



The context of control: A cross-national investigation of the link between political institutions, efficacy, and collective action

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Most research on efficacy and participation in collective action has focused on single country samples with little attention paid to the relationship between efficacy and country-level structural factors. Drawing on value expectancy theory, we theorize a link between macro-level political institutions and micro-level efficacy. To address the previous limitations in the efficacy and collective action literature, we use multi-level, cross-national data, and present results from a series of hierarchical models testing whether efficacy increases collective action cross-nationally, whether political institutions affect efficacy, and whether the effect of efficacy on collective action is conditional on political institutions. We find that efficacy increases collective action, that certain political institutions increase efficacy, and that the effect of efficacy on collective action is partly conditional on the inclusiveness of a country's political institutions. These findings suggest the insufficiency of purely structural as well as social psychological explanations of collective action.

A primary objective in the study of collective action is to understand what factors can account for differential participation at the micro- and macro-levels (see Opp, 2010). Resource mobilization (RM) and political process theories (PPT) emphasize the effects of organizational and institutional environments on social movement dynamics (e.g., Kitschelt, 1986; McCarthy & Zald, 1977; Meyer & Minkoff, 2004; Minkoff, 1994; Staggenborg, 1988; Tarrow, 1989, 1998; Tilly, 1978) while often ignoring individual-level considerations. Critics came to refer to this as the 'structural bias' in social movement research (Diani & McAdam, 2003; Goodwin & Jasper, 1999). But the 1980s also saw a renewed interest in the 'social psychology of mobilization' (Ennis & Schreuer, 1987), focusing on collective action frames, frame alignment, identity, emotions, motivation, and efficacy (Ferree & Miller, 1985; Goodwin & Pfaff, 2001; Klandermans, 1984; Passy & Giugni, 2001; Snow, Rochford, Worden, & Benford, 1986). Scholars, like Klandermans (1984), have sought to link macro- and meso-level explanations to a micro-foundation

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of action, relying on rational actor based theories like value expectancy theory (VET) that emphasize, among other things, an individual's perception that his/her involvement in collective action will help achieve the valued outcome; in other words, a sense of efficacy.

Indeed, efficacy (and its opposite fatalism) is a central social psychological variable used to explain an array of individual behaviours. Rotter (1954, 1966) originated the term 'internal locus of control' to refer to individuals who exhibit behaviour (including political behaviour) that is outwardly directed. Individuals with an internal locus of control are efficacious because they perceive change as coming primarily from their own actions. In contrast, those who have a 'high external locus of control' are fatalistic, believing that life events are determined by fate, or powerful others. Thus, efficacy and fatalism are viewed as opposite ends of a continuum of perceived control: from efficacy - perceiving that one is free and has control over one's life and outcomes and can act to change those outcomes - to fatalism - a sense of lacking control and the power to change one's circumstances (Gecas, 1989, p. 291; see also Mirowsky & Ross, 2003). Since political behaviour is inherently outwardly directed, it is perhaps the most obvious and frequent behavioural manifestation of efficacy.

Drawing from the social psychology literature, we predict that fatalism (those individuals with high external locus of control) should decrease one's likelihood of participating in collective action, whereas efficacy (those with high internal locus of control) should increase one's likelihood of participation. While most research on efficacy and collective action has been confined geographically to single countries like the United States (for a notable exception, see Klandermans, van der Toorn, & van Stekelenburg, 2008), using a general measure of efficacy/fatalism allows us to test this hypothesis cross-nationally. Evidence for this hypothesis would lend support to a general social psychological explanation of the role of efficacy/fatalism in collective action and its cross-national generalizability.

Moreover, because general perceptions of control are 'socially transmitted', they are affected by the structures within which individuals reside (Mirowsky & Ross, 1984, 2003; Thompson, Ellis, & Wildavsky, 1990; Zarit, Pearlin, & Schaie, 2003). These structural or institutional arrangements help explain cross-national variation in efficacious/fatalistic perceptions (Andrain & Smith, 2006; Banfield, 1958; Grendstad, 2003; Thompson *et al.*, 1990; Whelan, 1996). In this way, both micro- and macro-level characteristics are predicted to affect efficacy/fatalism. While PPT emphasizes the effect of opening or closing political opportunity structures (POS) on collective action (Tarrow, 1998; Tilly, 1978), little attention has been paid to linking social psychological factors like efficacy to structural and institutional contexts. Thus, the next step towards a generalized understanding of collective action is to investigate the relationship between efficacy/fatalism and objective structural and institutional factors (Van Zomeren, Postmes, & Spears, 2008). We draw from existing theoretical frameworks that seek to address the micro-macro link, including the work of Klandermans (1984, 1997) on VET and Opp's (2010) structural-cognitive model (SCM), and theorize the link between political institutions, efficacy, and collective action. This paper contributes to social movement and collective action scholarship by highlighting the ways in which individuals' perceived instrumentality (i.e., freedom to act) and the POS within which they reside affect their likelihood of participating in collective action. It sheds light on a micro-level mechanism that provides an explanation for why political institutions account for variation in cross-national participation. Our approach allows for a broader

understanding of the ways in which institutions and social psychological orientations are linked, and the conditions under which their interaction facilitates or constrains participation. To test these hypotheses, we use data from approximately 41,810 individuals in 48 countries. We present results from a series of multi-level models testing whether efficacy increases collective action cross-nationally, whether political institutions affect efficacy, and how the effect of political institutions on collective action may be conditional on efficacy.

Efficacy/fatalism and the theory of collective action

This paper seeks to link micro- and macro-level considerations by drawing from Opp's (2010) SCM of collective action. Opp (2010, pp. 118–119) states: 'Applying the theory of collective action to explain protest behaviour implies adopting a micro-macro perspective' as all social movement theories implicitly have a macro- and micro component. The problem is that the micro-macro link needs to be expounded as it is often treated in a secondary and/or ambiguous manner – what Opp refers to as an 'explanation sketch' rather than a full explanation. Essentially, social movement theories make a host of assumptions about individual preferences and motivations without explicitly theorizing them (Opp, 2010). RM makes assumptions about individual motivations for joining an organization, suggesting that these motivations are based loosely on the costs and rewards of participation (McCarthy & Zald, 1977). Presumably, as mobilizing structures, organizations affect incentive structures for participation. PPT assumes that individuals are aware and take advantage of openings in the political opportunity structure (a macro-level effect) because this structural feature changes incentives for participation at the individual level. Opp (2010) criticizes both PPT and RM for not elaborating the micro-macro link that is needed to understand participation in collective action. Opp's SCM suggests that the link between structural characteristics and collective action is not direct but rather, that structural variables or contexts, in part, shape cognitive processes that establish incentives for participation which in turn explains differential participation. Connecting structural contexts to social psychological factors (e.g., SCMs) can shed light on the otherwise 'black-box' left by social movement theories, such as RM and PPT, and help explain involvement by individuals (Ennis & Schreuer, 1987; Klandermans, 1984; Van Stekelenburg, Klandermans, & Van Dijk, 2009). At the same time, SCMs also benefit social psychological approaches, which often lack proper work on socio-political contexts (see Van Stekelenburg *et al.*, 2009 for a similar argument).

Klandermans' (1984) classic work provides a SCM for RM theory by drawing on VET to explicate a meso-micro link. VET is a version of rational choice theory, which claims that an individual's expectations of the success or failure of an action are weighed against the costs of participating and the value of the outcome to determine if participation is worth the effort (Finkel, Muller, & Opp, 1989; Gibson, 1997). The value of the outcome and the expectations of success or failure derive from individual beliefs, attitudes and perceptions, and the broader environment (see Feather, 1982; Klandermans, 1997). As Klandermans (1984, p. 585) explains: 'The usefulness of the framework is that it provides a device for the systematic analysis of the variety of beliefs, expectations and attitudes that are related to participation in a social movement'. In regards to RM, although an organization may have vast quantities of resources to put towards collective action, this perspective emphasizes that it is still an individual's perception of the success of collective action and the incentives involved in it that influences an individual's likelihood

of participating. Given this, in order to mobilize individuals, organizations must influence micro-level expectations and persuade individuals of the efficacy of collective action (Klandermans, 1984; Snow *et al.*, 1986). Although RM is seldom operationalized at the micro-level, several studies suggest that formal or social embeddedness is an important individual-level measure. Schussman and Soule (2005, p. 1099) note that 'research in both sociology and political science consistently shows that individuals embedded in organizations are more likely to participate in political activity'. VET helps explain this connection in that individuals who are socially embedded are more likely to be efficacious (Klandermans *et al.*, 2008; Passy & Giugni, 2001). Just as VET has been used to connect the meso- and micro-levels in RM, it can also be drawn on to link the macro POS to individual-level efficacy.

