

10-25-2018

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# Political Action as a Function of Grievances, Risk, and Social Identity: An Experimental Approach

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## ABSTRACT

Why would individuals engage in or support contentious politics? This question is challenging to answer with observational data where causal factors are correlated and difficult to measure. Using a survey-embedded experiment, we focus on three situational factors: grievances, risk, and identity. We also explore how individual differences in sociopolitical orientations—social dominance orientation (SDO) and right-wing authoritarianism (RWA)—impact action. Grievances influence engagement in and support for protests. Risk influences engagement in protest, but not support for it. Regardless of condition, SDO and RWA help explain why some people engage in protest while others do not, particularly within the same context.

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Grievances stemming from repression and discrimination have long been seen as a key cause of political protest.<sup>1</sup> While both dissident movements and academics point to grievance as a catalyst for protest, others note that many are aggrieved but few actually engage in protest or show willingness to support it.<sup>2</sup> There is a large body of theoretical,<sup>3</sup> qualitative,<sup>4</sup> and quantitative<sup>5</sup> work on factors that lead to mobilization at the state level. Yet there has been less work that focuses on factors that encourage support for protest at the individual level. Some qualitative work based primarily on interviews has found that grievance is often reported as a key factor in individuals mobilizing.<sup>6</sup> Similarly, quantitative research at the individual level finds that grievance influences protest and support for protest.<sup>7</sup> While these micro-level research findings are promising, they often include only participants who actually protest. By only examining people already engaged in protest the researchers are selecting on the dependent variable. This approach does not afford a level of comparison that allows the research to account for why people who do not choose to protest would make that

choice. Thus these analyses limit our ability to draw causal inferences about what leads individuals to engage in protest behavior.

Experimental approaches have been underutilized in this area of research and can help tease out the causal factors that make individuals sympathetic to protest.<sup>8</sup> In addition to macro- and group-level analyses, we posit that micro-level factors can explain differences in action under the same circumstances because—in the final analysis—movements are made up of individuals who need to be willing to grab a sign or risk pepper spray or even death to try to change society. Experimental, individual-level research in this area can also shed light on the psychology of how the mass public reacts to contentious politics and collective action. Regardless of whether individuals take action themselves, the general public's reaction to mobilization—either positive or negative—can influence the movement and its impact.<sup>9</sup>

Our article is organized as follows: We first discuss how grievances have been linked to support for protest and the roles that risk and social identity can play. We also provide a theoretical account for how individual differences in sociopolitical orientation—as embodied in social dominance orientation and right-wing authoritarianism—may account for variation in support for protest above and beyond these situational factors. We then describe the design of our survey experiment and the data collection process. Last, we present our analysis, summarize our findings, highlight potential limitations of our survey experiment, and suggest areas for research in the future.

### **Grievances, Risk, Identity, and Mobilization**

We focus on three types of grievances that are mentioned frequently in the literature, which we term discrimination, political repression, and physical harm. There is a long line of scholarship connecting these grievances to political action.<sup>10</sup> Yet these grievances often co-occur in the real world. One contribution of this article is to distinguish among different types of repression and their impact on support for political action with the aim of assessing the causal mechanism that has been identified in prior research. Discrimination is unequal treatment based on membership in an ascriptive group, such as a religion or ethnicity. Common examples of discrimination include reduced access to employment, housing, and educational opportunities compared to members of other groups, and restrictions on religious practices or the use of one's language.<sup>11</sup> There is considerable evidence that the specific grievance of discrimination is associated with greater protest and support for protest. Discrimination was the core grievance behind the peaceful movement for equal treatment of Catholics in Northern Ireland from the 1960s onward, and was also used to justify the terrorist campaign of the Irish Republican Army.<sup>12</sup> Ending discrimination was the key objective of the peaceful civil rights movement in the United States in the same period.<sup>13</sup> The second

category of grievance is political repression, which denies individuals political enfranchisement and legitimate outlets through which their preferences can be publicized and addressed. Others suggest that political repression, as we use the term, is likely to produce support for extra-legal dissent, such as protest activities, as this may be the only avenue available to citizens to publicize their grievances.<sup>14</sup> The third category of grievance encompasses threats by the authorities to inflict physical harm on individuals. Such physical repression for political reasons directly threatens survival or liberty, and violations of physical integrity transgress universal norms of protecting the body from physical harm.<sup>15</sup>

While these grievances create incentives for political action, the likelihood that individuals will act on these incentives is moderated by the expected response of the authorities. In particular, we expect that selective targeting—that is, punishments directed at individuals suspected of engaging in anti-regime activities, rather than at entire groups—reduces willingness to engage in or support political action. Dissident movements face powerful collective action problems; while some of the gains from successful action accrue to all dissidents, the costs of such action in the form of punishment by the state fall on individuals.<sup>16</sup> Selective targeting heightens this collective action problem by focusing punishment on those that actively oppose the regime and sparing those who remain indifferent or support the authorities, even if they are members of ascriptive groups subject to discrimination or political or physical repression.<sup>17</sup> The “opportunity structure” approach holds that risks or opportunities presented by the political environment move actors away from or toward support for protest.<sup>18</sup> The risk of punishment for mobilizing is a key component of the opportunity structure. Tilly lays out the basic thinking of the impact of opportunity structures by arguing that when there is a safe way to engage in politics, more people will protest or support protests.<sup>19</sup> Although there is a literature on how costs and benefits impact mobilization from a game theoretic perspective,<sup>20</sup> there is less empirical research on this topic.<sup>21</sup> At the individual level, researchers have found support for the influence of risk of punishment on people’s decision to protest.<sup>22</sup> The operationalization of risk in most of these studies is problematic, however. Risk is not operationalized as a potential cost imposed on the individual for protesting or supporting protest with a greater or lesser likelihood of occurrence, but rather simply as a cost that will or will not be paid. Such operationalizations are more consistent with the concept of grievance than the risk that Lichbach speaks of in his work.<sup>23</sup> From a perspective that sees risk as a potential cost, one should expect it to lead individuals to be less likely to take or support action. As Lichbach argues, the risks of participation can differ across individuals, but those risks that entail high costs should discourage participation—especially if the benefits of mobilization are shared or unclear.<sup>24</sup> “The costs of participation, however are paid only

by those who participate. Some costs...could be minimal. Other costs (e.g. jail, injury, or even death) are maximal.”<sup>25</sup> From this discussion, we expect that:

**H1:** Grievance increases willingness to protest and support protest most when the risk of punishment is low.

Individuals might be more likely to protest to address grievances of “their” in-group. This notion is consistent with the social identity perspective<sup>26</sup> and much research that finds an affinity for one’s in-group over members of the out-group. De Weerd and Kladermans found that strong group identification was linked to greater protest engagement on behalf of one’s group, but not for out-groups.<sup>27</sup> At the same time, we know that people who are not aggrieved will sometimes mobilize on behalf of people who are. Thus, we expect that:

**H2:** Grievance will have a stronger impact on willingness to protest and support protest among members of the group that is being subject to discrimination.

As previously discussed, it is difficult to identify causal mechanisms for engagement in and support for action in contentious politics. Studying the role of identity on such decisions is even more challenging in observational studies since perspectives cannot be randomly assigned in real life. Experimental work is optimal here, yet there is a dearth of such research on micro-level factors that impact political action.

