

## RESEARCH ARTICLE

# Superheroes for change: Physical safety promotes socially (but not economically) progressive attitudes among conservatives

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## Abstract

Across two studies, we find evidence for our prediction that experimentally increasing feelings of physical safety increases conservatives' socially progressive attitudes. Specifically, Republican and conservative participants who imagined being endowed with a superpower that made them invulnerable to physical harm (vs. the ability to fly) were more socially (but not economically) liberal (Study 1) and less resistant to social change (Study 2). Results suggest that socially (but not economically) conservative attitudes are driven, at least in part, by needs for safety and security.

*'Let me assert my firm belief that the only thing we have to fear is fear itself—nameless, unreasoning, unjustified terror which paralyzes needed efforts to convert retreat into advance.'*—Franklin D. Roosevelt, Inaugural Address, 1933

In the first inaugural address of Franklin D. Roosevelt (1938), given amidst the widespread disquiet of the Great Depression, the president famously warned Americans that their fear could serve as a psychological impediment to much needed social change. Decades later, research bears out Roosevelt's supposition: Across several disciplines and methodologies, research consistently demonstrates an association between threat, broadly defined, and political conservatism. Such work has shown that: (i) political conservatives are, on average, more likely to perceive threat than their liberal counterparts; and (ii) the existence of threat, in myriad forms, is associated with increased endorsement of conservative attitudes that resist efforts toward social change (for reviews, see Hibbing, Smith, & Alford, 2014; Jost, Federico, & Napier, 2013; Jost, Gaucher, & Stern, 2015). Here, we test the novel hypothesis that the opposite of threat—that is, heightened feelings of safety—will increase socially progressive beliefs, especially among conservatives. Specifically, we test the prediction that experimentally inducing feelings of safety will increase social liberalism among Republicans (Study 1) and acceptance of social change among conservatives (Study 2).

## Threat and Political Attitudes

The theory of ideology as motivated social cognition holds that there is an "elective affinity" between psychological needs for certainty and safety on the one hand, and the structure and content of politically conservative ideology on the other hand (Jost et al., 2013; Jost, Glaser, Kruglanski, & Sulloway, 2003), especially regarding social issues (Malka & Soto, 2015). Supporting this perspective, a surge of evidence connects individual differences in threat sensitivity to conservative attitudes. Block and Block (2006) found that preschool children characterized as fearful and inhibited were statistically more likely than their more emotionally resilient classmates to report conservative attitudes at age 23. As adults, conservatives (vs. liberals) perceive the world as a more dangerous place (Duckitt, Wagner, du Plessis, & Birum, 2002) and appear to be more perceptually vigilant to potentially threatening stimuli (Carraro, Castelli, & Macchiella, 2011; Castelli & Carraro, 2011; Shook & Clay, 2011; Vigil, 2010).

Evidence for the connection between threat and political attitudes has also emerged at the biological level. For instance, self-identified political conservatism is positively correlated with the size of the right amygdala (a region of the brain implicated in processing emotion, including fear; Kanai, Feilden, Firth, & Rees, 2011), and Republicans (vs. Democrats) displayed more activation in the right amygdala during a risk-taking task (Schreiber et al., 2013), suggesting that

conservatives may experience stronger emotional reactions than liberals when engaging in risky endeavors. Oxley *et al.* (2008) documented ideological differences in physiological responses to threat, such that participants who endorsed more socially conservative (vs. liberal) beliefs showed heightened startle reflexes in response to unexpected loud noises and elevated skin conductance specifically in response to fear-inducing images (see also Dodd *et al.*, 2012).

