Attitude toward protest uniquely predicts (normative and nonnormative) political action by (advantaged and disadvantaged) group members

Joseph Sweetman[a,*], Gregory R. Maio[b], Russell Spears[c], Antony S.R. Manstead[d], Andrew G. Livingstone[a]

[a] University of Exeter, Psychology, College of Life and Environmental Sciences, Exeter EX4 4QG, UK
[b] University of Bath, Claverton Down, Bath BA2 7AY, UK
[c] University of Groningen, Behavioural and Social Sciences, Po Box 72, 9700 AB Groningen, Netherlands
[d] Cardiff University, School of Psychology, Tower Building, Park Place, Cardiff CF10 3AT, UK

ABSTRACT

We find evidence that explicit (but not implicit) measures of general attitude towards protest uniquely predict normative and nonnormative political action tendencies, and behavior, over and above extant models of political action. Protest attitude uniquely predicts both the political action tendencies of members of disadvantaged groups and willingness to engage in solidarity-based action on behalf of such groups. Furthermore, we find some evidence that protest attitude is able to account for the effects of mobilization messages over a political issue; these messages increase political action tendencies by making attitude towards protest more positive. The results indicate that overall attitude toward protest reflects a wide array of affective, cognitive, and behavioral factors associated with protest that more specific, established predictors of collective political action do not tap. As such, general protest attitude offers an important addition to extant models of collective political action and efforts to examine the psychological processes underpinning political cognition and action.

Distinct psychological approaches have been developed to answer three basic questions regarding collective political action: First, what leads members of disadvantaged groups to engage in normative (i.e., peaceful and/or legal) political action? Second, what leads their advantaged counterparts to act in solidarity with them? Finally, what leads people to engage in nonnormative (i.e., violent and/or illegal) political action? Separate psychological models of political action have been developed to help explain such normative (Klandermans, 1997; Stürmer & Simon, 2004; Van Zomeren, Postmes, & Spears, 2008; Van Zomeren, Spears, Fischer, & Leach, 2004); solidarity-based (Iyer, Schmader, & Lickel, 2007; Leach & Snider, 2002; Subasic, Reynolds, & Turner, 2008; Thomas, McGarty, & Mavor, 2009); and nonnormative (see Tausch et al., 2011; Wright, Taylor, & Moghaddam, 1990) political action. These diverse models include a range of predictors, such as social identity, self-categorization; perceptions of efficacy; the expectancy-value of collective, normative, and reward motives; and feelings of anger, guilt, sympathy, empathy, moral outrage, and shame. We suggest that there is one curiously neglected general, but powerful, predictor that can add to the predictive validity of such models: overall attitude towards protest itself.

1. General protest attitude is a unique predictor of political action

Here our primary goal is to examine the unique predictive power of general protest attitude. Models of collective political action have omitted measures of overall attitudes towards protest behavior itself. To illustrate, we focus on three popular contemporary models: the emotion and efficacy-based coping model (Van Zomeren et al., 2004), an extension of this coping-based model to nonnormative action (Tausch et al., 2011), and the expectancy-value and identity dual pathway model (Stürmer & Simon, 2004). It is important to distinguish our treatment of protest attitude from the predictors of protest found in these established models. Perceptions of collective efficacy and appraisals or feelings of anger (Van Zomeren et al., 2004) or contempt (Tausch et al., 2011) constitute the predictors in the coping model(s). The predictors in the expectancy-value and identity model are constituted by collective identification and evaluations of protest behavior in relation to particular collective, normative, and personal benefits (versus costs), and the expectancy of deriving all three types of benefit (Klandermans, 1997; Stürmer & Simon, 2004).

A number of distinctions are needed in order to make a conceptual
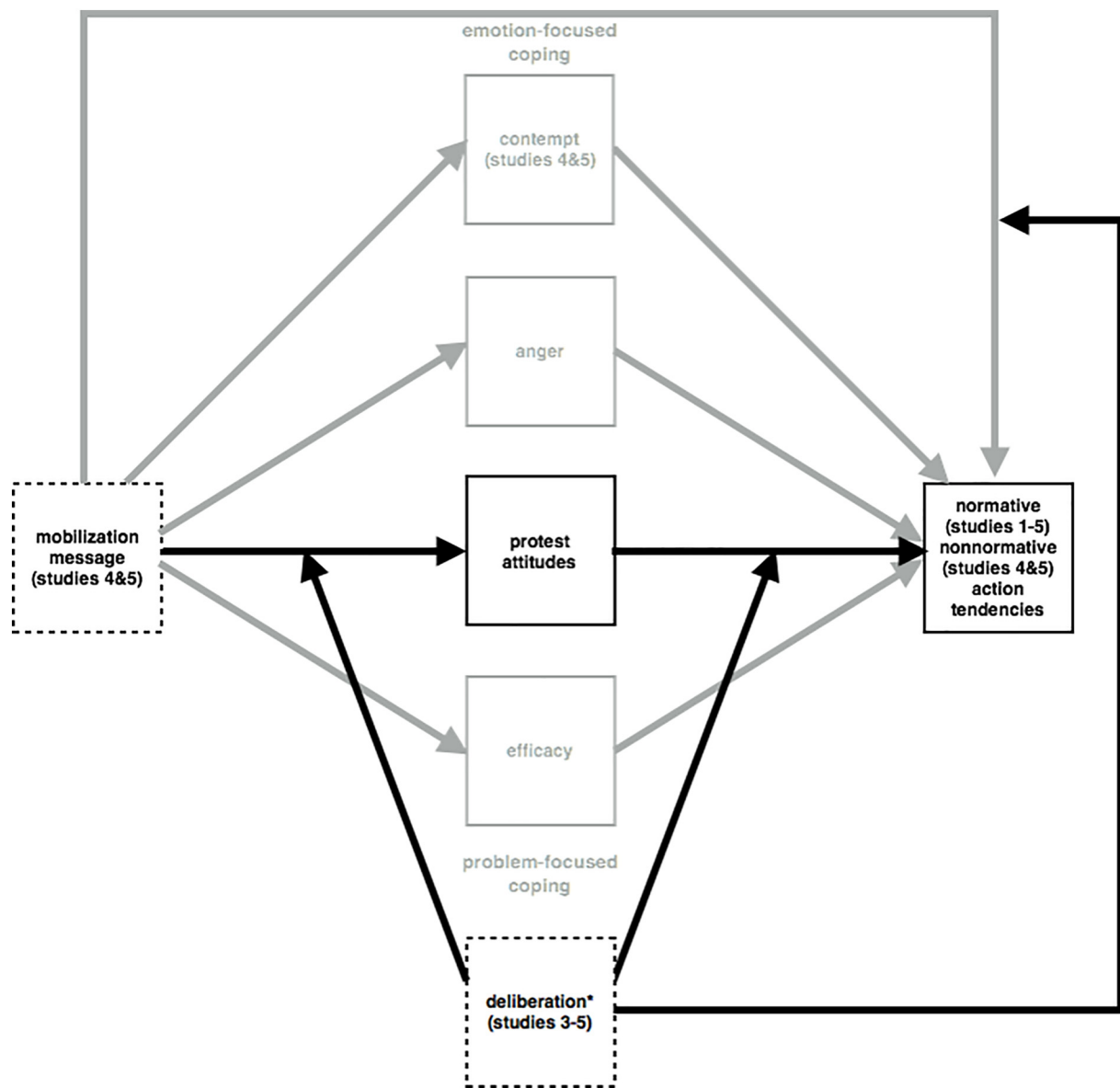

Fig. 1. Full conceptual/path model: Protest attitudes 1) have predictive validity over and above the emotion and efficacy-based coping model (grey boxes and arrows), 2) mediate the effects of mobilization messages on normative and nonnormative political action tendencies (protest attitude pathway), 3) are moderated by the motivation and/or opportunity for deliberation*. 2) and 3) suggest that the indirect effect of mobilization messages is conditional on deliberation. Additionally, deliberation moderates the direct effect of mobilization messages on action tendencies. Black boxes and arrows pertain to our novel hypotheses involving protest attitudes, mobilization message, and deliberation. Grey boxes and arrows reflect evidence from extant models. Broken boxes indicated manipulated variables. * we also included gender (not depicted) as a moderator of the protest pathway.

case for the unique predictive power of protest attitude. First, it is clear that attitudes or basic evaluative (e.g., "*good-bad*") responses to a specific behavior (i.e., protest behavior) encompass theoretical components that are distinct from (inter alia) perceptions of collective efficacy and appraisals or feelings of anger or contempt that constitute the coping model of political action (Van Zomeren et al., 2004), and its extension to nonnormative action (Tausch et al., 2011). Specifically, attitudes are conceptualized as behavior-related evaluative associations or tendencies stored in memory (see Fazio, Jackson, Dunton, & Williams, 1995; Fazio & Olson, 2003a; Maio, Olson, Bernard, & Luke, 2006; Scherer, 2005). In contrast, appraisals of collective efficacy and feelings of anger or contempt are meant to reflect an appraisal of the motivational relevance and congruence of an event and one's (or one's group's) resources and options for coping (Lazarus, 1991; see also, Van Zomeren et al., 2004). An overall measure of attitude towards protest is therefore likely to tap important factors beyond the motivational

relevance and congruence of an event and the available resources for coping with it. Thus, protest attitude should have predictive power over and above the emotion and efficacy-based coping model (see right-hand side of Fig. 1).

Second, the expectancy-value and identity dual pathway model (Stürmer & Simon, 2004) relies on the evaluation of protest behavior in relation to particular collective benefits for which the social movement or group fights, normative benefits from significant others' reactions to participation in the political action, the personal rewards (versus costs) from the action, and the expectancy of deriving all three types of benefit (Klandermans, 1997; Stürmer & Simon, 2004). In this model, a belief that the people you care about would respond positively to your specific political action (e.g., protesting gender inequality), multiplied by how important this reaction is to you, would constitute your "normative motive" for political action. Similarly, the value multiplied by the perceived likelihood of achieving collective goals are said to constitute

one's "collective motives." Finally, a belief about the likely personal rewards (minus costs) of specific political action, multiplied by how important these rewards are to you constitute your "reward motive" for political action.

Our treatment of attitude toward protest subsumes a more abstract target than expectancy-value approaches. This distinction between expectancy-value approaches to protest attitude and our own approach reflects the classic distinction between expectancy-value attitude models and three-component models of attitude content (see Olson & Maio, 2003). Three-component approaches suggest that attitudes can reflect an array of affective, cognitive, or behavioral factors that go well beyond particular beliefs (Dalege et al., 2016; Fazio & Olson, 2003a; Zanna & Rempel, 1988), whereas expectancy-value models (see Ajzen, 1991, 2005) rely on the evaluation and expectancy of particular beliefs about the attitude object.

Whereas the expectancy-value approach to political action is tied to particular beliefs about specific social, normative, and reward concerns, overall attitude toward protest focuses on the idea of political action itself, *independent of the topic of action* (e.g., "protest is *good-bad*"). As such, an overall measure of attitude towards protest in general is likely to tap important factors beyond the collective, normative, and reward motives incorporated in current expectancy-value models of collective political action (Klandermans, 1997; Stürmer & Simon, 2004). Finally, it is clear that a person's identification with a (politicized) collective identity (e.g., women fighting for gender equality) is conceptually distinct from their overall attitude toward protest. Taken together, this suggests that protest attitude should have predictive power over and above the expectancy-value and identity dual pathway model (see right-hand side of Fig. 2).

