

ARTICLE OPEN



Refining relational climate conversations to promote collective action

Julia C. Fine¹

Many US residents are worried about the climate crisis, but few are involved in collective climate action. Relational climate conversations are a commonly recommended yet understudied means of encouraging action. This study examines the effects of conversations between US climate activists and non-activists they knew, most of whom were concerned about climate change. Non-activists reported increased knowledge, perceived efficacy, and intention to take action following the conversations, but did not participate in collective climate action more than control groups. Common barriers included low perceived efficacy, lack of knowledge about collective climate action, and psychological distance of action. Activists' discussion of collective climate action was correlated with an increase in perceived efficacy among non-activists. Because perceived efficacy has been found to predict collective action, these results suggest that focusing on action, more so than solutions in the abstract, could enhance the effectiveness of relational climate conversations.

npj Climate Action (2024)3:10; <https://doi.org/10.1038/s44168-023-00091-0>

INTRODUCTION

In view of the urgency of the climate crisis, recent scholarship in climate communication has emphasized the need to move audiences from concern to action^{1,2}. The United States, a leading emitter of planet-warming gases³, is a key context for doing so. Sixty-four percent of the US population say they are at least somewhat worried about climate change⁴, but only 24% reported having donated money, contacted elected officials, volunteered for an activity focused on addressing climate change, or attended a protest or rally in the last year⁵. This gap between attitudes and behaviors is a well-known phenomenon in climate change communication^{6–8}. If the attitude-behavior gap can be closed, US climate movements will have a better chance at attaining the critical mass necessary to effect change.

Relational climate conversations are one promising means of transforming concern into action, yet sixty-seven percent of Americans—approximately the same percent who are worried about climate change—say they “rarely” or “never” discuss climate change with friends and family⁹. Americans' hesitancy to discuss climate change reinforces their incorrect perception that others are not concerned about it, resulting in a self-perpetuating spiral of silence^{10–12} and pervasive underestimation of others' support for climate mitigation policies¹³. Conversely, talking about climate change engenders further discussion¹⁴, increases concern¹⁵, and can result in actions such as giving presentations about climate issues, joining climate organizations, and contacting elected officials^{16,17}. Recognizing these benefits, many climate activists report having climate conversations on a regular basis¹⁸ and include them as part of a broader strategy of relational organizing, i.e., mobilizing existing social networks¹⁹.

Because climate conversations have primarily been studied through retrospective survey research, the discursive mechanisms by which they encourage collective actions such as political advocacy, protest, and community organizing remain understudied. This study draws on discourse analysis and surveys to examine the content and outcomes of a series of three conversations between 41 US climate activists and people they

knew who were not involved in climate action. The results identify strengths and limitations of climate conversations and suggest that they are effective at raising awareness, but need to be further refined as a means of movement-building.

BACKGROUND: BARRIERS TO, AND FACILITATORS OF, COLLECTIVE CLIMATE ACTION

Psychological distance from climate impacts

Psychological distance is often discussed as a barrier to climate concern, and by extension, to climate action. As Stoknes²⁰ puts it, “As soon as someone says ‘climate change,’ people are already beginning to turn off their feelings of risk and morality, as they place it in a box marked ‘someone else’s problem’ or ‘a problem I will deal with in the future.’” Norgaard²¹ similarly observes that psychological distance can serve as a defense mechanism, supporting a widespread form of climate denial that acknowledges the reality of climate change but holds it apart from everyday life. Psychological distance can take the form of temporal distance (perceiving climate change as far off in the future), spatial distance (perceiving it as happening elsewhere), social distance (perceiving it as happening to other people unlike oneself), and hypothetical distance (questioning whether it is happening at all)²². Psychological distance from climate impacts is evident among US residents: approximately 70% think that climate change will impact plants and animals, future generations, and people in developing countries, but only 47% think it will impact them⁹.

While psychological distance is commonly believed to hinder policy support and engagement in climate action, the empirical evidence is mixed. Several reviews of the literature have noted that not all experimental studies find a correlation between psychological proximity and policy support and/or household-level climate mitigation actions^{22–24}; some find no correlation, and some find that distal conditions actually outperform proximal ones. Contextual factors could explain these inconsistent results. For example, severe climate impacts may actually still be distal in

¹George Mason University, Fairfax, VA, USA. ✉email: jfine4@gmu.edu

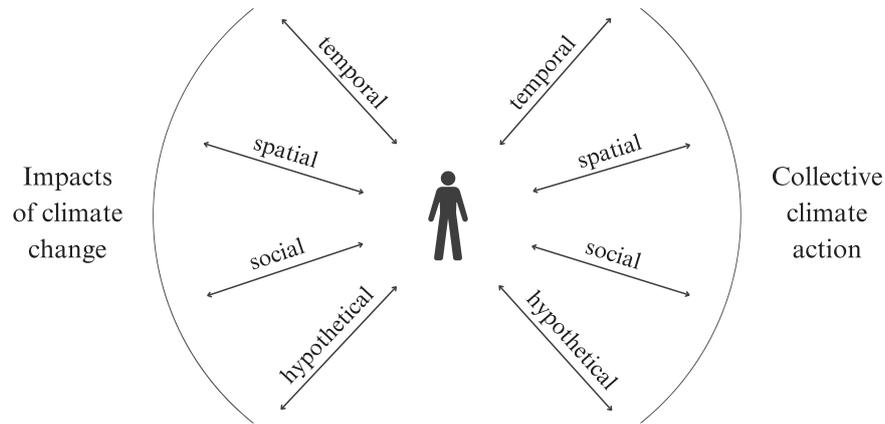


Fig. 1 Psychological distance of collective climate action.

Table 1. Proximal versus distal perceptions of collective climate action.		
	Proximal	Distal
Temporal	"People are taking collective climate action now"	"People will take collective climate action someday"
Spatial	"People are taking collective climate action in places I feel close to"	"People are taking collective climate action in faraway places"
Social	"People like me are taking collective climate action"	"The people taking collective climate action are nothing like me"
Hypothetical	"People will definitely take collective climate action"	"People are unlikely to take collective climate action"

some regions²², and participants' education and nationality may affect their reactions to psychological distance manipulations²³.

