



## Does group efficacy increase group identification? Resolving their paradoxical relationship

Martijn van Zomeren, Colin Wayne Leach, Russell Spears

### ► To cite this version:

Martijn van Zomeren, Colin Wayne Leach, Russell Spears. Does group efficacy increase group identification? Resolving their paradoxical relationship. *Journal of Experimental Social Psychology*, 2010, 46 (6), pp.1055. 10.1016/j.jesp.2010.05.006 . hal-00864365

**HAL Id: hal-00864365**

**<https://hal.science/hal-00864365>**

Submitted on 21 Sep 2013

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

## Accepted Manuscript

Does group efficacy increase group identification? Resolving their paradoxical relationship

Martijn van Zomeren, Colin Wayne Leach, Russell Spears

PII: S0022-1031(10)00122-8  
DOI: doi: [10.1016/j.jesp.2010.05.006](https://doi.org/10.1016/j.jesp.2010.05.006)  
Reference: YJESP 2465

To appear in: *Journal of Experimental Social Psychology*

Received date: 4 May 2009  
Revised date: 27 April 2010



Please cite this article as: van Zomeren, M., Leach, C.W. & Spears, R., Does group efficacy increase group identification? Resolving their paradoxical relationship, *Journal of Experimental Social Psychology* (2010), doi: [10.1016/j.jesp.2010.05.006](https://doi.org/10.1016/j.jesp.2010.05.006)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Running head: GROUP EFFICACY AND IDENTIFICATION

Does Group Efficacy Increase Group Identification?

Resolving their Paradoxical Relationship

Word Count for Report: 4,360 (excluding references)

## Abstract

Although group identification and group efficacy are both important predictors of collective action against collective disadvantage, there is mixed evidence for their (causal) relationship. Meta-analytic and correlational evidence suggests an overall positive relationship that has been interpreted as consistent with the idea that group identification leads to group efficacy. However, experimental evidence has not supported this causal relationship. To resolve this paradox, we show in an experiment that it is group efficacy that leads to increased group identification because group efficacy puts individuals' identity into action. We discuss the theoretical and practical implications of these findings.

Word count: 96

Keywords: group efficacy, group identification, collective action, coping

## Does Group Efficacy Increase Group Identification?

## Resolving their Paradoxical Relationship

Barack Obama's *Yes we can* slogan is a prime example of the importance of instilling individuals with hope for social change. The slogan contains two elements that represent psychological requirements for an affirmative answer to the question of whether "we can" achieve social change. First, the "we" communicates that individuals must identify with a *group* who together share the goal of social change. Second, the "can" communicates that the group requires the strength to be able to *achieve* the change it seeks. In this article, we examine the relationship between the "we" and "can" elements of Obama's slogan. In a departure from most previous thinking, we ask whether individuals' belief that group goals can be achieved through joint effort (i.e., *group efficacy beliefs*; e.g., Bandura, 1995, 1997; Van Zomeren, Spears, Fischer, & Leach, 2004) increases their *group identification* (e.g., Ellemers, Spears, & Doosje, 1999). An affirmative answer to this question would resolve an intriguing paradox in the literature.

The paradox is that although it is clear that group efficacy and group identification are positively correlated (Kelly & Breinlinger, 1995; Mummendey, Kessler, Klink, & Mielke, 1999; Van Zomeren, Postmes, & Spears, 2008), it is doubtful whether this relationship is due to the often assumed causal effect of group identification on group efficacy (for reviews, see Klandermans, 1997; Walker & Smith, 2002). In fact, the few experiments performed to date have failed to provide evidence that group identification causes greater group efficacy beliefs (Simon, Loewy, Stürmer, Weber, Freytag, Habig, et al., 1998, Study 2; Van Zomeren, Spears, & Leach, 2008, Study 2). A so far unexamined resolution to this paradox is that group efficacy leads to increased group identification, rather than vice versa. We believe that group efficacy indeed leads to increased group identification because it increases the tendency to undertake collective action (e.g., Van Zomeren et al., 2004). It is through collective action

tendencies that individuals *enact* their group identity and thereby concretely affirm and strengthen it as evidenced in increased identification with the group (e.g., Drury & Reicher, 2005). We therefore tested whether group efficacy increases group identification in an experiment.

