WILL WORK FOR BELONGINGNESS: PROTOTYPICALITY, UNCERTAINTY,

THREAT AND COLLECTIVE ACTION TENDENCIES

By

D. James Peabody

A Thesis Presented to

The Faculty of Humboldt State University

In Partial Fulfillment of the Requirements for the Degree

Master of Arts in Psychology: Academic Research

Committee Membership

Dr. Amber Gaffney, Committee Chair

Dr. Kauyumari Sanchez, Committee Member

Dr. Amanda Hahn, Committee Member

Dr. Christopher Aberson, Program Graduate Coordinator

May 2021

Abstract

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D. James Peabody

Collective action has a powerful role in shaping societies and is therefore
important to examine and understand. This study examines the effects of peripheral group
membership vs. prototypical group membership, uncertainty about one's self concept,
and perceived realistic threat from an outgroup on people's willingness to engage in
collective action. To assess these relationships, an online sample of Republicans and
Democrats ($N = 356$) were recruited from Mturk. This work adapted methods from work
on intergroup threat theory and uncertainty-identity theory to hypothesize that under low
threat, peripheral group members would be more willing to engage in collective action
under high uncertainty than low uncertainty, but prototypical group members will not
differ based on uncertainty level. Additionally, it predicted that under high threat,
prototypical participants would be more willing to engage in collective action under high
uncertainty than low uncertainty, but that the opposite would be true for peripherals.
Results were partially consistent with these hypotheses. Additionally, collective action
tendencies were predicted to be generally higher when threat is higher. Results were
mixed with respect to this hypothesis. This work has implications for current world
events (e.g., BLM protests, capitol riots) and when and why people engage on behalf of
the gro

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Will Work for Belongingness:

Prototypicality, Uncertainty, Threat and Collective Action Tendencies

Collective action has historically changed the face of many societies, in directions both positive and negative. Collective action is defined as a behavior in which a member of a group acts on the behalf of their group with the intent to better the relative position of their group (Wright & Tropp, 2002). In the U.S context, these behaviors are observed across the political spectrum, including cases of protests such as the Women's March or through organized efforts to contact congressional representatives en masse, a strategy regularly employed by the NRA. Previous research has suggested that perceived realistic and symbolic threats to one's ingroup are associated with greater willingness to engage in collective action (Çakal et al., 2016). This may be because when people feel their group's position is threatened with respect to an outgroup, they feel motivated to improve their group's position (Tajfel & Turner, 1979). Intergroup threat theory provides a framework through which this perceived threat may be understood, and it includes four components: realistic threats, symbolic threats, intergroup anxiety, and negative stereotypes (Stephan, Renfro, & Davis, 2008). Additionally, the relationship between threat and collective action may be moderated by uncertainty and prototypicality threat.

Prototypicality threat occurs when individuals feel that they do not fit into their group well due to feeling different from highly representative group members (Noel et al., 1995; Jetten & Spears, 1997). Past work has indicated that prototypicality threat motivates individuals to engage in normative behavior to improve their intragroup position (Noel et al., 1995). However, this has not been explored in the context of

collective action. Collective action behaviors tend to be normative and fulfil individuals' desires to publicly demonstrate their identification with their group (Reicher, 2004; Klein et al., 2007). Therefore, prototypicality threat may be expected to increase collective action behaviors, given specific contexts.

Uncertainty-identity theory suggests that humans have an inherent need to reduce uncertainty, and that one way they accomplish this is through group identification (Hogg & Adelman, 2013). This also creates a motivation to act in a group normative manner, as this furthers identification which serves to reduce uncertainty. Past work has suggested that under uncertainty individuals prefer extreme groups and are more likely to endorse radical behavior (Gaffney et al., 2014; Hogg & Adelman, 2013). In the context of collective action, this suggests that uncertainty may moderate the effects of prototypicality and intergroup threat on collective action tendencies, such that these tendencies may increase under higher levels of uncertainty.

Social identity theory

Social identity theory (SIT) suggests that individuals desire to have a positive self-concept, and that because group membership comprises the self-concept, group identification provides an opportunity to develop positive self-concept (Tajfel & Turner, 1979). In turn, SIT holds that groups serve as both positive and negative sources of identification with respect to the self-concept. Individuals seek to enhance the positively valanced factors of their group to enhance their own self-concept. Furthermore, individuals determine the positive or negative value of their group identification through

comparisons with relevant outgroups (e.g., students at one university may compare themselves to students at a rival institution). It is typical for people to hold numerous social identities that vary with respect to their level of centrality in their respective self-concepts (Hogg, 2006). When making intergroup comparisons, individuals' ideas of "us" and "them" are directed by their salient group identity. Which group identity is salient at any given time is driven by social context (e.g. an individual competing in a football game would likely have the group identity associated with their team activated, while an individual in a voting booth would likely have their group identity associated with their political affiliation activated).

When this intergroup comparison is evaluated positively by the individual, the group continues to be a source of information supporting a positive sense of self-concept (Tajfel & Turner, 1979). When the comparison is not positive, individuals engage in one of three strategies to mitigate the negative effects of the comparison: social creativity, individual mobility, or social competition. In the case of the social creativity strategy, the axes of comparison are cognitively redefined to make the comparison positive in an individual's mind (e.g., "*their* institution's football team may be better than *ours*, but it doesn't matter because *our* institution has more robust academics"). When an individual engages in an individual mobility strategy, they either distance themselves from the group psychologically if intergroup boundaries are impermeable (e.g., race, gender), or seek to join a different group if intergroup boundaries are permeable and perceived to be legitimate (e.g., organizational affiliations). Finally, if an individual engages in a social

competition strategy, they seek to establish superiority with respect to the axis of intergroup comparison, e.g., collective action to enhances a political party's intergroup position.

The present work is primarily concerned with the second and third strategies, as it was predicted that individuals' motivation to engage in either a disidentification or social competition strategy would be moderated by the psychological context created by this work's experimental manipulations. Specifically, because the intergroup hierarchy would be unlikely to be seen as legitimate in the current U.S. political climate, it is expected that under certain conditions participants will be motivated to disidentify with their group. However, under other conditions they are likely to support a social competition strategy.

Collective action

In a related line of work, Klandermans (2003) describes three motivational components of collective action participation: instrumentality, identity, and ideology. The instrumentality component describes the need for structural change given perceptions of injustice or deprivation. When individuals perceive their group to be deprived, they are more motivated to engage in collective action. Additionally, previous research has suggested anger-based reactions to relative deprivation and procedural unfairness are associated with a greater desire to engage in collective action (van Zomeren et al., 2004) while sadness-based reactions are associated with comparatively less desire to engage in collective action (Smith et al., 2008). This is because anger tends to be a more action-oriented emotion than sadness.

The identity component of collective action motivation draws heavily on self-categorization theory and social identity theory and suggests that groups associated with collective action movements can provide individuals with a positive source of identity, and that as identification with these groups increases, so does motivation to engage in collective action on their behalf (Klandermans, 2003; Turner et al., 1987). Past research has supported the suppositions of this motivational component through examinations of collective action movements seeking to improve conditions for Dutch and Spanish farmers and for members of the gay rights movement (Klandermans et al., 2002; Stürmer & Simon, 2004). This work further suggests that when an identity group becomes *politicized* group members are much more likely to engage in collective action (Klandermans, 2014; Simon & Klandermans, 2001). According to Simon and Klandermans (2001) an identity becomes politicized when the group becomes focused on a power struggle (e.g., employees in an industry that is unionizing). Additionally, group members who are especially embedded in identity groups are more likely to be willing to engage in collective action on behalf of that group (Klandermans et al., 2008).

The ideology component describes the value expressive aspects of collective action (i.e., that individuals are motivated to express their support for ideas and their affective orientation with respect to those ideas; (Klandermans, 2003; van Zomeren et al., 2004). Notably, this construct could also be examined through the lens of the social identity performance framework, contained in the social identity model of deindividuation effects (SIDE; Klein et al., 2007). Identity performance is defined as a

deliberate expression of normative behavior associated with a given identity group. This performance serves two functions, *identity consolidation* and *identity mobilization*. The identity consolidation function is similar to the ideology component, as it involves the expression of normative ideas and behaviors in order to demonstrate one's identification. The identity mobilization function is more closely related to the instrumentality component, as it describes how normative behavior can drive members to act in the interest of social change on behalf of the group.

Previous research has also emphasized dual pathway models of collective action, wherein the primary predictors of collective action were group-based anger and group efficacy (van Zomeren et al., 2004). A meta-analysis later furnished additional support for this model and also integrated identity into the model, leading to the social identity model of collective action (SIMCA; (van Zomeren et al., 2008). Findings again reiterated the importance of politicization of identities with respect to the predictive value of identification in regard to collective action tendencies. Further work suggested that identity salience affects collective action tendencies through a pathway of group-based anger (van Zomeren et al., 2004). Results suggested that when an individual's social identity is highly salient, they express higher levels of endorsement for collective action. Group identification was also positively associated with endorsement of collective action. Importantly, SIMCA also serves to integrate past work on collective action with the SIT literature.