Psychological distance from collective climate action

The above literature focuses on the psychological distance of climate *impacts*. Less commonly considered is the psychological distance of collective climate *action*. As diagrammed in Fig. 1, the same four dimensions (temporal, spatial, social, and hypothetical) can be used to theorize psychological distance from collective climate action. That is, collective climate action may be perceived as something to perhaps be pursued (hypothetical distance) in the future (temporal distance), elsewhere (spatial distance), by others unlike oneself (social distance) (Table 1). Attention to the psychological distance of collective climate action could help to "transform the notions of collective action and community into something more concrete and tangible"²⁵, thereby generating "empowering hope" rooted in plans to personally take action²⁶.

The temporal, spatial, and hypothetical dimensions of the psychological distance of climate action have not yet been the subject of much inquiry, but the social dimension has received considerable attention. Several studies have shown that social identification with environmental activists predicts political environmental activism^{27–30}. Social identification has also been shown to correlate with collective efficacy, or the perception of a group's competence³¹, which has in turn been shown to influence collective action³² and policy support³³. Most organizations' advice about how to have climate conversations likewise centers on social identification. For instance, it is commonplace to recommend "finding common ground" in climate conversations^{34,35}. Research also supports the recommendation of finding common ground, for instance by focusing on shared values and tailoring the conversation to the other participant(s)^{36–39}. Less commonly, climate organizations and researchers suggest strategies that proximize climate action along the hypothetical, spatial, and temporal dimensions, such as discussing actions one has taken⁴⁰ and mentioning immediate and local opportunities for action. The utility of each of these proximization strategies for

encouraging collective climate action remains understudied in experimental work.

Construal level

Closely linked to psychological distance is construal level, that is, whether a topic is presented in abstract, decontextualized terms (high-level construal) or in concrete, context-specific terms (low-level construal). Construal-level theory finds that abstraction is cognitively linked with psychological distance such that people conceptualize distant events in abstract terms and think of close events in concrete detail⁴¹. The relationship between abstraction and psychological distance is bidirectional: discussing behavior goals in concrete terms encourages more near-future action than discussing these goals in the abstract^{42,43}. However, the values that typically motivate collective climate action, such as care for living beings and desire for social justice, are inherently high-level construals because they require generalizing about appropriate behaviors across situations. Fortunately, it is possible to transition between, or "bridge," construal levels within a message or span of discourse⁴⁴. In-depth interpersonal conversations could offer ample opportunity to bridge construal levels, allowing participants to reflect on both the "why" of climate action (their high-level values) and the "how" (the low-level actions they plan to do).

Efficacy

As mentioned above, efficacy may mediate the relationship between psychological proximity and collective action. Efficacy encompasses feeling able to take action ("self-efficacy" or "personal efficacy") and believing that the action will yield the desired results ("response efficacy" or "outcome efficacy") at both the individual and collective levels^{32,33,45–47}. Additionally, Van Zomeren, Saguy, and Schellhaas⁴⁸ link the personal and collective levels of efficacy through the concept of participative efficacy, or the belief that one's individual actions will make a difference in achieving group goals.

Efficacy has been found to correlate with collective action, in general⁴⁹, and a small number of studies have observed that efficacy is correlated with collective climate action, in

particular^{32,50,51}. A larger body of literature has demonstrated that efficacy is correlated with *intention* to participate in collective climate action^{33,52–57}, as well as support for climate mitigation and adaptation policies^{33,56,58}. Geiger, Swim, and Frazer⁵⁹ further found that self-efficacy influences people's intention to take part in discussions of climate change, and Geiger et al.⁶⁰ observed that climate discussions, in turn, increase self-efficacy to have further conversations. However, little is known about whether and how climate conversations increase feelings of efficacy with regard to collective climate action, which have been shown to correlate with action-taking.

Research questions

Based on the above literature, it seems that discussing collective climate action in concrete and psychologically close terms could be an effective strategy for encouraging near-future action. Relational climate conversations yield insight into how activists proximize collective climate action and how partners respond, both during the conversation and in their subsequent behavior. The research questions for this study therefore include:

1. Overall, do relational climate conversations between activists and non-activists they know...
 - a. increase non-activists' concern, knowledge, perceived personal response efficacy, and intention to act?
 - b. influence non-activists to participate in collective climate action?
 - i. What barriers to action do non-activists report?
2. How do activists proximize collective climate action in relational conversations?
3. Does activists' proximization of collective climate action influence non-activists to take action?
4. Do personal response efficacy beliefs mediate the relationship between climate conversations and collective action participation?

METHODS

Study design

The study sample consists of one treatment group and two control groups ($n = 41$ for each) of people who were not currently involved in collective climate action, but knew at least one climate activist. In the treatment group, each non-activist had a series of three climate conversations with a climate activist they knew, and took assessment surveys to gauge their attitudes and actions over the course of the study. Two control groups, termed the "survey-only group" and the "no-intervention group," served to account for possible effects of the assessment surveys themselves on participants' attitudes and behaviors. The following sections provide more details about the recruitment process and study procedures for each group.

Treatment group. In the first conversation, activists were instructed to discuss the following themes for one hour: (1) the seriousness of the climate crisis, (2) the existence of climate solutions, (3) climate justice (defined as "the unequal responsibility for the climate crisis, the unequal impacts on various groups, and the need for just solutions determined by impacted communities"), and (4) opportunities to engage in collective climate action, particularly at a local level. In the second and third conversations, which were spaced three weeks apart and lasted half an hour each, activists were instructed to ask if their partners had any further thoughts, if they had taken action, and what had

supported them in doing so or prevented them from doing so. Conversations were conducted over Zoom or in person, according to participants' preference, and transcribed in Otter.ai. Following commonly recommended advice for climate conversations (see Fine, 2022), activists were encouraged to ask questions, listen attentively, find common ground with their partners, share personal stories, and invite their partners to take action, among other strategies. The conversation themes and instructions are included in Supplementary Document 1. This study was designed in collaboration with a focus group of climate activists from regional organizations around the US, who emphasized that it was necessary to have multiple conversations in order to build relationships and foster collective action. Human subjects approval was granted through the College of Saint Benedict and Saint John's University IRB. Written informed consent was obtained via online forms, and the research was conducted in compliance with all relevant ethical regulations.