There is also evidence that the existence of threat increases conservatism, in general, and seems to make “liberals think like conservatives” (Nail, McGregor, Drinkwater, Steele, & Thompson, 2009). For instance, researchers have documented a “conservative shift” in attitudes after threatening events, such as terror alerts or attacks (Nail *et al.*, 2009; Willer, 2004), and following mortality salience manipulations (Cohen, Ogilvie, Solomon, Greenberg, & Pyszczynski, 2005; Jost, Fitzsimons, & Kay, 2004; Landau *et al.*, 2004). When the system is threatened, people bolster their support for the “way things are” (Kay *et al.*, 2009; Ullrich & Cohrs, 2009), are more likely to endorse conservative policies and Republican political candidates (Craig & Richeson, 2014; Thorisdottir & Jost, 2011), exhibit increased ingroup favoritism (Nail *et al.*, 2009), and derogate those who challenge tradition—for instance, by engaging in backlash against a woman who contradicts gender stereotypes (Rudman, Moss-Racusin, Phelan, & Nauts, 2012). What is not known, however, is whether people’s political attitudes are affected by the reduction of that threat. Could making conservatives feel physically safe cause them to “think like liberals” and be more open to social change?

### Social versus Economic Political Attitudes

In this work, we test the relationship between feelings of safety and political attitudes. In doing so, we also aim to address some of the limitations of the extant literature. First, we make a distinction between social and economic ideology (or, attitudes about social change and inequality, Jost *et al.*, 2003). Although much past research tended to rely on a unidimensional measure of ideology, a growing body of evidence suggests that social and economic attitudes are differentially determined (Duckitt & Sibley, 2010; Feldman & Johnston, 2014; Federico, Weber, Ergun, & Hunt, 2013; Malka, Soto, Inzlicht, & Lelkes, 2014; Weber & Federico, 2013) and that threat, in particular, is primarily associated with ideological positioning in regard to social/cultural issues, and not economic issues (Federico, Johnston, & Lavine, 2014; Malka & Soto, 2014, 2015; Malka *et al.*, 2014). For instance, Malka *et al.* (2014) found that those who valued security and stability over creativity and self-expression were more likely to endorse anti-progressive stances on social issues (e.g., opposition to homosexuality, abortion, feminism, and immigration), but these values were unrelated to opposition to income inequality. Similarly, analyses by Wright and Baril (2013) revealed that the

perception of a dangerous world is correlated with social conservatism, but unrelated to economic conservatism.

It should be noted that the evidence in favor of threat being differentially related to social versus economic ideology has been almost exclusively correlational at this point. One noteworthy exception to this is research on disgust, which has revealed opposite effects on social versus economic political positions, such that priming disgust increases social conservatism, especially on issues regarding sexuality (Terrizzi, Shook, & McDaniel, 2013), presumably because it increases concerns about contamination, but also leads people to become more liberal on economic issues, presumably because it increases concerns about justice (Petrescu & Parkinson, 2014). Although disgust might be a special type of threat with a particular relationship to moral judgments (e.g., Feinberg, Antonenko, Willer, Horberg, & John, 2014; Haidt, 2001), this work nonetheless is further evidence that economic and social political positions likely have different motivational underpinnings.

The dual process model of ideology (e.g., Duckitt & Sibley, 2010; Duckitt *et al.*, 2002) offers a theoretical framework for understanding why economic and social political attitudes might be differentially determined. This model focuses on related socio-political constructs—namely, right-wing authoritarianism and social dominance orientation—and posits that these two worldviews have different motivational underpinnings. Specifically, right-wing authoritarianism (i.e., a socially conservative belief system characterized by a preference for upholding tradition and resisting social change) is motivated by needs for security and safety, whereas social dominance orientation (i.e., a preference for hierarchy and inequality) is motivated by needs for power, dominance, and superiority (Duckitt *et al.*, 2002). In line with this, research has shown that the perception of a dangerous world (both chronic and experimentally induced) is associated with right-wing authoritarianism, but not with social dominance orientation (Duckitt *et al.*, 2002; Duckitt & Fisher, 2003; Duckitt & Sibley, 2010). More generally, although threat does sometimes influence socially dominant attitudes, the relationship between threat and right-wing authoritarianism is consistently stronger (Onraet, van Hiel, Dhont, & Pattyn, 2013). Similarly, work on risk perception has shown that right-wing authoritarianism is positively associated with perceived riskiness of personal danger hazards, whereas social dominance orientation was either unrelated or negatively associated with perceived riskiness in these domains (Choma, Hanoch, Gummerum, & Hodson, 2013).