*Resolving the Paradoxical Relationship Between Group Efficacy and Group Identification*

Group identification and group efficacy are both important predictors of collective action against collective disadvantage<sup>1</sup>, which is commonly defined as any action individuals take as representatives of their group to improve the group's situation (Wright, Taylor, & Moghaddam, 1990). The key explanations for this complicated socio-psychological phenomenon have focused on individuals' identification with the disadvantaged group, their group efficacy beliefs, and their perception and emotional experience of injustice (for reviews, see Klandermans, 1997; Van Zomeren, Postmes, et al., 2008). For instance, both relative deprivation theory (for a review, see Walker & Smith, 2002) and social identity theory (Tajfel, 1978; Tajfel & Turner, 1979) focus on the degree to which individuals perceive their disadvantage as group-based (Kawakami & Dion, 1992; Simon et al., 1998) and as unjust (Runciman, 1966; Tajfel & Turner, 1979; Walker & Smith, 2002). Other prominent approaches focus on more instrumentally-oriented explanations of collective action that emphasize the importance of individuals' group efficacy beliefs (e.g., Mummendey et al., 1999; Van Zomeren et al., 2004), and more generally the mobilization of resources to press for social change (e.g., Klandermans, 1984; McCarthy & Zald, 1977).

A recent meta-analysis revealed that each of the major explanations of collective action has distinct value (Van Zomeren, Postmes, et al., 2008). Indeed, indicators of identity, efficacy, and injustice were found to be near equal, medium-sized, predictors of collective action. Moreover, these explanations are not unrelated to one another. In fact, group identity and group efficacy were found to be positively correlated across a considerable number of

studies ( $r = .19$ ; Van Zomeren, Postmes, et al., 2008). Qualitative field research also suggests that identification with a group is associated with a greater belief in group efficacy (e.g., Drury & Reicher, 2005). However, none of this research can establish that group identification *causes* group efficacy. In fact, the few experiments performed to date do not support the view that group identification causes greater group efficacy beliefs. For instance, Van Zomeren, Spears, et al. (2008, Study 2) found that a manipulation individuals' group (vs. personal) identity salience had no effect on individuals' group efficacy beliefs. Similarly, Simon et al.'s (1998) manipulation of common fate increased individuals' identification with a social movement but did not increase their belief in the group's efficacy. Although it is clear that group identification and group efficacy are positively correlated, there is no experimental evidence for the prevalent idea that group identification causes group efficacy. As such, the positive correlation between group identification and group efficacy is more likely the result of group efficacy causing increased group identification.

#### *Why Does Group Efficacy Increase Group Identification?*

We propose that a stronger belief in group efficacy indicates that individuals are more focused on achieving group goals through the *joint effort* of collective action (Bandura, 1995, 1997; Mummendey et al., 1999). Indeed, the notion that other group members are able and willing to take collective action is an important basis of the belief in group efficacy (Van Zomeren et al., 2004). This is consistent with the more general evidence that group efficacy beliefs increase team effectiveness and performance (Prussia & Kinicki, 1996), and that individuals' belief that social change is generally possible increases their group identification (e.g., Doosje, Spears, & Ellemers, 2002; Ellemers, 1993; Mummendey et al., 1999; Tajfel, 1978).

More specifically, group efficacy beliefs should increase group identification by increasing the tendency to engage in collective action itself. Collective action based in belief

in group efficacy can increase individuals' sense that they share a group identity that is concretely enacted through collective action. In other words, collective action based in the belief in group efficacy is an important way in which individuals "put their identity into action" (Reicher, 1996; Tajfel, 1978; Tajfel & Turner, 1979). Drury and Reicher's (2000, 2005) work in particular suggests that group efficacy and attendant collective action tendencies can redefine individuals' group identity in terms of the collective action for which group members are prepared. As such, a shared tendency for collective action can serve as a concrete means by which the group identity is affirmed and strengthened (Drury & Reicher, 2005; Ellemers, 1993; see also Leach, Rodriguez Mosquera, Vliek, & Hirt, *in press*). Our key hypothesis is therefore that stronger group efficacy beliefs increase individuals' group identification because it increases their collective action tendencies (see Figure 1). We tested our hypothesis in an experiment in which we manipulated group efficacy and measured group identification (the predicted outcome), and collective action tendencies (i.e., the predicted mediator).