PPT emphasizes the importance of POS (see Tarrow, 1998) whereby opportunities to participate politically facilitate collective action and the lack of such opportunities generally impedes it (Kitschelt, 1996; McAdam, 1982). Political opportunity has been operationalized in a variety of ways (see Meyer & Minkoff, 2004 and Opp, 2010 for a review and critique). Since our work is cross-national and seeks to systematically compare political-institutional contexts, we draw from the more 'state-centered opportunity structure' or 'cross-sectional statism' described by Tarrow (1996; see also Kitschelt, 1986; Kriesi, Koopmans, Duyvendak, & Giugni, 1992, 1995). This approach involves operationalizing POS as the degree of receptivity/exclusion (or repression) of the state and the extent of political access available to challengers, which are both stable features of the political context of countries (Gamson & Meyer, 1996). We draw from Lijphart's (1999) discussion of majoritarian and consensus systems. Lijphart refers to consensus democracies as 'kinder and gentler' because they are more open and less punitive and, as such, tend to include more women and minority groups. Overall, our approach requires examining, in a given country, both formal structures (e.g., the party system, electoral rules, and democratic consolidation) and more informal procedures (e.g., obstacles to minority participation, and intimidation) that explain the opportunity for collective action (Kriesi *et al.*, 1992).

Although PPT describes a variety of POS, it does not say much about why and how individuals respond differently to inclusive and exclusive political institutions. As Opp (2010) explains, Tarrow's (1998) work assumes that individual behaviour changes as a result of changes in POS implying a model whereby individual incentives mediate the effects of political opportunities and the rise of social movements. Therefore, political institutions must, in some way, shape incentive structures for an individual which in turn explains their involvement in collective action. VET adds to our understanding of the ways in which incentive structures affect decisions to participate by considering how individuals perceive the probability of actually obtaining the valued good (Klandermans, 1984). Efficacy/fatalism is important in understanding the notion of expected probability and perceived instrumentality or freedom to act. There must be a perception that there is a real likelihood that something will happen for someone to participate and those who have little efficacy or are highly fatalistic will not expect those outcomes to be realized, especially through their own actions. This suggests that even though individuals may highly value a good, it does not mean they are going to participate. Efficacy, therefore, is an important predictor of participation in collective action (Ennis & Schreuer, 1987; Finkel *et al.*, 1989; Klandermans, 1984; Klandermans *et al.*, 2008; Passy & Giugni, 2001; Piven & Cloward, 1977; Suh, 2001; Voss, 1996). Suh (2001) argues that political opportunities may increase efficacy when states (or other targets of action) respond favourably or are inclusive of challengers, thereby increasing perceptions of efficacy

or instrumentality. Thus, political opportunities affect the likelihood of participation in collective action both by shaping the incentive structure as well as individual perceptions of the effectiveness of collective action (Klandermans, 1988; Opp, 2010).

Efficacy/fatalism as 'global judgments'

Efficacy is an important aspect of rational action theories because it reveals the extent to which individuals see themselves as instrumental. An important assumption of any model that proposes an individual expectation of action, including VET, is that individuals have some perceived control, instrumentality, or freedom to act, which determines in large part an individual's expectations of an outcome. Efficacy/fatalism is classically conceptualized as a continuum of perceived control where on one end an individual is efficacious and believes that he/she 'can shape conditions and events in [. . . his/her] life' and at the other end, is fatalistic and believes 'that [. . . his/her] actions cannot influence events and circumstances' (Mirowsky & Ross, 2003, p. 174). In this way, efficacy and fatalism are 'global judgments' about how much control individuals have over their own life and environment. Because they are global judgments, they are predicted to affect many, if not all, areas of one's life by raising or lowering the perceived probability that a given action would result in a valued outcome. Without the expectation that one can control or influence circumstances, there is little incentive for fatalistic individuals to attempt to solve problems in any life domain. For example, perceived control as a global judgment has been applied to the domain of politics generally predicting that 'the less fatalistic people are, the more inclined they should be to think that there will be some payoff from political involvement and participation. If you think you can control the world about you, you should feel some motivation to become involved in politics' (Sherrill & Vogler, 1982). Fatalistic individuals, on the other hand, tend to withdraw from political life resulting in lower support for democracy and government institutions and less participation in collective action and politics (Andrain & Smith, 2006; Ellis, 1993; Goodwin & Allen, 2000; Sherrill & Vogler, 1982; Thompson *et al.*, 1990). One of the first to link efficacy to collective action was Rotter (1954) who found that civil rights activists were more likely to have an internal rather than external locus of control. This sparked a great deal of research on the effect of internal versus external loci of control on collective action (see Klandermans, 1983 for a review of 20 years' worth of research on this topic). Thus, we predict that the more efficacious an individual is, the more likely he/she will be to participate in collective action, all else being equal.

Since Rotter (1954), efficacy has been operationalized in the literature in numerous ways: (1) internal versus external locus of control (Gecas, 1989; Rotter, 1966; see also Klandermans, 1983); (2) task-specific (Sampson, McAdam, MacIndoe, & Weffer, 2005); (3) political efficacy (Corning & Myers, 2002; Ennis & Schreuer, 1987); and (4) collective efficacy (Sampson, Raudenbush, & Earls, 1997). There are several important reasons for using the more classical and generic formulation of efficacy/fatalism (see Markowitz, 1998 and Mirowsky & Ross, 2003 who also keep to the classical definition). First, it is difficult to compare task-specific forms of efficacy to one another, whereas general efficacy/fatalism is more comparable across studies. Unlike much of the past research on political efficacy and collective action, which draws primarily on single country samples, using a general measure of efficacy allows us to examine whether efficacy increases collective action *across countries*. Second, we do not seek to explain collective action as related to a specific social movement. In turn, this makes task-specific efficacy less

relevant. In addition, we are linking efficacy in the general population to participation and, much like Ennis and Schreuer (1987), we are not limiting our analysis to individuals already in a social movement. As Ennis and Schreuer suggest, 'Somehow, SMOs [social movement organizations] must overcome mass resignation, by expanding the sense of the possible' (p. 395). Mass resignation implies a general sense of fatalism that may not necessarily be task-specific. Using a more general understanding of efficacy/fatalism does not rely on knowing which social or political causes matter more or less to different individuals and whether or not they have differing levels of efficacy/fatalism on those issues. This would be very difficult to uncover in a large cross-national analysis and would make comparison difficult. Finally, measures of general efficacy/fatalism do not depend on any particular type of action (i.e., conventional or non-conventional), which allows us to examine the effect of efficacy on different types of collective action.

Linking contexts to efficacy/fatalism

Although the perception of control is often thought of as a property of the individual, many scholars have noted the cross-national and cross-cultural variation in perceptions of efficacy/fatalism (Andrain & Smith, 2006; Banfield, 1958; Goodwin & Allen, 2000; Grendstad, 2003; Whelan, 1996). This suggests that perceptions of freedom and control are at least in part shaped by social structures and institutions (Mirowsky & Ross, 1984, 2003; Thompson *et al.*, 1990; Zarit *et al.*, 2003). Pateman (1970) argues that efficacy arises and evolves with individuals' interactions with institutions, which may constrain or promote efficacy/fatalism within individuals. Thus, one major way to think about the micro-macro link is to conceptualize efficacy/fatalism as a function of structural characteristics, as well as individual factors.

In this way, political institutions may not solely limit or expand the opportunity for collective action, but may also affect individuals' global judgments regarding their level of efficacy/fatalism (Andrain & Smith, 2006; Goodwin & Allen, 2000), which may in turn affect individual decisions to participate in collective action. For instance, in places where power is not diffuse but rather concentrated in the hands of a few, individuals are predicted to be more fatalistic and perceive themselves as less instrumental since the locus of control is outside, not inside, the individual (Fendrich, 1993; Nathan, 2003). Macro-level authoritarian political structures may therefore contribute to the generation of micro-level fatalism. This perspective has been used to explain high rates of fatalism in China (Thompson *et al.*, 1990), the former East Germany (Andrain & Smith, 2006), and the former Soviet Union republics (Andrain & Smith, 2006; Goodwin & Allen, 2000). Alternatively, when institutions are more inclusive and encourage voice and participation, such as democratic political institutions, individuals tend to have a higher sense of efficacy (Andrain & Smith, 2006; Diamond, 1994). We predict that open POS should increase efficacy/decrease fatalism, whereas closed POS should increase fatalism/decrease efficacy.