## Individual Differences and Mobilization

Situational variables like grievance, risk, and social identity are not the only meaningful predictors of support for protest. Above and beyond these factors, we argue that individual differences in sociopolitical orientations may predict additional variance in protest that needs to be accounted for. Regardless of their circumstances, some individuals may simply be more or less inclined to support protest.

To unpack the role of individual differences, we draw on the *dual-process model*,<sup>28</sup> which suggests two basic dimensions govern preferences in the domains of intergroup relations and politics. The first dimension reflects preferences for equality versus inequality, and is best represented by *social dominance orientation* (SDO)—that is, the degree to which one favors intergroup hierarchy over equality between groups.<sup>29</sup> This dimension is psychologically rooted in power motives, low empathy, and a view of the world as highly competitive.<sup>30</sup> SDO, as a distillation of this dimension, is positively related to “hierarchy-enhancing” policy preferences (e.g., reduced redistribution) and negatively related to “hierarchy-attenuating” ones (e.g., increased redistribution); it also predicts hostility toward low-status minority groups—especially those that seek to challenge existing hierarchies.<sup>31</sup> The second dimension reflects a desire for conformity and social order, and it is best represented by *right-wing authoritarianism* (RWA)—that is, the degree to which one is conventional, submissive to

in-group authority, and hostile toward cultural “others.”<sup>32</sup> RWA is especially related to support for established authority figures and highly punitive attitudes toward groups that are perceived to disturb social order and traditional values (e.g., minorities whose values are thought to deviate from the “mainstream”).<sup>33</sup> This dimension is psychologically rooted in conformity, low openness, and a perception of the world as dangerous.<sup>34</sup> While there is typically a significant, positive relationship between SDO and RWA, they measure distinct motivations that should have unique impacts on political action net of each other.<sup>35</sup>

In the context of political action, the logic of the dual-process approach suggests that both SDO and RWA should be associated with reduced willingness to protest and support protest. First, because protest, as a form of political action, is often utilized in the service of universalistic, egalitarian goals, SDO should be associated with less willingness to protest and support protest. In other words, individuals high in SDO should be more invested in retaining society’s existing hierarchical organization. Moreover, given the low individual benefits and potentially high individual costs engaging in protest, overcoming the collective-action problem may require prosocial sacrifices that competitive, high-SDO individuals are less willing to make. Consistent with this, people higher in SDO are less supportive of nonviolent actions.<sup>36</sup> Second, because protest typically represents a challenge to established institutions and ways of doing things, RWA should also be associated with less protest and protest support. Put another way, those high in RWA should be more inclined to support authorities to maintain the status quo. Accordingly, research shows that people who score higher in RWA are less inclined to engage in or support any form of political action against the authorities.<sup>37</sup> Thus, we expect that:

**H3:** Participants with higher SDO scores will be less willing to protest or support protest.

**H4:** Participants with higher RWA scores will be less willing to protest or support protest.

In this study, we focus on SDO and RWA primarily as first-order individual-difference explanations for variation in support for political action above and beyond those accounted for by situational differences in grievance and risk. Nevertheless, we also offer exploratory predictions about how SDO and RWA may *moderate* the impact of the latter. Insofar as both individual differences make people resistant to protest, we might also expect those high on each dimension to be less moved to action by circumstances that heighten awareness of grievance or reduce the salience of risk. That is, if individuals high in SDO and RWA generally find political action to be undesirable, then they may respond with quiescence regardless of the unpleasantness of the status quo or the extent to which pushback from authorities will be minimal.

## Why the Experimental Approach?

An experimental approach allows us to tackle many issues that are difficult to address with observational data. We highlight two contributions that a survey experiment makes in this regard. First, research has identified many grievances that plausibly produce mobilization, including discrimination, the denial of political rights, and violation of physical integrity rights. Yet teasing out these effects is difficult because they often co-vary in observational settings. Understanding the relative importance of each type of grievance for decisions to protest or support protest advances this research area. Second, there is a debate in the literature about whether and how grievances interact with other factors—such as the risk of punishment, the social identity of an individual, and individual differences in sociopolitical orientation—to influence protest. Many of these factors are difficult to measure in the context of opportunities for political mobilization. An experimental approach can thus provide clearer evidence in favor of the causal mechanisms suggested by the body of large-*N* and qualitative work on grievances and protest.

In the present study, we use a general population survey experiment to systematically examine the influence of grievances, risk of punishment, and social identity on an individual's decision to engage in and support protest. Control over the treatments that individuals receive—in this case, vignettes—allow us to systematically vary these factors.<sup>38</sup> Random assignment to treatment ensures that the resulting data include sufficient variation along the multiple dimensions of interest. This variation is often difficult to achieve with observational data. Some observational studies select participants for research on the basis of the value of the dependent variable (e.g., interviewing only respondents who have engaged in protest or other forms of contentious politics). In other research, key causal factors co-vary, making it difficult to determine their individual effects on the dependent variable.<sup>39</sup> This collinearity makes it difficult to tease out the independent effect of each grievance on willingness to engage in and support political action. Survey and general population experiments have been identified as one promising way to address these issues.<sup>40</sup>

Survey experiments also allow us to measure relevant individual differences like SDO and RWA. We can then examine how factors—both controlled and measured—contribute to support for political action. We recognize that a survey experiment will not alone address all of these points in a decisive way. With such studies, there are threats to external validity since the scenario is hypothetical and stated preferences may not reflect actual behavior if the scenario was real. In the concluding section, we are careful to outline some of the limits of this approach. At the same time, though, an experimental approach complements observational studies by allowing the researcher to test theory by varying treatments in ways that allow estimation of their causal effects.

## Research Design

The present experiment was administered online by Knowledge Networks (KN), and drew from the KnowledgePanel, which is an online panel that is representative of the U.S. adult population. Using probability-based sampling techniques, panel members are randomly recruited.<sup>41</sup> Overall, 2,538 U.S. adult participants were drawn from the KN panel. While some may prefer to sample from a population at higher likelihood to actually take political action, we choose to survey the general U.S. population for several reasons. First, it is infeasible to locate a subsample from the United States that is already predisposed to mobilization, much less one that would be representative of the larger group. Second, our prior research shows that experimental treatments have a muted effect on samples from countries with higher levels of grievance and protest. In this work, participants likely had high levels of real-world grievance, so our treatments had little marginal effect. Taken at face value, this would suggest that grievances do not impact protest, although clearly this is not the case.<sup>42</sup> Third, while many U.S. adults may not have direct personal experience with the grievances under examination, contentious politics and collective action do occur in the United States. The extent to which the general public supports (or does to support) these actions can impact the ultimate success of a movement. Thus, sampling from the general population can shed light on the psychology of mass reaction to contentious politics.