2. The predictive role of implicit protest attitude

A focus on attitude toward protest allows us to address an ancillary goal: the potential role of controlled and automatic (or implicit) processes in political action. Social cognition and collective political action theorists have stressed the importance of automatic cognitive processes in the explanation of political cognition and action (Nosek, Graham, & Hawkins, 2010; Stekelenburg & Klandermans, 2010). However, there has been little empirical work on these automatic processes in the context of protest. Automatic processes are frequently assessed through implicit measures, thereby circumventing deliberative self-reports. Recent work has shown that both implicit and explicit measures of attitude towards presidential candidates have predictive power in models of voting behavior that include established predictors, such as explicit measures of attitude to the candidates, party affiliation, and political orientation (Lundberg & Payne, 2014). Although the evidence for the predictive power of implicit attitudes is mixed (Friese, Smith, Plischke, Bluemke, & Nosek, 2012; Karpinski, 2005), the notion that implicit measures of attitudes could have any predictive power over and above explicit measures is surprising, given that political behaviors are traditionally considered to demand high levels of controlled processing and deliberation (Nosek et al., 2010).

Notwithstanding the fact that the evidence across studies is mixed (Greenwald, Poehlman, Uhlmann, & Banaji, 2009; Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2013; Perugini & Richetin, 2010), theoretical approaches suggest that implicit attitudes play a greater predictive role when people lack the motivation, opportunity, and/or ability to engage in deliberative reasoning about the behavior (Fazio & Olson, 2003b). Taken together, these considerations suggest that if political action is deliberative, then impairing deliberation (e.g., through cognitive load) should decrease political action tendencies. Further, under these conditions of impaired deliberation, implicit measures of protest attitude should predict action tendencies (see moderated pathway in the right-hand side of Figs. 1 & 2).

3. Protest attitude mediates the effect of mobilization messages

A final (ancillary) goal of the present work is to examine whether protest attitude can account for the effect of mobilization messages on action. Attitudes can be influenced by specific, recent contexts. This ability of attitudes to encompass both general abstractions and recent exemplars is well documented (see Lord & Lepper, 1999). The influence of specific recent contexts on overall attitudes is important because it reveals how information that mobilizes support for protest on particular issues can shape attitude toward protest in general. Put differently, information mobilizing support for particular protests (e.g., on women's rights, climate change, etc.) can shift beliefs about the broader merits of collective protest, which may further mobilize support for political action in specific contexts.

This "protest attitude pathway" offers a novel addition to the anger, efficacy, and identity pathways that are said to explain the effect of mobilization messages on political action tendencies (see Stürmer & Simon, 2004; Van Zomeren et al., 2004). If overall protest attitude encompasses general abstractions and recent exemplars, then the influence of specific mobilization messages should affect attitude toward protest in general. As such, protest attitude offers a useful tool for explaining cognitive processes relating to politics by accounting for the influence of mobilization messages on political action. Similarly, given the deliberative nature of political action, one might expect mobilization messages and the protest attitude pathway to have less of an impact under conditions that impair deliberation (see complete path model in Figs. 1 & 2).

4. The present research

Across five studies we examine the role of overall attitude towards protest in predicting collective political action tendencies (Studies 1–5) and behavior (Study 2), over and above the emotion and efficacy-based coping model (Studies 1–5), its extension to nonnormative action (Studies 4 and 5), and the expectancy-value and identity dual pathway model (Studies 4 and 5). We also test the conditions under which implicit protest attitude and mobilization messages play a greater predictive role by manipulating the motivation and opportunity for deliberative thought (Studies 3–5). We select three areas of contention in which to examine the role of attitude towards protest. These include political issues in which participants formed part of a disadvantaged group, and cases in which participants could engage in solidarity-based action with outgroup members. Across a diverse range of issues (i.e., forced expulsion, university fee increases, and gender inequality), these studies provide the first test of the role of overall attitude towards protest in explaining political action. All measures, manipulations, and exclusions in the studies are disclosed. The studies are reported in the order that they were conducted.

5. Study 1

In this study we sought to develop implicit and explicit measures of attitude towards protest and examine their unique predictive power over and above the established efficacy and emotion-based coping model of collective political action (Van Zomeren et al., 2004). We measured people's feelings of anger over a contentious issue and their appraisals of their group's collective efficacy to address the issue. As the contentious issue, we choose an ingroup transgression, namely, the British expulsion of the Chagos islanders from their home island of Diego Garcia in order to make way for a US airbase.

5.1. Method

5.1.1. Participants, design, and procedure

Participants were 99 British undergraduate students (80 women and 19 men; age: $M = 19.69$, $SD = 3.28$) who received course credit for
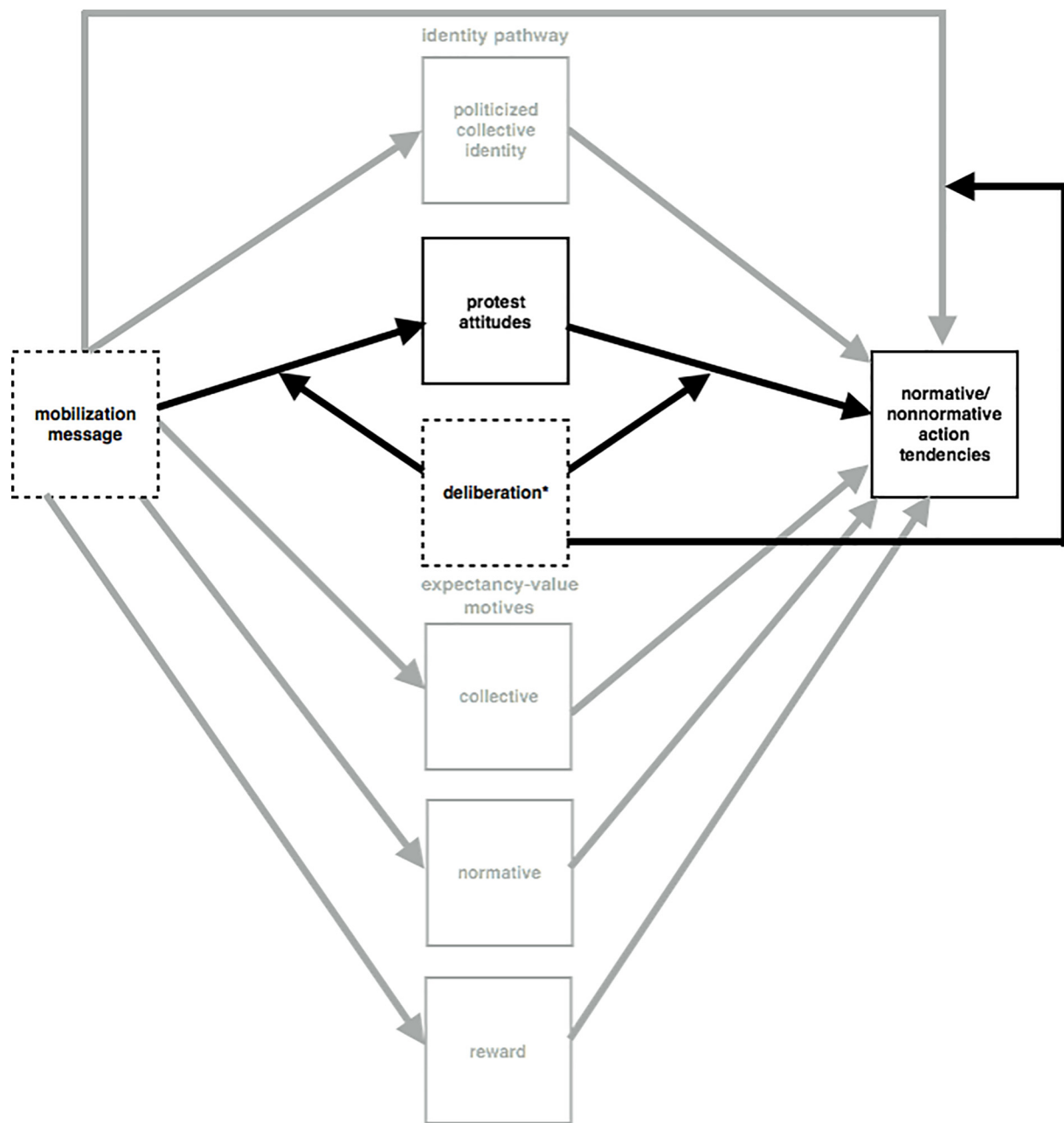
Fig. 2. Full conceptual/path model: Protest attitudes 1) have predictive validity over and above the expectancy-value and identity dual pathway model (grey boxes and arrows), 2) mediate the effects of mobilization messages on normative and nonnormative political action tendencies (protest attitude pathway), 3) are moderated by the motivation and/or opportunity for deliberation*. 2) and 3) suggest that the indirect effect of mobilization messages is conditional on deliberation. Additionally, deliberation moderates the direct effect of mobilization messages on action tendencies. Black boxes and arrows pertain to our novel hypotheses involving protest attitudes, mobilization message, and deliberation. Grey boxes and arrows reflect evidence from extant models. Broken boxes indicated manipulated variables. * we also included gender (not depicted) as a moderator of the protest pathway.

participation. A sensitivity analysis using G*power 3.1 indicated that the final sample of 99 provides 80% power ($\alpha = 0.05$; two-tailed) to detect an individual predictor effect as small as Cohen's $f^2 = 0.08$ (equivalent to an r_p^2 of 0.07) in a multiple regression analysis with four predictors. The size of the sample was determined by the number of people requiring course credit, and data collection did not depend on any preliminary analysis of results. Participants were informed that two separate studies would be completed during the session. The first was described as a social categorization task and as a validation of several individual difference measures. Participants completed the implicit and then explicit measure of attitude towards protest, followed by several filler measures. The "next" study was presented as a survey of students'

political attitudes and of their responses to a documentary detailing the complexities of international relations. Participants watched a 10-minute clip from "Stealing a Nation" – a film by the campaigning journalist John Pilger that comprises a critical investigative report of the forced expulsion of Chagos islanders by the British government (to view the film clip see "Materials" at https://osf.io/emk5josf.io/emk5j). After viewing the film, participants completed the rest of the measures.

5.1.2. Pre-film measures[1]
5.1.2.1. Implicit protest attitudes. Traditional implicit measures

---

[1] Participants also completed measures of SDO, RWA, political orientation,

(Greenwald, McGhee, & Schwartz, 1998) contrast evaluative responses with two categories (e.g., Black vs. White). There are no obvious or clear-cut comparison categories when considering attitudes toward protest. Therefore, we employed a Single Category Implicit Association Test (SC-IAT) to measure implicit attitudes towards protest; this test has exhibited good reliability and validity (Karpinski & Steinman, 2006). Seven target pictures of protest were selected to show large numbers of people with placards and signs of different types. To ensure that the general idea of protest was activated, rather than a specific protest issue, the words and phrases on signs and banners were blurred using Adobe Photoshop. The 21 evaluative target words (e.g., *excellent, unpleasant, nasty, marvelous*) for each dimension (good-bad) were taken from Karpinski and Steinman, and all target words were presented in lowercase. Participants were instructed to make their responses as quickly and accurately as possible. In order to maximize the reliability and validity of the SC-IAT, we did not include correct-response feedback, or a no response deadline, and participants were required to correct errant responses (see Cunningham, Preacher, & Banaji, 2001; Greenwald, Nosek, & Banaji, 2003; Nosek, Greenwald, & Banaji, 2005, 2007).

