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Felt responsibility and climate engagement: Distinguishing adaptation from mitigation



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ABSTRACT

Policy makers and citizens must choose from among a growing variety of strategic options as they try to cope optimally with climate change. As a means of more accurately predicting different types of climate change engagement, we empirically distinguish individuals' felt responsibility for mitigation (FRm) from felt responsibility for adaptation (FRa), and assess support for different climate action strategies (mitigation and adaptation). We surveyed two U.S. samples two months apart, and the replication study confirmed Study 1's findings of differing predictive powers for FRm vs. FRa. Each type of felt responsibility, controlling for the other, served as a mediator between belief in global warming (as well as belief in anthropogenic cause of climate change) and its corresponding climate action strategy (mitigation vs. adaptation). FRa predicted adaptation measures but not mitigation measures, while FRm predicted mitigation measures more strongly than it predicted adaptation but did predict both action strategies. We also found important individual differences: people's disposition toward behaving proactively correlated positively with all types of climate engagement, and political orientation (liberal/conservative ideology) interacted with climate action strategy (mitigation vs. adaptation) in predicting all engagement variables. Comparing levels of support across the political spectrum, the mitigation measures were highly polarizing, while the adaptation measures were less divisive.

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1. Introduction

The mitigation of global warming has long been a central strategic option for coping with climate change, but this solution has proceeded unevenly. As climate challenges increase in scope and intensity, adaptation has emerged as an additional and necessary coping strategy (Clayton et al., 2015; Evans et al., 2014; Klein et al., 2005; Landauer et al., 2015; Moser, 2010, 2012; Parry et al., 1998). Yet even as the need for both mitigation and adaptation becomes increasingly evident, psychological and behavioral research comparing and contrasting the two strategies remains scarce. The studies reported here 1) center upon the dual climate action strategies of mitigation and adaptation, in order to discern how cognitions about and support for the two might differ; 2) show that differing levels of felt responsibility for the two strategies relate to different levels of support; and 3) empirically introduce and validate the disposition to engage in proactive behavior as a key predictor and control variable. Like political ideology, also studied here, this personal disposition will be a valuable individual-difference variable in future research in the climate-change domain.

Some psychological drivers and inhibitors of mitigation and adaptation behaviors may be the same, but differences also are likely because proenvironmental behavior (PEB) is not a unitary, undifferentiated class of similar behaviors driven by the same causal factors (Stern, 2000). Just as one person can exhibit one PEB and not another, different individuals and groups can prefer and support certain policy solutions more than others for responding to climate change. We submit that unstudied distinctions between mitigation and adaptation strategies deserve concerted attention because these strategies differ from one another not only technically but also behaviorally. The psychology underlying such differences—how people perceive different climate action strategies, how they might choose among them, and why they engage in some ways but not in others—requires thorough study.

As we investigate psychological differences between mitigation and adaptation strategies, we still must search for constructs that most effectively mediate between beliefs—in the present studies, belief in global warming and in anthropogenic causation—and more active forms of climate engagement. With these

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requirements in mind, here we highlight felt responsibility for climate action, assessed separately for mitigation and adaptation, as a key psychological bridge between two climate-related beliefs and several types of engagement.

1.1. Inaction, mitigation, and adaptation

Most citizens have not engaged deeply with the issues of global warming and climate change (Gifford et al., 2011; Weber and Stern, 2011). Members of the public hold different perspectives, and views vary considerably. Regardless of belief and viewpoint, misunderstandings and oversimplifications abound; inaction prevails even among those who take climate change seriously (Weber and Stern, 2011). Proenvironmental attitudes alone are not nearly enough, as many psychological and situational obstacles prevent attitudes from translating into action (Gifford, 2011). Thus, mitigation efforts have fallen far short of what is needed, for reasons that are more human than technical.

Divisiveness and stalemates around climate action stem not only from different perceptions about the existence and causes of global warming (Weber and Stern, 2011), but also from perceived solution differences (Campbell and Kay, 2014). As adaptation along with mitigation is now an unequivocal necessity (Clayton et al., 2015; Landauer et al., 2015; Moser, 2012), the need for new research into multiple solutions is paramount.

The development of new strategies for adapting to climate change offers some relief in the form of an expanded solution set. However, the availability of multiple options raises new questions, challenges, and research opportunities regarding implementing both mitigation and adaptation strategies. For example, people with different levels of concern about climate change respond differently to communications with mitigation vs. adaptation frames (Howell et al., 2016). Moreover, increasing attention to adaptation could distract from and even reduce our mitigation efforts via negative spillover (Truelove et al., 2014). In some recent experiments, however, presenting information about adaptation increased people's willingness to mitigate (Evans et al., 2014), and their willingness to subsidize a mitigating technology (in one of two experiments by Carrico et al., 2014). Such research is in its infancy, contingency factors no doubt abound, and tradeoffs do seem likely. Consequently, our research must attend thoroughly and jointly to both adaptation and mitigation (Fielding et al., 2014; Truelove et al., 2014).