We manipulated three factors: social identity perspective, grievance, and risk. First, participants were randomly assigned to either the minority-group perspective or the majority-group perspective. This created two subsamples within the study. Within each subsample, participants were assigned to one of four possible grievance conditions: low grievance; discrimination; political rights repression; or, physical harm. The degree of risk from taking political action is included as binary variable: low or high. Thus, we have a  $2 \times 4 \times 2$  between-subjects experimental design with sixteen conditions, as shown on Table 1. Each participant was randomly assigned to one condition. The treatment vignettes asked the participant to imagine that he or she lives in a hypothetical country, and described the relevant combination of grievance, risk, and social identity perspective in that context. The low-grievance treatment describes in general terms some mistreatment of members of the minority group, but the nature of this mistreatment is kept deliberately vague: it is described as occurring some years ago, and the vignette states that minority-group members in the country currently hold fewer grievances. See the Appendix for the texts of these treatments.

The grievances described in all vignettes are clearly targeted at members of the minority group in the country, regardless of which identity group the participant was assigned. Thus, a participant in the majority-social-identity perspective subsample who was assigned to the discrimination grievance read a vignette describing discrimination



against members of the minority group (the “other”). These participants were asked if they would take action in protest of discrimination faced by an ethnic “other.” In contrast, a participant in the minority-social-identity perspective subsample read a description of discrimination against the minority group (his or her own group). These participants were asked if they would take action in protest of discrimination faced by members of their own ethnic group. The risk of punishment condition is contingent on the actions, not the identity, of the respondent. The risk of being punished is described as low or high for respondents that decide to engage in protest activities.

**Table 1.** Experimental conditions. (Table view)

Condition	Social identity perspective	Grievance	Risk
Subsample 1: Minority perspective			
1	Minority	None	Low
2	Minority	None	High
3	Minority	Discrimination	Low
4	Minority	Discrimination	High
5	Minority	Political rights	Low
6	Minority	Political rights	High
7	Minority	Physical harm	Low
8	Minority	Physical harm	High
Subsample 2: Majority perspective			
9	Majority	None	Low
10	Majority	None	High
11	Majority	Discrimination	Low
12	Majority	Discrimination	High
13	Majority	Political rights	Low
14	Majority	Political rights	High
15	Majority	Physical harm	Low
16	Majority	Physical harm	High

Participants first read their randomly assigned vignette and then answered a series of questions. Our outcome of interest is taking political action. Since this can take shape in a number of ways, we used three specific measures of political action as dependent variables: engaging in protest, providing financial support for protest, and viewing protest as justified.<sup>43</sup> Participants then completed measures of the two individual differences—that is, SDO and RWA (which were measured, not manipulated). Last, participants answered demographic questions and manipulation checks for the experimental treatments.<sup>44</sup>

## Data Analysis

Table 2 shows demographic and descriptive statistics for the key variables. We break this out by assignment to the minority or majority identity, since doing so for each of our sixteen treatment groups would be unwieldy. Treatment values and covariates, such as age, appear well-balanced across these two groups of respondents.

**Table 2.** Demographics and descriptive statistics. (Table view)

	Overall sample	Minority perspective subsample	Majority perspective subsample
Male	1,299 (51%)	617 (48%)	657 (51%)
Female	1,239 (49%)	642 (52%)	622 (49%)
Age range	18–94	18–94	18–93
Mean age	49.6	49.9	49.2
White	1,887 (74.3%)	951 (74.4%)	936 (74.3%)
Black	277 (11%)	130 (10.2%)	147 (11.2%)
Hispanic	213 (8.4%)	110 (8.6%)	103 (8.2%)
Other	161 (6.3%)	68 (5.3%)	93 (7.4%)
Engage in protest		643 (50.3%)	530 (42.1%)
Donate to protest		179 (14%)	179 (14.2%)
Justify protest		5.32 (1.83)	5.25 (1.82)
SDO		-1.33 (1.22)	-1.34 (1.21)
RWA		4.21 (1.51)	4.28 (1.47)
Total size	2,538	1,279	1,259

*Note.* For Action options, the number and percentage of participants who selected that they would engage in each action. For the engagement and justification questions, higher scores indicate greater level of agreement on a 7-point scale from 1 to 7. For the SDO and RWA questions, higher scores indicated stronger levels of each social personality factor on a 7-point scale from -3 to 3 for SDO and from 1 to 7 for RWA.

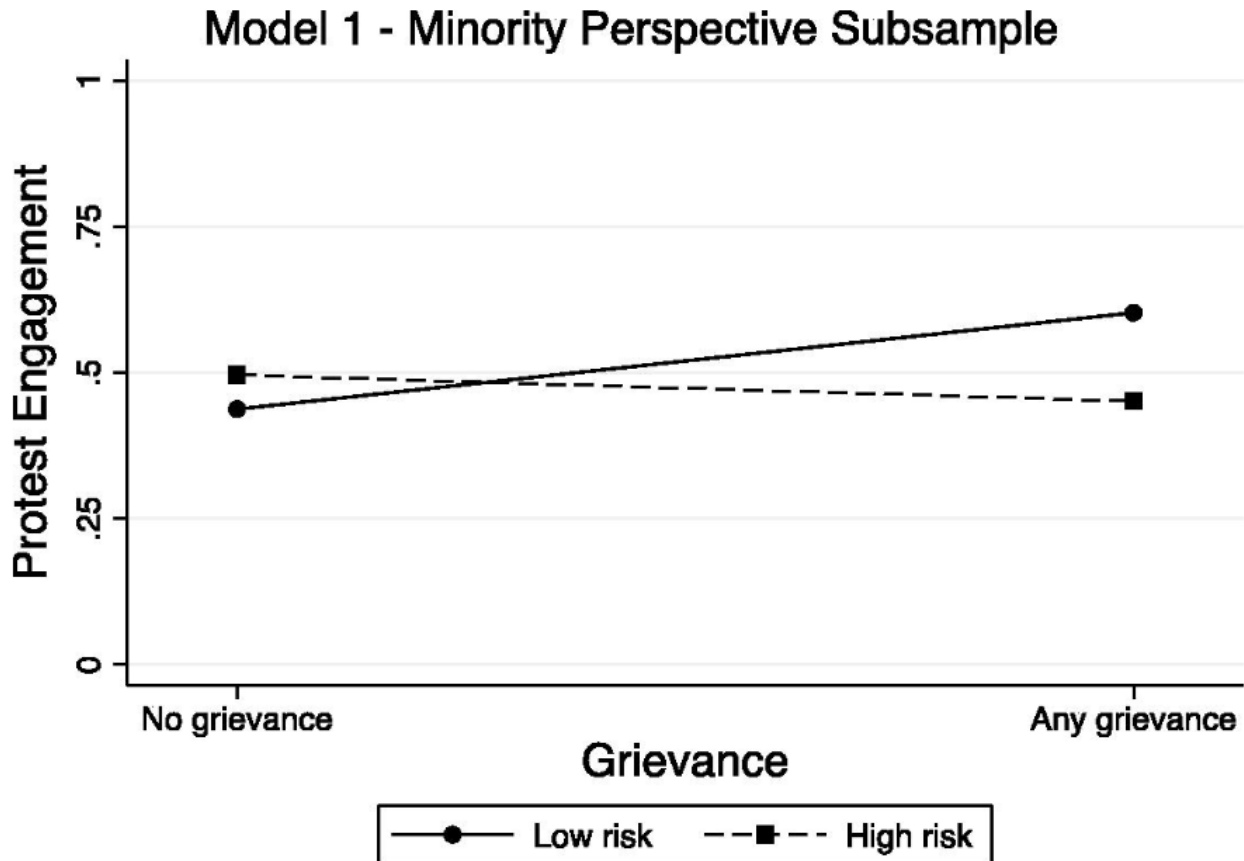
Separate regression models were estimated for the minority-social-identity subsample and the majority-social-identity subsample.<sup>45</sup> Across models we control for three variables that could impact our results: passing the manipulation check, age, and being a member of a minority group in real life. Passing the manipulation check indicates greater attention to the material so we expect a stronger result for these participants. Younger people may be more likely to engage in political action. While we assign participants to a social-identity perspective, they bring their personal experiences to the study so we control for being a minority community member in real life. Further,