Scores on the implicit measure were calculated using a scoring algorithm modeled on the *D*-score algorithm (see Karpinski & Steinman, 2006). Specifically, data from the practice blocks were discarded. Nonresponses and those < 350 ms were eliminated, and error responses were replaced with the block mean plus an error penalty of 400 ms. The average response times of Block 2 (e.g., protest + good) were subtracted from the average response times of Block 4 (e.g., protest + bad). This quantity was divided by the standard deviation of all correct response times within Blocks 2 and 4, such that higher scores imply more favorable attitudes toward protest. Following Karpinksi and Steinman, reliability was assessed by dividing the test trials (Block 2 and 4) into thirds (blocks of 24) and calculating a SC-IAT score for each third without dividing by the standard deviation of correct response times. The measure of internal consistency was obtained by calculating the average intercorrelation among these scores, applying the Spearman–Brown correction to compensate for the underestimation of the reliability associated with dividing the test into thirds. These adjusted reliability coefficients are directly comparable and conceptually equivalent to the Cronbach's alphas computed for the explicit measures. Analyses showed a reasonable level of internal consistency (adjusted $r = 0.68$), in line with prior use of the SC-IAT.

5.1.2.2. Explicit protest attitudes. Following Karpinksi and Steinman, participants rated protest using five 7-point (1 to 7) semantic differential items ($\alpha = 0.81$): *ugly-beautiful, bad-good, unpleasant-pleasant, wise-foolish,* and *awful-nice* (for full details with verbatim item stem and instructions, see Appendix).

5.1.3. Post-film measures
5.1.3.1. Anger. We measured feelings of anger using four items from

(footnote continued)

identification, stereotypes, legitimacy, responsibility, admiration, fear, attitude toward international relations/politics, and implicit and explicit measures of attitude towards people (see "Materials" at osf.io/emk5j). These measures were exploratory in nature. None of these measures were included in subsequent analyses, although (single) inclusion makes little difference to the findings. In addition, we also measured protest attitudes with a feeling thermometer and ratings of 39 items ($\alpha = 0.96$) regarding political protest: e.g., "Protest is an important way to help improve social problems." These items were included as part of a separate "(p-)scale" development project and correlated well with our explicit measure of protest attitudes ($r = 0.58$, $p < .001$). For simplicity, and consistency across studies, we employed the semantic differential scale in our analysis, although the findings hold with either scale (see Table S3 in "Supplementary Tables and Figures" at osf.io/emk5j for full details of the regression models with our p-scale as the explicit measure of protest attitude).

van Zomeren et al. (2004). Participants were asked how strongly they felt "angry," "irritated," "furious," and "displeased" in relation to the situation described in the documentary ($\alpha = 0.84$). Participants responded on a 7-point scale ranging from 1 (*not at all*) to 7 (*extremely*). Participants also completed a number of filler emotion items (e.g., "inspired," "afraid") in order to minimize demand characteristics.

5.1.3.2. Collective efficacy. We measured perceived collective efficacy to improve the situation described in the documentary using two items adapted from van Zomeren et al. (2004): "I think together we are able to change this situation," and "I think we are able to stop this from continuing" ($r = 0.76$). Participants answered on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

5.1.3.3. Political action tendencies. Participants used a scale from 1 (*very unwilling*) to 7 (*very willing*) to indicate the extent to which they would be willing to perform several actions in support of the victims (the Chagos islanders) of the British actions. The collective action items were derived from van Zomeren et al. (2004): "send an email of protest to the government/MP," "participate in a demonstration," "help organize a petition," "participate in raising our collective voice to stop this situation," and "take part in efforts to raise awareness about the Chagos islanders case" ($\alpha = 0.88$).

6. Results and discussion

We tested the unique predictive power of protest attitude by specifying two regression models. Block 1 included the coping model predictors (anger and efficacy), block 2 added the implicit and explicit measures of protest attitude (see Table S1 for means, standard deviations, and correlations with confidence intervals and Table S2 for full details of the regression models). The model with the addition of the protest attitude measures accounted for a large proportion of variance in political action tendencies, $R^2 = 0.41$, 90% CI [0.27, 0.50],[2] $F(4, 94) = 16.64$, $p < .001$. This was greater than the coping model alone, $\Delta R^2 = 0.17$, 90% CI [0.07, 0.27], $F(2, 94) = 14.00$, $p < .001$. Specifically, the explicit measure of protest attitude uniquely predicted political action tendencies, $b = 0.39$, 95% CI [0.24, 0.55], $p < .001$, $sr^2 = 0.15$, 90% CI [0.06, 0.25]. As predicted, the more positive the overall protest attitude, the greater the willingness to engage in solidarity-based political action. Implicit measures of protest attitude did not uniquely predict political action tendencies, $b = 0.09$, 95% CI [−0.49, 0.67], $p = .760$, $sr^2 = 0.00$, 90% CI [−0.01, 0.01]. Taken together, these results indicate that explicit, but not implicit, measures of attitude towards protest add substantially to the predictive power of the emotion and efficacy-based coping model of collective political action.

7. Study 2

We aimed to replicate our findings and extend them beyond measures of political action tendencies to actual protest behavior. We examined a novel, behavioral measure of solidarity-based political action. Specifically, we measured whether, after a partial debriefing, participants signed a petition placed outside of the lab at the end of the hallway. Because this measure was taken outside the lab, after purportedly completing the study, it is more representative of "real-world" protest behavior and, arguably, less prone to experimenter effects and demand characteristics. In line with general attitude–behavior models in psychology (see Ajzen, 1991, 2005), and collective political action

---

[2] R^2 (and sr^2) requires a confidence coefficient of $(1 − 2\alpha)$ if we are to infer statistical significance ($p < .05$) from an interval that does not contain zero – i.e., 90% (not 95%) confidence intervals for R^2 (and sr^2) correspond to the traditional 0.05 criterion of statistical significance.

(see Van Zomeren et al., 2008), intention should mediate the effect of overall protest attitude on specific protest behavior. We separated our pre- and post-film measures across two separate sessions (with an average interval of three-days). Given that longer periods of time between attitude measurement and behavioral observation lead to greater attitude-behavior inconsistency (Schwartz, 1978), this allowed a more conservative test of our hypotheses and reduced the likelihood that participants could guess the link between pre- and post-film measures.

7.1. Method

7.1.1. Participants, design, and procedure

This study included 73 British undergraduate students (19 men and 54 women; age: $M = 21.16$, $SD = 3.52$) who received course credit for participation. A sensitivity analysis using G*power 3.1 indicated that the final sample of 73 provides 80% power ($\alpha = 0.05$; two-tailed) to detect an individual predictor effect as small as Cohen's $f^2 = 0.11$ (equivalent to an r_p^2 of 0.10) in a multiple regression analysis with four predictors. A sensitivity analysis with R package "powerMediation" revealed that our sample of 73 provides over 80% power ($\alpha = 0.05$; two-tailed) to detect a mediation effect with a medium-sized correlation between protest attitude and action tendencies ($r = 0.30$) and a small odds ratio between action tendencies and behavior ($OR = 1.68$). This is based on estimates from our sample for the standard deviation of the mediator ($SD = 1.52$) and the marginal prevalence of the outcome (0.4). The size of the sample was determined by the number of people requiring course credit, and data collection did not depend on any preliminary analysis of results. All participants reported British nationality. Four participants failed to complete both parts of the study and their data were excluded from all analyses. Participants followed the same procedure as in Study 1, except for receiving a partial debriefing after the post-firm measures, followed by information that a local student human rights organization had left some information and a petition outside the lab on a notice board at the end of the hallway. Participants were told that they did not have to look at this information, but that "due to the ethics committee's stipulations" it was necessary that they be made aware of it. Participants then left the lab after being thanked for their participation. Participants were contacted later to inform them that the petition was fictitious and were given the correct details of the human rights organization addressing the issue.

7.1.2. Pre-film measures

We employed the same measures of implicit (adjusted $r = 0.89$) and explicit protest attitudes ($\alpha = 0.85$) as in Study 1.[3]

7.1.3. Post-film measures

We employed the same measure of anger ($\alpha = 0.88$), collective efficacy ($r = 0.85$), and political action tendencies ($\alpha = 0.93$). Finally, protest behavior was measured by checking whether or not participants signed the petition calling on the UK government to repatriate the islanders and pay them full reparations.

8. Results and discussion

For simplicity and consistency across studies, we employed the same analytic method as in Study 1 (see Table S4 for means, standard deviations, and correlations with confidence intervals and Tables S5 and S6 for full details of the regression models at osf.io/emk5j). The model with the addition of the protest attitude measures accounted for a medium-large proportion of variance in political action tendencies, $R^2 = 0.17$, 90% CI [0.02, 0.26], $F(4, 68) = 3.41$, $p = .012$. This was not

significantly greater than the coping model alone, $\Delta R^2 = 0.06$, 90% CI [-0.03, 0.14], $F(2, 68) = 2.27$, $p = .111$. This reflects the combination of the smaller (than Study 1) sample size and the implicit measure's lack of predictive power, $b = -0.17$, 95% CI [-1.06, 0.72], $p = .706$, $sr^2 = 0.00$, 90% CI [-0.01, 0.02]. However, the explicit measure of protest attitude uniquely predicted action tendencies, $b = 0.42$, 95% CI [0.03, 0.81], $p = .037$, $sr^2 = 0.06$, 90% CI [-0.03, 0.14]. Again, these results indicate that explicit, but not implicit, measures of attitudes towards protest uniquely predict collective political action tendencies.

8.1. Indirect effect of protest attitude

We employed R package "mediation" (Tingley, Yamamoto, Hirose, Keele, & Imai, 2012) to test the indirect effect of protest attitude (through action tendencies) on signing the petition. The package calculates estimates of the average causal mediation effect (ACME) by using the quasi-Bayesian Monte Carlo method based on normal approximation (Imai, Keele, & Tingley, 2010). This method has a good balance between Type I error and power, avoiding unacceptably high Type I error rates in other common methods (i.e., bias-corrected and accelerated bias-corrected bootstrap) of estimating mediation effects (Yzerbyt, Muller, Batailer, & Judd, n.d.).

In addition to the full model (i.e., the coping model with the addition of the protest attitude measures), we created a probit regression model for signing the petition (Y) with action tendencies (M), anger (X_1), efficacy (X_2), and our implicit (X_3) and explicit (X_4) protest attitude measures as predictors of M and Y. In total 40% of participants signed the petition (coded: 0 = not signed, 1 = signed). The model accounted for a marginally significant proportion of variance in protest behavior, McFadden's $R^2 = 0.099$, $\chi(5) = 9.65$, $p = .086$ (see Tables S7 for full details of the probit regression model). As predicted, action tendencies predicted whether participants signed the petition, $b = 0.32$, 95% CI [0.09, 0.58], $p = .011$. Analysis with 5000 Monte Carlo draws revealed a marginal indirect effect of explicit protest attitudes on petition behavior through action tendencies, $b = 0.03$, 95% CI [-0.00, 0.08], $p = .10$. Substituting the semantic differential scale with our exploratory p-scale ($\alpha = 0.96$) resulted in a significant indirect effect on petition behavior through action tendencies, $b = 0.06$, 95% CI [0.03, 0.13], $p = .025$ (see Fig. S1 for details).

8.1.1. Sensitivity analysis of indirect effects

Sensitivity analysis on these indirect effects revealed that they were robust up until p (rho) = 0.3 (see Figs. S2 & S3). That is, it would take an unobserved confounder ($R^2 = 0.09$) to overturn our conclusion that the assumptions for causal mediation are met (see Imai et al., 2010). Given the smaller sample size, these findings largely replicate those of Study 1 and provide some tentative evidence for the (indirect) predictive role of explicit protest attitudes in actual protest behavior.