Since efficacy/fatalism may be affected by a myriad of structural and individual-level factors (e.g., gender, income, education, and religion at the individual-level and economic development and inequality at the country-level)¹, individuals may be highly fatalistic

¹ Many individual- and structural-level factors have been found to affect efficacy/fatalism and collective action. Females and individuals with lower socio-economic status and education tend to have higher levels of fatalism and are less likely to participate in collective action (e.g., Kohn, 1977; Kohn & Schooler, 1983; McAdam, 1992; Oliver, 1984; Ross, 1991; Sobel, 1993). Measures of religiosity are often associated with fatalism and collective action although there are mixed results

even in open political environments or highly efficacious in contexts where institutions are exclusive. Given this, another important micro-macro link to investigate is whether political institutions condition the relationship between efficacy/fatalism and collective action. Because highly efficacious individuals have an internal source of motivation to participate, we expect that closed POS should have a weaker negative effect on collective action for efficacious individuals, since these individuals should be more able to overcome institutional obstacles. Likewise, open POS should have a weaker positive effect on participation for efficacious individuals, because they are already inclined to participate regardless of the open structure. On the other hand, closed POS add an additional obstacle to participation for highly fatalistic individuals whose own psychology already presents itself as a barrier to collective action. Thus, fatalists should be even less likely to participate in collective action in closed POS. While we expect fatalism to decrease collective action, we predict that this negative relationship will be weaker in more open POS, that is, we predict that fatalists, although less likely to participate overall, will be more likely to participate in environments conducive to collective action. Therefore, we expect an interaction effect between political institutions and efficacy.

Data and Methods

Sample

We draw data from the fourth wave (1999–2004) of the World Values Survey (WVS) for 48² countries with a sample of approximately 41,810 respondents. The WVS is a nationally representative survey of randomly selected adults and contains rich biographical information on individual attitudes, values, and religious views in addition to individual behaviour measures, such as political activism. While the WVS was designed to compare individual attitudes across countries, the data are biased towards developed nations. As a result, we include as many non-Western nations as missing data permit. It is clear that our country sample is not representative of all nations, and, as always, generalizations of our findings to other nations should be made with caution. Country-level measures come from a variety of sources including the World Bank, the Database of Political Institutions, and the Cingranelli-Richards Human Rights Dataset (CIRI). The CIRI data contain a variety of cross-national measures of government respect for human rights in addition to variables which capture structural and procedural obstacles and limitations to participation. All country-level values are for the same year as the country's WVS sampling year unless the same year was unavailable in which case we used values at least 5 years prior to the WVS sampling year.

regarding the direction of the effect (e.g., Jackson & Coursey, 1988; Schieman, Nguyen, & Elliot, 2003; Smith 1996; Zald, 1982). Other work has also emphasized the importance of country-level factors typically arguing that economic development reduces fatalism and increases collective action (see Haller & Hadler, 2008), whereas stratification and inequality increase fatalism and decrease collective action (Bruce & Thornton, 2004; Mirowsky et al., 1996; Rosenfield, 1989).

² Albania, Argentina, Bangladesh, Belgium, Bosnia and Herzegovina, Bulgaria, Belarus, Canada, Chile, Croatia, Czech Republic, Denmark, Estonia Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Italy, Japan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta Mexico, Republic of Moldova, Netherlands, Peru, Philippines, Poland, Romania, Russian Federation, Slovakia, South Africa, Zimbabwe, Spain Sweden, Uganda, Ukraine, Republic of Macedonia, Great Britain, United Republic Of Tanzania, United States, Serbia, and Montenegro. Bosnia and Serbia are dropped from models where democratic consolidation is included, as is Bulgaria for models with party concentration since there is no data for these countries on these measures.

Variables³

Dependent variables

Efficacy. Following from Acevedo (2008), we measure *efficacy* (or fatalism) using an item where individuals were asked how much freedom of choice and control they have in their life (ordinal scale from 1 to 10 where 10 = a great deal). Lower levels refer to people that 'feel that what they do has no real effect on what happens to them', whereas higher levels refer to people who feel they have complete 'free choice and control over their lives'. Higher values represent more efficacy and lower values represent more fatalism.

Participation in collective action. To measure *collective action*, we created a variable from questions asking the respondent whether he/she has ever (1) signed a petition, (2) joined a boycott, (3) attended lawful demonstrations, (4) joined unofficial strikes, or (5) occupied buildings or factories. We create a *binary* measure of action to indicate whether the respondent reports engaging in any of the five activities with 1 representing that the respondent engaged in at least one of these activities and 0 otherwise.

Political institutions. An important cross-national dimension that shapes the context of collective action and motivational dynamics is *democratic consolidation*. We use 'tenure of system' from the Database of Political Institutions to measure the length of time a country has been democratic.⁴ For example, the United Kingdom, France, the United States, and the Netherlands have 70 years (the maximum value in the data) while Bulgaria has 10 years, Spain has 23 years, and Greece has 26 years. Research suggests (see Goldstone, 2003) that the overall costs and risks of participation are lower in established democracies since (a) modern democratic states provide the resources and tools necessary for collective action and (b) democratic states have had lengthy experience with the inclusion of outsiders through the use of institutionalized channels (see Della Porta & Diani, 1999). At the same time, however, this variable does not necessarily capture more specific aspects of the political opportunity structure like the degree of access and the extent of repression/openness to challengers.

We include two important aspects of POS: degree of access and representation of group interests in the legislature, and degree of exclusiveness/repression⁵. Following Kriesi *et al.* (1992, 1995), our measures of political opportunity capture both formal institutions and informal government procedures.

In order to measure political access and representation of collective interests in the legislature, we use the Herfindahl Index (Herftot from the Database of Political Institutions; Beck, Clarke, Groff, Keefer, Walsh, 2001). This is a measure of party *concentration* found by taking the number of parties in the legislature over the number of seats a political party controls (or the sum of squared shares of all parties in the legislature). Smaller values (countries like Ukraine, Belgium, and India) indicate less

³ Descriptive statistics for individuals and countries can be found in the Appendix.

⁴ Because all our countries (except Serbia and Bosnia which have no data) received a score of 6 or 7 on the Executive Index of Political Competitiveness (i.e., have a competitively elected executive), the tenure of system measure (in years) captures democratic consolidation.

⁵ Kriesi *et al.* (1992) treat exclusive, repressive, confrontative, and polarizing as interchangeable.

concentration/more fragmentation in the party system and larger values indicate more concentration/less fragmentation (e.g., the United States). In general, greater party fractionalization should lead to more participation since there are more parties that reflect individual and group interests (Dalton, 2008; Norris, 2004).

In order to measure opportunity and repression, we use the *CIRI* (see Cingranelli & Richards, 2008) variable '*Electoral Self Determination*' formerly known as 'Political Participation'. The variable is coded as follows: a value of 0 means 'not respected'. That is, 'The government systematically retaliates against citizens who seek to possess this right through intimidation, threats of (or actual) violence, arrest, detention, and other coercive methods of control'. Countries with '0' include Belarus and Serbia. Countries that are coded as '1' legally recognize the right of citizens to have free and fair elections but this is limited in practice. As Cingranelli and Richards (2008) explain, limitation refers to 'official intimidation, harassment, physical violence, bribery, or other coercive tactics to prevent citizens from voting in elections or to influence their votes, including government manipulation or control of the media prior to and during elections'. Ukraine, India, and Zimbabwe are examples. Finally, countries coded as '2' hold fair and free elections (e.g., all western industrial countries in our sample have a value of 2). We believe this cross-national variable operationally defines state facilitation and repression in a way that closely resembles the definition described in the works of Tarrow (1996, 1998), Oberschall (1996), Della Porta (1996), and others.

In order to more formally test whether limitations exist based on group status, and whether group interests are proportionately represented, we include a measure of *women's political representation*. Representation of women in politics is partly a consequence of the political opportunity structure. As Paxton and Kunovich (2003, p. 90) state, 'Political parties and electoral systems, which enhance or limit the ability of men or other groups in government to promote their own interests, can be crucial factors in allowing women access in equal numbers'. Studies show that like other groups, women are more likely to be politically included in states that have a system of proportional representation and when there are political parties that promote their interests (Kenworthy & Malami, 1999; Matland, 1998). We use the *CIRI* variable 'Women's Political Rights' (WOPOL), which includes the right to vote, the right to run for political office, the right to hold elected and appointed government positions, the right to join political parties, and the right to petition government officials. The variable is originally coded using a four category scale ranging from 0 to 3. However, no country in our sample scores a 0 or 1 (no political equality or severe limitations), and thus, our variable is really a dichotomous measure of whether 'Political equality is guaranteed by law' (coded as 2; including France, Italy, and the United States) versus 'Political equality is guaranteed by law *and in practice*' (coded as 3; examples include the Scandinavian countries, Canada, and Germany). Cingranelli and Richards make this distinction using whether women 'hold more than thirty percent of seats in the national legislature and in other high-ranking government positions' (71).