as a robustness check, we also estimate all models with only participants whose assigned perspective matches their real-world identity (minority participant assigned to minority subgroup and non-minority participant assigned to majority subgroup).<sup>46</sup> We report models where each type of grievance (discrimination; political rights repression; physical harm) is individually included to examine their unique contributions to the outcome variables. In additional analyses, we also collapsed the three grievance conditions into a single category and entered the grievance manipulation into the analysis as a single grievance-versus-no-grievance dummy variable, as has been done in previous studies.

In Table 3, we analyze the impact of grievance and risk of punishment on the decision to engage in protest. This dependent variable can take two values (yes or no), so models are estimated using logistic regression. The table presents odds ratios for each independent variable; ratios greater (less) than one indicate a positive (negative) relationship between the independent and dependent variables. Clear patterns emerge that grievances generally increase protest. In models 1 and 3, we create a dichotomous measure indicating assignment to any of the grievance conditions. To properly assess H1, we interact the measures of grievance with the measure of risk of punishment an individual faces. Any grievance is associated with a 116 percent increase in the odds of protest in the minority group-identity condition, and a 89 percent increase in the majority perspective when the subject faces a low risk of punishment. The likelihood of protest when the subject holds a grievance and faces a high risk of punishment is 62 percent lower in the minority group-identity condition and 42 percent lower in the majority group-identity (although this relationship is significant at the  $p < .1$  level). Figures 1 and 2 visualize the substantive effects of the likelihood of engaging in protest contingent on low and high risk conditions for the minority and majority subsamples, respectively.<sup>47</sup> Consistent with H1, the likelihood of individual participation in protest is greatest when a grievance exists and risk of punishment is low.

Models 2 and 4 are identical to models 1 and 3, but use the different types of grievances as independent variables. Low risk of punishment combined with any specific grievance increases protest likelihood in the minority group. In the majority group, low punishment risk combined with either discrimination or political rights violation increased protest likelihood. High risk of punishment combined with specific grievances consistently reduces protest in the minority group. The relationships are less consistent among the majority group—high risk combined with discrimination or physical harm is associated with a lower likelihood of protest ( $p < .1$ ), but this is not the case for political repression. Higher SDO scores and higher RWA scores each decrease engagement in protest across samples. Across subsamples, a one-unit increase in SDO score decreased protest engagement by 31–32 percent depending on the model.

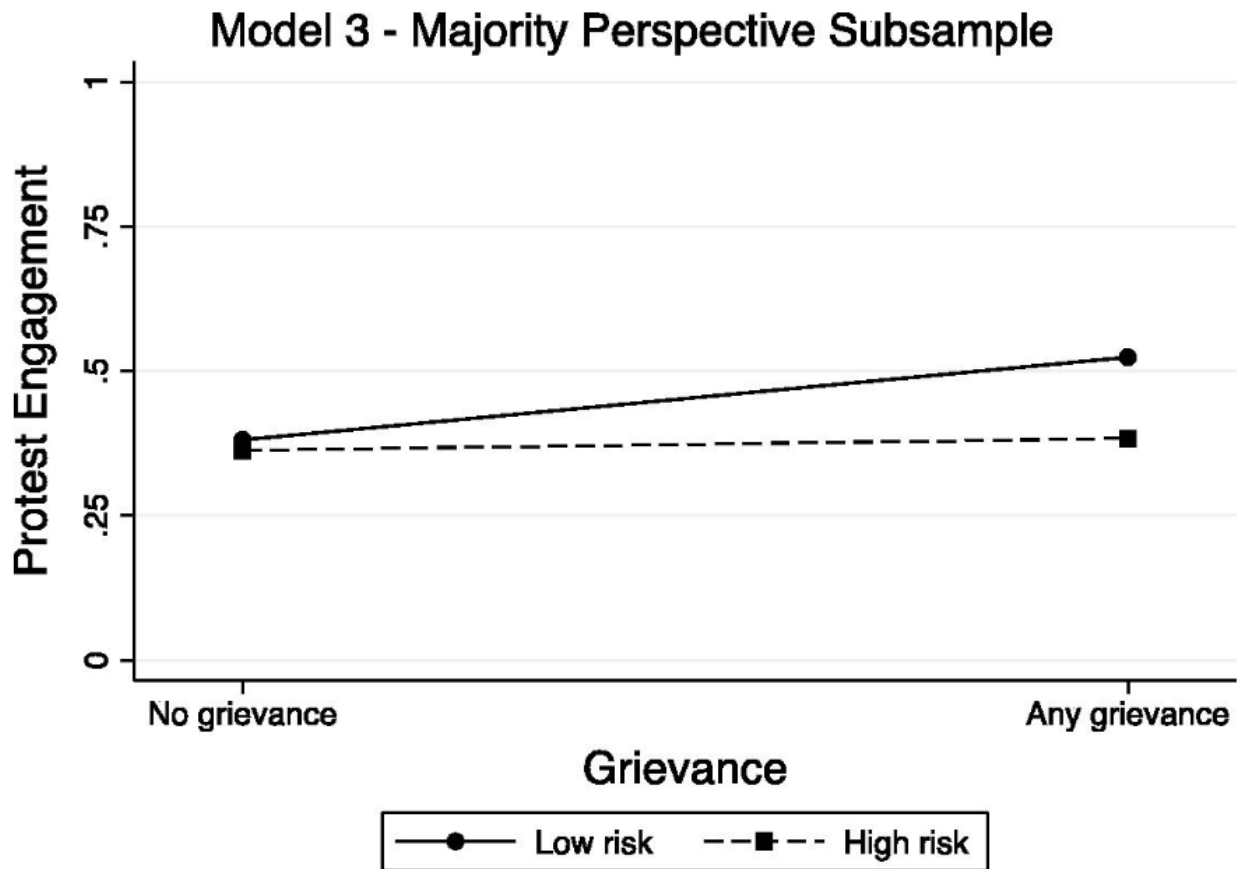
Similarly, a one-unit increase in RWA score decreased protest odds by 15 percent in the minority-perspective subsample and by 19 percent in the majority-perspective subsample. Finally, in exploratory analyses that are not tabled here, we also examine the moderating effects of SDO and RWA with respect to each treatment condition; these interactions were not significant.



**Figure 1.** Marginal effects of grievance on protest engagement for low and high risk conditions in the minority perspective subsample.