9. Study 3

We wanted to replicate our findings with a larger sample and extend them to normative (rather than solidarity-based) political action by disadvantaged group members. Further, we wanted to examine the role of implicit measures of protest attitudes when the opportunity to engage in deliberation is reduced (Nosek, Hawkins, & Frazier, 2011; Olson & Fazio, 2008). Therefore, we employed a cognitive load manipulation in order to impair deliberation about political action. We also wanted to address certain methodological issues. Studies 1 and 2 employed pictures of protests as the attitude object for our implicit measure. Although we masked semantic (protest) content of the pictures, it may be that these measures partly captured evaluations of crowds or large gatherings of people. We therefore employed protest words as the attitude object in Study 3. Finally, we employed the same evaluative semantic markers for both the implicit and explicit protest attitude measures; making comparisons between implicit and explicit measures

---

[3] Participants also completed some of the same exploratory measures as in Study 1. This time we measured protest norms instead of attitudes towards humans with implicit and explicit measures (see "Materials" at osf.io/emk5j).

more meaningful.

9.1. Method

9.1.1. Participants, design, and procedure

This study included 192 British undergraduate students (166 women and 21 men[4]; age: $M = 19.20$, $SD = 1.70$) who received course credit for participation. A sensitivity analysis using G*power 3.1 indicated that the sample of 192 provides 80% power ($\alpha = 0.05$; two-tailed) to detect an individual predictor effect as small as Cohen's $f^2 = 0.04$ (equivalent to an r_p^2 of 0.04) in a multiple regression analysis with six predictors. The size of the sample was determined by the number of people requiring course credit, and data collection did not depend on any preliminary analysis of results. Participants followed the same general procedure as in Study 1, except that instead of watching a film documenting an ingroup transgression, participants received information regarding proposed increases in student fees. They were told that UK universities were expecting to increase tuition fees and that this would result in large increases in student debt and students from poorer backgrounds dropping out of higher education.

9.1.1.1. Manipulation.
Participants were randomly allocated to either a low (cognitive load) or high (no cognitive load) deliberation condition. We manipulated deliberation at the beginning of the study with a digit span task (Van Dillen, Papies, & Hofmann, 2013). This involved participants being given an 8-digit number at the start of the study (cognitive load) or just before (no cognitive load) being asked to recall the number at the end of the study.

9.1.2. Pre-protest issue measures

9.1.2.1. Implicit protest attitudes.
We employed the same measure of implicit attitude as in Studies 1 and 2. However, this time we employed eight protest words (protest, demonstrate, rally, march, petition, picket, strike, boycott) instead of protest pictures as the stimuli for classification into the relevant categories. Analyses showed a good level of internal consistency (adjusted $r = 0.72$).[5]

9.1.2.2. Explicit protest attitudes.
Participants were this time asked to rate political protest on six evaluative attributes ($\alpha = 0.86$) taken from the measure of implicit attitude: "horrible" (reverse-coded), "fabulous," "terrible" (reverse-coded), "splendid," "pleasure," "unpleasant" (reverse-coded). Participants rated each on a scale from 1 (*not at all*) to 7 (*very much*). For full details with verbatim item stem and instructions, see Appendix.

9.1.3. Post-protest issue measures

We employed the same measures of anger ($\alpha = 0.89$), participants' perceptions of collective efficacy ($r = 0.89$), and political action tendencies ($\alpha = 0.92$), this time in relation to the fee increases.

---

[4] Five participants did not report their gender.

[5] Participants also completed some of the same exploratory measures as in Study 2. This time we measured implicit and explicit attitude towards politics instead of protest norms (see "Materials" at osf.io/emk5j). In addition, we measured participants anger, efficacy, and political action tendencies in relation to tackling "world poverty". Again, explicit protest attitude predicted action tendencies over and above the coping model, $b = 0.25$, 95% CI [0.13, 0.37], $p < .001$. We did not include the model here as we failed to counterbalance the order of political issues examined, with participants providing appraisals relating to university fees first and world poverty second. As such, we are unsure of the impact of order/framing on the world poverty appraisals. That is, participants may have felt like they should be consistent across political issues. In addition, solidarity-based action has already been addressed in Studies 1 and 2.

10. Results and discussion

We ran three regression models to test our predictions: Block 1 included the coping model predictors, block 2 added the protest attitude measures, and block 3 added the cognitive load manipulation (coded: -0.5 = control, 0.5 = cognitive load) and its interaction with (mean-centered) implicit attitudes (see Table S8 for means, standard deviations, and correlations with confidence intervals and Tables S9 for full details of all the regression models).

10.1. Digit span performance

As expected, correct reporting of the 8-digit number was contingent on deliberation condition, $\chi_{(1)}^2 = 75.29$, $p < .001$. A greater than chance proportion (12%) of those in the low deliberation (cognitive load) condition failed to report the correct 8-digit number, $z = 2.05$, $p = .041$. In contrast, a less than chance proportion (1%) of those in the high deliberation (no cognitive load) condition failed to correctly report the 8-digit number, $z = -2.11$, $p = .035$. This finding is consistent with successfully manipulating the opportunity for deliberation through our cognitive load manipulation, and suggests that participants paid attention to the digit span task.

10.2. Regression models

The model with the addition of the protest attitude measures (block 2) accounted for a large proportion of variance in political action tendencies, $R^2 = 0.47$, 90% CI [0.38, 0.53], $F(4, 187) = 41.38$, $p < .001$. This was significantly greater than the coping model alone (block 1), $\Delta R^2 = 0.10$, 90% CI [0.04, 0.15], $F(2, 187) = 17.24$, $p < .001$. The explicit measure of protest attitude uniquely predicted action tendencies in both block 2 ($b = 0.37$, 95% CI [0.23, 0.50], $p < .001$, $sr^2 = 0.08$, 90% CI [0.03, 0.13]) and block 3 ($b = 0.37$, 95% CI [0.23, 0.51], $p < .001$, $sr^2 = 0.08$, 90% CI [0.03, 0.13]). Once again, the implicit measure lacked predictive power, $b = 0.36$, 95% CI [-0.16, 0.88], $p = .172$, $sr^2 = 0.01$, 90% CI [-0.01, 0.02] and $b = 0.29$, 95% CI [-0.25, 0.83], $p = .285$, $sr^2 = 0.00$, 90% CI [-0.01, 0.01] for blocks 2 and 3, respectively. The role of the implicit measure was not moderated by cognitive load, $b = 0.28$, 95% CI [-0.75, 1.32], $p = .591$, $sr^2 = 0.00$, 90% CI [-0.01, 0.01].

These findings extend the predictive power of attitude towards protest to normative political action by disadvantaged group members. In this case, explicit measures of attitude toward protest helped to predict political action tendencies over and above the efficacy and emotion-based coping model. In contrast to theorizing on implicit processes (Nosek et al., 2011; Olson & Fazio, 2008), we found little evidence that implicit measures of protest attitude played a greater predictive role when there was a lack of opportunity to deliberate over action (i.e., under cognitive load).

11. Study 4

We wanted to replicate our findings in a larger, more representative (non-student) sample and to test whether information mobilizing support for particular protests affects overall protest attitude, which in turn engender political action tendencies in specific contexts. Further, we tested whether attitude towards protest has predictive power over and above the expectancy-value and identity dual pathway model (Stürmer & Simon, 2004). We also examined whether attitude towards protest predicted nonnormative action tendencies over and above variables (i.e., contempt) identified in extant models of nonnormative action (Tausch et al., 2011).

11.1. Method

11.1.1. Participants and design

This study included 383 British people (203 women and 154 men[6]; age: $M = 33.31$, $SD = 12.56$) from a crowdsourcing platform who received £0.92 for participation in an 11-minute study. A sensitivity analysis using G*power 3.1 indicated that the final sample of 355 provides 80% power ($\alpha = 0.05$; two-tailed) to detect an individual predictor effect as small as Cohen's $f^2 = 0.02$ (equivalent to an r_p^2 of 0.02) in a multiple regression analysis with 12 predictors. Simulation studies suggest that our sample of 355 provides approximately 80% power ($\alpha = 0.05$; two-tailed) to detect an indirect effect of $b = 0.05$ (Yzerbyt et al., n.d.; Fritz & MacKinnon, 2007).[7] That is, the product of a medium-sized path (partial effect) between the mobilization message manipulation and protest attitude ($a = 0.39$) and a small-sized path between protest attitude and action tendencies ($b = 0.14$). The size of the sample was maximized given available resources, and data collection did not depend on any preliminary analysis of results. Participants were randomly allocated to one of four conditions in a 2 (message: mobilization vs. control) x 2 (deliberation: high vs. low cognitive load) between-groups design.

11.1.2. Materials and procedure

Participants were told that the study was concerned with "people's thoughts and feelings about historic British social issues and memory abilities." Participants followed the same general procedure as in Study 3, except that we manipulated deliberation with a dot-pattern task instead of a digit span task. Specifically, participants were given a practice dot-pattern task to memorize and recall, and they were then given a difficult (high load) or easy (low load) dot-pattern task (see De Neys, 2006) to memorize before watching the mobilization message (for details see "Materials" at osf.io/emk5j). In the mobilization condition, participants viewed a short mobilization message: a short film on Emmeline Pankhurst and the British suffragette movement. Participants in the control condition viewed a video depicting various images of Victorian and Edwardian women (see "Materials" at osf.io/emk5j for details of both clips). To provide a rationale for the presentation of the clip, participants reported their thoughts and feelings about the clip in an open text box. Next participants were provided with information about contemporary British gender inequality (see "Materials" at osf.io/emk5j). Following this, participants completed the measures of interest. We preregistered the study design, including all measures and planned analyses, at Open Science Framework (see https://osf.io/emk5j).

11.1.3. Measures[8]

For our explicit measure of protest attitude, we asked participants to rate "protest," "demonstrations," "civil disobedience," "demonstrations," and "petitions" ($\alpha = 0.75$) on a scale from 1 (*extremely negative*) to 7 (*extremely negative*). For full details with verbatim item stem and instructions, see Appendix. Our implicit measure was the same as the one used in Study 3 (adjusted $r = 0.97$). We presented the same measures of anger ($\alpha = 0.92$), collective efficacy ($\alpha = 0.88$), and

(normative) political action tendencies ($\alpha = 0.96$) in relation to gender inequality. Using the same scale as in Study 3, we measured participants' collective politicized identification using three items: "I feel a bond with women fighting for gender equality," "I think that women fighting for gender equality have a lot to be proud of," and "I have a lot in common with the average woman fighting for gender equality" ($\alpha = 0.86$).

11.1.3.1. Expectancy-value predictors.
Participants rated their agreement with all collective, normative, and reward items adapted from Stürmer and Simon (2009), using a 7-point scale ranging from 1 (*not at all*) to 7 (*very much*). In line with Stürmer and Simon, we created a score for the collective motive by multiplying the ratings for the value item ("Gender equality is important to me") and the average of the two ($r = 0.61$) expectancy items ("I expect gender equality will happen" and "I expect that gender inequality can be improved through protest"). A score for the normative motive was created by multiplying the ratings for the value item ("If I protested gender inequality, the reaction of the people I care about would be important") and the expectancy item ("The people I care about would respond positively if I protested gender inequality"). Scores on the collective and normative motives could vary between $+1$ and $+49$.