Controls. *Income inequality* is measured by the Gini coefficient of income inequality in 2000. We measure economic development as the *per capita GDP* divided by 10,000 (in constant US\$ 2,000).

Biographical Characteristics include *age*, *gender* (1 = male), whether the respondent is *married* (1 = yes), *number of children* (count), the respondent's *education* level

(1 = did not complete elementary education to 8 = university degree) and social class (measured by the decile of their income with respect to their country of residence), whether the respondent is *employed* (1 = yes), in a *professional or managerial* occupation (1 = yes), and in a *manual* labour occupation (1 = yes) as predictors. Because *age* may have a non-linear relationship with *collective action* (i.e., age may have a decreasingly positive effect on collective action as individuals become less physically able to participate), we control for *age-squared*.

Following Klandermans *et al.* (2008) and Shussman and Soule (2005), we operationalize *organizational embeddedness* as the number of organizational ties (or respondent's total number of organizational affiliations). Organizational embeddedness is therefore a count of the number of organizations to which the respondent belongs from the following list: social welfare service for elderly, education/arts/music, labour unions, political parties, local political actions, human rights, conservation/the environment/ecology/animal rights, professional associations, youth work, sports or recreation, women's group, peace movement, organized concerned with health, and other groups. Each of these was dummy coded to indicate whether the respondent belonged to the organization (1 = yes) and then summed. One potential problem with summing these items is that any differential effects based on organizational type would be lost, that is, some of these organizational ties may capture extra-movement affiliations that could act as countervailing forces on participation. However, we find that the correlations between each organization and collective action are in the expected direction. We are confident that combining each of these items does not mask the effects of each separate item. In addition to organizational embeddedness, we include how much time the respondent spends with colleagues, with friends, and with individuals from church (1 = weekly to 4 = not at all) as measures of *social embeddedness*.

We also control for whether respondents identify as *atheist* or *not religious* (two dummy variables with identify as religious as the referent category), feel that *politics is important* (ordinal coded 1 = not at all important and 4 = very important), their *trust* in others (ordinal coded 1 = can't be too careful and 2 = most people can be trusted), their level of *life satisfaction* (ordinal scale from 1 to 10 where 10 = very satisfied), and their self-positioning on a *political scale* (ordinal scale from 1 to 10 where 10 = right).

Analysis

The data is structured into two hierarchical levels: Individuals (level 1) embedded within countries (level 2). This is problematic for standard linear or logistic regression models because the responses of individuals within the same country are likely correlated, which results in the underestimation of standard errors. Overall, hierarchical linear modelling (HLM), used to model continuous dependent variables, and hierarchical generalized linear modelling (HGLM), used to model binary and other non-continuous dependent variables, accurately estimate standard errors of clustered cases within larger units, and permit the estimation of higher level variables (Raudenbush & Bryk, 2002). Since our measure of *efficacy* is continuous, we use a standard hierarchical linear model that is conventional in multi-level studies. Since we use a binary measure for *collective action*, we use a two-level hierarchical logistic regression (see Raudenbush & Bryk, 2002). The HLM models were estimated using *xtmixed* and the HGLM models were estimated using *xtnmelogit* in STATA 10.

Individual-level characteristics are used to explain *within* country variation in the dependent variables, whereas country-level characteristics are used to explain

cross-national variation in the dependent variables. However, before adding country-level variables to our models, we must first establish that our dependent variables vary cross-nationally. To do so, we begin by estimating a random intercept-only model, which allows each country to have its own intercept. If the random intercept effect is statistically significant, this means that the dependent variable does in fact vary significantly across countries. We then add the political institution variables separately to the models to determine if they can account for this variation.⁶ To check the robustness of the findings, we subsequently add two country-level controls - *GDP* and *inequality*. Because we are also interested in whether the effect of *efficacy* on *collective action* varies across countries, we add a random effect for *efficacy* into our models predicting *collective action*. Given a statistically significant random effect for *efficacy*, we then add interaction effects between *efficacy* and the country-level political institution variables to identify if political institutions can help explain the cross-national variation in *efficacy*'s effect on *collective action*.

Results and Discussion

Table 1 shows the unstandardized coefficients for nine HLM regression models predicting *efficacy*. Model 1 reports the random intercept-only model, which allows the intercept for *efficacy* to vary across countries. Averaging the mean *efficacy* scores for each country, results in a mean *efficacy* score of 6.660. However, the statistically significant random intercept shows that allowing the countries to have varying intercepts explains more variation in *efficacy* than a fixed country effect alone. This means that countries have significantly different mean levels of *efficacy*, that is, *efficacy* varies across countries. Given this, we investigate whether political institution variables can explain this variation. Even-numbered models separately add each political institution variable to the model with individual-level controls. On the individual-level, the effects of the control variables are fairly consistent with past theoretical and empirical research. Males and individuals with more education, higher incomes, and professional jobs are more efficacious than their counterparts (Kohn, 1977; Kohn & Schooler, 1983; Ross, 1991). *Social embeddedness*, whether measured as time spent with friends or colleagues, increases *efficacy* across all models. Friends and colleagues can be conduits of resources as well as support, which may increase individuals' perceptions of how much control they have over their life and outcomes. Moreover, individuals who are more socially embedded may talk about politics more often, which may make them feel more efficacious (see Klandermans *et al.*, 2008). This result is consistent with Passey and Giugni's (2001) and Klandermans *et al.*'s (2008) findings that *social embeddedness* increases *efficacy*.

On the country-level, drawing on VET (Klandermans, 1984) and Opp's (2010) SCM, we predict that political institutions affect individual levels of *efficacy*. While *electoral self-determination* and *party concentration* (Models 2 and 4, respectively) have no statistically significant estimated effects on *efficacy*, *democratic consolidation*, and *women's political representation* both significantly increase *efficacy* (Models 6 and 8, respectively). *Democratic consolidation* explains roughly 13% of the cross-national

⁶ The variables are added separately because they are correlated and the cross-national variation is fairly small, relative to the within-country variation. Adding all the variables at once may mask important relationships due to these properties.

Table 1. Hierarchical linear models predicting efficacy (unstandardized coefficients with standard errors in parentheses) $N = 41,810$ and 48

	Electoral self-determination			Party concentration (Herfindahl Index)			Democratic consolidation			Women's political representation		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9			
<i>Country-level characteristics</i>												
<i>Inequality</i>	-	-	0.820* (0.391)	-	0.707 (0.392)	-	0.745 (0.386)	-	-	0.999** (0.357)		
<i>GDP</i>	-	-	0.402*** (0.100)	-	0.472*** (0.095)	-	0.328* (0.160)	-	-	0.334*** (0.090)		
<i>Electoral self-determination</i>	-	0.059 (0.159)	-	-	-	-	-	-	-	-		
<i>Party concentration (Herfindahl Index)</i>	-	-	-	0.462 (0.601)	0.792 (0.495)	-	-	-	-	-		
<i>Democratic consolidation</i>	-	-	-	-	-	0.013*** (0.003)	0.005 (0.006)	-	-	-		
<i>Women's political representation</i>	-	-	-	-	-	-	-	0.855*** (0.257)	-	0.670** (0.242)		
<i>Individual/Level characteristics</i>												
<i>Age</i>	-	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.006*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)		
<i>Age-squared</i>	-	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)		
<i>Male</i>	-	0.119*** (0.021)	0.119*** (0.021)	0.119*** (0.021)	0.106** (0.022)	0.119*** (0.021)	0.114*** (0.021)	0.114*** (0.021)	0.119*** (0.021)	0.119*** (0.021)		
<i>Married</i>	-	-0.061* (0.024)	-0.061* (0.024)	-0.061* (0.024)	-0.069*** (0.025)	-0.061* (0.024)	-0.061* (0.024)	-0.061* (0.024)	-0.061* (0.024)	-0.061* (0.024)		
<i>Number of children</i>	-	0.011 (0.008)	0.011 (0.008)	0.011 (0.008)	0.016* (0.008)	0.011 (0.008)	0.014 (0.008)	0.014 (0.008)	0.014 (0.008)	0.011 (0.008)		
<i>Education</i>	-	0.033*** (0.006)	0.033*** (0.006)	0.033*** (0.006)	0.035*** (0.006)	0.033*** (0.006)	0.034*** (0.006)	0.034*** (0.006)	0.034*** (0.006)	0.033*** (0.006)		