Now we explore the impact of grievance on donating money to support protest. The dependent variable here is a binary indicator of providing financial support for protest, so we again use logistic regression to estimate the models. As Table 4 shows, the presence of any grievances combined with a low risk of punishment still predicts providing financial support to protest, but only for those in the minority-social-identity perspective subsample (model 5), for whom the odds of donation are 90 percent larger compared to participants in the high-grievance condition. When breaking grievances apart, those in the minority-social-identity perspective who faced discrimination or physical repression and low risk of punishment showed 100 percent ( $p < .1$ ) and 150 percent, respectively, greater odds of providing financial support for protest, while denial of political rights combined with low risk did not influence the provision of financial support (model 6). No combination of grievance and risk influenced willingness to donate money in support of protesters in the majority condition. These findings are

somewhat consistent with H1. Low risk increases donations among those assigned to a grievance condition, but only among the minority group. We suspect that the weaker effects of grievance and risk may result from a plausible assumption among subjects that the severity of punishment for those who actually protest would be greater than for those who support dissidents with small donations. Protesters might be attacked, jailed, or shot, while those who make donations would likely face lower costs such as a fine or legal prosecution.



**Figure 2.** Marginal effects of grievance on protest engagement for low and high risk conditions in the majority perspective subsample.

With respect to the individual differences, both SDO and RWA again predicted outcomes. A one-unit increase in SDO score is associated with a 28 percent decrease in the odds of donating in the minority-perspective subsample and 22–23 percent decrease in the majority-perspective subsample, depending on the model. Similarly, a one-unit increase in RWA score is associated with 18 percent lower odds of donating to the protest in both subsamples. For exploratory purposes, we again examined the interactions between treatment conditions and both SDO and RWA. As before, the results did not provide evidence that either individual difference moderated the impact of the treatments.

**Table 3.** Engage in a protest march. (Table view)

	Minority perspective subsample		Majority perspective subsample	
	Model 1	Model 2	Model 3	Model 4
Grievance (dummy)	2.16*** (0.43)		1.89** (0.39)	
Discrimination		2.59*** (0.64)		2.13** (0.53)
Political rights		2.38*** (0.59)		1.92** (0.46)
Physical harm		1.63* (0.40)		1.66 † (0.43)
High risk	1.28 (0.31)	1.28 (0.31)	0.87 (0.23)	0.86 (0.23)
Grievance × High risk	0.38** (0.11)		0.58 † (0.17)	
Discrimination × High risk		0.34** (0.12)		0.52 † (0.18)
Political rights × High risk		0.44* (0.15)		0.73 (0.26)
Physical harm × High risk		0.35** (0.13)		0.52 † (0.19)
Manipulation check passed	2.58*** (0.34)	2.59*** (0.35)	1.57** (0.20)	1.56** (0.20)
SDO	0.69*** (0.04)	0.68*** (0.04)	0.69*** (0.04)	0.68*** (0.04)
RWA	0.85*** (0.04)	0.85*** (0.04)	0.81*** (0.04)	0.81*** (0.04)
Age	1.00 (0.004)	1.00 (0.004)	1.00 (0.004)	1.00 (0.004)
Minority (dummy)	0.87* (0.12)	0.87 (0.12)	1.14 (0.17)	1.13 (0.18)
Observations	1,228	1,228	1,197	1,197

Logistic regression models. Constants not reported.

Note. Odds ratios are presented with robust standard errors in parentheses.

†  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

In Table 5, we analyze the impact of grievance on level of justification for protest. Protest justification was measured on a seven-point scale, so we estimated these models using both ordered logistic regression and Ordinary Least Squares (OLS). Since the results were similar, we report the OLS models in the text for ease of substantive interpretation; ordered logit models appear in the Appendix.<sup>48</sup> As expected by H1, grievances combined with low risk increase protest justification by 0.49 points in the minority perspective subsample (model 9) and by 0.38 points in the majority subsample (model 11). This finding holds across all grievance types for the minority subsample, but

not for the majority subsample (models 10 and 12). In the minority subsample, each form of grievance increased protest justification: discrimination by 0.54 points; repression of political rights by 0.47 points; and, physical harm by 0.47 points. In the majority subsample, low risk combined with repression of political rights increases or physical harm increases justification for protest by .34 ( $p < .1$ ) and .63 points, respectively. With the exception of physical harm in the majority condition, high risk does not have a statistically significant effect on justification for protest.

**Table 4.** Provide financial support for protest. (Table view)

	Minority perspective subsample		Majority perspective subsample	
	Model 5	Model 6	Model 7	Model 8
Grievance (dummy)	1.90* (0.58)		0.92 (0.27)	
Discrimination		2.00 † (0.72)		0.61 (0.24)
Political rights		1.29 (0.50)		1.15 (0.38)
Physical harm		2.50* (0.89)		0.99 (0.34)
High risk	1.34 (0.51)	1.34 (0.52)	0.75 (0.27)	0.75 (0.27)
Grievance × High risk	0.95 (0.40)		1.59 (0.65)	
Discrimination × High risk		0.95 (0.48)		2.05 (1.07)
Political rights × High risk		1.19 (0.62)		1.49 (0.71)
Physical harm × High risk		0.79 (0.39)		1.51 (0.73)
Manipulation check passed	1.55* (0.30)	1.57* (0.31)	1.45* (0.25)	1.43* (0.25)
SDO	0.72*** (0.06)	0.72*** (0.06)	0.78*** (0.06)	0.77** (0.07)
RWA	0.82** (0.05)	0.82*** (0.05)	0.83** (0.05)	0.83*** (0.06)
Age	1.02*** (0.01)	1.02*** (0.01)	1.02*** (0.01)	1.02*** (0.01)
Minority (dummy)	1.18 (0.23)	1.17 (0.23)	0.88 (0.19)	0.87 (0.18)
Observations	1228	1228	1197	1197

Logistic regression models. Constants not reported.

Note. Odds ratios are presented with robust standard errors in parentheses.

†  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Turning to the individual differences, a one-unit increase in SDO decreases protest justification by 0.46 points in the minority-perspective subsample and by 0.34 points in the majority-perspective subsample. Similarly, a one-unit increase in RWA decreases protest justification by 0.08 points in the minority perspective and 0.11 or 0.12 points in

the majority perspective subsample. Interestingly, participants who were assigned to the minority perspective and are themselves members of a minority ethnic group in real life were *less* likely to justify protest (0.38-point decrease). This is the first model where participants' own identity impacted the outcome variable. Participant race had no impact on protest justification in the majority perspective subsample.

**Table 5.** Justification for protest. (Table view)

	Minority perspective subsample		Majority perspective subsample	
	Model 9	Model 10	Model 11	Model 12
Grievance (dummy)	0.49** (0.15)		0.38* (0.15)	
Discrimination		0.54** (0.18)		0.18 (0.19)
Political rights		0.47* (0.18)		0.34 † (0.18)
Physical harm		0.47** (0.18)		0.63*** (0.18)
High risk	0.03 (0.19)	0.04 (0.19)	0.06 (0.19)	0.06 (0.19)
Grievance × High risk	-0.24 (0.22)		-0.29 (0.22)	
Discrimination × High risk		-0.34 (0.28)		-0.04 (0.28)
Political rights × High risk		-0.13 (0.26)		-0.21 (0.26)
Physical harm × High risk		-0.25 (0.26)		-0.61* (0.28)
Manipulation check passed	0.79*** (0.11)	0.80*** (0.11)	0.70*** (0.10)	0.70*** (0.10)
SDO	-0.46*** (0.05)	-0.46*** (0.05)	-0.34*** (0.04)	-0.34*** (0.04)
RWA	-0.08* (0.03)	-0.08* (0.03)	-0.12** (0.04)	-0.11** (0.04)
Age	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)
Minority (dummy)	-0.38*** (0.11)	-0.38*** (0.11)	-0.21 † (0.12)	-0.21 † (0.12)
Observations	1211	1211	1187	1187

*Notes.* Ordinary least squares regression models. Robust standard errors in parentheses.