### *Method*

Ninety-eight students (22 males, 76 females, mean age 20 years) participated in an experiment during a mass testing session at the University of Amsterdam. The experiment was disguised as a survey conducted by an independent research body, modeled after the procedure used by Van Zomeren et al. (2004). This (bogus) survey was about the opinion of first-year Psychology students at the University of Amsterdam toward a recent plan of the University Board. Participants were informed that the plan proposed the raising of the tuition fees that students pay annually. Then, participants read whether an expert on collective action had stated that collective action would be effective (high group efficacy) in stopping this plan, or not that effective (moderate group efficacy). Participants were randomly allocated to one of the two conditions.



### *Procedure*

All participants read the following: “As you might have heard, there are government plans for financial cuts affecting all universities in The Netherlands. If these plans are carried out, all universities will then have to solve the problem of wishing to maintain high levels of quality education while lacking sufficient funds to achieve this. Therefore the University of Amsterdam has proposed a plan to raise annual tuition fees for its students by 600 euros” (which equals about US \$800). Then, participants read the following: “To justify this plan, University Board member J. Verhagen recently said in an interview, “Cuts are always a negative event, but what can we do about it? If our students want to maintain their high level of quality education, we think they should pay more.” Then, we introduced the group efficacy manipulation. Participants in the high group efficacy condition read the following: “Professor Klandermans of the Free University of Amsterdam, who is a specialist on the topic of collective action, reacted to this plan by saying in an interview: “Collective action *really affects* these kinds of decisions. My research shows that especially in times like these, collective action *can* stop the raising of tuition fees”. In the moderate group efficacy condition, participants read: “Professor Klandermans of the Free University of Amsterdam, who is a specialist on the topic of collective action, reacted in the same interview to this plan by saying: “Collective action *does not really affect* these kinds of decisions. My research shows that especially in times like these, collective action *cannot really* stop the raising of tuition fees” (note that italics were not included in the original).

### *Dependent Variables*

All measures, derived from Van Zomeren et al. (2004) and Van Zomeren, Spears, et al. (2008), applied 7-point response scales (i.e., 1 = *not at all*, 7 = *very much*). We first checked our group efficacy manipulation with a 4-item measure of group efficacy ( $\alpha = .86$ ; “I think *together we are able to change this situation / we are able to stop this proposal / that*

*students can successfully stand up for their rights against the Board / that students can really influence these decisions of the Board”). We also measured collective action tendencies (i.e., the presumed mediator) with four items ( $\alpha = .93$ ; “I would participate in a future demonstration to stop this proposal / participate in raising our collective voice to stop this proposal / do something together with fellow students to stop this proposal / participate in some form of collective action to stop this proposal”), and group identification (i.e., the predicted outcome) with four items ( $\alpha = .90$ ; “I see myself as / am glad to be a student”, “I identify / feel connected with other students”).*

To assess the construct validity of our measures (see also Van Zomeren, Spears, et al., 2008, 2010), we performed a principal axis factor analysis with oblique rotation (Russell, 2002). Results showed three extracted factors with an eigenvalue  $> 1$  that corresponded exactly to our three measures. All items loaded strongly on their intended factor (with factor loadings  $> |.73|$ ), and the explained variance was 71.88 %. Thus, our measures had adequate construct validity<sup>2</sup>.

## Results

Gender and age were included in initial analyses. As these variables did not influence the results they were omitted here. Table 1 summarizes the means and standard deviations of the key variables by experimental condition, and Table 2 reports the correlations between these variables across conditions and by experimental condition.

### *Manipulation Check*

An analysis of variance (ANOVA) with group efficacy as the independent variable and the group efficacy measure as the dependent variable showed a significant main effect of the group efficacy manipulation,  $F(1, 96) = 6.66, p = .01, \text{partial}\eta^2 = .07$ . As can be seen in Table 1, group efficacy beliefs were higher in the high group efficacy condition than in the moderate group efficacy condition. Thus, our manipulation was successful.