In one experimental study, participants increased in right-wing authoritarianism (but not social dominance orientation) when they were told to imagine that society will deteriorate in the future (i.e., become economically unstable, with higher crime and an ineffective government) as compared to when the future society was described as unchanged or improved (Duckitt & Fisher, 2003). However, participants in that study did

not become less authoritarian when society was described as becoming safer—that is, more economically prosperous and with lower crime—as compared to remaining unchanged. It is hard to conclude from this study—which surveyed undergraduates in New Zealand—whether this result indicates that feelings of safety do not influence political attitudes, or whether the participants' default assumption is that society is generally safe, and thus, the notion that society is getting even safer and more stable is not impactful.

Relatedly, a second concern about the previous work examining the link between threat and political attitudes is that the construct of “threat” has been operationalized in many different ways, oftentimes in ways that are not completely separate from ideological content. While it is important to document how political attitudes are affected by political events, including the salience of terrorism (Jost *et al.*, 2007; Ullrich & Cohrs, 2009; Willer, 2004), immigration and racial demographic shifts (Craig & Richeson, 2014), or reminders of system deterioration (Jost *et al.*, 2015), it is also important to understand if political attitudes are affected by seemingly unrelated events or perceptions. Indeed, a meta-analytic review of the relationship between threat and political attitudes found that threats stemming from the external world (e.g., intergroup anxiety, terrorism, and economic instability) were more strongly related to right-wing attitudes than internal threats (e.g., trait level anxiety and fear of death; Onraet *et al.*, 2013). Because societal-level threats are inevitably related to politics, it could be that the changes in political attitudes observed are not solely psychological, but at least partly due to a deliberate preference for more conservative policies in times of threat. Thus, one aim throughout our studies is to separate, as much as possible, the threat from the ideological content, thereby offering a particularly strict test of the theory of conservatism as motivated social cognition. Specifically, we simply make people imagine that they are physically safe from harm, and test whether this reduction in perceived vulnerability affects political attitudes.

In this work, we test the idea that the need for physical protection manifests itself in a desire for social protection (i.e., maintaining social order and tradition)—or, as Roosevelt put it, that fear can “paralyze needed efforts to convert retreat into advance.” Across two studies, we experimentally test the novel hypothesis that making people feel physically safe will reduce their tendency to seek comfort in the familiar, and instead become more open to change. Moreover, we examine the effects of safety on social versus economic attitudes (Study 1) and attitudes about social change versus equality (Study 2). Participants were randomly assigned to imagine being endowed with a superpower, either that they were invulnerable to physical harm (safety condition) or the ability to fly (as a control condition). We predict that participants who imagine being endowed with a superpower that made them invulnerable to physical harm (vs. the ability to fly)

would be more socially (but not economically) liberal (Study 1) and less resistant to social change (but not more egalitarian; Study 2). Because conservatives perceive threat more readily at baseline, when compared to liberals, we also predicted that the effect of safety on political attitudes would be more pronounced for Republicans (vs. Democrats; Study 1) and conservatives (vs. liberals; Study 2).

Both studies were reviewed and approved by the university institutional review board before data collection, and we adhered to all APA ethical guidelines in conducting this research. Participants were informed that their participation was voluntary and confidential, and they could discontinue the study at any time without penalty.

### Study 1

We experimentally induce feelings of physical safety by having participants imagine that they are endowed with a superpower that rendered them invulnerable to physical harm (vs. the ability to fly, which served as the control condition). Previous work has shown that these two superpowers are seen as equally desirable, but that people feel significantly safer when they imagine having physical invulnerability (vs. flying) superpower (Huang, Ackerman, & Bargh, 2013), and this is verified in the current study. After participants were randomly assigned to superpower condition, they indicated the extent to which they were conservative (vs. liberal) on both social and economic issues. We hypothesized that the invulnerability prime would increase social (but not economic) liberalism as compared to the flying prime, especially among Republicans.

