

We need climate change mitigation and climate change mitigation needs the ‘We’: a state-of-the-art review of social identity effects motivating climate change action

Torsten Masson and Immo Fritsche



Effectively fighting global warming requires large groups to engage in concerted action. In the present review article we aim to understand how human appraisals and responses to the challenge of climate change are shaped by social identities (i.e. people’s membership in specific social groups). We first describe the recent Social Identity Model of Pro-Environmental Action (SIMPEA), linking social identity theorizing to the study of climate action. Then, we review research on how collective climate action is driven by social identification, ingroup norms, group-based emotions, and collective efficacy beliefs. Finally, we focus on how very inclusive social identities (spatially or temporally), such as global identification, may provide a unique opportunity to advance interventions fostering people’s climate action.

Address

Department of Social Psychology, Institute of Psychology, University of Leipzig, Germany

Corresponding author:

Masson, Torsten (Torsten.Masson@uni-leipzig.de)

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Thirty years after the first assessment report of the Intergovernmental Panel on Climate Change, it might almost be a truism that fighting climate crisis is a collective challenge. Psychological research, however, has tended to investigate private mitigation efforts as a process of *individual* decision-making [1]. This is problematic with regard to both the scale and the speed of changes needed to effectively address global warming. The ecological impact of a single person is – on a global scale – negligible. Attempts to frame climate change as a problem of individual behavior may backfire, leading to feelings of personal helplessness and fear of others free-riding (i.e. not cooperating) [2,3]. Evidence from climate models

indicates that limiting global warming to 1.5–2°C above preindustrial levels requires urgent action [4]. This will (likely) involve substantial societal changes, which can only be accomplished by means of cooperation within and across large social groups, that is, on the *collective* level [5].

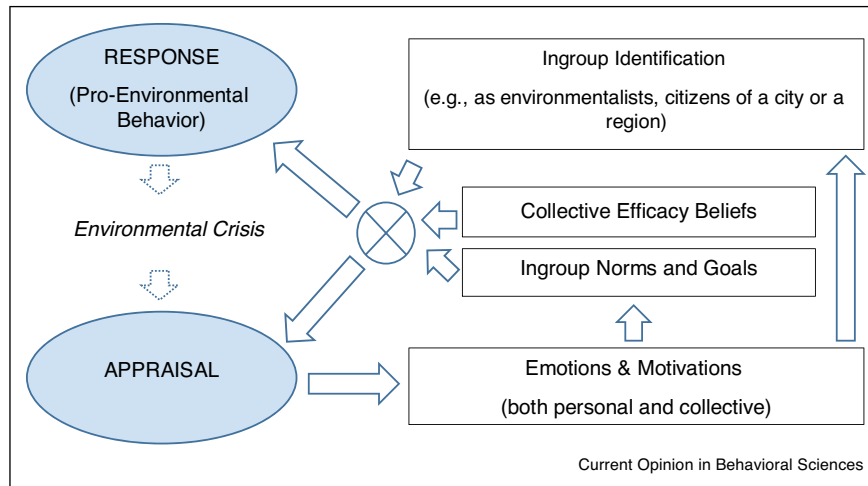
Collective thinking should help people to discount personal helplessness or fear of others free-riding and to target collective goals of climate change prevention. According to the social identity approach [6,7], humans have the unique capacity to define their self in terms of either their idiosyncratic person (‘I’) or their group memberships (‘we’). Self-categorization as a member of a specific group shifts the psychological focus from the ‘I’ to the ‘we’. Consequently, when individuals consider themselves as group members, they also consider their *individual* behavior as part of a *collective* (i.e. group-based) action: Where *I* cannot do anything, *WE* might stand a chance [8].

In the present paper we aim to show how social identities can shape human responses to climate change. Specifically, we briefly outline the Social Identity Model of Pro-Environmental Action (SIMPEA; [9••]; see [Figure 1](#)) and review recent climate action research on four core variables of the model as well as their interactive effects: social identification (i.e. the strength of an individual’s psychological bond with their group), collective efficacy beliefs (i.e. an individual’s perception of the group as being capable to reach its goals), ingroup norms (i.e. an individual’s perception of what is prototypical and normative for the group), as well as collective emotions (i.e. an individual’s emotions that arise due to events and states relevant to the ingroup) and motivational states (e.g. threat) arising from environmental crisis appraisals. We will discuss open research questions and cast a spotlight on the potential that specific social identities, such as global human identification, have for advancing interventions fostering people’s climate action [10].