Self-categorization theory

While SIMCA does effectively integrate the literature on SIT and collective action, it does not consider how intragroup threats to identity may affect that component of the model. These intragroup identity threats may be understood through the lens of self-categorization theory (SCT). SCT builds on SIT by describing the cognitive mechanisms present during intergroup comparisons (Turner et al., 1987). SCT suggests that as individuals seek to further enhance their self-concept by positively differentiating their own group from other groups, they do so through a focus on intragroup similarities and intergroup differences – *metacontrast* (Hogg, 2006). This process also results in a prototype that feels clear to members of the ingroup. This prototype contains a set of prescriptive and descriptive norms for group behavior. That is, a prototype provides members of a given group with direction for how to feel and act. Referent informational influence suggests that when a social identity is salient, individuals depersonalize to the group's prototype and use that particular group prototype to provide them with information that guides their behavior (Hogg & Turner, 1987). As a result, ingroup members either consciously or unconsciously seek to approximate their ingroup prototype as a representation of the self. Those members who closely approximate the group prototype are 'prototypical' of the group whereas those who do not or cannot closely approximate normative attitudes and behaviors are 'peripheral'. This suggests the importance of social context, as the norms driving individuals' behavior depend on which group identity is currently salient (Reicher, 2004).

Prototypicality threat

Metacontrast processes lead to group prototypes guiding feelings and behavior, and

when an individual does not feel that they match up with this group prototype, these

feelings of being peripheral may induce insecurity about one's identity (Noel et al.,

1995). In turn, this identity insecurity motivates individuals to engage in behaviors that

are normative and consistent with the group prototype to establish that they "fit in" with

the other members of their group if the group is perceived to be high in status (Reid &

Hogg, 2005). For example, past work has indicated that compared to prototypical group

members, peripheral group members tend to show more support for coercive persuasive

strategies directed at outgroups when they believe their endorsement of these strategies

will be made public (Noel et al., 1995). However, the opposite is true when those

responses are kept private, suggesting that they are less appealing when they lack an

identity expressive component. These findings suggest that when group members feel

peripheral, they may be more willing to engage in public displays of negativity towards

an outgroup to gain acceptance in their ingroup. This may also be suggestive of a more

general effect wherein peripheral group members are willing to engage in public actions

on behalf of their ingroup in a bid for acceptance, including collective action.

Peripherals (as opposed to prototypicals) are more willing to endorse behaviors

that are detrimental to an outgroup if it will secure them acceptance in the ingroup with

relative ease (Goldman & Hogg, 2016). The behaviors in question ranged from mild,

such as submitting a complaint, to extreme, such as engaging in physical violence. This

suggests that group members who feel peripheral may be willing to engage in radical behavior on behalf of their group should they believe it might lead to acceptance. Related work suggests a similar effect, wherein group members who were feeling that they were becoming more peripheral in their group expressed a desire to exclude newcomers who were shifting the group prototype (Danbold & Huo, 2015, 2017). This again suggests that peripheral group members may be willing to engage in hostile behaviors towards others to bolster their intragroup position.

Steinel et al.'s (2010) work provides additional context to this assertion, as they found that endorsement of a competitive group norm was moderated by a need to belong. Peripheral participants who demonstrated a greater need to belong endorsed a competitive group norm at a level similar to prototypical participants, but peripheral participants that demonstrated a lower need to belong endorsed this competitive norm at a much lower rate. This has implications for the present work, as it suggests that peripheral participants who are less motivated to identify with the ingroup will express less support for collective action compared to peripheral participants who are more motivated to identify with the ingroup. Additional work on loyal deviance (i.e. deviating from a group norm that encourages behavior which is harmful to the group) has suggested that self-investment in groups is positively associated with loyal deviance for prototypical group members, but not for peripheral group members (Masson & Fritsche, 2019). For norms that were not maladaptive, the relationship between self-investment and norm endorsement was positive for both peripheral and prototypical group members. This also

has implications for the current work, as it suggests that while peripheral group members may be motivated to engage in collective action behaviors that are not self-sacrificing to gain acceptance into the group, they may be less motivated to engage in behaviors that involve self-sacrifice. However, the implications of these findings may be qualified by work exploring the relationship between uncertainty about one's self-concept and identity processes.

Uncertainty-identity theory

Uncertainty-identity theory posits that individuals have a need to reduce self-conceptual uncertainty, and that group identification is an effective mode of uncertainty reduction (Hogg, 2007; Hogg & Adelman, 2013). Thus, higher levels of uncertainty create a motivation for group identification to reduce this uncertainty. Evidence suggests that in the United States political context, individuals who are strongly identified with their political party tend to increase their identification level when primed with uncertainty (Hohman, Hogg, & Bligh, 2010). Additionally, when individuals are very uncertain, they demonstrate a preference for more radical groups, however when less uncertain, people demonstrate a preference for more moderate groups (Hogg et al., 2010). This suggests that higher levels of uncertainty may be associated with greater motivation to identify strongly with a well-defined group and to support collective action and even radical collective action on one's groups' behalf. Notably, radical groups are highly attractive sources of identity under uncertainty because they have clear attitudinal and behavioral norms (Gaffney et al., 2014). Additional work has suggested that when

individuals feel peripheral, they also report higher levels of uncertainty (Hohman et al., 2017). This work also suggested that when peripheral group members feel uncertain they identify more strongly with their groups compared with peripheral group members who feel less uncertain (Hohman et al., 2017). However, uncertainty level does not affect the degree to which prototypical group members identify with their groups. Peripheral group members who were more uncertain also report more ingroup bias compared to less uncertain peripheral group members, while prototypical group members did not differ in terms of ingroup bias with respect to their level of uncertainty. Findings from Reid and Hogg (2005) suggest that the relationship between identification, prototypicality, and uncertainty is qualified by the status of the salient group. Their findings indicate that while highly uncertain peripheral members of high-status groups identify more strongly with those groups than prototypical members, the opposite is true when the group in question is a low-status group. This suggests that high-status groups are particularly attractive outlets for uncertainty reduction when individuals feel peripheral. Due, to the relative societal stature of United States political parties, the present work posits that under uncertainty, political parties will be perceived as having high status and that highly uncertain participants will be more motivated to identify with them. These intragroup identity threats may also interact with intergroup threat to affect collective action tendencies.

Threat

Previous collective action work has highlighted the role of threat in collective

action tendencies, often denoted in terms of grievances (Klandermans, Sabucedo,

Rodriguez, & De Weerd, 2002; Klandermans, 2014). SIMCA also discusses the role of

threat in collective action (van Zomeren et al., 2008). However, neither model draws on a

model that systematizes threat in a clear way, which may be necessary to better

understand the role of intergroup threat in collective action tendencies. Intergroup threat

theory (ITT) provides such a systematic understanding, suggesting that intergroup threat

can be separated into four components, including realistic threat, symbolic threat,

intergroup anxiety, and negative stereotypes (Stephan et al., 2008). Realistic threat

includes threats to a group's resources, whether tangible resources including money and

property, or intangible resources including political power. Symbolic threats are threats to

the ingroup's core values or beliefs, including theological beliefs or morality systems.

Intergroup anxiety represents apprehension with respect to interactions with outgroup

members due to fears of negative outcomes such as being made to feel embarrassed or

foolish. Negative stereotypes are cognitive structures ascribing negative characteristics to

outgroup members, and in turn make people feel as though their interactions with the

outgroup will be negative. Intergroup anxiety and negative stereotypes can lead to

negative affect, which may drive negative intergroup attitudes and behaviors. Stephan,

Ybarra, and Bachman, (1999) demonstrated that all four factors predicted attitudes

towards immigrant groups. In particular, greater perceived threat predicted more negative

attitudes towards immigrants.

Additional work examined this relationship with respect to women's attitudes

towards men and found that symbolic threat, intergroup anxiety, and negative

stereotyping was negatively associated with attitudes towards men (Stephan, Stephan,

Demitrakis, Yamada, & Clason, 2000). However, realistic threat was not significantly

related to attitudes towards men. The authors suggested that this may be due to the

historical context of gender power dynamics in the United States. Past work examining

Republicans and Democrats suggested that highly identified individuals under high threat

who perceive their group as being high in status express greater endorsement for status

hierarchies compared to less strongly identified and less threatened individuals (Rios

Morrison et al., 2009). This suggests that individuals in a political power struggle may be

more likely to support collective action on behalf of their group, to enhance their group's

relative position in the status hierarchy. Other work suggests that perceived realistic and

symbolic threats mediate the relationship between identification and collective action

(Çakal et al., 2016). In this model, high identification predicted collective action

tendencies, and this relationship was partially mediated by perceived threat. Furthermore,

these results supported this relationship in both advantaged and disadvantaged groups.

This suggests that individuals who perceive threat to their group are motivated to engage

in collective action on its behalf, and that high identification is associated with higher

perception of threat.

        The social identity model of collective action (SIMCA) posits that injustice,

efficacy, and identity are all predictive of collective action tendencies (van Zomeren et

al., 2008). The injustice construct contains within it threatening intergroup events, which

are interrelated with the ITT constructs of realistic and symbolic threat. A meta-analysis found stronger support for SIMCA compared to other integrative models and suggests that all three factors are predictive of collective action tendencies and are interrelated with one another. The present work suggests the integration of ITT with SIMCA by providing empirical support for the interrelation of realistic and symbolic threat with the injustice component of the SIMCA model.

Overview of the research

A pilot study was conducted to validate an intergroup threat manipulation, adapted from Rios et al. (2018). The manipulation had two levels: high vs. low, and the groups were compared with respect to a measurement of intergroup threat. The pilot also included measurements of collective action intentions. Additional measured variables were included for exploratory analyses measured variables including group-based anger, relative deprivation, uncertainty, group identification, and perceived legitimacy of the 2020 impeachment inquiry.