### Method

**Participants.** One hundred and fifty-eight participants were recruited from a University-hosted online subject pool in exchange for a chance to win a gift certificate. Eight participants did not respond to our measure of partisanship (described below), and an additional five did not respond to the dependent measures, yielding a final sample of 145 (66.9% female; 74.5% White; average age,  $M = 35.31$ ;  $SD = 13.18$ ).

**Procedure.** Participants engaged in a visualization task (taken from Huang *et al.*, 2013) in which they imagined being endowed with a superpower. Specifically, they were told to imagine the following situation:

*‘On a shopping trip, you wander into a strange store with no sign out front. Everything is dimly lit and the shopkeeper calls you by name even though you have never seen him before. He tells you to come close and he says to you in a weird voice “I have decided to give you a gift. Tomorrow, you will wake to find that you have a superpower. It will be an amazing ability, but you must keep it absolutely*

*secret. If you purposely tell anyone or show off your power, you will lose it forever. That night, you have a hard time sleeping, but when you wake, you find that you do indeed have a superpower.'*

In the *safety condition*, the passage follows:

*'A glass falls on the floor and without meaning to you accidentally step on the broken glass. It doesn't hurt you at all though, and you realize that you are completely invulnerable to physical harm. Knives and bullets would bounce off you, fire won't burn your skin, a fall from a cliff wouldn't hurt at all.'*

In the *control condition*, participants read a similar passage that had them imagine they could fly, namely:

*'You miss a step going down on the stairs, but instead of tumbling down, you float gently to the bottom of the banister. You try jumping from the top of the stairs again and realize that you are able to fly. You can propel yourself through the air as if you were a bird. You can travel entire distances without even touching the ground.'*

In both conditions, the paragraph concluded with the following: "You don't have any other super-powers though (for example, no super-strength). Everything else is exactly the same as it was yesterday."

Participants wrote a few sentences about how they felt and responded to several questions assessing their reactions to their superpower, including mood, liking, and feelings of safety and uncertainty. Participants then reported their political views on (i) social and (ii) economic issues (1 = *Very liberal*; 9 = *Very conservative*) and completed a demographic questionnaire, which included one item asking which party (Democrat vs. Republican) they voted (or would have voted) for in the most recent election. Forty-five participants (31%) reported a preference for the Republican (vs. Democratic) candidate, and this did not differ across conditions,  $\chi^2(1) = .04, p = .833$ .

## Results

In line with results found in Huang et al. (2013), participants who imagined being invulnerable to harm reported feeling significantly safer than participants who imagined having the ability to fly; no other differences emerged between conditions on reactions to the superpower (Table 1). We conducted a multivariate ANOVA with condition (physical invulnerability vs. flying) and partisanship (Democrat vs. Republican) as fixed factors, and the two political orientation measures (social conservatism and economic conservatism) as the dependent variables.

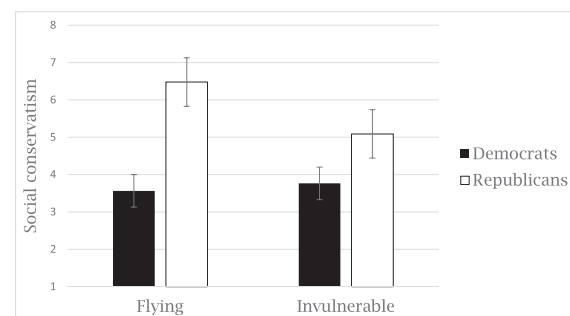
For social conservatism, results revealed a significant main effect of partisanship,  $F(1, 141) = 29.40, p < .001, \eta_p^2 = .17$ , that was further qualified by the predicted condition-by-partisanship interaction,