Activists and partners individually took online surveys prior to the study and after each conversation to gauge partners' climate attitudes (including self-reported climate knowledge, concern, perceived personal response efficacy, and intention to take action), activists' perceptions of their partners' attitudes, and both participants' impressions of how each conversation went. In addition, partners took a follow-up survey three months after the final conversation, which focused on their actions and attitudinal changes. Partners' knowledge, concern, perceived personal response efficacy, and intention to take action were assessed over the course of the study on a five-point scale. Knowledge was averaged across seven sub-categories: knowledge of climate science, current local climate impacts, current global climate impacts, likely future impacts, root causes, climate justice issues, and climate solutions. Similarly, concern was assessed as an average of concern about current local impacts, current global impacts, likely future impacts, and climate justice issues. Personal response efficacy beliefs were evaluated based on partners' responses to the question "To what extent do believe your actions can help counteract climate change," with 0 indicating "Not at all" and 4 indicating "Very much." Intention to take action was assessed as an average of partners' ratings of how likely they were to (a) take collective actions such as political organizing, contacting legislators, or joining a climate action group, (b) make lifestyle changes such as eating less meat and flying less, (c) talk to others about climate change, climate justice, or climate action, and (d) seek out more information about climate change, climate justice, or climate action.

Action over the course of the study was assessed by asking participants which climate actions, if any, they had taken, then aggregating these actions into two scores: collective action and total action. Collective action was quantified as the number of subtypes of collective action each participant took between the first conversation and the follow-up survey, with each "yes" answer counting as one point; subtypes of collective action included joining a climate organization, attending a training, testifying about their concern at a public meeting, contacting a political representative, and participating in another form of collective climate action not listed. Total action was summed across these types of collective action plus seeking out more information about climate issues, talking to others about climate issues, making lifestyle changes, and donating to a climate organization.

Control groups. To test whether the assessment surveys themselves might increase participants' awareness of climate issues and prompt them to take action, one control group—the survey-only group—did not have climate conversations, but took surveys on the same timeline as the treatment group (three surveys three weeks apart, then a follow-up survey three months after the third survey). The surveys were identical to those taken by the

conversational partners in the treatment group except that they did not mention having conversations. To compare the outcomes of the treatment group and the survey-only group against a baseline, a second control group (the “no-intervention group”) was surveyed about their climate-related attitudes and actions over the previous five months, corresponding to the total study duration. All surveys are included in Supplementary Document 2.

Recruitment and demographic data

Treatment group participants were recruited by emailing 230 climate action organizations around the US, selecting organizations that mentioned climate action as part of their work on their websites and aiming for geographic spread. To improve representation of the youth climate movement, environmental science departments from around the US were also contacted so that professors could recruit student activists, and the study call was shared with the Association for Environmental Studies and Sciences (AESS) listserv. Climate activists from these organizations and universities were asked to recruit a conversational partner (someone they knew who was not currently involved in climate action). Activists were additionally asked to recruit people they knew who were not involved in climate action for the survey-only and no-intervention control groups, and calls for control group participants were shared through the AESS listserv.

All participants were US residents. All participants who completed the full series of conversations were at least 18 years old, but one participant who completed only some of the conversations was under 18 years old. Activists mostly selected friends (44%), family members (29%), or significant others (10%) as their conversational partners, and they mostly rated their relationships with their conversational partners as very close (51%), with some rating their relationships as fairly close (17%) or somewhat close (17%). Activists mostly self-categorized as very politically progressive (69%), while their conversational partners were split between very progressive (46%) and somewhat progressive (34%). The survey-only group was mostly somewhat progressive (35%) or very progressive (25%), and the no-intervention group, similarly, was mostly somewhat progressive (46%) or very progressive (30%). Most activists said they had been impacted by climate change (89%), whereas partners were divided between being unsure if they had been impacted (51%) and saying they had been impacted (37%). The survey-only group was similarly split between being unsure if they had been impacted by climate change (39%) and reporting that they had (34%). The no-intervention group mostly reported that they had been impacted (44%) or were unsure (32%). Experiences of climate change did not differ significantly across the treatment and control groups, and neither did race, gender, religion, or attitudes towards climate change and climate action prior to the study (including knowledge, concern, perceived personal response efficacy, and intention to take action). However, age did differ significantly across the three groups ($\chi^2(14, n = 41) = 41.1, p = .04$), as did financial situation ($\chi^2(8, n = 41) = 15.9, p < .001$). The treatment group was mostly in their twenties and thirties, whereas the survey-only control group was younger, and the no-intervention control group was older. A higher proportion of the no-intervention control group than other groups self-categorized as somewhat wealthy. Full demographic information is available in Supplementary Tables 1–10.

Six pairs of participants in the treatment group dropped out before completing all three conversations, and three non-activist partners did not complete some of the surveys. Therefore, the qualitative analysis of the climate conversations includes 50 pairs of participants, while the quantitative analyses includes 41 pairs. The survey-only group and the no-intervention group each likewise include 41 participants.

Methods of analysis

The conversations were analyzed in ATLAS.ti using a combination of a priori code families and an inductive grounded theory approach⁶¹. A priori code families were drawn from suggested conversational topics, such as collective action, climate justice, root causes, solutions, and barriers to action, and recommended interactional strategies, such as active listening (e.g., reformulating the conversational partner’s statements to confirm understanding) and storytelling. Inductive codes were added to describe subcategories within the code families and capture emergent themes. A full list of codes is available in Supplementary Table 11. Statistical analyses were performed in Python.

Attribution and anonymization practices

Because assigning pseudonyms raises ethical concerns⁶², participants were given the option of using their chosen pseudonyms or their real names. All real names are used with permission.