Although many consider whether to emphasize mitigation or adaptation to be a false choice because both are essential, not everyone shares this perspective. Implementing multiple strategies requires allocating finite resources such as attention, effort, time, thought and funding between and among the options. We need to understand better how and why such choices are and will be made. Will both strategies receive adequate attention, interest, and commitment? Who will care most (least) about mitigation (adaptation), across time and circumstance? The studies described here provide new measures and some foundational knowledge that will help to answer such questions.

1.2. Felt responsibility as a bridge from beliefs to climate engagement

The present research contributes to general and long-running efforts to comprehend the relationships between attitudes and behaviors (Fazio, 1990; Fazio and Zanna, 1981), and reflects normative depictions and theories of ecological citizenship (Dobson, 2003; Wolf et al., 2009). Moreover, this research leverages and adds empirical validation to value-belief-norm theory (Stern, 2000; Stern et al., 1999). Specifically, we studied individuals' feeling of personal responsibility as a vital psychological link from mere beliefs in global warming and in its

anthropogenic cause to multiple forms of climate-change engagement (Kaiser and Shimoda, 1999; Wolf et al., 2009; Wolf and Moser, 2011). We chose a future-oriented form of felt responsibility as a key mediator because it captures both ascribed responsibility to self and a sense of personal obligation to take action from value-belief-norm theory (Stern, 2000), and therefore it is a proximal predictor of commensurate actions. In addition, its relative generality and greater bandwidth compared with behavior-specific self-efficacy are likely to make its commensurate actions more wide-ranging than self-efficacy's. Furthermore, as elaborated in the following paragraphs, felt responsibility predicts proenvironmental behaviors within organizational contexts, as well as helping behavior when others are in need (as is the planet).

Felt responsibility is a psychological construct reflecting the extent to which individuals feel capable of and compelled to take useful action toward a desired result (Fuller et al., 2006). Such a construct may be mission-critical for translating climate beliefs into action. As a prime example of its potential impact, a person's felt responsibility helps explain the difference between bystander inaction and intervention when someone needs help (Booth, 2012; Gifford et al., 2011; Latané and Darley, 1970). Felt responsibility reduces diffusion of responsibility, as individuals believe that it is up to them to do something rather than assume that someone else will. It also can promote a sense of increased agency, a belief that individual actions can indeed make a significant difference. Furthermore, felt responsibility for change has been shown to predict individual voice (constructive, change-oriented communication intended to improve situations: Le Pine and Van Dyne. 2001) and efforts at continuous improvement (behaviors aimed at improving processes and outcomes: Fuller et al., 2006). We expected similar relationships between felt responsibility and climate change engagement.

Responsibility often is backward-looking (Seiling, 2001), as in "Who is responsible for this debacle? Someone must be held accountable." In the domain of climate change, backward-looking responsibility is the prime consideration in the polluter-pays principle and the empirically-demonstrated importance of global warming attributions: whether people view its cause as anthropogenic or natural. Attributions to human activity predict some action, whereas naturalism does not (Baron, 2006).

In considering the potential role of felt responsibility in generating climate action, we draw from Weber (2010) discussion of three modes in which people process information as they make environmentally-relevant decisions. Of the three, the first two often fail to translate into action, while the third is expected to most powerfully influence behavior over time. The first information-processing strategy, the analytic-based processing that scientists tend to use, has limited behavioral impact; people (even some scientists) are constrained by a preference for the status quo, future discounting, and other biases (Gifford, 2011). A second possible route to action, affect-based information processing including emotions such as fear and worry, is similarly inadequate: unknown risks like global warming and climate change are of uncertain nature and consequence, often causing people to deny and avoid the problem (Feinberg and Willer, 2011).

Weber (2010) concludes that the best bet for promoting climate action may be a third route: rule-based decision making. Rule-based decisions, and their resulting behaviors, can stem from laws, formal authority, and social norms. Additionally, people can devise and enact their own decision-making rules. Truelove et al. (2014) theorize that all three modes of information processing can prompt a person to engage initially in a PEB, but highlight rule-based decision making as the mode most likely to motivate subsequent PEBs and maintain them over time.

One viable means of identifying rules is to assume personal responsibility for taking action. Possible self-imposed assertions of

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