Following the pilot, a 2 (intergroup threat: high, low) x 2 (prototypicality threat: prototypical, peripheral) x 2 (uncertainty: high, low) between-subjects experimental design examined the aforementioned constructs. Intergroup threat, prototypicality threat, and uncertainty were manipulated with cognitive primes. Measured variables included a collective action intentions scale and two behavioral measures of collective action. Additional measured variables checked the effectiveness of the manipulations. These included scales measuring uncertainty, group identification, political ideology, participant

prototypicality, group-based anger, intergroup threat, relative deprivation, and perceived

legitimacy of the impeachment inquiry.

Pilot study hypotheses

Hypothesis 1. Groups in the high threat condition will perceive greater intergroup

threat compared to the low threat condition.

Hypothesis 2. Participants in the high threat condition will express a greater

willingness to engage in collective action when compared to participants in the low

intergroup threat condition.

Main study hypotheses

Hypothesis 1a. There will be a main effect of intergroup threat such that

participants in the high threat condition will express a greater willingness to engage in

collective action when compared to participants in the low intergroup threat condition.

Hypothesis 1b. There will not be a detectable main effect of the prototypicality

condition on willingness to engage in collective action.

Hypothesis 1c. There will be a three-way interaction. In the low threat condition

peripheral participants under high uncertainty will demonstrate a greater willingness to

engage in collective action compared to participants who are low in uncertainty, but

prototypical participants will not differ in their willingness to engage in collective action

with respect to their level of uncertainty. However, in the high intergroup threat condition

prototypical participants will demonstrate a greater willingness to engage in collective

action under high uncertainty compared to low uncertainty. The opposite will be true for

peripheral participants in the high threat condition (i.e., peripheral participants will demonstrate a greater willingness to engage in collective action under low uncertainty compared to high uncertainty).

Hypothesis 2a. Uncertain peripheral participants will not differ with respect to uncertain prototypical participants in terms of their participation in a non-self-sacrificing behavioral measure of collective action.

Hypothesis 2b. Uncertain peripheral participants will be less likely to engage in a self-sacrificing behavioral measure of collective action relative to uncertain prototypical participants.

Pilot Study Method

Participants

A sample of Democrats ($N = 48$) and Republicans ($N = 60$) was recruited from Amazon's Mechanical Turk platform (Mturk). Previous work has indicated that the data collected through this platform is commensurate or superior in quality to samples of college students (Buhrmester et al., 2011; Hauser & Schwarz, 2016). This method also allowed access to a more diverse and representative sample of the American electorate compared to a sample of college students. The mean age in the sample was 37.13 and ranged from 22 to 75. The sample was 2% American Indian or Alaska Native, 3% Asian, 5% Biracial, 13% Black, 5% Hispanic or Latino, and 73% White. Self-identified socioeconomic status was as follows: 6% low income, 23% working class, 14% lower middle class, 44% middle class, 13% upper middle class. Level of education was as follows: <1% less than high school degree, 6% high school graduate or equivalent, 16% some college but no degree, 11% associate degree, 48% bachelor's degree, 16% master's degree, <1% professional degree (e.g., J.D., M.D.), 2% doctoral degree. The mean Gender was erroneously omitted from the survey, and as such, data is not available.

Procedure

Informed consent

Following their recruitment via Mturk, participants were linked to a survey hosted on Qualtrics (an online survey platform). They were provided with an informed consent form and asked to provide their consent to participate in the study. They were also asked

to confirm their party affiliation.

Intergroup threat prime

Consistent with the intergroup threat theory literature, the intergroup threat prime consisted of adapted tweets generated from tweets posted by Republican and Democratic party leaders, (Rios et al., 2018; Rios Morrison et al., 2009). Participants were randomly assigned to read either tweets that highlighted current intergroup conflict (i.e., high threat) or tweets that highlighted a foreign policy issue with bipartisan consensus (i.e., low threat). Additionally, participants were shown graphs depicting bogus survey data suggesting either high intergroup conflict (i.e., high threat) or intergroup consensus (i.e., low threat). Participants were directed to read the tweets and graphs and then complete a comprehension check and filler questions regarding the leadership qualities of the tweets' authors.

Measured variables

Following their exposure to the intergroup threat prime, participants were directed to complete several dependent measures. These scales included perceived intergroup threat, collective action intentions, group-based anger, relative deprivation, uncertainty, group identification, leader support, and perceived legitimacy of the impeachment inquiry.

Materials

Manipulated variables

Intergroup threat. Perceived realistic and symbolic threat was manipulated using

materials adapted from past work utilizing constructs from intergroup threat theory (Rios et al., 2018; Rios Morrison et al., 2009). Participants were randomly assigned to either a high intergroup threat condition or a low intergroup threat condition via a randomizer embedded in the survey software.

In the high threat condition participants were directed to read a tweet from one of their party's leaders that was critical of the opposition party's actions in the then proceeding impeachment inquiry. If the participant was a Republican the tweet was attributed to then-President Donald Trump. The threatening tweet attributed to Donald Trump contained the text:

THE DEMOCRATS ARE TRYING TO DESTROY THE REPUBLICAN

PARTY AND ALL THAT IT STANDS FOR. STICK TOGETHER, PLAY

THEIR GAME, AND FIGHT HARD REPUBLICANS. OUR COUNTRY IS AT

STAKE!

For Democrats, the tweets were attributed to House Intelligence Committee Chairman Adam Schiff. The threatening tweet attributed to Intelligence Committee Chairman Adam Schiff contained the text:

The President abused his power and sought to EXTORT and BRIBE an ally into

conducting investigations to aid his reelection and so by withholding official acts.

This is an ATTACK on Democrats. Republicans are UNDERMINING our

democracy to STEAL power from Democrats.

These tweets were adapted from actual tweets written by the named political leaders to

retain their voice and to ensure that the manipulation retained a high degree of realism. Some words were rewritten in all caps for emphasis and some word choices were slightly modified to highlight the intergroup context inherent in the impeachment inquiry. Alongside the tweets, participants also viewed graphs depicting bogus polling data which suggested high ingroup consensus on the impeachment inquiry.

In the low threat condition participants were directed to read tweets from one of their party's leaders that focused on a domestic policy issue with bipartisan consensus (i.e., lowering prescription drug prices). Republicans were shown a tweet attributed to Senator Chuck Grassley while Democrats were shown a tweet attributed to Senator Ron Wyden. The content of the tweets focused on a bill they were co-sponsoring at the time, and contained the text:

> Half of seriously ill Americans struggle to pay their medical bills. The Grassley+Wyden Rx drug bill would cap out of pocket costs for many Americans in need.
>
> Republicans and Democrats coming together to support this bipartisan effort to make life better for all Americans.

Due to the bipartisan nature of the low threat manipulation, participants saw the same text regardless of their party affiliation. However, in both cases the tweet was attributed to ingroup leaders. Participants also viewed graphs depicting bogus polling data that suggested high ingroup consensus on support for bipartisan action on prescription drug pricing.

Measured variables

Intergroup threat manipulation comprehension check. Following their exposure to the intergroup threat manipulation, participants were asked a single forced choice question, "What recent events did the tweets discuss?" To avoid making the impeachment inquiry salient, participants in the low threat condition were asked to choose between "Unrest in Kashmir" and "Plans to reduce prescription drug prices." In the high threat condition, participants were asked to choose between "The ongoing impeachment inquiry" and "Unrest in Kashmir."

Intergroup threat manipulation filler questions. These consisted of questions adapted from the identity prototypicality subscale of the identity leadership inventory (Steffens et al., 2014). The scale contains five items and participants were asked Likert-type questions regarding their feelings toward the leaders to whom the tweets were attributed, with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "This leader embodies what Democrats (Republicans) stand for" and "This leader is a model member of the Democratic (Republican) party."

Intergroup threat. Perceptions of intergroup threat were measured using questions adapted from the intergroup threat theory literature (C. W. Stephan et al., 2000; W. G. Stephan et al., 1998, 1999). The scale ($\alpha = .86$) consists of eight items and participants were asked Likert-type questions regarding their feelings regarding their outgroup, with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Four items were focused on realistic threat while the other four were focused on symbolic

threat. Example items include "Republicans (Democrats) dominate U.S. politics" and "Republicans and Democrats have conflicting values."

Group-based anger. This was assessed using items adapted from the intergroup emotions theory literature (Mackie et al., 2000). The scale (α = .93) consists of four items and participants were asked Likert-type questions regarding their emotions with respect to their outgroup, with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "I feel angry about the actions of Republicans (Democrats)" and "I feel irritated about the actions of Republicans (Democrats)."

Relative deprivation. Perceptions of relative deprivation were measured using items adapted from Folger and Martin, (1986). The scale (α = .87) consists of four items and participants were asked Likert-type questions regarding their ingroup's status with respect to their outgroup, with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "The government cares more about the economy in Republican (Democratic) areas than in Democratic (Republican) areas" and "The government puts the needs of Republicans (Democrats) ahead of the needs of Democrats (Republicans)."

Collective action. Willingness to engage in collective action was assessed using an eight item scale (α = .87) adapted from van Zomeren, Spears, Fischer, & Leach (2004). This was further subset into a four-item normative collective action scale (α = .74) and a four-item radical collective action scale (α = .92). Participants were asked to reflect on the current state of American politics and the actions of the opposing party with

respect to the then-ongoing impeachment inquiry. They were then asked questions

regarding their willingness to engage in collective action related to that issue on a 1

(*strongly disagree*) to 7 (*strongly* agree) scale. Example normative collective action items

include "I am ready to engage in a protest or rally to support the interests of Democrats

(Republicans)" and "I believe that action must be taken to support the interests of

Democrats (Republicans)." Example radical collective action items include "I would be

willing to overthrow the U.S. government to support the interests of Democrats

(Republicans)" and "If it came to it, I would be willing to engage in physical violence to

support the interests of Democrats (Republicans)"

      Group identification scale. A version of the group identification scale used

throughout the social identity theory literature was utilized (Hogg & Hardie, 1991; Hogg

et al., 1993; Hogg & Hains, 1996; Hogg et al., 1998). The scale ($\alpha = .94$) contains nine

items and participants were asked Likert-type questions regarding their feelings about

being a Democrat or a Republican with response options varying from 1 (*strongly

disagree*) to 7 (*strongly agree*). Example items include "Being a Democrat (Republican)

is important to me" and "I identify with being a Democrat (Republican)."