RESULTS

The following sections examine conversational partners’ attitudes and actions over the course of the study, their discussion of barriers to collective action, and activists’ strategies for helping them overcome these barriers. The psychological distance of climate action emerges as a common barrier to action; activists’ discursive practices of action proximization are discussed.

Attitudinal changes (RQ 1a)

Mixed ANOVAs were used to determine whether participants’ attitudinal changes over the study duration differed from those of the survey-only control group. (The no-intervention group was not included in this analysis because there was no pre-study measurement, so attitudinal changes over time could not be assessed.) Pre-test measurements were taken before the first conversation (treatment group) or during the first survey (survey-only group). Because the first survey constituted both a pre-test and an intervention for the survey-only group, there was no analogy to the survey taken by the treatment group after their first conversation. Interim measurements therefore consist of the survey taken after the second conversation (treatment group), and the second survey (survey-only group). Post-test measurements were taken after the third conversation (treatment group) and during the third survey (survey-only group). Shapiro-Wilk tests, Levene’s tests, and Mauchly’s tests were used to assess normality, homoscedasticity, and sphericity, respectively. The treatment group’s self-reported knowledge increased significantly more than that of the survey-only group ($p < 0.001$), as did their intention to take action ($p = 0.013$), perceived personal response efficacy ($p = 0.021$), and concern ($p = 0.042$) (Table 2, Fig. 2). Treatment group participants’ concern level only increased by 3%, however, perhaps owing to a ceiling effect; participants reported a high level of concern (3.4/4 on average) prior to the study.

Actions (RQ 1b)

One-way ANOVAs were used to determine whether the rate of climate action, in general, and collective climate action, in particular, differed significantly across the treatment group, the survey-only group, and the no-intervention group. No significant difference emerged in the total amount of actions or the amount of collective actions across the treatment and control groups (Table 3, Fig. 3).

However, 100% of the treatment group participants attributed their actions to their participation in the study, compared to only 58% of the participants in the survey-only control group. In other words, the survey-only group took action similarly to the treatment group, but perceived the intervention to be less

Table 2. Attitude changes in the treatment group versus the survey-only control group (** $p \leq 0.01$, * $p \leq 0.05$, ns – not significant).

Attitude (self-reported)	Percent change in treatment group from pre-test to post-test	Percent change in survey-only group from pre-test to post-test	η^2
Knowledge	19%	6%	0.115***
Intention of taking action	12%	2%	0.055*
Personal response efficacy	11%	1%	0.050*
Concern	3%	-4%	0.042*

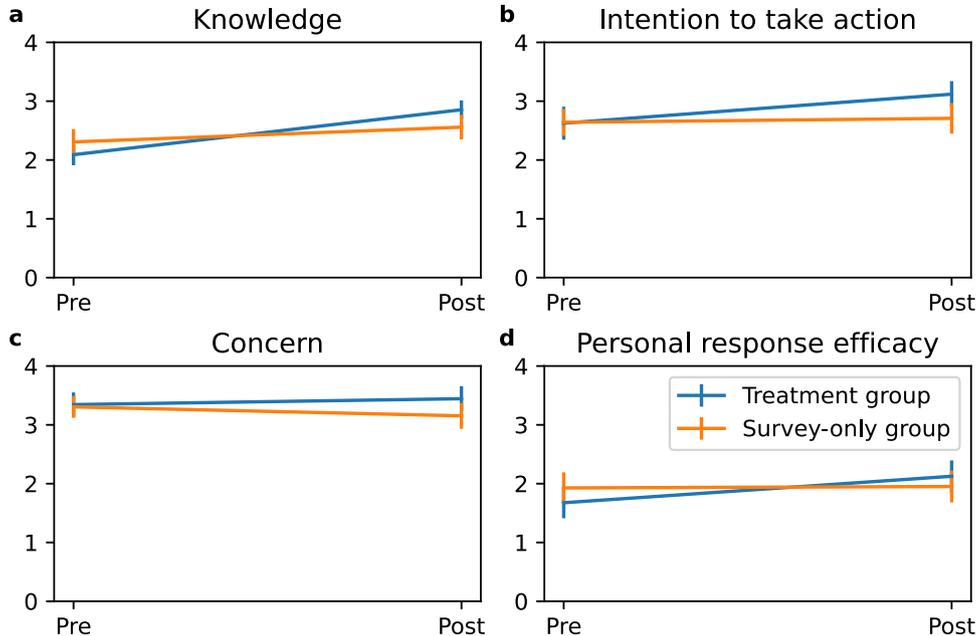


Fig. 2 Attitude changes in the treatment group versus the survey-only control group. $n = 41$ per group. Error bars represent 95% confidence intervals.

Table 3. Action outcomes did not differ significantly across treatment and control groups.

	Mean number of actions taken per participant (treatment group)	Mean number of actions taken per participant (survey-only group)	Mean number of actions taken per participant (no-intervention group)
Collective action	0.24	0.17	0.23
Total action	2.12	1.76	1.88

responsible for their action. One possible explanation is that treatment group participants were especially motivated to perceive their actions as stemming from their study participation because they wished to meet the expectations of both the researcher and the activist with whom they spoke.

Across the treatment and control groups, participants commonly spoke to others and sought more information, but rarely donated money or participated in collective action and advocacy (Table 4, Fig. 4).