A social identity perspective on climate action

The social identity approach [6,7] proposes that people derive a significant part of their self-concept from the social groups to which they belong. Individuals self-categorize in terms of a specific social identity (e.g. national group) if certain conditions are met, such as situational salience of social categories. The inclusivity of the groups that a person can identify with will vary,

Figure 1



Social Identity Model of Pro-Environmental Action [8]: A heuristic collective action model of environmental crisis appraisals driving people’s environmental responses via (collective) emotions and motivations and the product of ingroup identification, perceived collective efficacy, and perceived ingroup norms and goals, including a recursive process via appraisals.

ranging from small-scale groups (e.g. members of working teams) to large scale categories (e.g. citizens of a country). When people self-categorize in terms of a social identity they come to think and act as group members rather than as unique individuals. This involves a cognitive shift from personal goals, efficacy beliefs or cost-benefit perceptions to group goals (‘We want to do more to protect the climate’) and collective benefits (‘My climate behavior contributes to the well-being of my group’) or beliefs about collective efficacy (‘We can make a difference in climate change’) as factors guiding behavior.

Recently, social identity theorizing has been introduced to the study of climate action [9•,11•]. The Social Identity Model of Pro-Environmental Action (SIMPEA; [9•]) describes how collective variables affect appraisals and responses to large-scale environmental problems. In contrast to other psychological models of collective action [12], SIMPEA extends the prediction of collective action beyond situations involving intergroup conflict and politicized groups (i.e. traditional activist settings). It is not necessarily the antagonistic relationship between groups competing for improving (or maintaining) their social situation that motivates action on behalf of the group, but the shared perception of climate change as a collective challenge or threat. Also, it incorporates automatic effects of threat defense [13]. Specifically, the model assumes personal and collective emotions and motivations to arise from initial appraisals of environmental problems, such as feelings of collective guilt about the ingroup’s high climate impact. Collective emotions will shape environmental group norms and goals, for example, guilt leads to stronger reparation goals. In line with social identity theorizing,

group norms and goals are expected to predict group members’ climate action and (as a recursive circle) appraisals of climate change together with their strength of ingroup identification and their beliefs how effectively the group can fight climate change (collective efficacy beliefs). Identification, norms, and efficacy may also interact in predicting collective climate action and appraisal, for example when higher levels of ingroup identification lead to stronger adherence to actions and appraisals that are perceived as normative for the group. At the same time, personal threat motivation is proposed to increase people’s thinking and acting as group members, thus catalyzing collective processes driving people’s responses to, and appraisals of, the climate crisis.

SIMPEA provides an account of the factors influencing collective climate action. Collective climate action describes any action that group members perform as a representative of the group guided by climate change-related group goals. Importantly, notions of collective action are often limited to public or activist behaviors [14]. In contrast, our understanding of collective climate action refers to both private (e.g. purchase of local products) and activist behaviors (e.g. engagement in climate initiatives). It is the mindset (personal versus identity salient) and not the type of behavior that transforms individual behavior into collective action. Research indicates collective climate action being driven by the four proximal predictors of pro-environmental action proposed in SIMPEA: Self-categorization and ingroup identification, ingroup norms, collective efficacy beliefs, collective emotions and motivations.

Self-categorization and ingroup identification

For group-based action to occur, individuals need to self-categorize as members of a social group and they need to identify with their group [15**,16]. In line with this, strong identification with groups that are intrinsically related to climate action, such as the group of environmentalists, increased group members' collective climate action [17–19], even when controlling for personal predictors of such action [20**]. In other cases, the effects of identification will depend on the norms and goals people attribute to their group [21]. Specifically, identification will only have a positive effect on collective climate action (and appraisals supporting action) if group members perceive their group to share climate goals and norms [22,23**,24**,25], but not if the group is typically associated with anti-sustainable behavior [26]. For instance, experimental research found that political party identification affected the acceptance of anthropogenic climate change, decreasing acceptance among conservative (but not liberal) participants when their political identity was salient [27**, for similar findings see Refs. 28,29]. Furthermore, stereotypes portraying environmentalists as 'Communist watermelons' (i.e. green on the outside, red on the inside) have been shown to demotivate action to reduce global warming among right-wing non-members through perceptions of environmentalists as a threat to society [30].