For the reward motive items, we created a score for the benefits of protest by multiplying the ratings for the value item ("Coming together with others to protest gender inequality is rewarding") and the expectancy item ("I expect to come together with others to protest gender inequality"). Again, we then created a negative score for the costs of protest by multiplying the ratings for the value item ("Taking time out to protest gender inequality is costly") by minus 1 and multiplying the product and the (positive) expectancy item ("I expect to take time out to protest gender inequality.") To create a score for the reward motive, the benefits product term ($+1$ to $+49$) was added to the (negative) cost product term (-1 to -49). Scores for this motive could vary between -48 to $+48$.

11.1.3.2. Contempt and nonnormative political action tendencies.
We measured feelings of contempt by asking participants to what extent they felt "contempt" and "disdain" ($\alpha = 0.83$) towards "people with sexist beliefs and those whose actions help to maintain gender inequality." These items were adapted from Tausch et al. (2011), with participants responding on a 7-point scale from 1 (*absolutely not*) to 7 (*absolutely*). Using the same scale as in previous studies, we asked how willing they were to "take part in sit-ins or occupations," "take part in civil disobedience," and "take part in violent political action" ($\alpha = 0.85$).

12. Results

12.1. Analytic approach

For each type of political action (i.e., normative and nonnormative) and each extant model (i.e., efficacy- and emotion-based coping model and the expectancy-value and identity dual pathway model), we ran a series of three regression models to test our main predictions – twelve in total. In other words, we ran three regression models for each combination of extant model and type of political action. Block 1 included the extant model predictors. Block 2 added the protest attitude measures. Block 3 added the deliberation manipulation (coded: $-0.5 =$ low cognitive load, $0.5 =$ high cognitive load) and its interactions with the protest attitude measures; the mobilization manipulation and its interaction with the deliberation manipulation; and gender (coded: $-0.5 =$ male, $0.5 =$ female) and its interaction with the mobilization manipulation (see Table S10 for means, standard deviations, and correlations with confidence intervals and Tables S11–17 for full details of the regression models). The terms including gender were added because participants belonged to either an advantaged (male) or a

---

[6] Twenty-six participants failed to provide details of their gender and two failed to complete all of the measures (N for analysis = 355).

[7] Strictly speaking, $N = 404$ for 80% power with percentile bootstrap estimation. Yzerbyt et al., show that the Monte Carlo method closely approximates percentile bootstrap estimation in terms of power, so we use this approximation for our sensitivity analysis. However, these simulations are based on simple, single mediator models. Given that extant models are weakly correlated with protest attitude but strongly correlated with action tendencies, addition of these variables is likely to increase power for the test of our indirect effects. This increase in power is attenuated somewhat by the inclusion of the weakly associated interaction terms in the final model of Y.

[8] For exploratory purposes, participants also completed items measuring modern sexism, political interest, and sympathy towards the victims of sexism.

disadvantaged (female) groups.

12.2. Normative action tendencies (adjusting for the emotion and efficacy coping model)

The model with the addition of the protest attitude measures (block 2) accounted for a large proportion of variance in normative political action tendencies, $R^2 = 0.46$, 90% CI [0.39, 0.51], $F(4, 350) = 74.55$, $p < .001$. This proportion of variance was significantly greater than that accounted for by the coping model alone (block 1), $\Delta R^2 = 0.07$, 90% CI [0.04, 0.11], $F(2, 350) = 23.53$, $p < .001$. The explicit measure of protest attitude uniquely predicted action tendencies in both block 2 ($b = 0.42$, 95% CI [0.30, 0.55], $p < .001$, $sr^2 = 0.07$, 90% CI [0.03, 0.10]) and block 3 ($b = 0.42$, 95% CI [0.29, 0.55], $p < .001$, $sr^2 = 0.06$, 90% CI [0.03, 0.09]). Once again, the implicit measure lacked predictive power and was not moderated by our deliberation manipulation ($ps > 0.26$). Gender uniquely predicted action tendencies, $b = 0.50$, 95% CI [0.21, 0.79], $p < .001$, $sr^2 = 0.02$, 90% CI [0.00, 0.03] (see Table S11 for full details of the regression models).

12.3. Indirect effect of mobilization message

To test the (conditional) indirect effect of the mobilization message manipulation through explicit protest attitude we specified two regression models. First, we regressed (mean-centered) explicit protest attitudes (M) on the mobilization (X_1; coded: $-0.5 = $ control, $0.5 = $ mobilization) and deliberation manipulations (X_2), their interaction ($X_{1:2}$), gender (X_3) and its interaction with the mobilization manipulation ($X_{3:1}$). Second, we employed the regression model from block 3 as the model for Y (see Tables S11 [Y = block 3] & S12 [M] for full details of the regression models). In short, this regression approach allows us to test the full conceptual model depicted in Fig. 1. Specifically, analysis in the R package "mediation" with 5000 Monte Carlo draws revealed a significant indirect effect of the mobilization manipulation on normative action tendencies through explicit attitudes, $b = 0.07$, 95% CI [0.02, 0.15], $p = .004$. This was not conditional on deliberation, $b = -0.00$, 95% CI [-0.10, 0.10], $p = .98$, or gender, $b = -0.00$, 95% CI [-0.10, 0.10], $p = .996$ (see Fig. S4 for details of indirect, direct and total effects).

12.4. Nonnormative action tendencies[9] (adjusting for the emotion and efficacy coping model)

The model with the addition of the protest attitude measures (block 2) accounted for a large proportion of variance in nonnormative political action tendencies, $R^2 = 0.34$, 90% CI [0.27, 0.39], $F(5, 349) = 36.25$, $p < .001$. This proportion of variance was significantly greater than that account for by the coping model alone (block 1), $\Delta R^2 = 0.17$, 90% CI [0.11, 0.22], $F(2, 349) = 44.35$, $p < .001$. The explicit measure of protest attitude uniquely predicted action tendencies in both block 2 ($b = 0.20$, 95% CI [0.15, 0.25], $p < .001$, $sr^2 = 0.12$, 90% CI [0.07, 0.17]) and block 3 ($b = 0.20$, 95% CI [0.15, 0.25], $p < .001$, $sr^2 = 0.12$, 90% CI [0.07, 0.17]). The implicit measure also uniquely predicted nonnormative action tendencies in both block 2 ($b = 0.31$, 95% CI [0.16, 0.46], $p < .001$, $sr^2 = 0.03$, 90% CI [0.01, 0.06]) and block 3 ($b = 0.31$, 95% CI [0.16, 0.46], $p < .001$, $sr^2 = 0.03$, 90% CI [0.01, 0.05]). However, it was not moderated by our

---

[9] As one might expect, nonnormative action tendencies were positively skewed. We report all models with a log transformation of nonnormative action tendencies. There was no substantive difference in findings regardless of the nonnormative action variable employed. For ease of interpretation, we also present the models including the original variable in "Supplementary Tables and Figures" at osf.io/emk5j (see Tables S13 and S17 for details of the regression models).

deliberation manipulation ($p > .57$; see Table S14 for full details of the regression models).

12.5. Indirect effect of mobilization message

Following the same analytic approach, analysis revealed a significant indirect effect of the mobilization manipulation on nonnormative action tendencies through explicit attitudes, $b = 0.08$, 95% CI [0.03, 0.13], $p = .003$. This was not conditional on deliberation, $b = -0.00$, 95% CI [-0.07, 0.07], $p = .978$, or gender, $b = 0.00$, 95% CI [-0.07, 0.08], $p = .992$ (see Fig. S5).

12.6. Sensitivity analysis of indirect effects

Sensitivity analysis on the two indirect effects revealed that they were robust up until p (rho) $= 0.2$ and p (rho) $= 0.4$ for normative and nonnormative action tendencies, respectively (see Figs. S4 & S5). That is, it would take unobserved confounders of $R^2 = 0.04$ and $R^2 = 0.16$ to overturn our conclusion that the assumptions for causal mediation are met for the model of normative and nonnormative action tendencies, respectively (see Imai et al., 2010).

12.7. Normative action tendencies (adjusting for expectancy-value and identity model)

The model with the addition of the protest attitude measures (block 2) accounted for a large proportion of variance in normative political action tendencies, $R^2 = 0.62$, 90% CI [0.57, 0.66], $F(6, 348) = 96.37$, $p < .001$. This proportion of variance was significantly greater than that accounted for by the coping model alone (block 1), $\Delta R^2 = 0.01$, 90% CI [-0.00, 0.02], $F(2, 348) = 5.25$, $p = .006$. The explicit measure of protest attitude uniquely predicted action tendencies in both block 2 ($b = 0.17$, 95% CI [0.06, 0.29], $p = .003$, $sr^2 = 0.01$, 90% CI [-0.00, 0.02]) and block 3 ($b = 0.19$, 95% CI [0.08, 0.31], $p = .001$, $sr^2 = 0.01$, 90% CI [0.00, 0.02]). The implicit measure lacked predictive power and was not moderated by our deliberation manipulation ($ps > 0.38$). Gender marginally predicted action tendencies, $b = 0.23$, 95% CI [-0.02, 0.49], $p = .074$, $sr^2 = 0.00$, 90% CI [-0.00, 0.01] (see Table S15 for full details of the regression models).

12.8. Indirect effect of mobilization message

Analysis revealed a significant indirect effect of the mobilization manipulation on normative action tendencies through explicit attitudes, $b = 0.08$, 95% CI [0.02, 0.16], $p = .005$. This was not conditional on deliberation, $b = -0.00$, 95% CI [-0.10, 0.09], $p = .986$ or gender, $b = 0.00$, 95% CI [-0.10, 0.10], $p = .987$ (see Fig. 2 for a conceptual representation and Fig. S6 for details of the indirect effect).

12.9. Nonnormative action tendencies (adjusting for expectancy-value and identity model)

The model with the addition of the protest attitude measures (block 2) accounted for a large proportion of variance in normative political action tendencies, $R^2 = 0.38$, 90% CI [0.30, 0.43], $F(6, 348) = 35.23$, $p < .001$. This was significantly greater than the coping model alone (block 1), $\Delta R^2 = 0.09$, 90% CI [0.05, 0.13], $F(2, 348) = 25.61$, $p < .001$. The explicit measure of protest attitude uniquely predicted action tendencies in both block 2 ($b = 0.14$, 95% CI [0.09, 0.19], $p < .001$, $sr^2 = 0.05$, 90% CI [0.02, 0.09]) and block 3 ($b = 0.15$, 95% CI [0.09, 0.20], $p < .001$, $sr^2 = 0.06$, 90% CI [0.02, 0.09]). The implicit measure also uniquely predicted nonnormative action tendencies in both block 2 ($b = 0.31$, 95% CI [0.16, 0.45], $p < .001$, $sr^2 = 0.03$, 90% CI [0.01, 0.05]) and block 3 ($b = 0.30$, 95% CI [0.15, 0.45], $p < .001$, $sr^2 = 0.03$, 90% CI [0.01, 0.05]). However, the effect of the implicit measure was not moderated by our deliberation manipulation

($p > .62$; see Table S16 for full details of the regression models).

12.10. Indirect effect of mobilization message

Analysis revealed a significant indirect effect of the mobilization message on nonnormative action tendencies through explicit attitudes, $b = 0.06$, 95% CI [0.02, 0.10], $p = .002$. This was not conditional on deliberation, $b = -0.00$, 95% CI [-0.06, 0.06], $p = .991$ or gender, $b = -0.00$, 95% CI [-0.06, 0.06], $p = .982$ (see Fig. S7).