Barriers to collective action (RQ 1bi)

To better understand the low rate of collective action in the treatment group, the content analysis examined partners’ discussions of barriers to action. Commonly reported barriers included lack of free time (22 participants), low perceived personal response efficacy (19 participants) and/or self-efficacy (12 participants), lack of knowledge about climate action (17 participants) or climate issues in general (12 participants), having

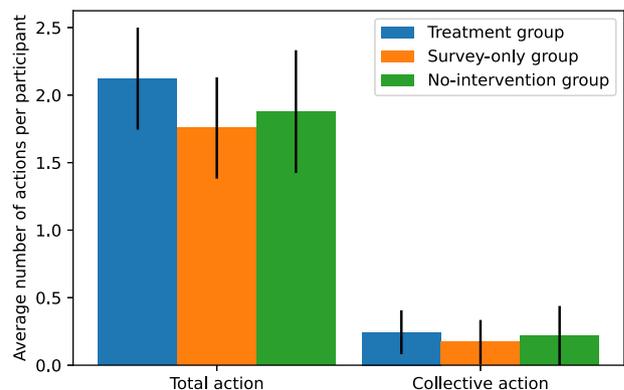
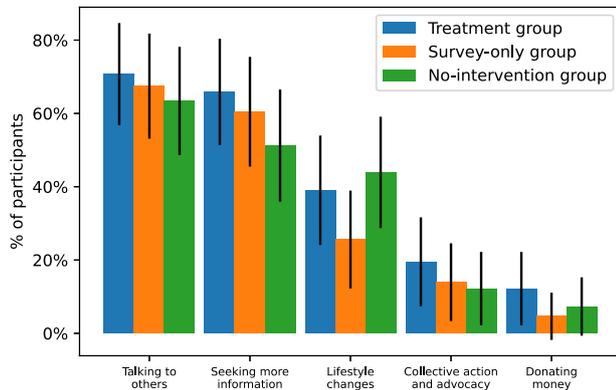


Fig. 3 Action outcomes did not differ significantly across treatment and control groups. $n = 41$ per group. Error bars represent 95% confidence intervals.

Table 4. Actions by type (not significantly different across treatment and control groups).

	Percent of participants (treatment group)	Percent of participants (survey-only group)	Percent of participants (no-intervention group)
Talking to others	71%	66%	63%
Seeking more information	65%	61%	51%
Lifestyle changes	39%	27%	44%
Collective action and advocacy	24%	17%	22%
Donating money	12%	5%	7%

**Fig. 4** Actions by type (not significantly different across treatment and control groups). $n = 41$ per group. Error bars represent 95% confidence intervals.

other concerns (17 participants), being isolated from communities of climate action (11 responses), and psychological distance both from climate impacts (9 responses) and from climate action (8 responses). Other barriers included a feeling of despair about the future (10 participants), burnout or exhaustion (9 participants), not hearing of opportunities for action (7 participants), and feeling overwhelmed (6 participants mentioned feeling overwhelmed by climate change, and 2 mentioned feeling overwhelmed by climate action). Lack of free time and preoccupation with other concerns are difficult barriers to overcome through conversation alone, although intersectional frames could help by relating climate change to other issues. Barriers that are perhaps more practical to address through climate conversations include low perceived self-efficacy and response efficacy, lack of knowledge about climate action, and the psychological distance of climate action. As will be discussed later, perceived personal response efficacy can be increased through discussion of climate action. The following sections therefore focus on lack of knowledge about, and psychological distance from, climate action—two interrelated barriers that likely contribute to low self-efficacy and can be addressed together.

Lack of knowledge about collective climate action. Of the 17 partners who mentioned lack of knowledge about climate action as a barrier, 4 specified that it was the main factor preventing them from taking action. For instance, partner Grayson reflected, “If there is anything that holds me back, it’s probably just knowledge, like knowing what to do, or what I can do, or what I should do. It’s not so much lack of motivation” (Conversation 1, 16:39–16:56). Lack of knowledge about climate action can in turn limit engagement with activist communities: partner Maddie commented, “Because I’m still new in terms of understanding climate action, I don’t see myself participating in community-based events until I have a better understanding of the issues at hand and how I can directly impact it personally” (Conversation 2,

11:54–12:10). Conversely, isolation from communities of climate action can lead to lack of knowledge about action. For instance, when asked what might support her to take part in a climate action initiative, conversational partner Raechel mentioned a need for “some sort of group ... someone to tell me what to do,” noting, “I don’t think independently, I would necessarily do that” (Conversation 2, 4:28–5:01). Conversational partner Megan similarly noted, “When it comes to climate action, we all see all the big issues ... but if you don’t have that connection to your community, it makes it harder to ... know how to act on it” (Conversation 3, 41:14–42:01). Introducing audiences to activist communities—including online communities—and educating them about climate action may help disrupt this cycle of isolation and lack of knowledge. These strategies are discussed further in the section on discursive strategies of action proximization.

Abstraction and psychological distance of collective climate action. Partners commonly generalized about collective climate action in the abstract more than they discussed concrete opportunities for such action in their own lives. In addition, they described feeling social distance (low social identification with climate activists), temporal distance (perceiving collective climate action as happening in the future, particularly when it came to their own actions), and spatial distance (perceiving collective action as happening elsewhere) (Table 5).

Thirteen partners perceived collective action, in particular, as distant and unattainable, framing lifestyle change as more practical (1) or more within their sphere of influence (2).

(1)

“If I’m not going to be going out and lobbying for stuff, in terms of like maybe just renewable energy, what are practical things that you do in your life or that could be done?”

Jennifer (partner), Conversation 2, 30:02–30:16

(2)

“What I’ve decided is, like everything else, the only thing I have control over is me. And I can be an example and I can say things, but I’m it ... When I’m in the car, we turn the motor off.”

Hayjude (partner), Conversation 3, 13:21–13:42

The trend of distancing collective action and proximating lifestyle changes is particularly concerning because several of the most commonly mentioned lifestyle changes in the data set (reducing plastic use, recycling, and avoiding waste) are not effective strategies for climate change mitigation⁶³. Furthermore, seven participants mentioned that a focus on individual lifestyle

Table 5. Forms of action distancing (n = 50).

Form of action distancing	Example	Count
Construal level (abstraction)	<i>There are plenty of nonprofit groups in this country. Thousands. Getting involved with them is one good thing for the average Joe to create some sort of change.</i> –Kieran	18
Social	<i>Most people I know are super discouraged from being in that [environmental] space because it's completely white ... How I see it is more of like granola white people, like, 'Oh, I love going outdoors. This is why I want to protect the climate.'</i> –Maddy	7
Temporal	<i>It makes you feel a certain distance from the problem where you're like, 'Oh, this is an issue, but I can maybe deal with it a little later.'</i> –Megan	4
Spatial	<i>Climate change is like a global issue. Most of the guys that meet with our state-level reps, they're a singular state representative.</i> –Grant	1

Table 6. Activists' strategies for proximizing collective climate action (n = 50).