Continued

Table 1. (Continued)

	Electoral self-determination			Party concentration (Herfindahl Index)		Democratic consolidation		Women's political representation	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Income scale	-	0.020*** (0.005)	0.020*** (0.005)	0.020*** (0.005)	0.012* (0.005)	0.020*** (0.005)	0.016*** (0.005)	0.016*** (0.005)	0.020*** (0.005)
Employed	-	0.133*** (0.031)	0.133*** (0.031)	0.133*** (0.031)	0.129*** (0.032)	0.133*** (0.031)	0.131*** (0.031)	0.131*** (0.031)	0.133*** (0.031)
Professional/Manager	-	0.096*** (0.034)	0.096*** (0.034)	0.096*** (0.034)	0.106*** (0.036)	0.096*** (0.034)	0.102*** (0.035)	0.102*** (0.035)	0.096*** (0.034)
Manual	-	-0.092*** (0.028)	-0.092*** (0.028)	-0.092*** (0.028)	-0.096*** (0.029)	-0.092*** (0.028)	-0.094*** (0.028)	-0.094*** (0.028)	-0.092*** (0.028)
Embeddedness	-	-0.005 (0.006)	-0.005 (0.006)	-0.005 (0.006)	-0.005 (0.006)	-0.005 (0.006)	-0.007 (0.006)	-0.007 (0.006)	-0.005 (0.006)
Time with friends	-	0.105*** (0.013)	0.105*** (0.013)	0.105*** (0.013)	0.088*** (0.014)	0.105*** (0.013)	0.098*** (0.013)	0.098*** (0.013)	0.105*** (0.013)
Time with colleagues	-	0.040*** (0.010)	0.040*** (0.010)	0.040*** (0.010)	0.048*** (0.011)	0.040*** (0.010)	0.043*** (0.010)	0.043*** (0.010)	0.040*** (0.010)
Political scale	-	0.033*** (0.005)	0.033*** (0.005)	0.033*** (0.005)	0.031*** (0.005)	0.033*** (0.005)	0.034*** (0.005)	0.034*** (0.005)	0.033*** (0.005)
Politics is important	-	0.053*** (0.011)	0.053*** (0.011)	0.053*** (0.011)	0.057*** (0.012)	0.053*** (0.011)	0.054*** (0.011)	0.054*** (0.011)	0.054*** (0.011)
Satisfied w/ life	-	0.371*** (0.005)	0.371*** (0.005)	0.371*** (0.005)	0.357*** (0.005)	0.371*** (0.005)	0.363*** (0.005)	0.363*** (0.005)	0.371*** (0.005)
Trust	-	-0.081*** (0.023)	-0.081*** (0.023)	-0.081*** (0.023)	-0.101*** (0.025)	-0.081*** (0.023)	-0.094*** (0.024)	-0.094*** (0.024)	-0.081*** (0.023)
Atheist	-	0.092 (0.049)	0.092 (0.049)	0.092 (0.049)	0.086 (0.052)	0.091 (0.049)	0.086 (0.050)	0.086 (0.050)	0.092 (0.049)
Non-religious	-	-0.026 (0.025)	-0.026 (0.025)	-0.026 (0.025)	-0.034 (0.027)	-0.026 (0.025)	-0.041 (0.026)	-0.041 (0.026)	-0.025 (0.025)

Continued

Table 1. (Continued)

	Electoral self-determination			Party concentration (Herfindahl Index)		Democratic consolidation		Women's political representation	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Missing religion	–	–0.142** (0.053)	–0.142** (0.053)	–0.142** (0.053)	–0.144* (0.056)	–0.142** (0.053)	–0.149** (0.055)	–0.149** (0.055)	–0.142** (0.053)
Constant	6.661*** (0.100)	6.665*** (0.100)	6.680*** (0.085)	6.701*** (0.100)	6.701*** (0.082)	6.735*** (0.100)	6.731*** (0.100)	6.673*** (0.091)	6.692*** (0.079)
Random effects									
Intercept	0.704*** (0.071)	0.668*** (0.069)	0.582*** (0.062)	0.706*** (0.071)	0.568*** (0.063)	0.613*** (0.071)	0.582*** (0.063)	0.625*** (0.071)	0.539*** (0.057)
Log-likelihood	–145,460	–90,230	–90,224	–80,120	–80,111	–87,584	–87,581	–90,226	–90,220
AIC	290,926	180,508	180,500	160,288	160,275	175,216	175,215	180,501	180,492
BIC	290,954	180,716	180,725	160,493	160,497	175,423	175,439	180,708	180,717
Wald X ²	–	8,361***	8,378***	6,642***	6,665***	7,671***	7,679***	8,368***	8,388***

*** $p < .001$, ** $p < .01$, * $p < .05$.

variation in *efficacy* and *women's political representation* explains roughly 11% of this variation. Although the significant positive effects of *democratic consolidation* and *women's political representation* on *efficacy* support our prediction, the non-significant effects of *electoral self-determination* and *party concentration* do not. This may be because *electoral self-determination* and *party concentration* measure more abstract aspects of POS that are further removed from individuals' daily lives. On the other hand, *democratic consolidation* and *women's political representation* may be more applicable to the daily lives of individuals in that they measure the ability of individuals' to freely participate and be represented in politics.

Our finding that two political institution variables affect *efficacy* has important implications for expectations regarding how changing POS affect *collective action*. PPT claims that open states should encourage participation while repressive states should discourage it. Implicit in the theory is that POS shape the incentive structure which in turn makes collective action more appealing. If, consistent with our findings, political institutions not only affect incentives for collective action but also how individuals view the likelihood of their actions changing their environment (i.e., their level of efficacy/fatalism), then closed POS may have enduring negative effects on participation in collective action even after they become more open (see e.g., Goodwin & Allen's 2000 work on fatalism and voting in former Soviet Union republics). While we can only speculate regarding this, it is a fruitful avenue for future research drawing on longitudinal, rather than cross-sectional, data.

Models 7 and 9 in Table 1 add our two country-level control variables—*GDP* and *inequality*. *GDP* increases *efficacy* (see Haller & Hadler, 2008) as does *inequality*. The latter appears to be counterintuitive, although it may be the case that *inequality* need not have negative effects on *efficacy* if individuals perceive *inequality* as just or fair (Hochschild, 1979; Osberg & Smeeding, 2006 on "fair inequality"). Net of these control variables, the estimated effect of *democratic consolidation* on *efficacy* loses its statistical significance, whereas the estimated effect of *women's political representation* maintains statistical significance. In Model 9, roughly 23% of the country-level variability in *efficacy* is accounted for by *women's political representation*, *GDP*, and *inequality*, indicating that a non-trivial amount of the variability in *efficacy* across countries is explained by this model.

Table 2 shows the HGLM models predicting *collective action*. As mentioned above, we investigate a binary measure of *collective action*. Odds ratios are reported for these models with odds ratios significantly above 1 representing a positive effect on *collective action* and odds ratios significantly below 1 representing a negative effect on *collective action*. If political institutions affect levels of *collective action* in a country, as PPT predicts, then *collective action* should vary across countries with different POS. To investigate this, we begin by estimating the random intercept-only model for *collective action* (Model 10). The statistically significant random intercept indicates that average levels of *collective action* significantly vary across countries. To determine whether political institution variables can explain this cross-national variation, we separately add each political institution variable to the model (odd-numbered models) with individual level controls and include a random effect for *efficacy* (i.e., the effect of *efficacy* on *collective action* is allowed to vary across countries). While *electoral self-determination* has no statistically significant estimated effect on *collective action*, *party concentration* significantly decreases the log odds of participating in *collective action*, whereas *democratic consolidation* and *women's political representation* significantly increase the log odds of participation. These significant estimated effects are consistent

Table 2. Hierarchical generalized linear models predicting collective action (odds ratios with standard errors in parentheses) $N = 41,810$ and 48