### *Hypothesis Testing*

To test the causal effect of the group efficacy manipulation on the measure of group identification, we performed an ANOVA. As hypothesized, there was a significant main effect of group efficacy,  $F(1, 96) = 4.89, p = .03, \eta^2_{\text{partial}} = .05$ . Group identification was higher in the high group efficacy condition than in the moderate group efficacy condition (see Table 1). Also as hypothesized, an ANOVA showed that the group efficacy manipulation increased collective action tendencies,  $F(1, 96) = 11.63, p < .01, \eta^2_{\text{partial}} = .11$ . There were higher collective action tendencies in the high group efficacy condition than in the moderate group efficacy condition (see Table 1).

### *Mediation Analyses*

We used multiple regression analysis to examine our hypothesized mediation model (see Figure 1), whereby the group efficacy manipulation increased individuals' group identification through increasing their collective action tendencies. Because these two variables were both measured and hence their causal relationship cannot be determined with certainty, we also compared this model with an alternative mediation model in which the assumed mediator and outcome variable were switched. Finding more empirical support for the hypothesized model than for the alternative model would provide more confidence in our model (i.e., we conducted this test because it is an empirical alternative).

Following Baron and Kenny (1986), we established that group efficacy increased both group identification ( $\beta = .22, p = .03$ ) and collective action tendencies ( $\beta = .33, p < .01$ ). When we included collective action tendencies as an additional predictor of group identification, it strongly predicted group identification ( $\beta = .60, p < .01$ ), and the direct effect of the group efficacy manipulation was no longer significant ( $\beta = .02, p > .80$ ). This is consistent with full mediation (Sobel's  $z = 3.06, p < .01$ ). Additional bootstrapping analyses,

as recommended by Preacher and Hayes (2008), corroborated this finding, with a confidence interval (CI) for the indirect effect that does not include zero (CI = .10 - .37).

We also examined an alternative model where the manipulation of group efficacy increased collective action tendencies via group identification. When we included group identification as a predictor of collective action tendencies, it strongly predicted collective action tendencies ( $\beta = .57, p < .01$ ), yet the direct effect of the group efficacy manipulation remained significant ( $\beta = .21, p = .01$ ). This is consistent with partial mediation (Sobel's  $z = 2.11, p < .04$ ). A bootstrap analysis was also consistent with significant partial mediation (CI = .02 - .33). Together these findings favor our hypothesized mediation model over the alternative model.

### *Discussion*

The results of this experiment showed that individuals' experimentally manipulated group efficacy beliefs increased their identification with their disadvantaged group by increasing their collective action tendencies. These findings resolve the paradoxical relationship in the literature between group efficacy and group identification by documenting the causal effect of group efficacy on group identification, and by explaining this causal effect through collective action tendencies. Our results thus constitute the first empirical evidence for the causal effects of group efficacy on group identification and collective action tendencies, and offer a theoretical pointer to the importance of group efficacy beliefs in enabling individuals to enact (and thus affirm and strengthen) their group identity. We discuss these and other implications of our findings below.

### *Theoretical and Practical Implications*

The current results resolve the paradoxical relationship between group identification and group efficacy beliefs. Whereas meta-analytic evidence and correlational findings suggest a positive relationship (e.g., Kelly & Breinlinger, 1995; Mummendey et al., 1999; Van

Zomeran, Postmes, et al., 2008), this does not appear to be due to the causal effect of group identification on group efficacy beliefs (e.g., Van Zomeran, Spears, et al., 2008, Study 2; see also Simon et al., 1998, Study 2). Our findings represent the first experimental evidence that group efficacy can cause increased group identification. As such, our findings suggest that the correlation between group efficacy and group identification may be better explained by the former causing the latter, rather than vice versa.