Strategy	Example	Count (activists)	Count (instances)
Explaining types of action	<i>Protests, petitions, signature drives, marches, civil disobedience, those are a big part of climate activism, but they are always intended to achieve something.</i> –Sabine	28	113
Naming specific organizations	<i>One of my classmates ... she's a part of the UCSD Green New Deal.</i> –Amy	25	83
Sharing experiences with action	<i>A bunch of us decided to start a Greenfaith circle, and last year, we demonstrated in front of the banks who are funding fossil fuel projects.</i> –Bonnie	25	63
Suggesting actions	<i>You could have your bulletin board for campus ministry be Laudato si'-themed for Earth Month.</i> –Jessica	18	47
Inviting their partner to take action together	<i>We have two things related to the action team that will be in the Birmingham area ... Would I be able to get you to commit to coming to at least one of those two things?</i> –Rob	15	31
Linking partner's skills to climate action	<i>Some [actions] might be participating with other people nearby, like to put on our Earth Day event next spring ... Your artistic ability would be great. Want to draw some pictures for us?</i> –Karen	14	24

changes led them to feel less hopeful that their actions could be effective (e.g., 3).
(3)

"The town where I'm from, they're no longer collecting recyclables, because there's just no buyers ... I just watch this trash fill up every single day and feel even more helpless than I have before, even though recycling, now, as an adult, I'm like, 'This is not the best climate action I can take.' But at least it was a climate action, and so watching that, I definitely feel a sense of helplessness."

Megan (partner), Conversation 2, 5:26–5:51

The equation of climate action with unrelated environmentally conscious behaviors in this sample suggests a need both to educate the public about the (in)effectiveness of lifestyle changes and to portray collective action as concrete, achievable, effective, and close to home. This strategy responds to Whitmarsh et al.'s⁶⁴ call to aim not only for "carbon literacy" but for "carbon capability," or "an individual's ability and motivation to reduce emissions *within the broader institutional and social context*" [emphasis added].

Discursive strategies of action proximization (RQ 2)

Activists most commonly proximized collective climate action by explaining types of action, naming specific organizations, and sharing their experiences taking action (Table 6). They also frequently suggested actions for their partners to take, linked their

partners' skills and traits to action (often in a complimentary light), and invited them to take action together.

Activists often used these action proximization strategies in tandem. For instance, the following excerpt illustrates a combination of the first and third most common proximization strategies: the activist explains a type of collective climate action (protest) and shares a specific experience (a protest of Chase Bank in Massachusetts) (4).

(4)

"We don't just protest for the fun of it. We protest because we have a target. So, for example, in Massachusetts, we've been protesting Chase Bank, because Chase Bank has invested billions in new fossil fuel exploration since the signing of the Paris Agreement, like \$1.9 billion. So, it's the worst bank, and we want to target them because we want people to know. We want people to tell Chase, 'Don't do that.' We want people to leave Chase and go to a different bank until Chase wakes up and sees that they lose money."

Sabine (activist), Conversation 3, 16:31–17:27

In general, these strategies proximize action by making it more concrete; that is, bringing the nebulous concept of "collective climate action" into sharper focus by discussing specific, contextualized activities such as protesting at a local branch of a bank. Because concreteness is cognitively linked to spatial, temporal, and social proximity, concrete representations of collective climate action should influence participants to think of it as closer in space, time, and the social landscape. Feeling closer

to collective climate action along these dimensions could in turn encourage action in the near future. Furthermore, learning concrete details about collective climate action could help participants understand the wide range of possible actions and find types of action that suit their skills, theory of change, identity, and capacity.

Even once people understand collective climate action in proximal and concrete terms, however, they may still feel hesitant to take action if they must do so on their own. Invitations to take action together may therefore be a particularly powerful proximization strategy. In nearly all cases (37/43), partners accepted activists' invitations or suggestions. However, overall rates of collective action remained low. (Similarly, there was no significant correlation between partners' reported intentions to take action—averaged across their post-conversation survey responses—and the total number of actions they took.) This mismatch between commitments/intentions and actions could be due to external factors such as lack of free time. Alternatively, it could indicate that partners still privately harbored some reservations, such as feeling out of place in activist communities or doubting that proposed actions would be effective.

Activists' action proximization does not correlate with partners' engagement in collective climate action (RQ 3, RQ 4)

Spearman's correlation tests were used to assess whether activists' proximizations of collective climate action—quantified as the total number of times each activist used each of the previously discussed proximization strategies across all three conversations—were significantly correlated with partners' engagement in collective climate action. No significant correlation emerged. This finding could be due to the low rate of collective action overall.

However, further Spearman's correlation tests revealed that activists' explanations of climate action correlated with increases in partners' perceived personal response efficacy from the pre-test to the measurement taken after the third conversation ($r_s(37)$: 0.47, $p = 0.003$). In contrast, activists' discussion of systemic climate solutions such as changes to energy and transportation infrastructure was *negatively* correlated with increases in partners' perceived personal response efficacy ($r_s(37)$: -0.336, $p = 0.036$). Because efficacy beliefs have been shown to be an important influence on collective action, and low perceived personal response efficacy was one of the most commonly mentioned barriers to action, the correlation between action talk and increased perceived personal response efficacy suggests that discussing collective climate action in the specific—more so than climate solutions in the abstract—could potentially lead to collective action. However, these findings are correlational. Additional research is needed to understand whether there is a causal pathway from discussing collective climate action, to feeling an increased sense of efficacy, to taking action.

DISCUSSION

Overall, the results align with previous findings that relational climate conversations can result in positive attitudinal changes. The conversations in this study increased participants' knowledge of climate issues, perceived personal response efficacy, and intention to take action. However, encouraging collective action proved to be more difficult, even with a concerned and politically progressive sample. The conversations did not lead to more climate action than the assessment surveys themselves, suggesting that more work is needed to refine climate conversations as an organizing tool.