	Electoral self-determination			Party concentration (Herfindahl Index)			Democratic consolidation			Women's political representation	
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18		
<i>Country-level characteristics</i>											
<i>Inequality</i>	-	-	0.271*** (0.098)	-	0.318** (0.118)	-	0.329** (0.125)	-	-	0.371* (0.149)	
<i>GDP</i>	-	-	2.035*** (0.190)	-	2.259*** (0.202)	-	2.061*** (0.325)	-	-	2.304*** (0.235)	
<i>Electoral self-determination</i>	-	1.101 (0.425)	1.011 (0.202)	-	-	-	-	-	-	-	
<i>Party concentration (Herfindahl Index)</i>	-	-	-	0.090** (0.078)	0.236** (0.111)	-	-	-	-	-	
<i>Democratic consolidation</i>	-	-	-	-	-	1.030*** (0.004)	1.006 (0.005)	-	-	-	
<i>Women's political representation</i>	-	-	-	-	-	-	-	2.968** (1.233)	-	1.088 (0.297)	
<i>Individual/Level characteristics</i>											
<i>Age</i>	-	1.004*** (0.001)	1.004*** (0.001)	1.004*** (0.001)	1.004*** (0.001)	1.005*** (0.001)	1.005*** (0.001)	1.004*** (0.001)	1.004*** (0.001)	1.004*** (0.001)	
<i>Age-squared</i>	-	1.000*** (0.000)	1.000*** (0.000)	0.999*** (0.000)	0.999*** (0.000)	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)	1.000*** (0.000)	
<i>Male</i>	-	1.137*** (0.027)	1.137*** (0.027)	1.130*** (0.029)	1.130*** (0.029)	1.127*** (0.027)	1.127*** (0.027)	1.137*** (0.027)	1.137*** (0.027)	1.137*** (0.027)	
<i>Married</i>	-	0.924** (0.025)	0.924** (0.025)	0.933* (0.027)	0.933* (0.027)	0.942* (0.026)	0.942* (0.026)	0.924** (0.025)	0.924** (0.025)	0.924** (0.025)	
<i>Number of children</i>	-	1.011 (0.009)	1.011 (0.009)	1.016 (0.010)	1.016 (0.010)	1.012 (0.009)	1.012 (0.009)	1.011 (0.009)	1.011 (0.009)	1.011 (0.009)	
<i>Education</i>	-	1.128*** (0.008)	1.128*** (0.008)	1.123*** (0.008)	1.123*** (0.008)	1.126*** (0.008)	1.126*** (0.008)	1.128*** (0.008)	1.128*** (0.008)	1.128*** (0.008)	

Continued

Table 2. (Continued)

	Electoral self-determination			Party concentration (Herfindahl Index)		Democratic consolidation		Women's political representation	
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18
Income scale	–	1.046*** (0.006)	1.046*** (0.006)	1.044*** (0.006)	1.044*** (0.006)	1.051*** (0.006)	1.051*** (0.006)	1.046*** (0.006)	1.046*** (0.006)
Employed	–	1.200*** (0.042)	1.200*** (0.042)	1.150*** (0.042)	1.150*** (0.042)	1.181*** (0.041)	1.181*** (0.041)	1.201*** (0.042)	1.200*** (0.042)
Professional/Manager	–	1.055 (0.041)	1.056 (0.041)	1.071 (0.044)	1.072 (0.044)	1.064 (0.042)	1.064 (0.042)	1.055 (0.041)	1.056 (0.041)
Manual	–	0.931* (0.029)	0.931* (0.029)	0.922* (0.030)	0.922* (0.030)	0.913** (0.029)	0.913** (0.029)	0.931* (0.029)	0.931* (0.029)
Embeddedness	–	1.148*** (0.008)	1.147*** (0.008)	1.145*** (0.009)	1.144*** (0.009)	1.145*** (0.008)	1.144*** (0.008)	1.147*** (0.008)	1.147*** (0.008)
Time with friends	–	1.126*** (0.017)	1.126*** (0.017)	1.122*** (0.018)	1.122*** (0.018)	1.123*** (0.017)	1.123*** (0.017)	1.126*** (0.017)	1.126*** (0.017)
Time with colleagues	–	1.033** (0.012)	1.033** (0.012)	1.058*** (0.013)	1.058*** (0.013)	1.044*** (0.012)	1.044*** (0.012)	1.033** (0.012)	1.033** (0.012)
Political scale	–	0.976*** (0.005)	0.976*** (0.005)	0.964*** (0.005)	0.964*** (0.005)	0.965*** (0.005)	0.965*** (0.005)	0.976*** (0.005)	0.976*** (0.005)
Politics is important	–	1.234*** (0.016)	1.234*** (0.016)	1.239*** (0.017)	1.239*** (0.017)	1.238*** (0.016)	1.238*** (0.016)	1.234*** (0.016)	1.234*** (0.016)
Satisfied w/ life	–	0.980*** (0.006)	0.980*** (0.006)	0.978*** (0.006)	0.978*** (0.006)	0.980*** (0.006)	0.980*** (0.006)	0.980*** (0.006)	0.980*** (0.006)
Trust	–	0.814*** (0.022)	0.813*** (0.022)	0.809*** (0.023)	0.809*** (0.023)	0.817*** (0.022)	0.817*** (0.022)	0.813*** (0.022)	0.813*** (0.022)
Atheist	–	1.288*** (0.073)	1.285*** (0.072)	1.282*** (0.077)	1.277*** (0.077)	1.296*** (0.075)	1.292*** (0.075)	1.287*** (0.073)	1.284*** (0.072)

Continued

Table 2. (Continued)

	Electoral self-determination			Party concentration (Herfindahl Index)			Democratic consolidation			Women's political representation		
	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18			
Non-religious	–	1.072* (0.031)	1.069* (0.031)	1.095** (0.033)	1.092** (0.033)	1.096** (0.032)	1.093** (0.032)	1.071* (0.031)	1.069* (0.031)			
Missing religion	–	0.963 (0.056)	0.962 (0.056)	1.029 (0.065)	1.028 (0.065)	1.024 (0.063)	1.022 (0.063)	0.963 (0.056)	0.962 (0.056)			
Efficacy	–	1.015* (0.004)	1.015* (0.004)	1.013* (0.003)	1.013* (0.003)	1.013* (0.003)	1.013* (0.003)	1.015* (0.004)	1.015* (0.004)			
Constant	–	0.670** (0.092)	0.692*** (0.055)	0.735* (0.113)	0.728*** (0.061)	0.725** (0.081)	0.713*** (0.061)	0.682** (0.100)	0.695*** (0.062)			
Random effects												
Intercept	1.003*** (0.100)	0.953*** (0.097)	0.539*** (0.056)	0.953*** (0.097)	0.535*** (0.058)	0.759** (0.079)	0.574*** (0.060)	0.953*** (0.097)	0.608*** (0.063)			
Efficacy	–	0.038*** (0.007)	0.038*** (0.007)	0.036*** (0.008)	0.036*** (0.008)	0.041*** (0.008)	0.041*** (0.008)	0.038*** (0.007)	0.039*** (0.007)			
Log-Likelihood	–39,644	–23,735	–23,708	–2,1024	–20,996	–22,974	–22,961	–23,738	–23,714			
AIC	79,293	47,520	47,469	41,745	42,045	45,998	45,976	47,526	47,841			
BIC	79,311	47,736	47,703	41,875	42,275	46,214	46,209	47,742	47,714			
Wald X ²	–	2,394***	2,494***	2,188***	2,288***	2,412***	2,469***	2,388***	2,462***			

*** $p < .001$, ** $p < .01$, * $p < .05$.

with PPT's prediction that more open POS facilitate collective action. A good example is Sweden – an established democracy with medium-to-high party fragmentation and group interest representation – which consequently has the highest average overall participation in *collective action* in our sample. Zimbabwe is a good example of a non-conducive political context, characterized by low or no *democratic consolidation* and very high *party concentration* (or low fragmentation – the lowest in our sample), repression, and exclusion. Zimbabwe has the lowest average participation in our sample.

On the individual-level, VET predicts that *efficacy* should increase *collective action*, which is supported by the results in Table 2: the log odds of engaging in *collective action* are greater for efficacious individuals across all models. This suggests that the positive effect of *efficacy* on *collective action* found in past studies may be generalizable across countries. Moreover, the results of our individual-level control variables are fairly consistent with previous research (McAdam, 1992; Oliver, 1984; Sobel, 1993): being male, highly educated, and in a high social class increases the log odds of participating in *collective action*. While being right-leaning politically increases *efficacy* (see Table 1), it decreases the log odds of participating in *collective action*, net of *efficacy*. Consistent with our results, past research has typically found that politically left-leaning individuals participate in *collective action* more (see Schussman & Soule, 2005). Although politically right-leaning individuals may feel more efficacious, they may not feel the need to channel their efficacy via collective action. This would suggest that another mechanism, beyond the scope of the present study, is at work, which can account for their lower levels of collective action. Congruent with RM and social capital theories, *organizational embeddedness* and *social embeddedness* increase the log odds of participating in *collective action* (see Kitts, 1999; Klandermans *et al.*, 2008; Passy & Giugni, 2001). Interestingly, individuals with higher levels of *trust* are less likely to participate in *collective action*. We can only speculate, but it may be that more pessimistic attitudes, including distrust of others, would motivate individuals to participate, which is consistent with Oliver's (1984) study. While general discontent is typically not sufficient to motivate collective action, if individuals do not foresee an improvement to their situation, they may be more likely to take action (Folger, 1986, 1987). Given this, if individuals do not trust others and the government specifically, they may be more likely to consider the government illegitimate and be more willing to take action against it (see Roef, Klandermans, & Johan, 1998). On the other hand, when individuals are more trusting of others and the government, they may tend to legitimize or justify the current situation and the decisions of the government, such that action becomes perceived as unnecessary.