One of the strengths of experimental research is to establish a causal relationship that was hitherto only assumed to flow in a specific direction. In this respect, the current study provides the first experimental evidence for the causal link between group efficacy and collective action tendencies (Kelly & Breinlinger, 1995; Mummendey et al., 1999; Van Zomeran et al., 2004; Van Zomeran, Spears, et al., 2008). This is consistent with a key prediction from *the dual pathway model of coping with collective disadvantage* (Van Zomeran et al., 2004; Van Zomeran, Spears, et al., 2008; for a review see Van Zomeran, Leach, et al., 2010). This model views collective disadvantage as a potential threat that individuals need to cope with, and predicts that individuals can become motivated to undertake collective action through their group efficacy beliefs (and, additionally, through their group-based anger). The model applies insights from the coping literature (e.g., Lazarus, 1991, 2001) to the group level by suggesting that the appraisal that the group has *coping potential* (e.g., group efficacy) leads to *problem-focused approach coping*<sup>3</sup>, which refers to attempts to change the situation through collective action (Van Zomeran, Leach, et al., 2010). Because previous studies examined group efficacy beliefs as a (correlational) mediator rather than as a (experimental) cause of collective action (Van Zomeran et al., 2004; Van Zomeran, Spears, et al., 2008), the current study supports more directly the dual pathway model's prediction that greater group efficacy leads to increased collective action tendencies.

The dual pathway model further explains why stronger group identification does not necessarily lead to stronger group efficacy beliefs. The model conceptualizes group identification as an indicator of the *relevance* of group identity (Van Zomeren, Spears, et al., 2008), and predicts that the more relevant a group identity is for collective disadvantage, the more likely it is that coping is required to deal with it (Van Zomeren, Leach, & Spears, 2010). However, the *type* of coping that occurs depends, in the case of problem-focused approach coping, on the appraisal of coping potential (Lazarus, 1991). For this reason, there is no *necessary* causal link between group identification and group efficacy.

Moreover, the current findings reveal stronger group identification as a hitherto unidentified consequence of problem-focused approach coping. Our results thus suggests that collective action tendencies are not simply an “end state”. When such tendencies are increased by greater group efficacy beliefs, group identification is also increased. Indeed, stronger group efficacy beliefs can serve to redefine individuals’ group identity in terms of the action for which individuals are preparing (e.g., Drury & Reicher, 2000, 2005). This highlights the importance of the enactment of a group identity in collective action contexts, and more specifically of a shared tendency for collective action to serve as a concrete means by which the group identity is affirmed and strengthened (Drury & Reicher, 2000, 2005; Ellemers, 1993; Leach et al., *in press*; Reicher, 1996).

More generally, the present results are in line with other work on collective action that suggests that group identification is not only a cause of collective action (Doosje, Spears, & Ellemers, 2002; Leach et al., *in press*; Reicher, 1996). Individuals’ identification with a disadvantaged group can guide their appraisal of events in ways that either promote or inhibit group-based beliefs and action (for reviews, see Ellemers et al., 1999; Iyer & Leach, 2008; Van Zomeren, Spears, et al., 2008). For example, Leach et al. (*in press*) suggested that group identification leads members of disadvantaged groups to see greater societal devaluation of

them, whereas greater belief in societal devaluation also causes increased identification with the devalued group as a countervailing response to the devaluation. Thus, the predictors and the outcomes of collective action must be seen as in a *dynamic* relation --- they can feedback into each other over time (Drury & Reicher, 2005; Van Zomeren, Drury, & Van der Staaij, 2010; Van Zomeren, Leach, et al., 2010). The current work contributes to a more dynamic view of group identity in the context of collective disadvantage.

The current findings also have important practical implications. Our results suggest that communicating strong group efficacy beliefs to disadvantaged group members is key to building and fostering group members' identification with the disadvantaged group and hence with their participation in collective action to achieve social change. This is important in stimulating members of disadvantaged groups (e.g., ethnic minority groups) to change their group's disadvantaged position. And although we did not examine this in the current study, the dual pathway model of coping with collective disadvantage also points to key antecedents of group efficacy beliefs in terms of variables that contribute to coping potential (Van Zomeren, Leach, et al., 2010). For example, group efficacy beliefs can be based in *consensus* within the group in terms of both a shared opinion and shared course of action (Postmes & Branscombe, 2002; Spears, Lea, Cornelissen, Postmes, & Ter Haar, 2002; Van Zomeren et al., 2004). The communication of strong consensus and group efficacy becomes even more important when one considers that socio-structural and systemic variables, including out-group resistance, often work *against* social change by decreasing a general sense that social change is possible (Tajfel, 1978; Tajfel & Turner, 1979).