Constants not reported.

†  $p < .10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

Supporting H1, we see that grievance combined with low risk of punishment is associated with greater odds of engaging in political action among the minority across models. This relationship is less consistent for those in the majority group, a finding broadly consistent with H2. We also find that high risk of punishment reduces



willingness to engage in protest across both the minority and majority conditions. The effect sizes are larger for those in the minority condition, which is consistent with H2 as well. Interestingly, we find that a high risk of punishment combined with grievance consistently reduces the likelihood of engaging in protest. But this effect is largely confined to those assigned to the minority condition, and does not influence willingness to donate to the protestors' cause or to consider the protest as justified. We suggested above that this may be due to the fact that subjects in our experiment inferred that the true cost of any punishment would be greater for those who actually protest than for those who provide moral or financial support to the dissidents. Supporting our fourth and fifth hypotheses, we also see consistent patterns across models for SDO and RWA. As expected, participants with higher scores on both measures consistently showed lower odds of protesting or donating to the protest and were less likely to think protest was justified. These findings also held across the minority and majority subsamples. Thus, combining situational and individual-level factors helps to explain why some people experience conditions like grievances, yet do not support action.

## **Discussion and Conclusion**

In the present study, we examined the relative contributions of different types of grievance, risk of punishment, and social identity on willingness to engage in and support for protest using an experimental paradigm. To account for person-based variance in protest support, we also considered the two individual differences highlighted by the dual-process model of intergroup attitudes (i.e., SDO and RWA). We found empirical support for the prediction that grievances have a demonstrable impact on a range of action choices. Our findings confirm the causal mechanisms proposed throughout a large body of large-*N* and qualitative work on the bases of protest and protest support. At the same time, the effect of grievance is influenced by risk and identity. Additionally, type of grievance impacts actions, especially as a function of social identity. The odds of protest in our experiment are lower when the participant faces a higher risk of punishment. These relationships largely disappear when we consider donations to the protestors or the justification of protest, a difference we attribute to the lower likely costs of punishments for each of these actions. Finally, net of situational differences in grievance, risk, and identity salience, SDO, and RWA were both associated with reduced willingness to protest, support protest financially, and justify protest.

Thus, our findings suggest that grievances, risk of punishment, social identity, and individual differences in sociopolitical orientation all play a role in willingness to engage in or support protest. Importantly, our findings shed particular light on how identity influences different forms of contentious political activity. Identity matters, but it matters

more in some situations than others. The introduction of factors favorable to protest—a strong grievance and low risk of punishment—leads to more protest support by members of majority *and* minority groups. This helps to explain how many successful movements by minority groups have attracted support from outsiders, who in our experiments appear to be motivated by the same factors.

Of course, our research design is not without its limitations. One such limitation is that the respondents may not identify strongly with the hypothetical situation described by the treatment. The population from which our sample is drawn is adults in the United States, few of whom may have any direct experience with discrimination, political repression, or physical repression as depicted in the vignettes. In particular, we might expect that Americans with little direct experience of discrimination or repression would be less likely to support political action. This means that the specific relationships in this experiment might not generalize to populations where true grievances exist. This is a limitation but one that should not be over-emphasized. The key advantage of an experiment such as this is that it allows a clean and direct assessment of theoretical propositions that are difficult to test with observational data. Further, in our related work that samples from the general population of countries with higher levels of grievances among the public, results are often null.<sup>49</sup> On the face, this would suggest that grievances do not impact action among these samples, although this is clearly not the case. As noted previously, we expect that null results in these related studies result from our treatments only moving the needle slightly as compared to the actual grievances that participants face in their real lives. For this reason alone, sampling from the general U.S. adult population is beneficial for confirming the causal mechanism proposed in other research. Finally, and very importantly, support from the general public impacts the success of collective action by a few people. From this perspective, results by a few people from a national sample can shed crucial light on the psychology behind mass support for contentious politics.

While there are many benefits to experimental research, one drawback to our design is that we cannot measure actual protest behavior. Positive responses to these questions are higher than what observational studies would suggest are the real levels of protest in response to grievances. For example, Table 2 suggests that over a third of respondents would engage in protest. This seems likely to be a somewhat higher rate of protest than one observes in the real world. For example, the AmericasBarometer 2008 survey<sup>50</sup> shows that about half this number (18.2 percent) reported that they had engaged in a protest march during the previous twelve months. We interpret these responses as more similar to *symbolic* expressions of support for such actions instead of *realistic* commitments by all respondents to actually protest. We note, though, that there is some research that compares hypothetical and actual behavior in experiments in other contexts.<sup>51</sup> However, we decided to ask respondents whether they would

commit to or refrain from action (rather than simply asking them if they supported such action) as a way to push them to think seriously about the potential risks of doing so that are described in the vignettes. Insofar as mass support for contentious politics impacts the movement's success, our results provide insight into factors that impact views of these movements. Further, as prior research shows, sampling from actual protest participants yields important insights into reasons why people decide to protest or support protest. Yet experimental research is necessary to isolate and confirm causal mechanisms. In this process, it is both infeasible and unethical to measure actual engagement in contentious politics.

Our findings also suggest a number of directions for future work on relationships between grievances and mobilization. One possibility would be to seek to validate these findings in other cultural and political contexts. It is possible that variation in these contexts might alter specific conclusions. Investigating this possibility in a systematic fashion has the potential to make a significant contribution to our understanding of whether or not the effects of grievances on mobilization are universal. Survey experiments of the type employed here have the potential to address many of the issues that observational analysis of the effects of repression pose, including measurement problems and endogenous relationships between mobilization and repression. We hope that future research will explore these avenues and others in an effort to better understand the genesis of political action.