**Table 1.** Means (and standard deviations) of manipulation check variables in Studies 1 and 2

	Superpower		<i>t</i>	<i>p</i>
	Flying	Invulnerability		
Study 1				
Like power	6.22 (1.98)	5.68 (2.28)	1.54	.13
Feeling	5.58 (1.97)	5.49 (1.89)	.29	.77
Uncertainty	4.52 (2.33)	4.29 (2.08)	.64	.52
<b>Safety</b>	<b>5.49 (1.69)</b>	<b>6.12 (2.18)</b>	<b>-2.00</b>	<b>&lt; .05</b>
Study 2				
Like power	6.41 (2.07)	6.06 (2.05)	.98	.33
Feeling	5.90 (1.88)	6.03 (1.86)	-.41	.68
Uncertainty	4.37 (1.94)	4.37 (2.31)	.00	1.00
Control	5.27 (2.00)	5.49 (2.12)	-.61	.54
<b>Safety</b>	<b>5.51 (2.04)</b>	<b>6.59 (1.82)</b>	<b>-3.21</b>	<b>&lt; .01</b>

$F(1, 141) = 4.13, p = .044, \eta_p^2 = .03$ . As shown in Figure 1, the superpower manipulation had no effect on Democrats' level of social conservatism ( $M = 3.57, SD = 2.11$  in the flying condition;  $M = 3.77, SD = 2.02$  in the physical invulnerability condition;  $M_D = -.20, SE = .44, p = .647$ ). Republicans, however, reported being significantly less socially conservative in the physical invulnerability condition,  $M = 5.09, SD = 2.71$ , as compared to the flying condition,  $M = 6.48, SD = 2.06$ ;  $M_D = 1.39, SE = .65, p = .034$ . Looking at it the other way, there was approximately a 3-point difference between Democrats and Republicans on social conservatism in the flying condition,  $M_D = -2.91, SE = .54, p < .001$ . In the physical invulnerability condition, this difference, although still significant, was reduced by more than half,  $M_D = -1.33, SE = .56, p = .020$ .

For economic conservatism, only a main effect for partisanship emerged,  $F(1, 141) = 40.26, p < .001, \eta_p^2 = .22$ : unsurprisingly, Republicans ( $M = 7.00, SD = 1.95$ ) were more economically conservative than Democrats ( $M = 4.62, SD = 2.12$ ). In line with our expectations, safety had no effect on economic political orientation nor was there an interaction between condition and partisanship,  $F's < .17, p's > .69, \eta_p^2 < .001$ .



**Fig. 1.** Mean social conservatism among Democrats and Republicans as a function of super power condition; error bars represent standard errors of the marginal means (Study 1)

## Discussion

As predicted, making Republican participants feel physically safe increased their liberalism on social issues, but their stance on economic issues was unaffected. Contrary to predictions, however, Democrat participants' attitudes (both social and economic) were unaffected by the prime. This is presumably because Democrats (and liberals) are chronically lower on threat perceptions than Republicans (and conservatives). This pattern of results mirrors that found in prior work, which has shown that experimentally inducing threat does not affect conservatives' responses, but causes "liberals to think like conservatives" (Nail *et al.*, 2009).

This study is the first evidence that we are aware of that goes beyond the relationship between threat and conservatism, and suggests that safety can promote more liberal attitudes, at least in regard to social issues. In the next study, we aim to conceptually replicate this finding, examining whether making conservatives feel physically safe will increase their progressive attitudes. Researchers have argued that political ideology is composed of two core components—resistance to change and acceptance of inequality (Jost *et al.*, 2003). Although social and economic political issues can (and typically do) include elements of both social change and inequality, evidence suggests that ideology is a dual process, with sociocultural conservative values of preserving tradition and resisting efforts toward change associated with perceptions of danger, and economic conservative values that bolster hierarchy associated with a view of the world as a competitive jungle (Duckitt & Sibley, 2009, 2010). Thus, in Study 2, we examine whether physical invulnerability affects people's acceptance of social change, specifically, but not preference for hierarchy in general.