Finally, our results have important implications for those researching or working on behalf of social movements or political campaigns. To return to Barack Obama's campaign slogan, in their basic form the current findings suggest that (collective) "can" leads to "we", but "we" does not necessarily lead to "can". This is a key message for campaigners and other

practitioners of collective action that seek to increase the size of their group or organization through attracting and committing individuals to their group. Social movements can play a major role in this respect by fostering individuals' sense of group efficacy (e.g., Klandermans, 1997; see also Mansbridge & Morris, 2001; McAdam, 1999; Simon & Klandermans, 2001), for example by portraying themselves as agentic entities (e.g., the gay movement, rather than gays in general). This should be effective in raising individuals' identification *with the social movement*, which was found to be one of the strongest predictors of collective action in Van Zomeren, Postmes, et al.'s (2008) meta-analysis. Thus, the current results point not only to the practical importance of raising group efficacy beliefs in mobilizing individuals for collective action, but also to the potential of social movements to attract and commit individuals as a function of stronger group efficacy beliefs.

#### *Limitations and Directions for Future Research*

Although the current study has the important advantage of strong internal validity, one limitation is its relatively weak external validity. That is, we employed a specific group in a particular context that represented a particular collective disadvantage. A critic could argue that the psychological processes we identified do not necessarily apply to other groups, contexts, or disadvantages. We do not believe, however, that this is necessarily the case because meta-analytic evidence suggests that group efficacy is an important predictor of collective action among very different types of groups, contexts, and collective disadvantages (Van Zomeren, Postmes, et al., 2008).

Another limitation of the current study is that we did not measure actual behavior. However, there are two reasons to suggest that this is not necessarily problematic for the interpretation of the current findings. First, Van Zomeren, Postmes, and Spears (2010) employed such a measure (i.e., signing a petition) and found that individuals' group-based anger and group efficacy explained whether they signed the petition through their collective



action tendencies (which is in line with theories of emotions as well as the attitude-behavior link; e.g., Fishbein & Ajzen, 1975; Frijda, 1986). Second, Van Zomeren, Postmes, et al.'s (2008) meta-analysis found that although the effects of injustice and efficacy on collective action were generally smaller on actual behavior than on "proxies" for such behavior (e.g., attitudes, intentions, action tendencies), these effects were still positive and significant. This suggests that using action tendencies as a proxy for behavior might overestimate the size of any obtained effect, but does not invalidate its interpretation.

Future research could proceed in at least three different directions. First, research can experimentally identify key antecedents of group efficacy, which according to the dual pathway model should be variables that contribute to coping potential (e.g., perceived consensus). Second, one can examine how the expression of group identity as a function of increased group efficacy beliefs relates to participation in collective action. It might be particularly interesting to examine how social movements can increase individuals' group efficacy beliefs and thus redefine individuals' movement identity and shape their identification with the movement and their participation in the movement. Third, one could examine whether group efficacy beliefs increase not only collective action tendencies and group identification, but also positive group-based emotions like hope, enthusiasm, and pride (e.g., Van Zomeren, Drury, et al., 2010). Indeed, although the current experiment examined whether "can" leads to "we", we did not yet examine the "yes" in Barack Obama's campaign slogan. This will advance our understanding of the role of positive emotions in approach coping with collective disadvantage, and, more generally, of the power of group efficacy beliefs to instill individuals with hope for social change.