      Measured uncertainty scale. A version of the measured uncertainty scale used

throughout the uncertainty-identity theory literature was utilized (Gaffney et al., 2014;

Grant & Hogg, 2012; Hogg et al., 2007). The scale ($\alpha = .91$) contains five items and

participants were asked Likert-type questions regarding their uncertainty about their

identity and the future with response options varying from 1 (*strongly disagree*) to 7

(*strongly agree*). Example items include "I am uncertain about myself and the future" and "At this very moment, I am uncertain about the future of the Democratic (Republican) party."

Demographics. Participants were asked a series of forced choice questions about their demographics. These will include questions regarding their race, age, socioeconomic status, and education level. They were also asked how believable they thought the bogus personality test in the prototypicality threat manipulation was. This consists of a single item measured on a 1 (*Extremely believable)* to 7 (*Extremely unbelievable*) scale.

Pilot Study Results

Intergroup threat manipulation

An independent samples t-test was conducted to assess differences in perceived intergroup threat between the high and low intergroup threat conditions. Participants in the high intergroup threat condition ($M = 5.52$, $SD = 0.85$) perceived greater intergroup threat compared to participants in the low threat condition ($M = 4.93$, $SD = 1.08$), $t(106) = 3.11$, $p = .002$, *95%CI*[0.21, 0.96], $d = 0.60$.

Collective action tendencies

An independent samples t-test was conducted to assess the relationship between normative collective action tendencies and intergroup threat. As predicted, participants in the high threat condition ($M = 5.58$, $SD = 0.90$) reported greater willingness to engage in collective action compared to participants in the low threat condition ($M = 5.05$, $SD = 1.29$), $t(106) = 2.44$, $p = .02$, *95%CI*[0.10, 0.96], $d = 0.47$.

Pilot Study Discussion

Results from the pilot indicated that participants in the low threat condition perceived less threat from their outgroup compared to participants in the high threat condition. This supported the validity of the manipulation and suggested that it would be an effective threat manipulation for the main study.

Additionally, participants in the high threat condition indicated more willingness to engage in collective action than participants in the low threat condition. This finding is novel in that it experimentally demonstrated that intergroup threat as defined by intergroup threat theory (W. G. Stephan et al., 2008) affects individuals' willingness to engage in collective action. This effect is consistent with past work examining collective action in the context of SIMCA (van Zomeren et al., 2008) and past work examining relationships between collective action and politicized identities (Klandermans, 2003). Therefore, this finding is an initial step in the integration of intergroup threat theory with social identity theory and SIMCA within the context of collective action research.

Main Study Method

Participants

A sample of Democrats and Republicans ($N = 356$) was recruited from Amazon's Mechanical Turk platform (Mturk). Previous work has indicated that the data collected through this platform is commensurate or superior in quality to samples of college students (Buhrmester et al., 2011; Hauser & Schwarz, 2016). This method allowed access to a more diverse and representative sample of the American electorate compared to a sample of college students. The mean age in the sample was 37.59 and the range was 19 to 78. The sample was 6% Asian, 1% Biracial, 13% Black, 8% Hispanic or Latino, 73% White, and 1% Other. Self-identified socioeconomic status was as follows: 7% low income, 20% working class, 15% lower middle class, 47% middle class, 10% upper middle class, and <1% upper class. Level of education was as follows: 1% less than high school degree, 8% high school graduate or equivalent, 18% some college but no degree, 11% associate degree, 44% bachelor's degree, 15% master's degree, <1% professional degree (e.g., J.D., M.D.), 1% doctoral degree. Gender was erroneously omitted from the survey, and as such, data is not available.

Procedure

Informed consent

Following their recruitment via Mturk, participants were linked to an online survey platform. They were provided with an informed consent form and asked to provide their consent to participate in the study. They were also asked to confirm their

party affiliation.

Uncertainty prime

Participants who indicated their consent were first exposed to the uncertainty

prime (Gaffney et al., 2014; Grant & Hogg, 2012; Hogg et al., 2007). This prime consists

of a short writing task, and they were asked to recall their responses at two set points later

in the survey to ensure the prime remains salient. They were randomly assigned to

complete a version of the prime that makes them feel either high levels of uncertainty or

low levels of uncertainty.

Prototypicality threat prime

Following the uncertainty prime, participants were exposed to a prototypicality

threat prime adapted from Hohman et al. (2017). This consists of a pre-test ideology

measurement followed by a bogus personality test. After the personality test, participants

were shown randomly assigned false feedback indicating that their scores are either very

similar to members of their ingroup (i.e. that they are prototypical) or very different from

members of their ingroup (i.e. that they are peripheral). Following this they were directed

to complete a manipulation check. After this, they were exposed to an intergroup threat

prime.

Intergroup threat prime

This study used the intergroup threat prime that I previously piloted, which was

adapted from (Rios et al., 2018; Rios Morrison et al., 2009). Participants were randomly

assigned to read either tweets that highlight current intergroup conflict (i.e. high threat) or

tweets that highlight a foreign policy issue with bipartisan consensus (i.e. low threat).

Participants were directed to read the tweets and then complete a comprehension check

and filler questions regarding the leadership qualities of the tweets' authors. They were

also directed to complete survey scales measuring perceived intergroup threat, group-

based anger, and relative deprivation. The intergroup threat scale was used for a

manipulation check. The group-based anger scale and the relative deprivation scale were

used for exploratory analyses assessing the intercorrelation of group-based anger, relative

deprivation, and perceived intergroup threat.

Measured variables

Following their exposure to the intergroup threat prime, participants were directed

to complete several dependent measures. These include a collective action intentions

scale and two behavioral collective action measures, wherein participants were asked if

they would like to sign a petition or donate money on behalf of their group. Additionally,

participants were asked to complete an uncertainty scale and a prototypicality scale for

post hoc assessments of the uncertainty and prototypicality threat manipulations. They

were also directed to complete scales measuring group identification and group efficacy

for planned exploratory analyses. Once they have completed these survey scales,

participants were asked to complete a set of items regarding demographics. Finally, they

were provided a short debriefing statement explaining the purpose of the study and the

necessary use of deception. Following this, they were provided with a code to collect

their compensation on Mturk.

Materials

Manipulated independent variables

  Uncertainty. Uncertainty was manipulated utilizing a cognitive prime that has

been utilized extensively throughout the uncertainty identity literature (e.g. Gaffney et al.,

2014; Grant & Hogg, 2012; Hogg, Sherman, Dierselhuis, Maitner, & Moffitt, 2007).

Participants in the high uncertainty condition were asked:

> Please take a few moments to think about yourself, your future, and where you are
>
> going. Please list and describe 3 things that make you feel deeply uncertain about
>
> being a Democrat (Republican) and who you are as a Democrat (Republican)
>
> were asked to reflect on times that they have felt very certain or uncertain, then be
>
> asked to write down three examples of times when they have felt very certain
>
> about their life or very uncertain about their life.

In the low uncertainty condition, participants were instead asked:

> Please take a few moments to think about yourself, your future, and where you are
>
> going. Please list and describe 3 things that make you feel very confident about
>
> being a Democrat (Republican) and who you are as a Democrat (Republican).

In both conditions, participants were then be provided with three boxes in which they

input their examples of certainty or uncertainty. In an extension of past work, participants

were told that this component of the study measures memory, and that they would be

asked to recall what they wrote down later in the experiment and recreate it. Participants

were then be asked to do this after completing each other cognitive prime and survey

scale.

Prototypicality threat manipulation. Consistent with past work in the social identity literature, participants will take a bogus personality test followed by false feedback (Hohman et al., 2017; Schmitt & Branscombe, 2001). The personality test contains 25 items adapted from the *International Personality Item Pool* (Goldberg et al., 2006). These items are statements that are responded to on a 1 (*very inaccurate*) to 100 (*very accurate*) anchored sliding scale. The statements include "I don't mind being the center of attention" and "I follow a schedule." Following their completion of the bogus personality test participants were given false feedback in the form of a bidirectional graph that indicates that their scores were very similar to other members of their group (i.e. that they're prototypical) or that they were very similar to members of their outgroup (i.e. that they're peripheral). The graph endpoints were labeled *"Liberal Personality Type"* and *"Conservative Personality Type"*. Two additional points were labeled, close to either end of the scale. These points were labeled *"Average Republican Score"* and *"Average Democrat Score"*. Participants had their score labeled as being proximate to either their ingroup's average score or their outgroup's average score. Participants were also shown their precise score, indicated in percentages.

Intergroup threat. The materials used to manipulate intergroup threat were identical to those used in the pilot study.

Measured variables

Political ideology. Participants' political ideology was measured using a 3-item

7-point semantic differential scale (α = .93). Participants were asked to indicate their

liberalism or conservatism, and the items were anchored with 1 to 7 anchored scale. The

differential anchors proceeded from *"Socially Conservative"* to *"Socially Liberal."* The

additional items proceeded from *"Fiscally Conservative"* to *"Fiscally Liberal"* and from

"Liberal" to *"Conservative."*

Prototypicality threat manipulation check. Participants were asked a single

forced choice question, consisting of "Did you score closer to the Liberal Personality

Type or the Conservative Personality Type?" Response options included "Liberal

Personality Type" and the "Conservative Personality Type." Following this, participants

were asked to recall the precise percentages they scored on the personality test. To do

this, they were asked to indicate their score on a 1 to 100 sliding scale.