## Notes

1. Ted Robert Gurr, *Why Men Rebel* (Princeton, NJ: Princeton University, 1970); Ted Robert Gurr, *Peoples versus States: Minorities at Risk in the New Century* (U.S. Institute of Peace Press, 2000); Andreas Wimmer, Lars-Erik Cederman, and Brian Min, "Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set," *American Sociological Review* Washington, DC, 74, no. 2 (2009): 316–337.
2. Paul Collier and Anke Hoeffler, "Greed and Grievance in Civil War," *Oxford Economic Papers* 56, no. 4 (2004): 563–595.
3. Gurr, *Why Men Rebel*; Doug McAdam, Sidney Tarrow, and Charles Tilly, "Dynamics of Contention, Cambridge Series in Contentious Politics" (2001); Sidney G. Tarrow, *Power in Movement: Social Movements and Contentious Politics* (Cambridge: Cambridge University Press, 2011); Jacquelin Van Stekelenburg and Bert Klendermans, "The Social Psychology of Protest," *Current Sociology* 61, no. 5–6 (2013): 886–905.
4. Tarrow, *Power in Movement*.
5. Collier and Hoeffler, "Greed and Grievance in Civil War"; James D. Fearon and David D. Laitin, "Ethnicity, Insurgency, and Civil War," *American Political Science Review* 97, no. 1 (2003): 75–90; Jonathan Fox, "Is Ethnoreligious Conflict a Contagious Disease?" *Studies in Conflict & Terrorism* 27, no. 2 (2004): 89–106; Gurr, *Why Men*

- Rebel*; Benjamin T. Harrison, "Roots of the Anti-Vietnam War Movement," *Studies in Conflict & Terrorism* 16, no. 2 (1993): 99-111.
6. John Horgan, "The Psychology of Terrorism (Cass Series: Political Violence)" (2005); Jeff Victoroff, "The Mind of the Terrorist: A Review and Critique of Psychological Approaches," *Journal of Conflict Resolution* 49, (Routledge: New York, NY) no. 1 (2005): 3-42.
7. Jenny Irons, "The Shaping of Activist Recruitment and Participation: A Study of Women in the Mississippi Civil Rights Movement," *Gender & Society* 12, no. 6 (1998): 692-709; Jacquelin Van Stekelenburg, Bert Klandermans, and Wilco W. Van Dijk, "Combining Motivations and Emotion: The Motivational Dynamics of Protest Participation," *Revista de Psicología Social* 26, no. 1 (2011): 91-104.
8. See for an exception: Jing Shi, Zhen Hao, Alexander K. Saeri, and Lijuan Cui, "The Dual-Pathway Model of Collective Action: Impacts of Types of Collective Action and Social Identity," *Group Processes & Intergroup Relations* 18, no. 1 (2015): 45-65.
9. Ruud Koopmans and Jan Willem Duyvendak, "The Political Construction of the Nuclear Energy Issue and Its Impact on the Mobilization of Anti-Nuclear Movements in Western Europe," *Social Problems* 42.2 (1995): 235-251; Bert Klandermans, "The Social Construction of Protest and Multiorganizational Fields," *Frontiers in Social Movement Theory* (1992): 77-103.
10. Collier and Hoeffler, "Greed and Grievance in Civil War"; Fearon and Laitin, "Ethnicity, Insurgency, and Civil War"; Fox, "Is Ethnoreligious Conflict a Contagious Disease?"; Gurr, *Why Men Rebel*; Gurr, *Peoples versus States*; Horgan. "The Psychology of Terrorism"; McAdam, Tarrow, and Tilly, "Dynamics of Contention, Cambridge Series in Contentious Politics" ; Tarrow, *Power in Movement*; Wimmer, Cederman, and Min, "Ethnic Politics and Armed Conflict"; Van Stekelenburg and Klanderman, "The "The Social Psychology of Protest"; Victoroff. "The Mind of the Terrorist."
11. Devah Pager and Hana Shepherd, "The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets," *Annual Review of Sociology* 34 (2008): 181-209.
12. Louise Richardson. *What Terrorists Want: Understanding the Enemy, Containing the Threat* (New York: Random House, 2007).
13. Doug McAdam, *Political Process and the Development of Black Insurgency, 1930-1970* (Chicago: University of Chicago Press, 2010).
14. Robert J. Art and Louise Richardson, *Democracy and Counterterrorism: Lessons from the Past* (US Institute of Peace Press, 2007). Washington, DC.
15. Margaret E. Keck and Kathryn Sikkink, *Activists beyond Borders: Advocacy Networks in International Politics* (Ithaca, NY: Cornell University Press, 2014).
16. Mark I. Lichbach, "Contending Theories of Contentious Politics and the Structure-Action Problem of Social Order," *Annual Review of Political Science* 1, no. 1 (1998): 401-424.
17. Jeff Goodwin, *No other Way Out: States and Revolutionary Movements, 1945-1991* (Cambridge: Cambridge University Press, 2001); Stathis N. Kalyvas, *The Logic of*

- Violence in Civil War* (Cambridge: Cambridge University Press, 2006); James I. Walsh and James A. Piazza, "Why Respecting Physical Integrity Rights Reduces Terrorism," *Comparative Political Studies* 43, no. 5 (2010): 551–577.
18. Tarrow, *Power in Movement*; Charles Tilly, *From Mobilization to Revolution* (Reading, MA: Addison-Wesley, 1977).
  19. Tilly. "From Mobilization."
  20. Lichbach, "Contending Theories of Contentious Politics and the Structure-Action Problem of Social Order."
  21. Nelson A. Pichardo Almanzar and Cedric Herring, "Sacrificing for the Cause: Another Look at High-Risk/Cost Activism," *Race and Society* 7, no. 2 (2004): 113–129.
  22. Nella Van Dyke, "Crossing Movement Boundaries: Factors that Facilitate Coalition Protest by American College Students, 1930–1990," *Social Problems* 50, no. 2 (2003): 226–250.
  23. Lichbach, "Contending Theories of Contentious Politics and the Structure-Action Problem of Social Order."
  24. Ibid.
  25. Mark Irving Lichbach, *The Rebel's Dilemma (Economics, Cognition, and Society)* (Ann Arbor: University of Michigan Press, 1995), 16.
  26. Bernd Simon and Bert Klandermans, "Politicized Collective Identity: A Social Psychological Analysis," *American Psychologist* 56, no. 4 (2001): 319; H. Tajfel and J. C. Turner, "The Social Identity Theory of Intergroup Behavior," in *Psychology of Intergroup Relations*, ed. Stephen Worchel and William G. Austin (Chicago: Nelson-Hall, 1986), 7–24; Martijn Van Zomeren, Tom Postmes, and Russell Spears, "Toward an Integrative Social Identity Model of Collective Action: A Quantitative Research Synthesis of Three Socio-Psychological Perspectives," *Psychological Bulletin* 134, no. 4 (2008): 504.
  27. Marga De Weerd and Bert Klandermans, "Group Identification and Political Protest: Farmers' Protest in the Netherlands," *European Journal of Social Psychology* 29, no. 8 (1999): 1073–1095.
  28. John Duckitt, "A Dual-Process Cognitive-Motivational Theory of Ideology and Prejudice," *Advances in Experimental Social Psychology* 33 (2001): 41–113; John Duckitt and Chris G. Sibley, "Personality, Ideology, Prejudice, and Politics: A Dual-Process Motivational Model," *Journal of Personality* 78, no. 6 (2010): 186–194.
  29. Felicia Pratto, Jim Sidanius, Lisa M. Stallworth, and Bertram F. Malle, "Social Dominance Orientation: A Personality Variable Predicting Social and Political Attitudes," *Journal of Personality and Social Psychology* 67, no. 4 (1994): 741; Jim Sidanius and Felicia Pratto, *Social Dominance: An Intergroup Theory of Social Hierarchy and Oppression* (Cambridge: Cambridge University Press, 1999).
  30. Duckitt, "A Dual-Process Cognitive-Motivational Theory of Ideology and Prejudice."
  31. Sidanius and Pratto, *Social Dominance*.
  32. Bob Altemeyer, *Enemies of Freedom: Understanding Right-Wing Authoritarianism* (Jossey-Bass, 1988); Bob Altemeyer, *The Authoritarian Specter* (Cambridge, MA: Harvard University Press, 1996). San Francisco, CA.