To understand why the conversations mostly did not lead to collective action, the analysis drew on the framework of psychological distance, examining how partners framed climate action as close or faraway in time, space, reality/hypotheticality,

and the social world, and construal-level theory, observing whether partners discussed collective climate action in concrete or abstract terms. The findings show that partners often spoke of collective climate action in distal and abstract terms. When asked what actions they could take, they frequently discussed marginally effective lifestyle changes such as recycling, which they found to be more tangible and attainable than collective action. For partners who had heard that these lifestyle changes were ineffective, this psychological proximity to lifestyle changes—coupled with distance from collective action—sometimes resulted in feelings of powerlessness.

In response, activists used a range of strategies to make collective climate action seem more concrete and proximal, including explaining types of action, discussing past experiences with action, mentioning specific organizations, connecting action to partners' skills and interests, and making suggestions and invitations. Activists' explanations of climate action—but not of climate solutions in the abstract—were correlated with an increase in partners' perceived personal response efficacy and intention to take action. Because efficacy beliefs are known to influence collective action, this finding suggests that proximizing climate action could be an important pathway for mobilizing concerned audiences.

This study has demonstrated that psychological distance and construal-level theory are useful for understanding why collective climate action is rare even among those who are concerned. Furthermore, the finding that loosely structured relational climate conversations mostly lead to further learning and discussion, but not collective action, has ramifications for how to use relational climate conversations in outreach and mobilization. If an organization aims to increase awareness of climate change, then relational climate conversations will likely produce the desired results even with little guidance. If the goal is to inspire collective climate action, however, organizations should consider providing additional frameworks, supporting resources, and trainings for climate conversations. One promising strategy for further exploration is focusing on concrete details of collective climate action, such as what to do and how to do it.

A major limitation of this study is that the treatment and control groups are not representative samples of US activists and non-activists they know. In particular, these samples are fairly politically progressive and relatively insulated from the effects of climate change. Demographics who have other political beliefs, as well as those who are more directly affected by the climate crisis, are likely to approach climate conversations differently. The US context, in turn, is not representative of the global climate movement. Regional political landscapes and interaction norms undoubtedly shape both the content and the outcomes of climate conversations. Future research could replicate the study with a larger and more representative sample—which could enable further clarification of the relationship between discourse strategies and conversation outcomes—and examine other national contexts to determine whether the findings are generalizable. In addition, further studies could evaluate self-efficacy as well as personal response efficacy; manipulate aspects of conversational settings, such as the number of participants, the participants' relationship to each other, the spacing of conversations, and the medium (including digital media); and vary the content of climate conversations, e.g., by introducing a stronger emphasis on specific opportunities for collective climate action.

DATA AVAILABILITY

The dataset for this study is available in the Harvard Dataverse⁶⁵ at <https://doi.org/10.7910/DVN/L7DJPO>.

CODE AVAILABILITY

The code for the analysis can be accessed at <https://dataverse.harvard.edu/api/access/datafile/7556112>.

Received: 16 August 2023; Accepted: 1 December 2023;