Intergroup threat manipulation comprehension check. The comprehension

check utilized was identical to the comprehension check utilized in the pilot study.

Intergroup threat manipulation filler questions. These questions were identical

to those utilized in the pilot study.

Intergroup threat. This scale was identical to what was used in the pilot study (α

= .86)

Group-based anger. This was assessed using items adapted from the intergroup

emotions theory literature (Mackie et al., 2000). The scale (α = .90) consists of four items

and participants were asked Likert-type questions regarding their emotions with respect

to their outgroup, with response options varying from 1 (*strongly disagree*) to 7 (*strongly*

agree). Example items include "I feel angry about the actions of Republicans (Democrats)" and "I feel irritated about the actions of Republicans (Democrats)."

Relative deprivation. Perceptions of relative deprivation was measured using items adapted from Folger & Martin, (1986). The scale (α = .85) consists of four items and participants were asked Likert-type questions regarding their ingroup's status with respect to their outgroup, with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "The government cares more about the economy in Republican (Democratic) areas than in Democratic (Republican) areas" and "The government puts the needs of Republicans (Democrats) ahead of the needs of Democrats (Republicans)."

Collective action. Willingness to engage in collective action was assessed using an eight item scale (α = .82) adapted from van Zomeren, Spears, Fischer, & Leach (2004). This was further subset into a four-item normative collective action scale (α = .77) and a four-item radical collective action scale (α = .89). Participants were asked to reflect on the current state of American politics and the actions of the opposing party with respect to the then-ongoing impeachment inquiry. They were then asked questions regarding their willingness to engage in collective action related to that issue on a 1 (*strongly disagree*) to 7 (*strongly* agree) scale. Example normative collective action items include "I am ready to engage in a protest or rally to support the interests of Democrats (Republicans)" and "I believe that action must be taken to support the interests of Democrats (Republicans)." Example radical collective action items include "I would be

willing to overthrow the U.S. government to support the interests of Democrats (Republicans)" and "If it came to it, I would be willing to engage in physical violence to support the interests of Democrats (Republicans)"

There were also two behavioral measures. The first was a non-self-sacrificing behavior and it asked participants if they would like to sign a bogus petition critical of the opposing party's position with respect to the impeachment inquiry. The second was a self-sacrificing behavioral measure wherein participants were asked if they would like to forgo their compensation in the study and instead have it donated to a bogus advocacy group that is advocating for their party's interests in the inquiry.

Group identification scale. A version of the group identification scale ($\alpha = .94$) used throughout the social identity theory literature was utilized (Hogg & Hardie, 1991; Hogg et al., 1993; Hogg & Hains, 1996; Hogg et al., 1998). The scale contains 9 items and participants were asked Likert-type questions regarding their feelings about being a Democrat or a Republican with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "Being a Democrat (Republican) is important to me" and "I identify with being a Democrat (Republican)."

Self-prototypicality scale. A version of the self-prototypicality scale ($\alpha = .91$) used throughout the social identity theory literature was utilized (van Knippenberg & van Knippenberg, 2005). The scale contains 5 items and participants were asked Likert-type questions regarding their feelings about being a Democrat or a Republican with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include

"I am representative of Republicans (Democrats)" and "I share common interests and ideals with Democrats (Republicans)."

Efficacy. Perceptions of group-based efficacy was measured with a scale adapted from van Zomeren et al. (2004). The scale ($\alpha = .95$) consists of five items and participants were asked Likert-type questions regarding their group's efficacy with respect to the then-ongoing impeachment inquiry with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "I think that Democrats (Republicans) can work together to successfully impeach Trump (end the impeachment inquiry)" and "I think Democrats (Republicans) can influence their party leaders (congress) to impeach Trump (end the impeachment inquiry)."

Measured uncertainty scale. A version of the measured uncertainty scale used throughout the uncertainty-identity theory literature was utilized (Gaffney et al., 2014; Grant & Hogg, 2012; Hogg et al., 2007). The scale ($\alpha = .90$) contains five items and participants were asked Likert-type questions regarding their uncertainty about their identity and the future with response options varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "I am uncertain about myself and the future" and "At this very moment, I am uncertain about the future of the Democratic (Republican) party."

Demographics. Participants were asked a series of forced choice questions about their demographics. These will include questions regarding their gender identity, race, age, socioeconomic status, and education level. They were also asked how believable

they thought the bogus personality test in the prototypicality threat manipulation was.

This consisted of a single item measured on a 1 (*Extremely believable)* to 7 (*Extremely*

unbelievable) scale.

Main Study Results

Data screening

An initial sample of 232 Democrat and 228 Republican responses was collected.

Data from 34 Democrat and 36 Republican responses were removed due to incorrect

responses to the prototypicality threat comprehension check. An additional 15 Democrat

and 19 Republican responses were removed due to incorrect responses to the intergroup

threat comprehension check. This resulted in an overall sample of 183 Democrats and

173 Republicans (total $N = 356$).

Manipulation checks

An independent samples t-test was conducted to assess the effectiveness of the

intergroup threat manipulation, the uncertainty prime, and the prototypicality threat

manipulation. Consistent with the pilot, participants in the high intergroup threat

condition ($M = 5.29$, $SD = 0.97$) perceived more threat from the outgroup than

participants in the low intergroup threat condition ($M = 5.04$, $SD = 1.04$), $t(354) = 2.38$, p

$= .017$, $95\%CI[0.04, 0.46]$, $d = 0.25$.

The uncertainty prime was effective, as participants assigned to the high

uncertainty condition ($M = 4.83$, $SD = 1.38$) reported greater self-uncertainty compared to

participants assigned to the low uncertainty condition ($M = 4.10$, $SD = 1.57$), $t(354) =$

4.70, $p < .001$, $95\%CI[0.43, 1.04]$, $d = 0.50$.

Results indicated that the prototypicality threat manipulation was ineffective,

$t(354) = 0.04$, $p = .965$, $95\%CI[-0.25, 0.24]$, $d = .005$. Participants in the high

prototypicality threat condition ($M = 5.05$, $SD = 1.19$) did not significantly differ from

participants in the low prototypicality threat condition ($M = 5.05$, $SD = 1.20$). However,

these results are qualified by exploratory analyses.

Collective action tendencies

Assumptions

Visual inspection of a histogram indicates that the normative collective action

tendencies was negatively skewed (see Figure 1). This was confirmed with tests

Figure 1
Histogram of Non-Radical Collective Action Tendencies

Note. Dotted line represents a normal distribution.
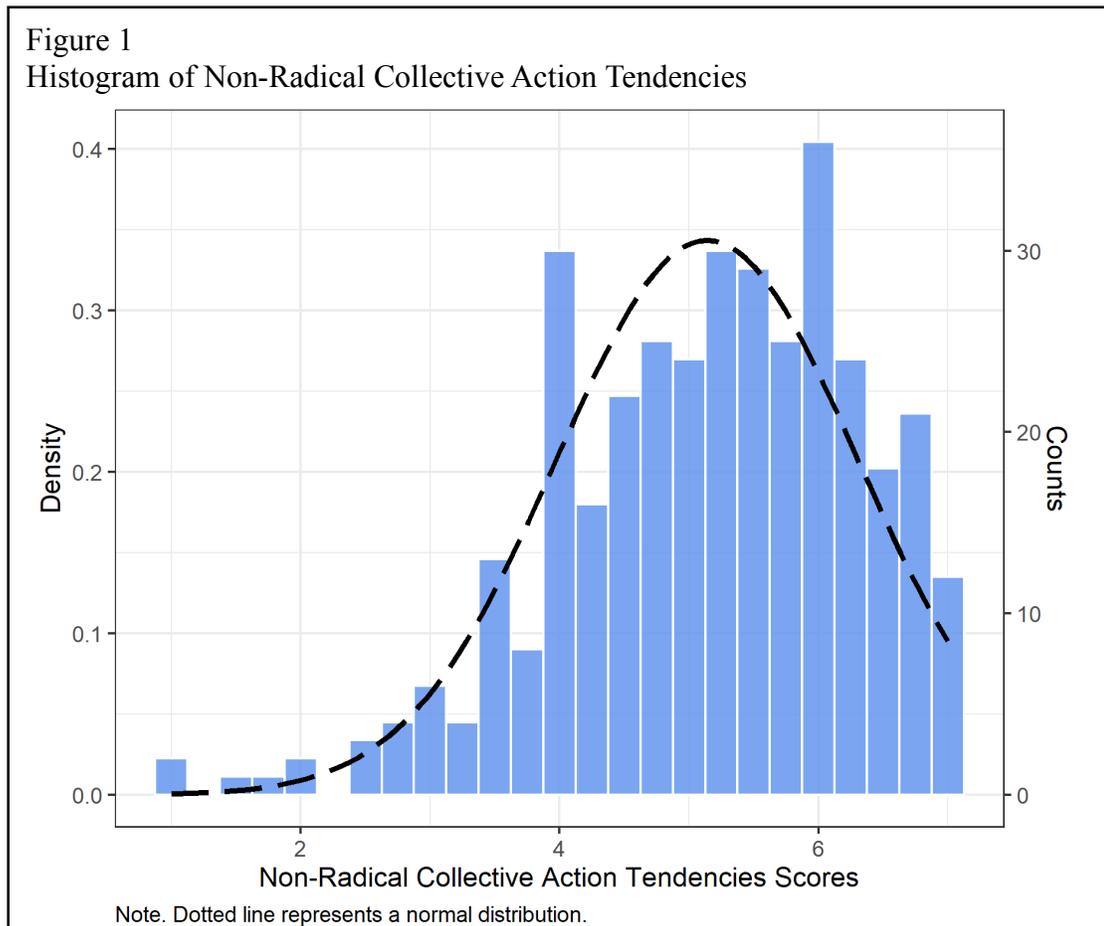
assessing confidence intervals around the distributions skew, *95%CI*[-1.04, -0.32]. To

address this violation of the normality assumption, a reflected square-root transformation was performed. This resulted in a satisfactory confidence interval around the skew statistic and a histogram that appeared visually more normal, *95%CI*[-0.40, 0.11]. To ease interpretation of the results, the transformed data were reflected a second time following the transformation so that observed effects would be directionally