33. Altemeyer, *The Authoritarian Specter*.

34. Duckitt, "A Dual-Process Cognitive-Motivational Theory of Ideology and Prejudice."

35. J. Christopher Cohrs, Barbara Moschner, Jürgen Maes, and Sven Kielmann, "The Motivational Bases of Right-Wing Authoritarianism and Social Dominance Orientation: Relations to Values and Attitudes in the Aftermath of September 11, 2001," *Personality and Social Psychology Bulletin* 31, no. 10 (2005): 1425–1434.

36. Anthony F. Lemieux and Victor H. Asal, "Grievance, Social Dominance Orientation, and Authoritarianism in the Choice and Justification of Terror versus Protest," *Dynamics of Asymmetric Conflict* 3, no. 3 (2010): 194–207.

37. Ibid.

38. We cannot—of course—randomly assign participants to the majority or minority social identity in the real world. While we assign social identity perspective in this study, real life experiences may impact participants' ability to relate to the other group when assigned to a perspective that is dissimilar from their own in reality. To control for this, we included a dummy variable for being a member of a minority racial group in all models. As discussed below, actual social identity rarely had a significant impact on the outcome variables.

39. For example, consider the study of support for terrorism among Palestinians. Many Palestinians have both some grievance against Israel and a salient group identity. It would be difficult to find a large number of Palestinian respondents that have neither or only one of these characteristics. Similar issues concern the different types of grievances that are a central part of our study. Discrimination, political repression, and physical repression frequently co-vary in observational data. For example, most Blacks in the southern United States likely held one or more of these grievances in the pre-Civil Rights era.

40. Brad Bishop, Alexandra Cooper, D. Sunshine Hillygus, "Innovative Survey Methodologies for the Study of Attitudes Toward Terrorism and Counterterrorism," *Institute for Homeland Security Solutions* (2009); Diana C. Mutz. *Population-Based Survey Experiments* (Princeton, NJ: Princeton University Press, 2011).

41. For more detail see <http://www.knowledgenetworks.com/knpanel/index.html>

42. Anthony F. Lemieux, Erin M. Kearns, Victor Asal, and James Igoe Walsh. "Support for Political Mobilization and Protest in Egypt and Morocco: An Online Experimental Study," *Dynamics of Asymmetric Conflict* 10, no. 2–3 (2017): 124–142.

43. We also asked participants about engaging in a terrorist attack and providing support to the attack, although we do not analyze those outcomes in this study. Relatively few participants indicated that they would engage in or justify terrorism, which makes it challenging to model factors that impact these decisions.

44. Participants were asked two questions as manipulation checks. First, they were asked, "What is the personal risk of punishment you face if you were involved in any kind of challenge to the government?" and the response options were either "I would face a very low risk" or "I would face a very high risk." Second, they were asked, "You are a member of which ethnic group?" where response options were either "I am a

member of the minority Estamese ethnic group” or “I am a member of the majority Buchari ethnic group.”

45. For all hypotheses, we estimated models with a variety of techniques, none of which fundamentally changed the results. We are reporting results of the regression models for each subsample. We also estimated regression models with assigned social identity as a dummy variable, but the substantive results remained unchanged. Additionally, we estimated models with and without participants who failed the manipulation checks. Again, this did not change the significance of each independent variable but did minimize the effect in some cases. To account for this, we have included passing manipulation checks as a dummy variable in all reported models. We also included interactions terms for risk and age, risk and grievances, and grievances and SDO score. Again, these largely did not impact the results and thus are not reported.

46. In addition to the results reported in the text, we also estimated models to only include participants whose randomly assigned identity in the experiment matched their real-world racial identity.

First, we compare results from minority participants who were assigned to the minority subsample condition to the results reported in text. Overall, results similar across models, however, we will discuss a few key differences here. In Table 3, physical harm alone, the interaction between risk and both political rights and physical harm, and RWA are no longer significant in the minority subsample. Among minority participants, the threat of physical harm from government agents is likely higher in real-life, which could explain why they are less likely to engage in protest against it. In Table 4, only a small percentage of participants in the minority subsample indicated that they would donate to support the protest, which makes it difficult to compare these models to those reported in text. In Table 5, neither grievances generally nor physical harm impact protest justification. Minorities face more grievances in the real-world, so it may be that our treatments have a more limited effect on these participants. This would be consistent with results from a similar study that sampled from countries with higher levels of both grievance and protest. Again, RWA no longer has a significant impact either. Although this last effect requires additional exploration in future research, we speculate that it is because the disruptive implications of protest are more threatening to authoritarians in majority groups, who are likely to have a stronger investment in the maintenance of social order (e.g., Aaron Dusso, “Race and Right-Wing Authoritarianism: How Scoring High in Authoritarianism Does Not Necessarily Lead to Support for Right-Wing Candidates,” *Social Science Quarterly* 98, no. 1 (2017): 244–260).

We then compare results from non-minority participants who were assigned to the majority subsample condition to the results reported in text. Across models, results are nearly identical for the majority subsample except that both discrimination and political rights repression now significantly increase perceived justification for the protest.

47. We plotted the marginal effects of grievance (or grievance type) by low and high risk conditions for all models where the interaction between these two variables is significant. For brevity’s sake, the rest of these plots are located in the Appendix.

48. While we find no changes in direction between the OLS and ordered logit models, there were a few cases where significance level changes. When estimating models with ordered logit, the following is different from the OLS models: In model 4A, political right repression has a significant impact on protest justification. In model 3A, the dummy variable for being a minority in real life is now significantly related to protest justification.

49. Lemieux, Kearns, Asal, and Walsh. "Support for Political Mobilization."

50. AmericasBarometer, *Latin American Public Opinion Project (LAPOP)*. (n.d.). [www.LapopSurveys.org](http://www.LapopSurveys.org) (accessed 24 April 2017).

51. See, inter alia, Anabela Botelho and Ligia Costa Pinto, "Hypothetical, Real, and Predicted Real Willingness to Pay in Open-Ended Surveys: Experimental Results," *Applied Economic Letters* vol. 9, no. 15, pp. 993-996; John B. Loomis, "Strategies for Overcoming Hypothetical Bias in Stated Preference Surveys," *Journal of Agricultural and Resource Economics* 1, no. 39, pp. 34-46. Botelho & Pinto - 2002  
Loomis - 2014.

## **Funding**

This research was supported through the Time Sharing Experiments in the Social Sciences Program (TESS), a program of the National Science Foundation and the U. S. Department of Homeland Security awarded to Lemieux, Walsh, and Asal. Preparation of this research was also supported in part by the U. S. Department of Homeland Security Science and Technology Directorate's Office of University Programs through Award Number 2012-ST-061-CS0001 made to the National Consortium for the Study of Terrorism and Responses to Terrorism (START). The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Department of Homeland Security or START. The authors have no financial conflicts of interest related to this research.