## References

- Austenfeld, J. L. & Stanton, A. L. (2004). Coping through emotional approach: A new look at emotion, coping, and health-related outcomes. *Journal of Personality*, 72, 1335 - 1363
- Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 32, 519-530
- Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 1-45). Cambridge, England: Cambridge University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Doosje, B., Spears, R., & Ellemers, N. (2002). Social identity as both cause and effect: The development of group identification in response to anticipated and actual changes in the inter-group status hierarchy. *British Journal of Social Psychology*, 41, 57-76.
- Drury, J. & Reicher, S. D. (2000). Collective action and psychological change: The emergence of new social identities. *British Journal of Social Psychology*, 39, 579 – 604.
- Drury, J., & Reicher, S. D. (2005). Explaining enduring empowerment: A comparative study of collective action and psychological outcomes. *European Journal of Social Psychology*, 35, 35-58.
- Ellemers, N. (1993). The influence of socio-structural variables identity management strategies. In W. Stroebe & M. Hewstone (Eds), *European Review of Social Psychology* (p. 27 - 50). Chichester, UK: Wiley.
- Ellemers, N., Spears, R., & Doosje, B. (1999). *Social identity: Context, commitment, content*. Oxford: Blackwell.

- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior*. Reading, MA: Addison-Wesley.
- Frijda, N. H. (1986). *The emotions*. Cambridge: University Press.
- Folkman, S. & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology*, 55, 745-774
- Iyer, A. & Leach, C. W. (2008). Emotion in inter-group relations. *European Review of Social Psychology*, 19, 86-125.
- Kawakami, K., & Dion, K. L. (1992). The impact of salient self-identities on relative deprivation and action intentions. *European Journal of Social Psychology*, 23, 525-540.
- Kelly, C., & Breinlinger, S. (1995). Identity and injustice: Exploring women's participation in collective action. *Journal of Community & Applied Social Psychology*, 5, 41-57.
- Klandermans, B. (1984). Mobilization and participation: Social-psychological expansions of resource mobilization theory. *American Sociological Review*, 49, 583-600
- Klandermans, B. (1997). *The social psychology of protest*. Oxford: Basic Blackwell.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lazarus, R. S. (2001). Relational meaning and discrete emotions. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion* (pp. 37 - 67). Oxford: University Press.
- Leach, C. W., Rodriguez Mosquera, P. M., Vliek, M. L. W. & Hirt, E. (*in press*). Group identification and group devaluation. *Journal of Social Issues*.

- Mansbridge, J. J. & Morris, A. D. (2001). *Oppositional consciousness: the subjective roots of social protest*. Chicago: University Press
- McAdam, D. (1999). *Political processes and the development of black insurgency, 1930 - 1970 (2nd edition)*. Chicago: University Press.
- McCarthy, J. D., & Zald, M. N. (1977). Resource mobilization and social movements: A partial theory. *American Journal of Sociology*, 82, 1212–1241.
- Mummendey, A., Kessler, T., Klink, A., & Mielke, R. (1999). Strategies to cope with negative social identity: Predictions by social identity theory and relative deprivation theory. *Journal of Personality and Social Psychology*, 76, 229-245.
- Postmes, T., & Branscombe, N. R. (2002). Influence of long-term racial environmental composition on subjective well-being in African Americans. *Journal of Personality and Social Psychology*, 83, 735-751.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879 - 891
- Prussia, G. E. & Kinicki, A. J. (1996). A motivational investigation of group effectiveness using social-cognitive theory. *Journal of Applied Psychology*, 81, 187 – 198
- Reicher, S. D. (1996). 'The battle of Westminster': Developing the social identity model of crowd behaviour in order to explain the initiation and development of collective conflict. *European Journal of Social Psychology*, 26, 115-134.
- Runciman, W. G. (1966). *Relative deprivation and social justice: A study of attitudes to social inequality in twentieth-century England*. Berkeley: University of California Press.
- Russell, D. W. (2002). In search of underlying dimensions: The use and abuse of factor analysis in *Personality and Social Psychology Bulletin*. *Personality and Social Psychology Bulletin*, 28, 1629 – 1646