### Study 2

In this study, we induce feelings of physical safety (*vs.* a control condition) as in Study 1 and examine its impact on resistance to societal change and acceptance of inequality, the two core components of political ideology (Jost *et al.*, 2003). We hypothesized that participants would be less resistant to change, but not less accepting of inequality, when they imagined being endowed with a superpower that rendered them invulnerable to physical harm (*vs.* the ability fly). Because conservatives are chronically higher on threat perceptions, and based on the results from Study 1, where only Republican's attitudes shifted in response to the safety prime, we predicted that this effect would be more pronounced for (or perhaps only emerge among) conservative participants.

## Method

**Participants.** One hundred and forty people, recruited from an online subject pool, participated in this study in exchange for a chance to win a gift

certificate. Nine of these participants did not respond to the political orientation measure (described below), and an additional three did not respond to at least one of the questions assessing each of dependent variables, yielding a final sample of 128 (67.2% female; 73.4% White; average age,  $M = 34.67$ ;  $SD = 13.21$ ).

**Procedure.** Among a battery of demographic questions, participants reported their general political orientation (1 = *Very liberal*; 9 = *Very conservative*). Participants then engaged in the same visualization task as in Study 1. After writing a few sentences about how they felt and responding to several questions assessing their reactions to their superpower (Table 1), participants responded to questions assessing their resistance to change and acceptance of inequality. Resistance to change was measured with two items used in previous research (e.g., Jost *et al.*, 2007) that read: "I would be reluctant to make any large-scale changes to the social order;" and "I have a preference for maintaining stability in society, even if there seems to be problems with the current system" ( $r = .432$ ). Acceptance of inequality was assessed with two items (taken from Sidanius & Pratto, 2001) that read: "It's okay if some groups have more of a chance in life than others;" and "We should do what we can to equalize conditions for different groups" (reverse scored;  $r = .406$ ).<sup>1</sup>

## Results

As in Study 1, participants in the safety condition reported feeling significantly safer than those in the flying condition; there were no differences between conditions on any other reactions to the superpower (Table 1).

We conducted a fixed-effects mixed linear model predicting the endorsement of the dimensions of conservatism with dummy codes for dimension type (acceptance of inequality *vs.* resistance to change) and condition (invulnerability *vs.* flying), political orientation (mean-centered), and all of the two- and three-way interaction as predictors. Results revealed the predicted significant three-way interaction between dimension type, condition, and political orientation,  $b = .50$ ,  $SE = .16$ ,  $p = .003$ . Analysis of the simple slopes showed that for acceptance of inequality, there was the expected main effect of political orientation,  $b = .26$ ,  $SE = .10$ ,  $p = .016$ , such that conservatives reported higher acceptance of inequality than liberals. There was no significant effect of condition,  $b = .45$ ,  $SE = .31$ ,  $p = .150$ , and no reliable interaction between political orientation and condition,  $b = .14$ ,  $SE = .15$ ,  $p = .327$ .

<sup>1</sup>We collected participants' economic and social political orientation at the end of the study, with the anticipation of using them as additional dependent measures. However, these measures were too highly correlated with the initial measure of political orientation ( $r$ 's both =  $.75$ ,  $p < .001$ ) to be included in the analysis.

When analyzing the items measuring resistance to change, results revealed a main effect of political orientation,  $b = .47$ ,  $SE = .11$ ,  $p < .001$ , with conservatives reporting higher resistance to change than liberals. The main effect of priming condition was not significant,  $b = -.42$ ,  $SE = .31$ ,  $p = .18$ , but there was a significant condition-by-political orientation interaction,  $b = -.36$ ,  $SE = .15$ ,  $p = .016$ . Simple slopes analyses showed that there was no effect of the priming condition on liberals' ( $-1SD$ ) resistance to change,  $b = .30$ ,  $SE = .36$ ,  $p = .400$ ; among conservatives ( $+1SD$ ), however, resistance to change was significantly lower in the invulnerability condition as compared to the flying condition,  $b = -1.13$ ,  $SE = .49$ ,  $p = .021$  (Figure 2).