Figure 2
Histogram of Non-Radical Collective Action Tendencies (Square Root Transformed)

Note. Dotted line represents a normal distribution.
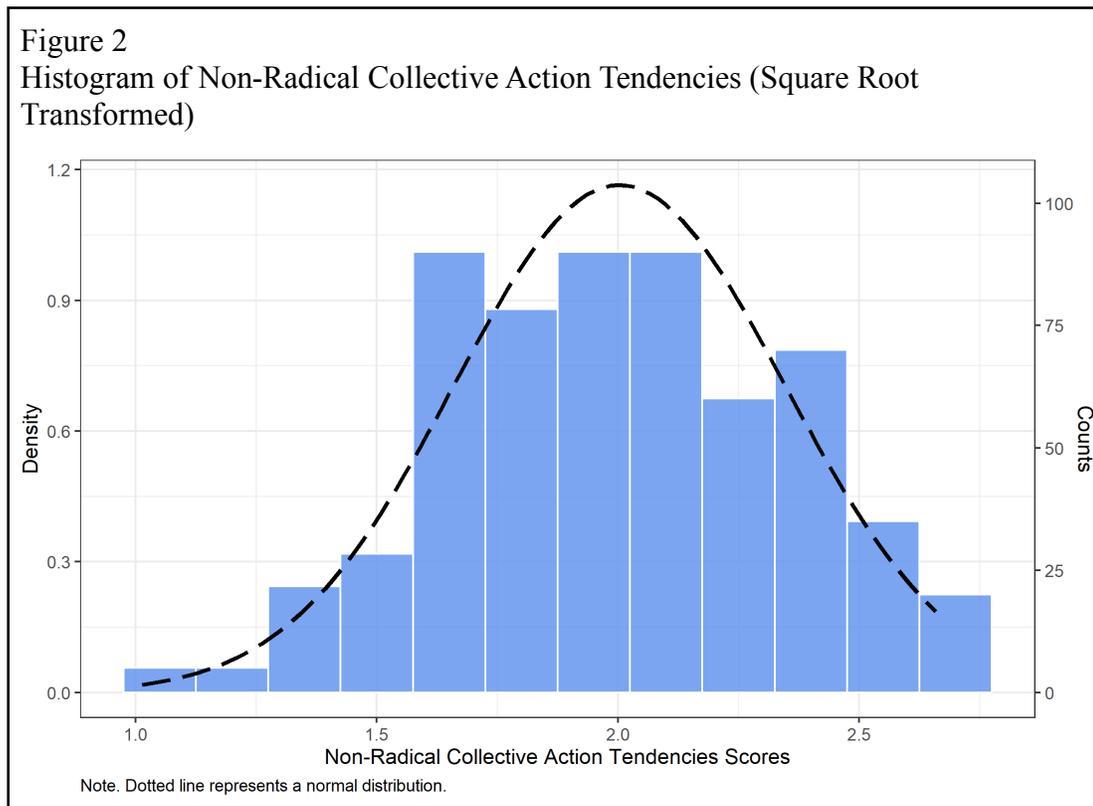
consistent with the untransformed data (see Figure 2).

ANOVA Model

A 2 x 2 x 2 ANOVA was conducted to assess the hypothesized relationships between intergroup threat, prototypicality threat, and uncertainty (see Table 1 and Table 2). There was not a significant main effect of intergroup threat on collective action

tendencies, $F(1,348) < .001$, $p = .988$, $\eta_p^2 < .001$. There was also no significant main

effect of prototypicality threat ($F(1,348) = 0.68$, $p = .411$, $\eta_p^2 = .002$) or uncertainty

($F(1,348) = 0.98$, $p = .322$, $\eta_p^2 = .003$) on collective action tendencies. However, these

nonsignificant main effects were qualified by a two-way interaction between uncertainty

and prototypicality threat, $F(1,348) = 5.34$, $p = .021$, $\eta_p^2 = .015$ (see Figure 3). Simple

Figure 3
Collective Action Willingness by Condition
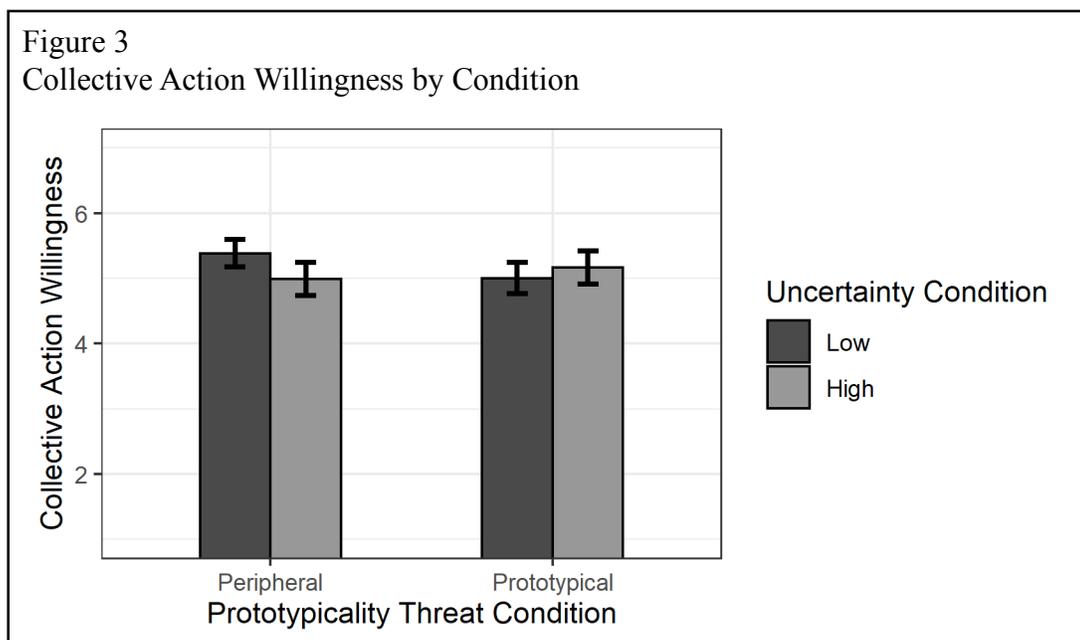
effects tests elaborating this interaction indicated that low uncertainty peripherals ($M =$

5.38, $SD = 1.02$) indicated greater willingness to engage in collective action compared to

low uncertainty prototypicals ($M = 5.00$, $SD = 1.17$), $F(1,348) = 5.00$, $p = .026$. However,

high uncertainty peripherals ($M = 4.99$, $SD = 1.18$) did not significantly differ from high

uncertainty prototypicals ($M = 5.17$, $SD = 1.24$), $F(1,348) = 1.09$, $p = .298$. Furthermore,

low uncertainty peripherals indicated greater willingness to engage in collective action

compared to high uncertainty peripherals, $F(1,348) = 5.39$, $p = .021$. However,

prototypicals' willingness to engage in collective action did not differ with respect to their

uncertainty level, $F(1,348) = .88$, $p = .349$. The hypothesized three-way interaction was

nonsignificant, $F(1,348) = 1.76$, $p = .185$, $\eta_p^2 = .005$.

Table 1

ANOVA results with non-radical collective action tendencies as the dependent variable

| Independent Variable	Sum of Squares	df	F	p	η_p^2
Intergroup Threat	0	1	<0.01	.988	<.001
Prototypicality Threat	0.91	1	0.67	.411	.002
Uncertainty	1.3	1	0.98	.322	.003
Intergroup Threat X Prototypicality Threat	1.3	1	0.98	.323	.003
Intergroup Threat X Uncertainty	0.6	1	0.46	.500	.001
Prototypicality Threat X Uncertainty	7.1	1	5.34	.021	.015
Intergroup Threat X Prototypicality Threat X Uncertainty	2.4	1	1.76	.185	.005
Residuals	465.2	348			

Table 2

ANOVA results with square root transformed non-radical collective action tendencies as the dependent variable

| Independent Variable	Sum of Squares	df	F	p	η_p^2
Intergroup Threat	0	1	0.01	.907	<.001
Prototypicality Threat	0.07	1	0.57	.451	.002
Uncertainty	0.10	1	0.84	.359	.002
Intergroup Threat X Prototypicality Threat	0.13	1	1.1	.295	.003
Intergroup Threat X Uncertainty	0.06	1	0.54	.463	.002
Prototypicality Threat X Uncertainty	0.62	1	5.36	.021	.015
Intergroup Threat X Prototypicality Threat X Uncertainty	0.18	1	1.52	.218	.004
Residuals	40.51	348			