As a specific type of identity, place identity, that is, the sense of being personally connected to a specific place or place-based community [31], has been found to affect people's inclination to protect their places from harm [32,33]. However, high levels of place identification may aid or impede collective climate action, depending on the type of action, and on specific personal factors, for example, ideological beliefs [34]. People who feel a strong connection with their local environment may oppose wind energy installations in their community to protect their local landscape [35,36]. At the same time, they may be keen to support initiatives to promote local climate change adaptation measures [37].

Ingroup norms

Ingroup norms (i.e. the attitudes and behaviors perceived as prototypical for the group) give group members' actions direction and purpose. Groups thus provide reference points for their members' climate behavior. A vast body of research is showing that salient climate (or pro-environmental) norms of a relevant ingroup foster people's efforts to reduce their impact on the natural environment [9**,38]. Effects of group-based social influence have been demonstrated across different climate behavior domains, such as mobility behavior, energy conservation, sustainable food and consumer choices, or activism behavior [39–42] and across different research settings, including lab studies [15**,43–45] and field studies [46–49]. People may adhere to the norms of their group to enact valued and distinct social identities or to fulfill

communal motives, such as being involved in their neighborhood [50,51].

Research on group-based social influence has tended to test the effects of single salient group norms or of aligned norms, for example when both injunctive and descriptive group norms support collective climate action. Less is known about the effects of normative conflict, that is, situations when the norms of the multiple social identities a person has are at odds with each other [52]. Initial evidence indicates that normative conflict may have motivating or demotivating effects, depending on people's personal environmental attitudes (strong attitudes motivated climate action) and mediated by personal self-efficacy beliefs [53].

Collective efficacy

Collective efficacy has been described as the extent to which people perceive their group to be effective in reaching its (e.g. climate) goals [54]. Strong beliefs about the ingroup's capability to mitigate climate change increased private-sphere collective climate action [40,55**,56–58] as well as activist behavior and acceptance of climate policies [42,59,60], even after controlling for personal efficacy [61]. Interestingly, belief in the capabilities of the ingroup to address climate crisis might also shape personal efficacy beliefs. Increased collective control perceptions led to higher personal efficacy beliefs, which, in turn, facilitated collective climate actions [62]. Furthermore, research showed that collective action intention was higher when people thought that their personal participation would contribute significantly to a collective action's success [participatory efficacy; 55**], conceptually linking personal to collective efficacy beliefs.

Collective emotions and motivations

Relatively few studies have investigated the effects of collective (i.e. group-based) emotions on how people respond to the climate crisis. With regard to negative emotions, collective guilt about an ingroup's past negative climate behavior has been found to increase members' willingness to engage in reparation actions, such as donating to environmental organizations [63–65]. Considering positive collective emotions, research indicated no consistent effects for collective pride on collective climate action [63,64], suggesting that collective pride may only motivate specific ingroup-enhancing climate behaviors. Results for collective pride thus seem to differ from research on personal pride, showing that anticipated feelings of personal pride were more effective than anticipated feelings of personal guilt for increasing respondents' pro-environmental behavioral intentions [66]. Mixed results were also found for the associations between collective hope (success is possible but unlikely) and collective climate action [56,67,68]. Hope may serve purposes of problem-focused coping (i.e. motivating collective climate action), particularly for persons with strong climate attitudes [67], as well as

emotion-focused coping (i.e. demotivating action), mediated by (less) feelings of distress [56]. Furthermore, feelings of being emotionally moved and positively overwhelmed were described to mediate the effects of collective efficacy appraisals on collective climate action intentions [69**].

Climate change appraisal may elicit personal helplessness and threat motivation. This is expected to foster people's 'We' thinking, as under conditions of personal helplessness people can restore their sense of control through *collective* agency [70]. Thus, SIMPEA proposes climate change threat to catalyze the effect collective processes have on people's responses to climate change. This is supported in experiments showing reminders of threatening climate change to increase ethnocentric and authoritarian tendencies [71,72], such as aggression towards ingroup deviants [71] and conformity to any salient ingroup norm [73]. Specifically, in the latter studies, salient climate change threat increased students' support of radical left-wing action when this was said to be approved of by the majority of fellow students whereas it reduced support when, apparently, the majority did not support it. In a similar vein, other studies showed personal threat (e.g. mortality salience) to catalyze the effect of pro-environmental norm salience fostering pro-environmental behavior [74,75]. Salient climate change threat also increased people's sense of collective climate efficacy [76] paving the way for pursuing collective action. This research disproves common sense that it is difficult to motivate people for climate action in times of threat and crisis. Instead, threat will motivate individuals to save the climate when climate protection is perceived as normative action of their *collective*.