12.11. Sensitivity analysis of indirect effects

Sensitivity analysis on the two indirect effects on normative and nonnormative action tendencies (adjusting for the expectancy-value and identity model) revealed that they were robust up until p (rho) = 0.2 and p (rho) = 0.3 for normative and nonnormative action, respectively (see Figs. S6 & S7). That is, it would take an unobserved confounder of $R^2 = 0.04$ and 0.09 to overturn our conclusion that the assumptions for causal mediation are met for the normative and nonnormative action mediation models.

13. Discussion

Taken together, these findings largely replicate the results of Studies 1–3 and extend the predictive power of attitude to protest over and above the expectancy-value and identity dual pathway model and the extended coping model for both normative and nonnormative political action tendencies. This is important as it was possible that the predictive power of protest attitude simply reflected relevant aspects of collective politicized identity (Van Zomeren et al., 2008). Further, we also find that the predictive power of protest attitude remains significant after adjusting for group membership. Finally, we find that the protest attitude pathway accounts for a (small) indirect effect of the mobilization messages manipulation on normative and nonnormative action tendencies. That is, watching the mobilization message (vs. control) predicted more positive protest attitude, which, in turn, predicted greater action tendencies.

14. Study 5

The findings from Study 4 replicate those of Studies 1–3 in a larger, more representative (non-student) sample. In Study 5 we sought to replicate and extend the findings of Study 4 using a different manipulation of deliberation. While cognitive load manipulations impair deliberation to differing degrees, we sought to actively encourage deliberation regarding the political issue in question. Therefore, we tested the effect of deliberation using a more "positive" manipulation: encouraging, rather than impeding, deliberation via a thought task manipulation.

14.1. Method

14.1.1. Participants and design

This study included 285 British people (151 women and 128 men[10]; age: $M = 36.77$, $SD = 16.51$) from a crowdsourcing platform who received £1.67 for participation in a 20-minute study. A sensitivity analysis using G*power 3.1 indicated that the final sample of 278 provides 80% power ($\alpha = 0.05$; two-tailed) to detect an individual predictor effect as small as Cohen's $f^2 = 0.03$ (equivalent to an r_p^2 of 0.03) in a multiple regression analysis with 12 predictors. Simulation studies suggest that our sample of 278 provides well over 80% power ($\alpha = 0.05$; two-tailed) to detect an indirect effect of $b = 0.05$. That is,

the product of a medium-sized path between both the mobilization message manipulation and protest attitude ($a = 0.39$) and protest attitude and action tendencies ($b = 0.39$). The size of the sample was maximized given available resources, and data collection did not depend on any preliminary analysis of results. Participants were randomly allocated to one of four conditions in a 2 (message: mobilization vs. control) x 2 (deliberation: high vs. low) between-groups design.

14.1.2. Procedure, materials and measures

The procedure, materials and measures were the same as those in Study 4, with the exception that participants in the high deliberation condition completed an open text thought task (see Chaiken & Yates, 1985) in which they were asked to report their thoughts and feelings about the clip that they had watched. Those in the low deliberation condition where asked to report their thoughts and feelings about their most recent visit to a supermarket. We employed the same measures of explicit ($\alpha = 0.81$) and implicit (adjusted $r = 0.80$) protest attitude, anger ($\alpha = 0.94$), collective efficacy ($\alpha = 0.87$), normative political action tendencies ($\alpha = 0.96$), collective politicized identification ($\alpha = 0.85$), feelings of contempt ($\alpha = 0.88$), nonnormative political action tendencies ($\alpha = 0.85$), collective ($r = 0.47$), normative, and reward motives.

15. Results

To test our predictions, we followed the same analytic approach as in Study 4 (see Table S18 for means, standard deviations, and correlations with confidence intervals).

15.1. Normative action tendencies (adjusting for emotion and efficacy coping model)

The model with the addition of the protest attitude measures (block 2) accounted for a large proportion of variance in normative political action tendencies, $R^2 = 0.36$, 90% CI [0.28, 0.42], $F(4, 273) = 39.02$, $p < .001$. This was significantly greater than the coping model alone (block 1), $\Delta R^2 = 0.04$, 90% CI [0.01, 0.07], $F(2, 273) = 7.90$, $p < .001$. Explicit protest attitude uniquely predicted action tendencies in both block 2 ($b = 0.27$, 95% CI [0.12, 0.42], $p < .001$, $sr^2 = 0.03$, 90% CI [0.00, 0.06]) and block 3 ($b = 0.28$, 95% CI [0.13, 0.43], $p < .001$, $sr^2 = 0.03$, 90% CI [0.00, 0.06]). The implicit measure was not a significant predictor and was not moderated by the deliberation manipulation ($ps > 0.12$). Gender uniquely predicted action tendencies, $b = 0.53$, 95% CI [0.17, 0.89], $p = .004$, $sr^2 = 0.02$, 90% CI [-0.00, 0.04] (see Table S19 for full details of the regression models).

15.2. Indirect effect of mobilization message

Analysis revealed a nonsignificant indirect effect of the mobilization manipulation on normative action tendencies through explicit attitudes, $b = 0.06$, 95% CI [-0.02, 0.17], $p = .12$. This was not conditional on deliberation, $b = 0.00$, 95% CI [-0.14, 0.14], $p = 986$ or gender, $b = 0.00$, 95% CI [-0.14, 0.14], $p = .989$ (see Tables S20 for details of the regression model for M and Fig. S8 for details of indirect, direct and total effects).

15.3. Nonnormative action tendencies[11] (adjusting for emotion and efficacy coping model)

The model with the addition of the protest attitude measures (block

---

[10] Six participants failed to provide details of their gender and one failed to complete the explicit measure of protest attitude (N for analysis = 278).

[11] Again, nonnormative action tendencies were positively skewed. There was no substantive difference when we ran models a with a log transformation of nonnormative action tendencies adjusting for the coping model. However, there were differences adjusting for the expectancy-value and identity model.

2) accounted for a medium-to-large proportion of variance in nonnormative political action tendencies, $R^2 = 0.23$, 90% CI [0.15, 0.29], $F(5, 272) = 16.51$, $p < .001$. This was significantly greater than the coping model alone (block 1), $\Delta R^2 = 0.03$, 90% CI [-0.00, 0.05], $F(2, 272) = 4.65$, $p = .01$. The explicit measure of protest attitude uniquely predicted action tendencies in both block 2 ($b = 0.08$, 95% CI [0.03, 0.13], $p = .003$, $sr^2 = 0.02$, 90% CI [-0.00, 0.05]) and block 3 ($b = 0.09$, 95% CI [0.03, 0.14], $p = .002$, $sr^2 = 0.03$, 90% CI [-0.00, 0.05]). The implicit measure did not uniquely predict nonnormative action tendencies and was not moderated by our deliberation manipulation ($ps > 0.52$; see Table S21 for full details of the regression models).

15.4. Indirect effect of mobilization message

Analysis revealed a marginally significant indirect effect of the mobilization manipulation on nonnormative action tendencies through explicit protest attitude, $b = 0.02$, 95% CI [-0.00, 0.06], $p = .09$. This was not conditional on deliberation, $b = -0.00$, 95% CI [-0.04, 0.05], $p = .986$ or gender, $b = -0.00$, 95% CI [-0.05, 0.04], $p = .975$ (see Fig. S9).

15.5. Sensitivity analysis of indirect effects

Sensitivity analysis on the two indirect effects on normative and nonnormative action revealed that they were robust up until p (rho) = 0.2 ($R^2 = 0.04$). Put simply, it would take an unobserved confounder of $R^2 = 0.04$ to overturn our conclusion that the assumptions for causal mediation are met (see Figs. S8 & S9).

15.6. Normative action tendencies (adjusting for expectancy-value and identity model)

The model with the addition of the protest attitude measures (block 2) accounted for a large proportion of variance in normative political action tendencies, $R^2 = 0.57$, 90% CI [0.50, 0.61], $F(6, 271) = 59.00$, $p < .001$. This proportion of variance was not significantly greater than that explained by the expectancy-value model alone (block 1), $\Delta R^2 = 0.01$, 90% CI [-0.00, 0.01], $F(2, 271) = 2.92$, $p = .208$. The explicit measure of protest attitude did not uniquely predict action tendencies in block 2 ($b = 0.10$, 95% CI [-0.03, 0.22], $p = .126$, $sr^2 = 0.00$, 90% CI [-0.00, 0.01]) or block 3 ($b = 0.10$, 95% CI [-0.03, 0.23], $p = .120$, $sr^2 = 0.00$, 90% CI [-0.00, 0.01]). The implicit measure lacked predictive power and was not moderated by our deliberation manipulation ($ps > 0.22$). Gender did not uniquely predict action tendencies, $b = 0.25$, 95% CI [-0.05, 0.56], $p = .105$, $sr^2 = 0.00$, 90% CI [-0.00, 0.01] (see Table S23 for full details of the regression models).

15.7. Indirect effect of mobilization message

Analysis revealed a nonsignificant indirect effect of the mobilization manipulation on normative action tendencies through explicit attitudes, $b = 0.02$, 95% CI [-0.01, 0.09], $p = .27$. This was not conditional on deliberation, $b = 0.00$, 95% CI [-0.08, 0.07], $p = .993$ or gender, $b = 0.00$, 95% CI [-0.07, 0.07], $p = .998$ (see Fig. S10).

15.8. Nonnormative action tendencies (adjusting for expectancy-value and identity model)

The model with the addition of the protest attitude measures (block 2) accounted for a large proportion of variance in nonnormative political action tendencies, $R^2 = 0.34$, 90% CI [0.25, 0.39], $F(6, 271) = 22.81$, $p < .001$. This was not significantly greater than the expectancy-value and identity model alone (block 1), $\Delta R^2 = 0.01$, 90% CI [-0.01, 0.02], $F(2, 271) = 1.53$, $p = .218$. The explicit measure of protest attitude marginally predicted action tendencies in block 2, $b = 0.04$, 95% CI [-0.01, 0.09], $p = .087$, $sr^2 = 0.01$, 90% CI [-0.01, 0.02]. It fell narrowly short of conventional significance in block 3, $b = 0.05$, 95% CI [-0.00, 0.10], $p = .06$, $sr^2 = 0.01$, 90% CI [-0.01, 0.02]. The implicit measure did not uniquely predict nonnormative action tendencies and was not moderated by our deliberation manipulation ($p > .43$; see Table S25 for full details of the regression models).

15.9. Indirect effect of mobilization message

Analysis revealed a nonsignificant indirect effect of mobilization message on nonnormative action tendencies through explicit attitudes, $b = 0.01$, 95% CI [-0.01, 0.04], $p = .23$. This was not conditional on deliberation, $b = 0.00$, 95% CI [-0.03, 0.03], $p = .996$ or gender, $b = -0.00$, 95% CI [-0.21, 0.20], $p = .970$ (see Fig. S11).

15.10. Sensitivity analysis of indirect effects

Sensitivity analysis on the two indirect effects on normative and nonnormative action tendencies (adjusting for the expectancy-value and identity model) revealed that they were robust up until p (rho) = 0.1 (see Figs. S10 & S11). That is, it would take an unobserved confounder of $R^2 = 0.01$ to overturn our conclusion that the assumptions for causal mediation are met.