Looking at the interaction the other way, when participants are primed with having the ability to fly, we find the expected effect of political orientation, such that conservatives are more resistant to change than liberals,  $b = .47$ ,  $SE = .11$ ,  $p < .001$ . Notably, when primed with invulnerability, this ideological difference was eliminated,  $b = .12$ ,  $SE = .10$ ,  $p = .244$ , with conservatives equally as open to social change as liberals.

## Discussion

Consistent with Study 1, results from this study confirmed that when conservatives imagined that they were endowed with a superpower that made them invulnerable to physical harm (vs. the ability to fly), and thus feeling physically safe, they were more socially progressive. Specifically, results showed that the safety (vs. control) prime significantly reduced conservatives' resistance to change but did not have a reliable impact on attitudes about inequality. Indeed, the ideological difference on resistance to change was, remarkably, completely eliminated when participants were primed with safety.

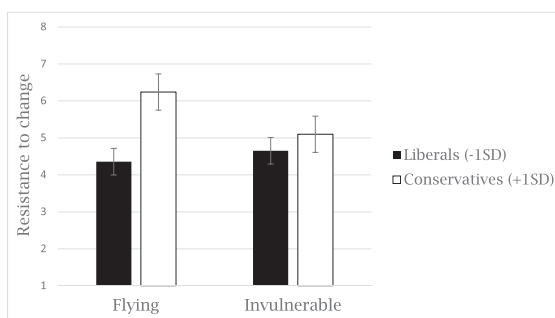
Across both studies, liberals' attitudes were unaffected by the manipulation. Although we thought that heightening feelings of safety might increase progressive attitudes across the board, the results showed that only conservatives were affected by our manipulation. This does not appear to be due to a "floor

effect," given the moderate levels of social liberalism and resistance to change among the liberals in our study (Figures 1 and 2). More research is needed to fully understand the conditions under which liberals and conservatives shift their attitudes about social issues. Speculatively, the results from these studies, in conjunction with prior work showing that threat made dispositional liberals (but not conservatives) report more conservative attitudes (e.g., higher ingroup favoritism, lower support for gay rights; Nail *et al.*, 2009), might mean that baseline differences in threat perceptions can account for political polarization when it comes to social issues. In other words, ideological differences on issues regarding social change appear to be minimized (or even eliminated) to the extent that liberals feel threatened (Nail *et al.*, 2009) or that conservatives feel safe (Studies 1 and 2).

## General Discussion

Across two studies, we demonstrate a relationship between safety and political attitudes. The results from these studies illustrate that it is not only the presence (vs. absence) of threat that influences ideology but also that the opposite of threat—safety and security—can foster more progressive attitudes. Specifically, we found that experimentally inducing feelings of physical safety can lead Republicans and conservatives to embrace more progressive attitudes, including social liberalism in general and acceptance of change, in particular. Whereas the bulk of prior work has shown that aversive conditions—including system threat, mortality salience, and even cognitive load—tend to cause a "conservative shift," especially among liberal participants (e.g., Eidelman, Crandall, Goodman, & Blanchard, 2012; Nail *et al.*, 2009), these studies offer evidence that it is, in fact, possible to get conservatives to become more liberal, at least in regard to social issues. This adds to a small but growing literature on the psychological antecedents of liberalism (e.g., Van der Toorn, Napier, & Dovidio, 2014).

On a theoretical level, this work is a first step in uncovering the insights that can be gleaned from disentangling two rather broad constructs, namely, threat and political ideology. It raises the question of whether there are meaningful differences in the effects of different types of threat on people's political attitudes. While threats to the legitimacy and stability of the sociopolitical system seem to lead people to defend all aspects of that system, including both social and economic arrangements (Jost *et al.*, 2015), the studies presented here reveal that physical threat is especially tied to people's attitudes concerning preserving the social order and resisting social change. Preferences for hierarchy or inequality, by contrast, may be especially enhanced under different types of threat—for instance, the threat of Whites losing power (i.e., competition) or symbolic threats to the national landscape or values (i.e., national identity threat). In an era of historically unprecedented economic inequality, understanding



**Fig. 2.** Mean resistance to change as a function of superpower condition and political ideology; error bars represent standard errors of the simple slopes (Study 2)

the social conditions that lead people to accept inequality, even when that inequality is the result of change, is an important next step for future researchers.

