of youth after engaging in non-radical and radical political activities. *Curr. Psychol. J. Diverse Perspect. Diverse Psychol. Issues* 41, 7843–7853. doi: 10.1007/s12144-020-01239-5