Exploratory regression analysis

An exploratory regression analysis was conducted to follow up the ANOVA analysis due

to the questionable results for the prototypicality manipulation check. The overall model

consisting of measured self-prototypicality and measured uncertainty predicting

collective action tendencies was significant, $R^2 = .38$, $F(3,352) = 73.14$, $p < .001$. Self-

prototypicality ($b = 0.60$, $p < .001$) and uncertainty ($b = 0.10$, $p = .004$) were both

positively associated with collective action tendencies. These results were qualified by an

interaction, $b = -0.08$, $p = .003$. When self-prototypicality was higher there was not a

significant relationship between uncertainty and collective action tendencies ($b = -0.003$,

$p = .940$) whereas when self-prototypicality was lower there was a positive relationship

Figure 4
Collective Action by Measured Uncertainty and Self-Prototypicality
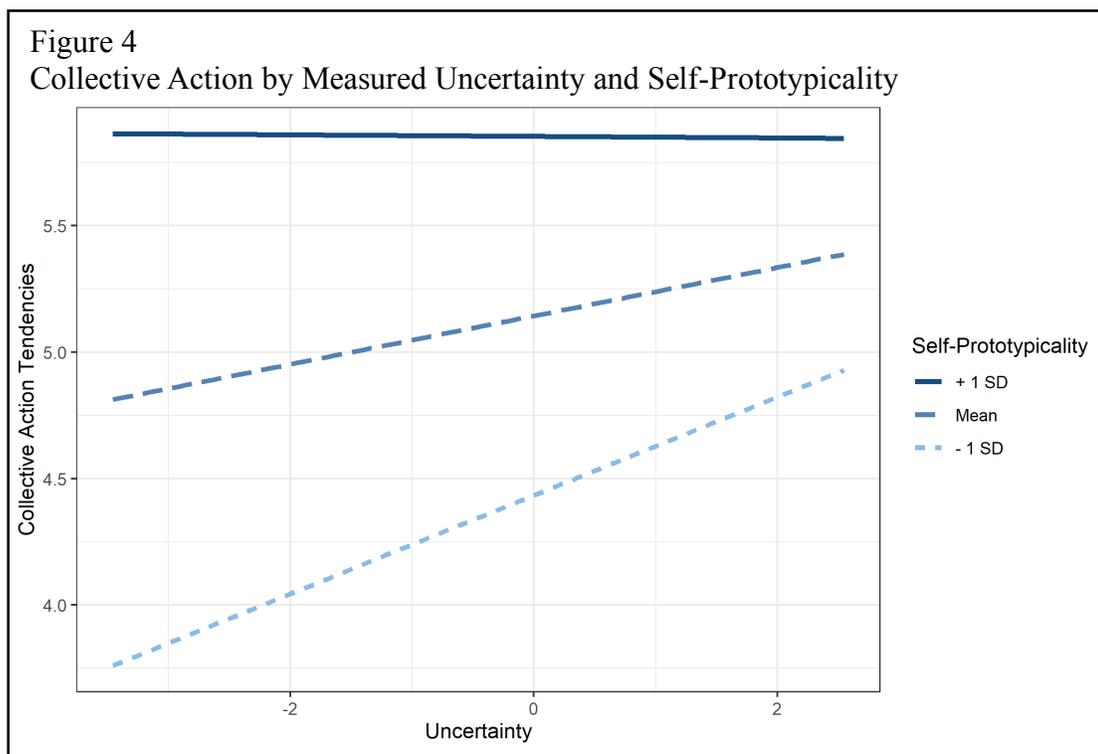
between uncertainty and collective action ($b = .20$, $p < .001$). Notably, this interaction

was in the opposite direction of the interaction observed in the ANOVA model (see

Figure 4).

Given a potential order effect (as self-uncertainty was measured after the self-

report and behavioral collective action measures), an additional exploratory regression

analysis was conducted. In this model, self-prototypicality was predicted from collective

action tendencies and manipulated prototypicality. The overall model was significant, R^2

= .37, $F(3,352) = 67.73$, $p < .001$. Collective action tendencies was positively associated

with self-prototypicality, $b = 0.71$, $p < .001$. Manipulated prototypicality was not a

significant predictor of collective action tendencies, $b = 0.07$, $p = .46$. These results are

Figure 5
Self-Prototypicality by Manipulated Prototypicality and Measured Uncertainty
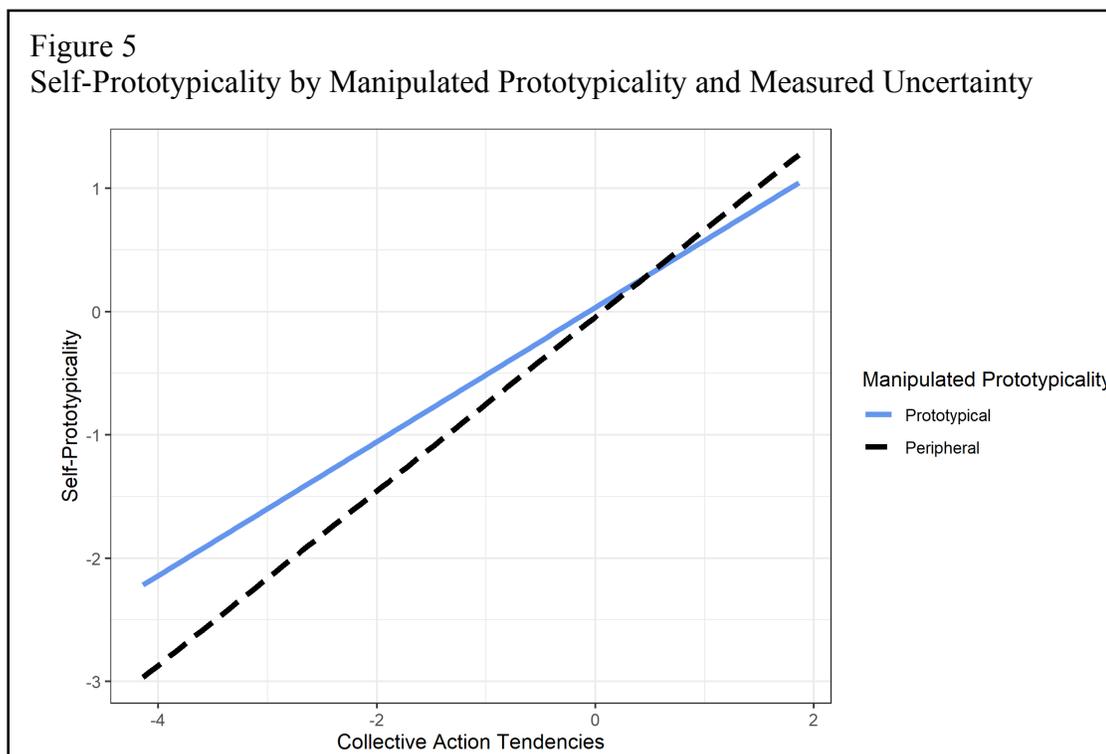

qualified by a marginally significant interaction, $b = -0.16$, $p = .063$ (see Figure 5). This

marginally significant interaction suggested that while collective action tendencies were

positively associated with self-prototypicality at both levels of manipulated

prototypicality, the relationship was stronger for participants in the peripheral condition

($b = 0.71$, $p < .001$) compared to the prototypical condition ($b = 0.54$, $p < .001$).

Exploratory ANOVA model

A 2 x 2 ANOVA was conducted to examine relationships between prototypicality

and uncertainty with respect to group identification. There was not a significant main

effect of uncertainty on group identification, $F(1,352) = 2.00$, $p = .157$, $\eta_p^2 = .006$. There

was also not a significant main effect of prototypicality threat on group identification,

$F(1,352) = 0.03$, $p = .851$, $\eta_p^2 < .001$. However, these insignificant main effects were

qualified by an interaction between prototypicality threat and uncertainty, $F(1,352) =$

9.79, $p = .002$, $\eta_p^2 = .027$ (see Figure 6).

Figure 6
Group Identification by Condition
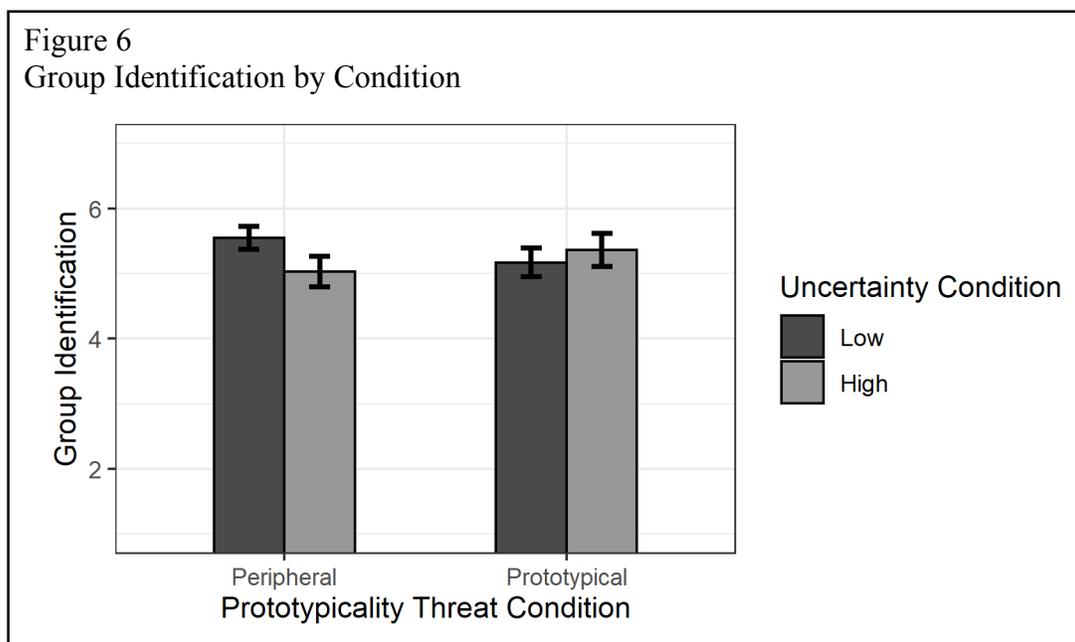
Simple effects tests indicated that low uncertainty peripherals ($M = 5.55$, $SD =$

0.87) identified more strongly with their group compared to high uncertainty peripherals

($M = 5.03$, $SD = 1.10$), $F(1,352) = 10.21$, $p = .001$. High uncertainty prototypicals ($M =$

5.36, $SD = 1.22$) did not differ from low uncertainty prototypicals ($M = 5.17$, $SD = 1.07$),

$F(1,352) = 1.48$, $p = .224$.