16. Discussion

Taken together, these findings largely replicate the main findings of Study 4. Explicit protest attitude generally predicted normative and nonnormative action tendencies after adjusting for extant models. Differences in the magnitude of some of the coefficients across Studies 4 and 5 may reflect sampling error and changes made to the study design. Specifically, the nonsignificant path between explicit protest attitude and normative action tendencies (when adjusting for the expectancy-value and identity dual pathway model predictors) and the smaller, nonsignificant indirect effects of the mobilization manipulation, may reflect the smaller sample size in Study 5 and the changes made to our deliberation manipulation. It is plausible that the change to the deliberation manipulation reduced the impact of the mobilization message on explicit protest attitudes. Indeed, there was no effect of the mobilization manipulation on explicit protest attitude in Study 5 (see Table S22). As such, the explicit measure of protest attitude in Study 5 would not reflect specific, recent exemplars as it did in Study 4.

17. P-curve analysis

Across our five studies, explicit protest attitude significantly predicted action tendencies in nine out of eleven of our key inferential tests – added to a model containing extant predictors (i.e., block 2 of the regression models). This is approximately what would be expected if there were a true effect. Indeed, out of these nine significant tests seven were $p < .001$ (eight were $p < .003$). P-curve analysis using the p-curve.com app 4.0 (Simonsohn, Nelson, & Simmons, 2014) revealed that the half and full p-curve indicated evidential value (see Fig. S12).

(footnote continued)

Specifically, results for the explicit measure reached or "approached" statistical significance with the log transformed variable but did not with the original variable. Here, we report the log transformed variable, sacrificing ease of interpretation for more accurate estimates (see Tables S22 and S24 for details of the regression models with the original nonnormative action tendencies variable).

18. General discussion

The evidence from these studies consistently indicates that explicit measures of overall attitude towards protest uniquely predict the willingness of disadvantaged and advantaged group members to engage in normative and nonnormative political action, over and above extant models of collective political action. This consistent role of explicit attitude toward protest is important for two key reasons. First, such predictive power is impressive given the variety of distinct models developed to test political action across these diverse settings. Second, this predictive power is especially impressive given that these are measures of protest attitude *in general* rather than, as is the case with extant models, appraisals and attitudes related to specific forms of political action. It is well documented that greater specificity between attitude and behavioral measures greatly strengthens attitude's predictive power (Kraus, 1995). Our key finding was true across a range of contentious issues and (indirectly) for behavior, as well as closely linked measures of political action tendencies (Van Zomeren et al., 2008; Webb & Sheeran, 2006). Overall, the evidence supports our key theoretical claim – general protest attitude captures a wide array of affective, cognitive, and behavioral factors associated with protest that extant models, focused on the specific circumstances of the protest situation, do not.

Typically, protest attitude was as important as predictors from extant models. Indeed, in some cases it explained unique variance in action tendencies when other established predictors did not. Although the effect sizes for attitude toward protest (adjusting for extant models) were small in certain studies (see Tables S2–S25), the effect sizes are comparable with those reported in meta-analyses that adjust for other predictors of political action (Van Zomeren et al., 2008). One key question that arises from our findings is just what affective, cognitive, and behavioral factors does protest attitude capture that extant models do not. We believe that protest attitude is important precisely because it reflects a foundational element of ideology – what counts as appropriate political conduct (Oliver & Johnston, 2000; Wilson, 1973). This is consistent with the notion that protest attitude acts as an important aspect of ideology that helps to regulate social hierarchy (Sidanius & Pratto, 1999). To explicate the ideological nature of protest attitude, future work would do well to focus on its relationship with well-established measures of ideological tendencies (Duncan, 1999; Jost, Federico, & Napier, 2009; Pratto et al., 2014; Sidanius & Pratto, 1999; Stewart et al., 2016). Putting aside the question of whether SDO and RWA reflect "ideological attitudes" or "personality" (see Sibley & Duckitt, 2008), a focus on protest attitude may help to elucidate the more behavioral side of these established ideological orientations.

These observations, and the ease of measuring protest attitude, open the door to various forms of inquiry. For instance, overall protest attitude may help to tap the ideological "climate" in different societies in order to better predict the likelihood of mass political mobilization. We also suggest that protest attitude may act as a useful tool for integrating more traditional notions of ideology that place an emphasis on deliberation and reason into political action research. This is particularly important when we consider the limitations of treating ideology as mere framing (Oliver & Johnston, 2000). In line with the deliberative nature of both ideology and political action, and in keeping with Greenwald et al.'s (2009) meta-analysis, we found no consistent evidence that the predictive role of implicit measures of protest attitude varied as a function of the opportunity or ability to engage in deliberation, as dual process models of social behavior would suggest (Nosek et al., 2011; Olson & Fazio, 2008). Neither did we find evidence that the indirect effect of mobilization messages (via protest attitude) on action tendencies was conditional on deliberation. Given that our manipulations of deliberation influenced opportunity and/or ability to deliberate, it would be appropriate for future research to broaden the scope by focusing on motivation to engage in political deliberation.

Although research shows that implicit measures of attitudes play a unique predictive role in other political behaviors, such as voting (see Lundberg & Payne, 2014; and also Nosek et al., 2010), our findings indicate that their role may be less important when it comes to collective political action. Across studies it was explicit, not implicit, measures of protest attitude that tended to predict action tendencies. This result is consistent with the idea that explicit (but not implicit) measures of political attitudes reflect deliberative, ideological concerns (see Kuppens & Spears, 2014). Again, this finding is in line with traditional accounts of ideology that emphasize the role of deliberative and rational, as opposed to automatic and habitual, processes (Oliver & Johnston, 2000; Wilson, 1973).

However, it may also be the case that other automatic evaluations play a role in political action. Our focus on both explicit and implicit measurement of attitudes toward protest is consistent with evidence that specific behavior is highly predicted by attitudes towards the behavior (Ajzen, 1991, 2005; Olson & Maio, 2003). Nonetheless, it is plausible that the automatic evaluations assessed by implicit measures of attitude toward protest are just some of many spontaneous evaluations that are relevant to collective political action (e.g., attitude towards individuals or groups, see Lundberg & Payne, 2014). Furthermore, it has been suggested that implicit attitudes may influence deliberative behavior when there is a chance to bias processing of information early in the stream of thinking about the behavior (e.g., Vargas, Hippel, & Petty, 2004). Thus, we would not dismiss the possibility that future research finds associations between implicit measures of other potential attitude objects and political action. However, the possibility that implicit processes play a stronger role in voting behavior than in collective political action is an important topic for further inquiry, with obvious implications for informing the debate on how politics is, and should be, practiced in our societies.

In addition to limits on the inferences we can draw about political action and implicit processes, there are several other limitations of the present work that should be acknowledged. Studies 1 and 2 were both small, cross-sectional studies using student samples, with the attendant concerns about the correlational nature of the findings, and their generalizability and reliability. We addressed this shortcoming using larger, more representative experimental designs in Studies 3–5. Given the consistency of the key findings across studies, p-curve analysis, and average power, we are reassured about the reliability and generalizability of our key finding: the unique predictive role of protest attitude. However, the evidence that protest attitude accounted for the persuasive effect of mobilization messages on political action tendencies is weaker. There was a failure to find a total effect of the mobilization message manipulation on action tendencies. As such, one might want to be cautious in interpreting the associated indirect effects (Yzerbyt et al., n.d.).

We took three steps to address some of these, and other, concerns with mediation analysis. First, we pre-registered our indirect effect hypothesis. In other words, we did not fail to find a total effect and then proceed to examine the indirect effect in an exploratory manner (Loeys, Moerkerke, & Vansteelandt, 2014). Second, we estimated indirect effects using the quasi-Bayesian Monte Carlo method based on normal approximation (Imai et al., 2010) to address the unacceptably high Type I error rates associated with other common methods (i.e., bias-corrected and accelerated bias-corrected bootstrap) (Yzerbyt et al., n.d.). Thirdly, we conducted sensitivity analyses to assess the robustness of the indirect effects against violations of the assumption of no unmeasured M-Y confounding variables (Imai et al., 2010; Loeys et al., 2014).

Although these steps are useful, future work needs to employ manipulation-of-mediator designs in order to establish the causal importance of the "protest attitude pathway" (Pirlott & MacKinnon, 2016). Fortunately, adopting an attitude-based approach provides ample techniques and paradigms for manipulating protest attitude. For example, future work could manipulate protest attitude using evaluative conditioning, and examine how this compares to interventions

based on more controlled, propositional processes (De Houwer, Thomas, & Baeyens, 2001). If protest attitude is similar to any other attitude object, one would expect such interventions to be successful in manipulating protest attitude. However, if those who contend that ideological attitudes are inherently deliberative and rational (Oliver & Johnston, 2000; Wilson, 1973) are correct, it would be expected that only interventions based on more controlled, propositional processes would influence protest attitude.

In sum, our integration of methodological and theoretical insights from models of attitude and collective political action offers a new way to draw together old and new approaches to understanding political cognition and action. The results clearly show that general attitude toward protest reliably complement the variables included in extant models of collective political action. Its potential for intervention, along with its ease of measurement, make protest attitude an important addition to contemporary models of collective political action.

Open practices

All data and materials for Studies 1–5 have been made publicly available via Open Science Framework and can be accessed at https://osf.io/emk5j. The plan for Study 4 was preregistered at Open Science Framework (https://osf.io/emk5j). This article has received badges for Open Data, Open Materials, and Preregistration. More information about the Open Practices badges can be found at https://osf.io/tvyxz/wiki/home/.

Appendix A. Supplementary data

The Appendix and all supplementary data for this article can be found online at https://doi.org/10.1016/j.jesp.2019.01.001.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T.

Ajzen, I. (2005). *Attitudes, personality, and behavior* (2nd ed.). Maidenhead; UK: Open University Press.

Chaiken, S., & Yates, S. (1985). Affective-cognitive consistency and thought-induced attitude polarization. *Journal of Personality and Social Psychology, 49*(6), 1470–1481. https://doi.org/10.1037/0022-3514.49.6.1470.

Cunningham, W. A., Preacher, K. J., & Banaji, M. R. (2001). Implicit attitude measures: Consistency, stability, and convergent validity. *Psychological Science, 12*, 163–170. https://doi.org/10.1111/1467-9280.00328.

Dalege, J., Borsboom, D., van Harreveld, F., van den Berg, H., Conner, M., & van der Maas, H. L. J. (2016). Toward a formalized account of attitudes: The causal attitude network (CAN) model. *Psychological Review, 123*(1), 2–22. https://doi.org/10.1037/a0039802.

De Houwer, J., Thomas, S., & Baeyens, F. (2001). Association learning of likes and dislikes: A review of 25 years of research on human evaluative conditioning. *Psychological Bulletin, 127*(6), 853. https://doi.org/10.1037/0033-2909.127.6.853.

De Neys, W. (2006). Dual processing in reasoning: Two systems but one reasoner. *Psychological Science, 17*(5), 428–433. https://doi.org/10.2307/40064560?ref=search-gateway:e774eae233191f6a9ded984a0ba89735.

Duncan, L. E. (1999). Motivation for collective action: Group consciousness as mediator of personality, life experiences, and women's rights activism. *Political Psychology, 20*(3), 611–635. https://doi.org/10.1111/0162-895X.00159.

Fazio, R. H., Jackson, J., Dunton, B., & Williams, C. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline. *Journal of Personality and Social Psychology, 69*(6), 1013–1027. https://doi.org/10.1037/0022-3514.69.6.1013.

Fazio, R. H., & Olson, M. A. (2003a). Attitudes: Foundations, functions, and consequences. In M. Hogg, & J. Cooper (Eds.). *The sage handbook of social psychology* (pp. 139–160). London: Sage.