Next, we added our two country-level control variables to the model (even numbered models) – *inequality* and *GDP*. *Inequality* decreases the likelihood of participating in *collective action*, whereas *GDP* increases it. *Inequality*'s negative effect is consistent with research finding that when *inequality* patterns social relations, there are fewer intergroup associations and more interpersonal conflict among groups, which makes it more difficult for individuals to achieve common goals (Blau, 1977) and resolve collective action problems (Hechter, 2000). Net of *GDP* and *inequality*, *party concentration* is the only political institution variable to maintain a statistically significant estimated effect (Model 14). In addition to the micro- and macro-level direct effects, our structural-cognitive VET model predicts that the effect of *efficacy* on *collective action* will be conditional on the political opportunity structure, where efficacious individuals should be more likely than fatalists to participate in closed POS. This also implies that closed POS should have less of a negative effect on collective action for efficacious individuals. Since the random effect for efficacy shown in Table 2 is statistically significant (i.e., the

slope coefficient for efficacy on collective action varies across countries), we test our prediction by exploring cross-level interactions between *efficacy* and our country-level political institution variables. Table 3 presents the interaction terms for the cross-level interactions with *efficacy*.

Model 19 shows that *electoral self-determination* conditions the effect of *efficacy* on *collective action*, which accounts for some of the variation in *efficacy* slopes across countries. Consistent with our prediction, *efficacy* increases the log odds of participating in *collective action* more in countries with less *electoral self-determination*. Also, this indicates that the *electoral determination* of a country matters little when individuals are highly efficacious. As *efficacy* goes up, the effect of *electoral determination* becomes less positive. This suggests that efficacy may be especially important for facilitating collective action where the political opportunity structure is closed. At the same time, any contextual effect of *electoral self-determination* on *collective action* is negated among highly efficacious individuals. Therefore, as predicted, it only has a positive effect on *collective action* for fatalistic individuals. Since the average effect of *electoral self-determination* centres on zero (i.e., is not statistically significant in Models 11, 12, and 19), the effect of *electoral self-determination* is entirely conditional on *efficacy*.

Model 25 shows that another measure of political opportunity, *women's political representation*, also has a statistically significant interaction effect with *efficacy*, but it is in the opposite direction of what we hypothesized: Efficacious individuals have a higher log odds of participating in collective action in countries with more political representation for women. To insure that this interaction effect does not depend on an individual's sex (i.e., that the interaction effect exists for women but not men), we estimated a three-way interaction effect between *women's political representation*, *efficacy*, and *sex* (results not shown). The three-way interaction effect was not statistically significant; therefore the interaction effect between *women's political representation* and *efficacy* does not depend on the *sex* of the individual. This is consistent with using *women's political representation* as a proxy for 'the quality of democratic representation' (Lijphart, 1999, p. 280), which should affect both men and women. We argue that the reason for the opposite interaction effects may be due to what these two political institution variables are measuring; *electoral self-determination* measuring repression and *women's political representation* measuring access and group representation. It may be that efficacy helps surmount repression, whereas access provides the necessary opportunity for efficacious individuals to act. Importantly, both interaction effects support a macro-micro conditional relationship between POS and efficacy, which suggests that certain macro-level political contexts may amplify the micro-level positive effect of efficacy on collective action; however, future research should further investigate how different measures of POS may have varying implications for efficacy and other social psychological variables.

Next, we added *GDP* and *inequality* to the models. While the interaction effect for *electoral self-determination* remains statistically significant (Model 20), the interaction effect for *women's political representation* is attenuated (Model 26). Even with interaction effects added to the models, there is still unexplained residual variability in *efficacy* across countries, which suggests that unmeasured country-characteristics also influence the effect of *efficacy* on *collective action*.

Across several models, controlling for *GDP* attenuated the direct or conditional effects of some of the political institution variables. This should be expected as economic development is typically highly correlated with a number of political institution variables and since democratization, as Przeworski, Alvarez, Cheibub, and Limongi (2000, p.78) claim,

Table 3. Hierarchical generalized linear models predicting collective action with cross-level interaction terms for efficacy and country characteristics (odds ratios with standard errors in parentheses) $N = 41,810$ and 48

	Electoral self-determination		Party concentration (Herfindahl Index)		Democratic consolidation		Women's political representation	
	Model 19	Model 20	Model 21	Model 22	Model 23	Model 24	Model 25	Model 26
<i>Country-level characteristics</i>								
<i>Inequality</i>	–	0.271*** (0.098)	–	0.317** (0.119)	–	0.329** (0.125)	–	0.371* (0.149)
<i>GDP</i>	–	2.036*** (0.190)	–	2.258*** (0.204)	–	2.061*** (0.325)	–	2.304*** (0.235)
<i>Electoral self-determination</i>	1.101 (0.425)	1.011 (0.202)	–	–	–	–	–	–
<i>Party concentration (Herfindahl Index)</i>	–	–	0.085** (0.075)	0.237** (0.115)	–	–	–	–
<i>Democratic consolidation</i>	–	–	–	–	1.030*** (0.004)	1.006 (0.005)	–	–
<i>Women's political representation</i>	–	–	–	–	–	–	2.969** (1.233)	1.088 (0.297)
<i>Individual-level characteristics</i>								
<i>Efficacy</i>	1.016* (0.008)	1.016* (0.008)	1.016* (0.008)	1.016* (0.008)	1.012* (0.005)	1.012* (0.005)	1.016* (0.008)	1.016* (0.008)

Continued

Table 3. (Continued)

	Electoral self-determination		Party concentration (Herfindahl Index)		Democratic consolidation		Women's political representation	
	Model 19	Model 20	Model 21	Model 22	Model 23	Model 24	Model 25	Model 26
Cross-level interactions: Efficacy X ...								
Electoral self-determination	0.826** (0.030)	0.816** (0.026)	-	-	-	-	-	-
Party concentration (Herfindahl Index)	-	-	0.995 (0.018)	0.995 (0.018)	-	-	-	-
Democratic consolidation	-	-	-	-	1.000 (0.000)	1.000 (0.000)	-	-
Women's political representation	-	-	-	-	-	-	1.131* (0.022)	1.031 (0.022)
Constant	0.670** (0.092)	0.670** (0.092)	0.732* (0.115)	0.733*** (0.062)	0.725** (0.081)	0.712*** (0.061)	0.682** (0.100)	0.695*** (0.062)
Random effects								
Intercept	0.953*** (0.097)	0.448** (0.056)	0.943*** (0.096)	0.535*** (0.058)	0.759** (0.079)	0.574*** (0.060)	0.953*** (0.097)	0.608*** (0.063)
Efficacy	0.029*** (0.007)	0.029*** (0.007)	0.039*** (0.007)	0.036*** (0.008)	0.041*** (0.008)	0.041*** (0.008)	0.032*** (0.007)	0.037*** (0.007)
Log-likelihood	-23,735	-23,708	-20,443	-20,415	-22,974	-22,961	-23,737	-23,713
AIC	47,521	47,471	40,937	40,866	46,000	45,978	47,526	47,481
BIC	47,726	47,713	41,159	41,124	46,224	46,200	47,751	47,732
Wald X ²	2,394***	2,494***	2,099***	2,199***	2,414***	2,469***	2,392***	2,466***

Note. All models include the individual-level control variables found in Table 2 (not shown). ***p < .001, **p < .01, *p < .05.

'is undoubtedly linked to economic development'. In fact, because this relationship is so strong, some studies use economic variables as proxies for political institutions (see Keefer & Knack, 2000). Because the effects of economic development and political institutions are most likely inextricably intertwined (see Przeworski & Limongi, 1993), it may be inappropriate to interpret the attenuation of the political institution effects as evidence contrary to PPT. It is more reasonable to assume that they work together to affect collective action. Since comparative approaches in the study of political process have generally been applied strictly to Western countries (Kitschelt, 1986; Kriesi *et al.*, 1995), there was no need to control for other structural variables (Tarrow, 1998). Thus, this issue has not been addressed by past PPT research. Given past research on the relationship between political and economic institutions, we advocate interpreting the effects of the political institution variables and *GDP* in tandem. Still, the results without the country-level controls should be interpreted with caution.