Chi-squared models

A chi-squared test indicated that high uncertainty peripherals did not differ from

high uncertainty prototypicals with respect to non-self-sacrificing collective action

behavior, $\chi^2(1,174) = 0.003$, $p = 1.00$, $V < .001$.

Additionally, a chi-squared test indicated that high uncertainty peripherals did not

differ from high uncertainty prototypicals with respect to self-sacrificing collective action

behavior, $\chi^2(1,174) = 3.43$, $p = .083$, $V = .126$.

Discussion

Whereas this study's hypotheses were not fully supported, some results were partially consistent with my predictions, which may still positively contribute to theoretical development.

There were not significant effects of prototypicality threat on collective action behavior under conditions of high uncertainty, contrary to predictions. Additionally, contrary to predictions, there was no significant main effect of threat on collective action tendencies. Also contrary to what was predicted, there was not a significant three-way interaction. However, there was a significant two-way interaction wherein low-uncertainty peripherals demonstrated greater willingness to engage in collective action when compared to high-uncertainty peripherals (whereas prototypicals did not differ with respect to uncertainty level). The effect size for the intergroup threat manipulation check was smaller in the main study compared to the pilot, which may explain the non-significant results for the main effect in the latter study compared to the significant effect of threat on collective action willingness in the pilot study. That is, perhaps due to the quickly shifting context of the impeachment inquiry, the intergroup threat manipulation became less effective between data collection time points. Further refinement and testing of the intergroup threat manipulation should be pursued before additional use to generate greater confidence in its validity as a manipulation.

The significant two-way interaction between prototypicality threat and uncertainty suggests that prototypicality threat motivates collective action behavior when individuals

feel less uncertainty regarding themselves, but that the opposite occurs when individuals

feel highly uncertain. This is a novel finding which suggests intragroup factors influence

collective action willingness in addition to intergroup factors. Whereas it has already

been well established that high-conflict intergroup contexts motivate collective action on

behalf of one's group (Klandermans, 2003; van Zomeren et al., 2008), it is less clear how

intragroup factors may affect collective action tendencies. The current finding suggests

that how we perceive our relative position within our own group may affect how willing

we are to act on behalf of it. More specifically, it suggests that when individuals feel

more certain of who they are and feel peripheral within their group, they may be

motivated to engage in collective action to better their intragroup position. However, if

they are threatened by both uncertainty and feeling peripheral, they may instead be less

motivated to attempt to better their intragroup position. The former is consistent with past

work on the performative aspects of identity (Klein et al., 2007), wherein acting on behalf

of one's group may be fulfilling both identity consolidation (i.e., strengthening an

identity) and identity mobilization (i.e., acting on behalf of an identity to shape the

intergroup context). Furthermore, this may be tied to previous findings from Goldman

and Hogg (2016), wherein peripherals were more willing to engage in aggressive

intergroup behaviors when they thought it would lead to easy intragroup acceptance. The

present finding is fundamentally similar in that it suggests that peripherals are strategic

with acceptance-directed efforts. That is, peripherals may be motivated to engage in

normative behaviors to gain intragroup acceptance, but only if they are relatively

confident of their success.

This finding also complicates and potentially extends the results of Hohman et al.

(2017), which examined prototypicality threat and uncertainty with respect to group

identification. They found that high uncertainty peripherals expressed greater

identification with their ingroup compared to low uncertainty peripherals. They suggest

that these highly uncertain peripherals are motivated to identify with their ingroup to

reduce their uncertainty. However, the present study's results contained an interaction

which was inverted compared to Hohman et al. (2017). That is, in the present study low

uncertainty peripherals demonstrated greater ingroup identification compared to high

uncertainty peripherals.

There are some notable differences between the present study's context and that

of Hohman et al. (2017) which may account for this difference. Hohman et al. (2017)

used a population of undergraduate students and positioned a rival university as the

salient outgroup. The present study instead recruited participants who identified with

political parties during one of the most heated U.S. partisan conflicts in decades. Given

this, the claim that intergroup animosity was higher in the present sample compared to

the previous sample seems to have face validity. This then points to a potential moderator

of the effect observed in Hohman et al. (2017), i.e., group identification may be more

desirable as an outlet for reducing uncertainty when the future intergroup context is itself

relatively stable (e.g., rival universities) but less desirable when that context appears

unstable (e.g., partisan identities during an impeachment). This may also be tied to Reid and Hogg (2005), which suggested that highly uncertain peripherals were less motivated to identify with low-status groups compared to high status groups. Findings in the present study, when considered in the context of Hohman et al. (2017), Reid and Hogg (2005), and Goldman and Hogg (2017), may suggest that peripherals are strategic with their identification and performative behaviors, engaging in collective action and identification when they feel confident it will yield a source of positive identity, but abstaining when they are less confident. This is an important question for future research, which could extend past findings by manipulating the perceived stability of the intergroup context while considering the interaction between prototypicality and uncertainty on identification and collective action intentions.

The failure of the manipulation check for prototypicality treat complicates the above findings, as the prototypical and peripheral conditions did not differ with respect to measured prototypicality. However, prototypicality was measured near the end of the survey following the collective action items and behavioral measures as we were concerned that if they were before collective action items, they might lead to order effects. Due to this, we considered the possibility that the measured prototypicality results may have been confounded by the participants' responses to the collective action items, such that peripheral participants who expressed greater support for collective action may have buffered their feelings of being peripheral and may have then reported greater feelings of prototypicality. A marginal exploratory analysis was consistent with this

position, pointing to an opportunity for future work exploring this idea. That is, does an opportunity to engage in identity performance following prototypicality threat buffer the effects of said threat on individuals' self-perception of their prototypicality. However, given that the result was marginal and the analysis was exploratory, we may not yet say anything conclusive about this otherwise notable finding.

This study was limited in part by its methods. Although online data collection is speedy and efficient, it may be posited that the data it provides lack some of the richness that may be attained with more involved laboratory manipulations. Furthermore, this study specifically examined the context of intergroup threat and conflict in American politics. Whereas this is certainly a worthwhile context to examine, it could be valuable to conduct a follow up that generalizes the relationships observed here to other populations and social contexts. This study also highlights opportunities for future work. Specifically, it partially aligns with several past findings on intergroup behavior (Goldman & Hogg, 2016; Hohman et al., 2017; Reid & Hogg, 2005), suggesting the opportunity to integrate these findings. Manipulating forecasted intergroup contexts to examine potential moderations of the observed interaction between uncertainty and prototypicality threat on group identification and collective action appears to be a natural next step. Additionally, developing an experimental manipulation to examine whether identity performance may buffer the effects of prototypicality threat appears promising.

Concluding remarks

Collective action is a strong force with which societies are shaped. These findings suggest that when conflict between groups is high, individuals who feel that they are not very representative of their group are more willing to act on its behalf when they feel more certain of themselves. The findings here also suggest that these individuals identify more strongly with their groups compared to other more uncertain individuals who are not very representative of their groups.

Looking at the context of the election, this could have applications to increase or reduce collective action behaviors. For example, these findings suggest that inducing greater uncertainty decreases individuals' willingness to engage in collective action on behalf of their group.

If more Republican leaders had clearly endorsed the integrity of the democratic process, rather than indulging then-President Trump's false claims regarding fraud, this may have induced a greater sense of uncertainty in the Republicans on the fringe of their own party. While it is of course impossible to say what would have happened had influential figures behaved differently, it is conceivable that greater uncertainty could have had a cooling effect on some of the harmful activism that took place following the election. Conversely, these findings suggest that informing individuals that they are peripheral by not following beneficial norms around actions such as voting while simultaneously seeking to induce certainty about the future could increase those behaviors. The most ardent Trump supporters may not consider themselves prototypical of the Republican Party and (at least demographically) they are not representative of the

United States (Trump supporters are largely white, male, and older see: Pew Research Center, 2020). On January 6, 2021, thus US saw many of these supporters come together in a violent form of collective action that was ultimately an insurrection on the nation's capital. Perhaps Trump's loss and continued demographic shifts signaled to many of these people their lack of prototypicality.

Findings from the present study highlight several opportunities for future work. There is still much work to be done to further examine and understand how individuals' perceptions of how they fit in with their own group may moderate their willingness to engage in collective action. The need to understand and shape collective action behavior is also exceedingly apparent in the present context. In the last year, widespread protest following the death of George Floyd has shifted public opinion and may yet lead to substantive institutional change. In the same period, a group of violent activists stormed the U.S. capitol and attempted to subvert the democratic process through violence. As long as collective action shapes societies, it will be essential to expand our knowledge of and ability to shape collective action.

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