Fazio, R. H., & Olson, M. A. (2003b). Implicit measures in social cognition research: Their meaning and use. *Annual Review of Psychology, 54*, 297–327. https://doi.org/10.1146/annurev.psych.54.101601.145225.

Friese, M., Smith, C. T., Plischke, T., Bluemke, M., & Nosek, B. A. (2012). Do implicit attitudes predict actual voting behavior particularly for undecided voters? *PLoS One, 7*(8), e44130. https://doi.org/10.1371/journal.pone.0044130.s008.

Fritz, M. S., & MacKinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science, 18*(3), 233–239. https://doi.org/10.1111/j.1467-9280.2007.01882.x.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*(6), 1464–1480. https://doi.org/10.1037/0022-3514.74.6.1464.

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the implicit association test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology, 85*(2), 197–216. https://doi.org/10.1037/0022-3514.85.2.197.

Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the implicit association test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology, 97*(1), 17–41. https://doi.org/10.1037/a0015575.

Imai, K., Keele, L., & Tingley, D. (2010). A general approach to causal mediation analysis. *Psychological Methods, 15*(4), 309–334. https://doi.org/10.1037/a0020761.

Iyer, A., Schmader, T., & Lickel, B. (2007). Why individuals protest the perceived transgressions of their country: The role of anger, shame, and guilt. *Personality and Social Psychology Bulletin, 33*(4), 572–587. https://doi.org/10.1177/0146167206297402.

Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology, 60*, 307–337. https://doi.org/10.1146/annurev.psych.60.110707.163600.

Karpinski, A. (2005). Attitude importance as a moderator of the relationship between implicit and explicit attitude measures. *Personality and Social Psychology Bulletin, 31*(7), 949–962. https://doi.org/10.1177/0146167204273007.

Karpinski, A., & Steinman, R. B. (2006). The single category implicit association test as a measure of iImplicit social cognition. *Journal of Personality and Social Psychology, 91*(1), 16–32. https://doi.org/10.1037/0022-3514.91.1.16.

Klandermans, B. (1997). *The social psychology of protest.* Oxford; UK: Blackwell.

Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin, 21*(1), 58–75. https://doi.org/10.1177/0146167295211007.

Kuppens, T., & Spears, R. (2014). You don't have to be well-educated to be an aversive racist, but it helps. *Social Science Research, 45*(C), 211–223. https://doi.org/10.1016/j.ssresearch.2014.01.006.

Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist, 46*(8), 819–834. https://doi.org/10.1037/0003-066X.46.8.819.

Leach, C. W., & Snider, N. (2002). Poisoning the consciences of the fortunate: The experience of relative advantage and support for social equality. In I. Walker, & H. J. Smith (Eds.). *Relative deprivation: Specification, development, and integration* (pp. 136–163). New York: Cambridge University Press.

Loeys, T., Moerkerke, B., & Vansteelandt, S. (2014). A cautionary note on the power of the test for the indirect effect in mediation analysis. *Frontiers in Psychology, 5*(1), 1549. https://doi.org/10.3389/fpsyg.2014.01549.

Lord, C. G., & Lepper, M. R. (1999). Attitude representation theory. *Advances in Experimental Social Psychology, 31*, 265–343. https://doi.org/10.1016/S0065-2601(08)60275-0.

Lundberg, K. B., & Payne, B. K. (2014). Decisions among the undecided: Implicit attitudes predict future voting behavior of undecided voters. *PLoS One, 9*(1), e85680. https://doi.org/10.1371/journal.pone.0085680.s001.

Maio, G., Olson, J. M., Bernard, M., & Luke, M. (2006). Ideologies, values, attitudes, and behavior. In J. Delamater (Ed.). *Handbook of social psychology* (pp. 283–308). New York, NY: Springer. https://doi.org/10.1007/0-387-36921-X_12.

Nosek, B., Greenwald, A., & Banaji, M. (2007). The implicit association test at age 7: A methodological and conceptual review. In J. Bargh (Ed.). *Social psychology and the unconscious: The automaticity of higher mental processes* (pp. 265–292). New York; NY: Psychology Press.

Nosek, B., Hawkins, C. B., & Frazier, R. S. (2011). Implicit social cognition: From measures to mechanisms. *Trends in Cognitive Sciences, 15*(4), 152–159. https://doi.org/10.1016/j.tics.2011.01.005.

Nosek, B. A., Graham, J., & Hawkins, C. B. (2010). Implicit political cognition. In B. Gawronski, & B. K. Payne (Eds.). *Handbook of implicit social cognition* (pp. 548–564). New York: Guildford Press.

Nosek, B. A., Greenwald, A. G., & Banaji, M. R. (2005). Understanding and using the implicit association test: II. Method variables and construct validity. *Personality and Social Psychology Bulletin, 31*(2), 166–180. https://doi.org/10.1177/0146167204271443.

Oliver, P., & Johnston, H. (2000). What a good idea! Frames and ideologies in social movement research. *Mobilization, 5*(1), 37–54. https://doi.org/10.17813/maiq.5.1.g54k222086346251.

Olson, J. M., & Maio, G. R. (2003). Attitudes in social behavior. In T. Millon, & M. J. Lerner (Eds.). *Handbook of psychology: Personality and social psychology* (pp. 299–325). Hoboken, NJ: John Wiley & Sons Inc.

Olson, M. A., & Fazio, R. H. (2008). Implicit and explicit measures of attitudes: The perspective of the MODE model. In R. E. Petty, R. Fazio, & P. Brinol (Eds.). *Attitudes: Insights from the new implicit measures* (pp. 19–63). New York, NY: Psychology Press.

Oswald, F. L., Mitchell, G., Blanton, H., Jaccard, J., & Tetlock, P. E. (2013). Predicting ethnic and racial discrimination: A meta-analysis of IAT criterion studies. *Journal of Personality and Social Psychology, 105*(2), 171–192. https://doi.org/10.1037/a0032734.

Perugini, M., & Richetin, J. (2010). Prediction of behavior. In B. Gawronski, & B. K. Payne (Eds.). *Handbook of implicit social cognition* (pp. 255–277). New York, NY: Guildford

Press.

Pirlott, A. G., & MacKinnon, D. P. (2016). Design approaches to experimental mediation. *Journal of Experimental Social Psychology, 66*(C), 29–38. https://doi.org/10.1016/j.jesp.2015.09.012.

Pratto, F., Saguy, T., Stewart, A. L., Morselli, D., Foels, R., Aiello, A., et al. (2014). Attitudes toward Arab ascendance: Israeli and global perspectives. *Psychological Science, 25*(1), 85–94. https://doi.org/10.1177/0956797613497021.

Scherer, K. R. (2005). What are emotions? And how can they be measured? *Social Science Information, 44*(4), 695–729. https://doi.org/10.1177/0539018405058216.

Schwartz, S. H. (1978). Temporal instability as a moderator of the attitude-behavior relationship. *Journal of Personality and Social Psychology, 36*(7), 715–724. https://doi.org/10.1037/0022-3514.36.7.715.

Sibley, C. G., & Duckitt, J. (2008). Personality and prejudice: A meta-analysis and theoretical review. *Personality and Social Psychology Review, 12*(3), 248–279. https://doi.org/10.1177/1088868308319226.

Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression.* New York, NY: Cambridge University Press.

Simonsohn, U., Nelson, L. D., & Simmons, J. P. (2014). P-curve: A key to the file-drawer. *Journal of Experimental Psychology: General, 143*, 534–547. https://doi.org/10.1037/a0033242.supp.

Stekelenburg, J., & Klandermans, B. (2010). Individuals in movements: A social psychology of contention. In B. Klandermans, & C. Roggeband (Eds.). *The handbook of social movements across disciplines* (pp. 157–204). New York, NY: Springer. https://doi.org/10.1007/978-0-387-70960-4_5.

Stewart, A. L., Pratto, F., Bou Zeineddine, F., Sweetman, J., Eicher, V., Licata, L., et al. (2016). International support for the Arab uprisings: Understanding sympathetic collective action using theories of social dominance and social identity. *Group Processes & Intergroup Relations, 19*(1), 6–26. https://doi.org/10.1177/1368430214558310.

Stürmer, S., & Simon, B. (2004). *Collective action: Towards a dual-pathway model. 15(1)*, 59–99. https://doi.org/10.1080/10463280340000117.

Stürmer, S., & Simon, B. (2009). Pathways to collective protest: Calculation, identification, or emotion? A critical analysis of the role of group-based anger in social movement participation. *Journal of Social Issues, 65*, 681–705. https://doi.org/10.1111/j.1540-4560.2009.01620.x.

Subasic, E., Reynolds, K. J., & Turner, J. C. (2008). The political solidarity model of social change: Dynamics of self-categorization in intergroup power relations. *Personality and Social Psychology Review, 12*(4), 330–352. https://doi.org/10.1177/1088868308323223.

Tausch, N., Becker, J. C., Spears, R., Christ, O., Saab, R., Singh, P., & Siddiqui, R. N. (2011). Explaining radical group behavior: Developing emotion and efficacy routes to normative and nonnormative collective action. *Journal of Personality and Social Psychology, 101*(1), 129–148. https://doi.org/10.1037/a0022728.

Thomas, E. F., McGarty, C., & Mavor, K. I. (2009). Transforming "apathy into movement": The role of prosocial emotions in motivating action for social change. *Personality and Social Psychology Review, 13*(4), 310–333. https://doi.org/10.1177/1088868309343290.

Tingley, D., Yamamoto, T., Hirose, K., Keele, L., & Imai, K. (2012). mediation: R package for causal mediation analysis. Retrieved October 21, 2018, from http://CRAN.R-project.org/package=mediation.

Van Dillen, L. F., Papies, E. K., & Hofmann, W. (2013). Turning a blind eye to temptation: How cognitive load can facilitate self-regulation. *Journal of Personality and Social Psychology, 104*(3), 427–443. https://doi.org/10.1037/a0031262.

Van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives. *Psychological Bulletin, 134*(4), 504–535. https://doi.org/10.1037/0033-2909.134.4.504.

Van Zomeren, M., Spears, R., Fischer, A. H., & Leach, C. W. (2004). Put your money where your mouth is! Explaining collective action tendencies through group-based anger and group efficacy. *Journal of Personality and Social Psychology, 87*(5), 649–664. https://doi.org/10.1037/0022-3514.87.5.649.

Vargas, P. T., von Hippel, W., & Petty, R. E. (2004). Using partially structured attitude measures to enhance the attitude-behavior relationship. *Personality and Social Psychology Bulletin, 30*(2), 197–211. https://doi.org/10.1177/0146167203259931.

Webb, T., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin, 132*(2), 249–268. https://doi.org/10.1037/0033-2909.132.2.249.

Wilson, J. (1973). *Introduction to social movements.* New York, NY: Basic Books.

Wright, S. C., Taylor, D. M., & Moghaddam, F. M. (1990). Responding to membership in a disadvantaged group: From acceptance to collective protest. *Journal of Personality and Social Psychology, 58*(6), 994–1003. https://doi.org/10.1037/0022-3514.58.6.994.

Yzerbyt, V. Y., Muller, D., Batailer, C., & Judd, C. M. (n.d.). New recommendations for testing indirect effects in mediational models: The need to report and test component paths. Journal of Personality and Social Psychology.

Zanna, M. P., & Rempel, J. K. (1988). Attitudes: A new look at an old concept. In D. Bar-Tal, & A. Kruglanski (Eds.). *The social psychology of knowledge* (pp. 315–334). New York, NY: Cambridge University Press.