Conclusions

One of the most central social psychological variables in collective action and social movement studies is efficacy. Yet, most previous studies of efficacy and collective action analysed the impact of efficacy on collective action in one country or at most a few. Using a general measure of efficacy, we tested its effect on collective action across 48 countries. We found that, as predicted, efficacious individuals are more likely to participate in collective action, which suggests that the positive effect of efficacy on collective action found in previous studies may be generalizable cross-nationally. While past research on efficacy and collective action has generally neglected efficacy's relationship to structural factors, drawing on VET and SCM, we theorized a link between macro political institutions and individual-level efficacy. We proposed that more open POS should increase efficacy and found support for this hypothesis. Moreover, we predicted that efficacy's effect on collective action should be partially conditioned on POS, where efficacious individuals should be more likely than fatalists to participate in collective action in more closed structures. We found mixed support for this hypothesis depending on how POS were operationalized: measuring POS as political repression supported the hypothesis, whereas measuring POS as group political representation did not and instead showed the opposite conditional effect (i.e., efficacious individuals are more likely to participate in more open POS characterized by group representation). While both results provide support for a link between macro-level political institutions and micro-level efficacy, future studies should further investigate the relationship between efficacy and different conceptualizations of POS. Overall, it seems that participation in collective action is a result of both individual- and country-level factors and their relationship to each other, although efficacy and other individual-level variables explain more of the variation in participation. This supports the notion that macro-level characteristics may not be proximate causes of participation (Lichbach, 1998; Opp, 2010) and that a micro-level mechanism (i.e., a macro-micro link) is needed to fully account for collective action.

In order to investigate the effects of political institutions and efficacy, we used a cross-national sample of 48 countries from the WVS. There are two important advantages associated with the use of a large cross-national sample of individuals. First, it allows for the adequate testing of more generic models of collective action that are not dependent on any one specific social movement or country. Although case studies are useful for highlighting certain mechanisms of participation, these mechanisms can be difficult to generalize, particularly across different national contexts. Second, it allows researchers

to consider both social-psychological and objective structural effects across a fairly varied sample of countries.

However, there are limitations to our study. Because the data are cross-sectional, we cannot make claims about causality. Some variables we specify as preceding collective action may in fact follow from it. In this case, our statistical model would be incorrectly specified as it does not coincide with the correct causal model. However, an alternative statistical model, where action predicts these variables, suffers from the same issue. This is a notable problem in the literature as a whole: Van Zomeren *et al.*'s (2008) meta-analysis of 34 efficacy and collective studies included only four studies for which causal inference could be drawn. Despite this, several findings strengthen our confidence in the specification of the model. The inclusion of age helps account for the fact that older individuals have been 'exposed' longer and have a higher probability of having participated in collective action. In addition, the macro-level effects cannot be explained away by misspecification of the model since we would not expect country characteristics at this time point to have influenced collective action in the past.

Another limitation is that our sample is restricted to 48 countries. Although it would be ideal to include all the countries of the world, such an expectation is unrealistic. Although our sample is biased towards western countries, it is not limited to them, which is often the case with cross-national work due to poor data outside the west. Our sample is therefore a dramatic improvement over prior research. Moreover, we find that there is significant variability across countries with respect to collective action as well as the effect of efficacy on collective action. This indicates that while structural variations found in the sample are much narrower than the structural variations found in the population (i.e., all countries), there is still important variability between the countries in our sample.

Despite these limitations, our analyses reveal an important relationship between key structural level political institution variables, efficacy, and collective action. Our findings suggest the inadequacy of structural-only explanations of collective action, but also the insufficiency of purely social psychological explanations. Instead, our results highlight the interdependencies between structure and social psychological factors. We believe that building upon this type of model will help elucidate the relationship between the micro and the macro in explaining participation in collective action.

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Appendix. Variable specifications and descriptive statistics

Variable	Definition	No. of obs	Mean	SD	Min	Max	Source
<i>Dependent variables</i>							
<i>Efficacy</i>							
Efficacy	How much freedom of choice and control (1 = none at all to 10 = a great deal)	41,810	6.652	2.387	1	10	WVS
<i>Collective action</i>							
Any action	Binary measure of collective action (1 = participated in at least one of the following types of collective action: signed a petition, joined a boycott, attended lawful demonstrations, joined unofficial strikes, or occupied buildings/factories, 0 = otherwise)	41,810	0.423	0.494	0	1	WVS
<i>Country-level variables</i>							
<i>Inequality</i>							
GDP	Gini coefficient of income inequality 2000	48	3.518	0.231	3.206	4.057	WB
Electoral	Per capita Gross Domestic Product of a country divided by 10,000	48	1.158	0.951	0.055	3.421	WB
<i>self-determination</i>	Extent citizens enjoy freedom of political choice and the legal right and ability in practice to change the laws and officials that govern them through free and fair elections. A score of 1 indicates that while citizens had the legal right to self-determination, political participation is only moderately free and open. A score of 2 indicates that political participation is very free and citizens had the right to self-determination through free and fair elections in both law and practice.	48	1.693	0.584	0	2	CIRI
<i>Party concentration</i>							
Party concentration	Number of parties in the legislature over the number of seats a political party controls or the sum of squared shares of all parties in the legislature	48	0.331	0.178	0.096	1	DPI

Continued

Appendix. (Continued)

Variable	Definition	No. of obs	Mean	SD	Min	Max	Source
<i>Democratic consolidation</i>	How long the country has been autocratic or democratic in years	48	31.08	27.06	3	70	DPI
<i>Women's political representation</i>	Women's political rights include a number of internationally recognized rights. These rights include: the right to vote; the right to run for political office; the right to hold elected and appointed government positions; the right to join political parties; and the right to petition government officials. A score of 2 indicates that women's political rights were guaranteed in law, but were still moderately prohibited in practice. A score of 3 indicates that women's political rights were guaranteed in both law and practice.	48	2.142	0.353	2	3	CIRI
<i>Individual-level variables</i>							
<i>Biographical characteristics</i>							
Age	Age	41,810	42.92	16.73	15	101	WVS
Male	Sex (1 = male, 0 = female)	41,810	0.473	0.499	0	1	WVS
Married	Marital status (1 = married, 0 = otherwise)	41,810	0.578	0.493	0	1	WVS
Number of children	Number of children	41,810	1.836	1.697	0	20	WVS
Education	Highest level of education (1 = no elementary, 8 = university degree)	41,810	4.451	2.206	1	8	WVS
Income scale	Respondent's position on 10-point income scale	41,810	4.621	2.49	0	10	WVS
Employed	Employment status (1 = employed, 0 = otherwise)	41,810	0.736	0.44	0	1	WVS
Professional	Is a professional or manager (1 = yes, 0 = no)	41,810	0.123	0.329	0	1	WVS
Manual laborer	Is a manual laborer (1 = yes, 0 = no)	41,810	0.363	0.48	0	1	WVS
Embeddedness	Count measure of the number of organizations for which the respondent is a member	41,810	1.187	1.791	0	14	WVS

Continued

Appendix. (Continued)

Variable	Definition	No. of obs	Mean	SD	Min	Max	Source
Time with friends	Time spent with friends (1 = weekly to 4 = not at all)	41,810	3.271	0.885	1	4	WVS
Time with colleagues	Time spent with colleagues (1 = weekly to 4 = not at all)	41,810	2.268	1.176	1	4	WVS
Political scale	Self-positioning in political scale (1 to 10 where 10 = right)	41,810	5.573	2.328	1	10	WVS
Politics is important	Politics is important (1 = very important to 4 = not at all)	41,810	2.252	0.945	1	4	WVS
Trust	Most people can be trusted (1 = can't be too careful and 2 = most people can be trusted)	41,810	1.733	0.442	1	2	WVS
Life satisfaction	Satisfaction with your life (1 to 10 where 10 = very satisfied)	41,810	6.471	2.548	1	10	WVS
Atheist	1 = Atheist, 0 = otherwise	41,810	0.040	0.200	0	1	WVS
Non-religious	1 = Non-religious, 0 = otherwise	41,810	0.233	0.422	0	1	WVS
Missing religion	1 = System missing, 0 = otherwise	41,810	0.053	0.224	0	1	WVS