This research also adds to a growing body of evidence suggesting that, at least on some occasions, social and economic political attitudes are differentially determined (Malka & Soto, 2015). In our studies, we found that increasing people's sense of safety did make them more socially liberal, but did not influence their stance on economic issues. It is important to point out, though, that many political issues contain elements of both social change and equality. Additional research is needed to unravel when and how (and, perhaps, for whom) attitudes toward change versus equality will take precedent in shaping political opinion. One intriguing proposition is that different types of threat will lead to conservatism, but through different pathways. During times of physical danger, opposition to same-sex marriage, immigration, or gender equality might be mostly driven by a desire to preserve tradition, whereas these same political stances, during periods of other types of threat (e.g., economic), may be driven primarily by a motivation to preserve status hierarchies.

One further contribution of our studies is that we use a manipulation that is completely devoid of ideological content. Whereas much of the prior research has relied on social and political threats (e.g., Jost *et al.*, 2015), the results from these studies—where participants simply imagined feeling safe—are particularly good evidence for a link between ideology and needs for safety and security more generally. It should be noted that while there is substantial evidence that links conservatism and threat (Onraet *et al.*, 2013), there is some disagreement about the underlying mechanism. Whereas some researchers argue that conservatism is associated with a “negativity bias” (e.g., Hibbing *et al.*, 2014), others contend that it is instead associated with arousal more generally, including both negative and positive arousal (Tritt, Inzlicht, & Peterson, 2013). Our studies cannot speak to this debate, as it is conceivable that imagining oneself as physically invulnerable to harm could have been arousal reducing, as well as threat reducing.

Our findings also demonstrate that physical needs and desires can manifest in our sociopolitical beliefs, complementing a growing catalog of intervention attempts in other domains of physical experience (Bargh & Shalev, 2012, Study 3; Huang, Sedlovskaya, Ackerman, & Bargh, 2011; IJzerman *et al.*, 2012, Study 2; Zhong & Liljenquist, 2006). For example, research has shown that behaviors addressing people's needs to avoid physical contamination (such as receiving vaccinations or washing one's hands) have the added benefit of dampening prejudice against groups that are heuristically associated with disease (Huang *et al.*, 2011), and that experiences of physical warmth ameliorate feelings of loneliness and isolation (i.e., social coldness; IJzerman *et al.*, 2012).

The current research leads to the interesting possibility that aspects of the physical environment

could help explain demographic differences in political attitudes. For instance, people who are high (vs. low) in social class tend to be more socially liberal, but more economically conservative (Feldman & Johnston, 2014; Malka *et al.*, 2014). If high social class decreases feelings of vulnerability, the current work could help explain why this economically conservative demographic is more progressive on social issues than their less advantaged counterparts.<sup>2</sup> Similarly, although the relationship between age and political attitudes is complicated (Danigelis, Hardy, & Cutler, 2007), some work suggests that attitudes on social, but not economic, issues become more conservative with age (Cornelis, Van Hiel, Roets, & Kossowska, 2009). One fascinating topic for future research would be to examine whether feelings of physical vulnerability (because of age or sickness, for example) lead people to become less socially progressive than they once were. On the flip side, the relative physical strength (or even perceived invincibility) of young people might be causally related to the fact that they are society's most reliably liberal cohort, especially on social issues (Leonhardt, 2012). Indeed, if there is any conservative trend among young people, it is libertarianism—socially liberal but economically conservative (Harvard University, 2014).

Decades ago, Roosevelt noted that fear can paralyze social change; here, we offer empirical support for his observation by showing that ameliorating fear can facilitate social change. Just as threat can turn liberals into conservatives, safety can turn conservatives into liberals—at least while those feelings of threat or safety last.

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