- Simon, B., & Klandermans, B. (2001). Politicized collective identity: A social-psychological analysis. *American Psychologist*, 56, 319–331.
- Simon, B., Loewy, M., Stürmer, S., Weber, U., Freytag, P., Habig, C., Kampmeier, C., & Spahlinger, P. (1998). Collective identification and social movement participation. *Journal of Personality and Social Psychology*, 74, 646-658
- Spears, R., Lea, M., Corneliusen, R. A., Postmes, T., & Ter Haar, W. (2002). Computer mediated communication as a channel for social resistance: The strategic side of SIDE. *Small Group Research*, 33, 555-574.
- Tajfel, H. (1978). The achievement of inter-group differentiation. In H. Tajfel (Ed.), *Differentiation between social groups*. (p. 77-100). London: Academic Press.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of inter-group conflict. In W.G. Austin & S. Worchel (Eds.), *The social psychology of inter-group relations* (p. 33-47). Monterey: CA: Brooks/Cole.
- Van Zomeren, M., Drury, J. & Van der Staaij, M. (2010). *Experimental evidence for the empowering consequences of collective action*. Manuscript under review.
- Van Zomeren, M., Leach, C. W., & Spears, R. (2010). *A dynamic dual pathway model of coping with collective disadvantage*. Unpublished manuscript.
- 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, 504 – 535
- Van Zomeren, M., Postmes, T., & Spears, R. (2010). *On conviction's collective consequences: Integrating moral conviction into the Social Identity Model of Collective Action*. Manuscript under review.
- 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, 649–664
- Van Zomeren, M., Spears, R., & Leach, C. W. (2008). Exploring psychological mechanisms of collective action: Does relevance of group identity influence how people cope with collective disadvantage? *British Journal of Social Psychology*, 47, 353 – 372
- Walker, I., & Smith, H. J. (2002). *Relative deprivation: Specification, development, and integration*. Cambridge: University Press.
- 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, 994–1003.

## Footnotes

1. Collective disadvantage refers to the fact that one's social group or category membership is disadvantaged in some way in the context (see also Van Zomeren et al., 2004; Van Zomeren, Spears, et al., 2008), which implies some level of inter-group conflict. This can refer to more structural disadvantages (e.g., systemic discrimination), but also to more incidental disadvantages (e.g., increase in tuition fees for students; see Van Zomeren, Postmes, et al., 2008).
2. In a preliminary analysis, one additional item ("willingness to sign a petition") loaded on both the collective action tendencies and group identification factors. Interestingly, Van Zomeren, Spears, et al. (2008), Study 2, encountered a similar construct validity problem with this item and excluded it from the collective action tendencies scale. We therefore did not include this item in the scale here either.
3. The dual pathway model also identifies emotion-focused approach coping (e.g., Austenfeld & Stanton, 2004; Folkman & Moskowitz, 2004) as a distinct pathway to collective action. In the experiment we therefore also measured group-based anger with four items ( $\alpha = .88$ ; "I feel *angry* / *irritated* / *furious* / *displeased* because of this proposal"). In contrast to the significant effects of group efficacy on group identification and collective action tendencies, an ANOVA showed that the manipulation of group efficacy had no significant effect on group-based anger,  $F(1, 96) = 2.29, p > .13, \eta^2 = .02$ . Other indicators of emotion-focused approach coping (i.e., outcome and procedural unfairness, out-group blame) also showed null results, which supports the idea that problem- and emotion-focused approach coping represent distinct pathways to collective action.

Table 1.

*Means and Standard Deviations of the Key Dependent Variables by Experimental Condition*

	<i>High Group Efficacy</i> ( <i>n</i> = 52)	<i>Moderate Group Efficacy</i> ( <i>n</i> = 46)
<i>1. Group Efficacy</i>		
M	5.23	4.66
SD	1.05	1.13
<i>2. Group Identification</i>		
M	5.99	5.54
SD	0.87	1.12
<i>3. Collective Action Tendencies</i>		
M	5.65	4.79
SD	1.06	1.42



Table 2.

*Correlations Between Dependent Variables*


---

<i>Across Experimental Condition</i>			
	2.	3.	
1. Group Efficacy	.32*	.45*	
2. Group Identification		.61*	
3. Collective Action Tendencies			

---

<i>By Experimental Condition</i>			
	1.	2.	3.
1. Group Efficacy		.39*	.52*
2. Group Identification	.18		.72*
3. Collective Action Tendencies	.32*	.50*	

---

Note: The top panel represents the correlation table across the sample, whereas the bottom panel represents the correlation table by experimental condition (above the diagonal = the high efficacy condition, whereas below the diagonal = the moderate efficacy condition);

\*  $p < .05$ .

Figure 1. Hypothesized mediation model.