Interactive effects

While each of the four social identity factors discussed above seem to independently drive responses to climate change, their effects might in fact depend on each other. Specifically, SIMPEA [9**] proposes that ingroup identification, norms, and collective efficacy only affect people's environmental action when each of the other two variables in this row has sufficiently high scores. For instance, an ingroup prescriptive norm, or goal, of saving the climate might only impact group members' action intentions when they are identified [44] *and* think that their group is potentially effective in saving the climate. No research has addressed the question of interaction between the three factors in a comprehensive fashion, yet.

Social identities bridging space and time

The severity of climate change consequences will increase with time. Thus, for present-day individuals climate change often seems quite distant, both spatially and temporally. It adds that people tend to discount the value of future generations' benefits and harms compared

to present-day generations (i.e. 'intergenerational discounting'; [77]). This may prevent that people conceive of climate change as affecting themselves. Social identities can be mental bridges for people to adopt climate change as a problem that affects, and requires their social self.

Spatially distant consequences of climate change should be more relevant for people when they identify with social entities that are either (or both) severely affected by climate change (e.g. inhabitants of shallow island states) or that can be particularly effective in fighting climate change (e.g. inhabitants of high-emission states). Identification with humanity as a whole (or global identification) has been proposed to represent such an identity [10]. In fact, global identification and related constructs (for an exhaustive review see Ref. [78]) were positively related to people's acceptance of climate policy measures [79] and their collective climate intentions [79,80,81**] and actions [80,82]. Recent attempts increased the salience of global identity by showing a video of a man dancing with people all over the world, leading to greater consideration of climate change for a remote outgroup (Bangladesh) as compared to participants of control video condition [83]. In sum, these studies provide preliminary evidence, that supporting spatially extended social identities might motivate people's collective climate action intentions, although more experimental evidence is needed. Very inclusive identities, such as global identification, may lack a sense of distinctiveness as compared to identification with smaller social entities, possibly limiting the attractiveness of global identification in terms of self-categorization [84]. At the same time, inclusive identities might be more attractive than small groups if they can provide their members with a sense of efficacy to fight global problems (such as climate change), that is, if they are perceived as agentic.

There is a *temporal* gap between generational groups, as climate change is, or will be, a much more severe problem for people of younger and future generations compared to elder or present-day generations. Global climate protests, such as 'Fridays for Future' recently raised climate change concern in young people and, in fact, identification with the generation of Millennials was positively associated with climate change concern in young US-citizens [85]. Temporal intergroup categorization in the context of climate change made the young generation recognize themselves as a collective actor and motivates them to act. It is a crucial question whether, in turn, this will lead to intergenerational conflict and elder generations disengaging from climate action or to intergenerational cooperation in mitigating climate change. Dual categorization on both the level of a common ingroup [86] and the level of generational groups may foster the latter option, cooperation. In this case, people would see the young generation as a representative of their own,

superordinate, social identity (e.g. US citizens). Then, the projected severe climate change consequences for younger and future generations become vivid problems of people's social self, even for people of older generations, as climate victims are obviously 'among them'. This may not only prevent motivation loss in elder, or present-day generations but may add to their motivation to act against climate change.

Conclusions

Uncovering the collective dimension of people's climate action has great potential for both mitigating climate change and advancing psychological theorizing. For example, future research may extend current measures of collective variables (i.e. individual perceptions of collective properties) to test whether more objective measures (e.g. ingroup norms inferred from group discourse) may explain variance in collective climate action beyond existing measures. With regard to the application side, designing interventions for fostering climate action should not only focus on personal benefits and costs but should address the social self as well. The effectiveness of group-based interventions should crucially depend on whether the groups people identify with share pro-climate norms, and goals and whether they perceive their group to be effective in fighting global warming. Applying the social identity approach to climate action is an emerging field. Although previous empirical work supports that factors of collective thinking drive people's climate behavior, more specific evidence is required how these factors develop and play together in making people collective climate actors.

Conflict of interest statement

Nothing declared.

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