Published online: 27 February 2024

REFERENCES

- Kundzewicz, Z. W., Matczak, P., Otto, I. M. & Otto, P. E. From “atmosfear” to climate action. *Environ. Sci. Policy* **105**, 75–83 (2020).
- Moser, S. C. Reflections on climate change communication research and practice in the second decade of the 21st century: what more is there to say? *WIREs Climate Change* **7**, 345–369 (2016).
- Ritchie, H., Rosado, P. & Roser, M. CO₂ and greenhouse gas emissions. *Our World in Data* (2020). <https://ourworldindata.org/co2-and-greenhouse-gas-emissions>.
- Leiserowitz, A., Maibach, E., Rosenthal, S. & Kotcher, J. Climate change in the American Mind (2022).
- Tyson, A., Kennedy, B. & Funk, C. Climate engagement and activism. *Pew Research Center*. <https://www.pewresearch.org/science/2021/05/26/climate-engagement-and-activism/> (2021).
- Blake, J. Overcoming the ‘value-action gap’ in environmental policy: tensions between national policy and local experience. *Local Environ.* **4**, 257–278 (1999).
- van der Linden, S. Towards a new model for communicating climate change. in *Understanding and Governing Sustainable Tourism Mobility* (Routledge, 2014).
- Höppner, C. Rereading opinion polls on climate change in the UK Press. *Int. J. Commun.* **4**, 29 (2010).
- Leiserowitz, A., Maibach, E., Rosenthal, S., & Kotcher, J. (2022). *Climate Change in the American Mind: April 2022*. Yale University and George Mason University. <https://climatecommunication.yale.edu/wp-content/uploads/2022/07/climate-change-american-mind-april-2022.pdf> (2010).
- Geiger, N. & Swim, J. K. Climate of silence: pluralistic ignorance as a barrier to climate change discussion. *J. Environ. Psychol.* **47**, 79–90 (2016).
- Hill, N. American Climate Perspectives Survey 2023, Vol. I. *ecoAmerica* (2023). <https://ecoamerica.org/american-climate-perspectives-survey-2023-vol-i-blog/>.
- Noelle-Neumann, E. The spiral of silence a theory of public opinion. *J. Commun.* **24**, 43–51 (1974).
- Sparkman, G., Geiger, N. & Weber, E. U. Americans experience a false social reality by underestimating popular climate policy support by nearly half. *Nat. Commun.* **13**, 4779 (2022).
- Goldberg, M. H., van der Linden, S., Maibach, E. & Leiserowitz, A. Discussing global warming leads to greater acceptance of climate science. *Proc. Natl. Acad. Sci. USA* **116**, 14804–14805 (2019).
- Lawson, D. F. et al. Children can foster climate change concern among their parents. *Nat. Clim. Chang* **9**, 458–462 (2019).
- Beery, T., Schmitt, K., McDonnell, J. & Moore, T. Community climate conversations: engaging and empowering local action in a changing world. *J. Extens.* **57** (2019). <https://doi.org/10.34068/joe.57.06.24>.
- Galway, L. P., Beery, T., Buse, C. & Gislason, M. K. What drives climate action in Canada’s provincial North? Exploring the role of connectedness to nature, climate worry, and talking with friends and family. *Climate* **9**, 146 (2021).
- Fine, J. C. Closing the concern-action gap through relational climate conversations: insights from US climate activists. *Clim. Action* **1**, 1–15 (2022).
- TipSheet: Building a Relational Climate Conservation Program | Climate Advocacy Lab. <https://climateadvocacylab.org/resource/tipsheet-building-relational-climate-conservation-program>.
- Stoknes, P. E. Rethinking climate communications and the “psychological climate paradox”. *Energy Res. Soc. Sci.* **1**, 161–170 (2014).
- Norgaard, K. M. “People want to protect themselves a little bit”: Emotions, denial, and social movement nonparticipation. *Soc. Inquiry* **76**, 372–396 (2006).
- McDonald, R. I., Chai, H. Y. & Newell, B. R. Personal experience and the ‘psychological distance’ of climate change: an integrative review. *J. Environ. Psychol.* **44**, 109–118 (2015).
- Keller, E., Marsh, J. E., Richardson, B. H. & Ball, L. J. A systematic review of the psychological distance of climate change: towards the development of an evidence-based construct. *J. Environ. Psychol.* **81**, 101822 (2022).
- Maiella, R. et al. The psychological distance and climate change: a systematic review on the mitigation and adaptation behaviors. *Front. Psychol.* **11** (2020). <https://doi.org/10.3389/fpsyg.2020.568899>.
- Van Lange, P. A. M. & Huckelba, A. L. Psychological distance: how to make climate change less abstract and closer to the self. *Curr. Opin. Psychol.* **42**, 49–53 (2021).
- Geiger, N., Dwyer, T. & Swim, J. Hopium or empowering hope? A meta-analysis of hope and climate engagement. *Front. Psychol.* **14**, (2023). <https://doi.org/10.3389/fpsyg.2023.1139427>.
- Brick, C. & Lai, C. K. Explicit (but not implicit) environmentalist identity predicts pro-environmental behavior and policy preferences. *J. Environ. Psychol.* **58**, 8–17 (2018).
- Masson, T. & Fritsche, I. 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. *Curr. Opin. Behav. Sci.* **42**, 89–96 (2021).
- Fernandes-Jesus, M., Lima, M. L. & Sabucedo, J.-M. “Save the Climate! Stop the Oil”: actual protest behavior and core framing tasks in the portuguese climate movement. *J. Soc. Political Psychol.* **8**, 426–452 (2020).
- Furlong, C. & Vignoles, V. L. Social identification in collective climate activism: predicting participation in the environmental movement, extinction rebellion. *Identity* **21**, 20–35 (2021).
- Jugert, P. et al. Collective efficacy increases pro-environmental intentions through increasing self-efficacy. *J. Environ. Psychol.* **48**, 12–23 (2016).
- Doherty, K. L. & Webler, T. N. Social norms and efficacy beliefs drive the Alarmed segment’s public-sphere climate actions. *Nat. Clim. Change* **6**, 879–884 (2016).
- Bostrom, A., Hayes, A. L. & Crosman, K. M. Efficacy, action, and support for reducing climate change risks. *Risk Analysis* **39**, 805–828 (2019).
- David Suzuki Foundation. How and why to have climate change conversations. *David Suzuki Foundation*. <https://david Suzuki.org/what-you-can-do/how-and-why-to-have-climate-change-conversations/>.
- McLean, A. Attaining Meaningful Outcomes from Conversations on Climate. *Yale Program on Climate Change Communication*. <https://climatecommunication.yale.edu/news-events/attaining-meaningful-outcomes-from-conversations-on-climate/> (2019).
- Bloomfield, E. F., van Swol, L. M., Chang, C.-T., Willes, S. & Ahn, P. H. The effects of establishing intimacy and consubstantiality on group discussions about climate change solutions. *Sci. Commun.* **42**, 369–394 (2020).
- Ettinger, J. et al. Breaking the climate spiral of silence: lessons from a COP26 climate conversations campaign. *Clim. Change* **176**, 22 (2023).
- Grosse, C. *Working across Lines: Resisting Extreme Energy Extraction*. University of California Press (2022).
- van Swol, LM, Bloomfield, EF, Chang, CT, Willes, S. Fostering climate change consensus: the role of intimacy in group discussions. *Public Understanding Sci.* **31**, 103–118 (2022).
- Webster, R. & Marshall, G. The #TalkingClimate Handbook: how to have conversations about climate change in your daily life. *Climate Outreach/EIT Climate-KIC* (2019). <https://climateoutreach.org/reports/how-to-have-a-climate-change-conversation-talking-climate/#>.
- Trope, Y. & Liberman, N. Construal-level theory of psychological distance. *Psychol. Rev.* **117**, 440–463 (2010).
- Fessel, F. Increasing level of aspiration by matching construal level and temporal distance. *Soc. Psychol. Personal. Sci.* **2**, 103–111 (2011).
- McCrea, S. M., Liberman, N., Trope, Y. & Sherman, S. J. Construal level and procrastination. *Psychol. Sci* **19**, 1308–1314 (2008).
- Katz, S. J. & Byrne, S. Construal level theory of mobile Persuasion. *Media Psychol.* **16**, 245–271 (2013).
- Bandura, A. Self-efficacy mechanism in human agency. *Am. Psychol.* **37**, 122–147 (1982).
- Bandura, A. Self-efficacy: toward a unifying theory of behavioral change. *Psychol. Rev.* **84**, 191–215 (1977).
- Bandura, A. Social cognitive theory in cultural context. *Appl. Psychol.* **51**, 269–290 (2002).
- van Zomeran, M., Saguy, T. & Schellhaas, F. M. H. Believing in “making a difference” to collective efforts: participative efficacy beliefs as a unique predictor of collective action. *Group Process. Intergroup Relations* **16**, 618–634 (2013).
- van Zomeran, M., Postmes, T. & Spears, R. Toward an integrative social identity model of collective action: a quantitative research synthesis of three socio-psychological perspectives. *Psychol. Bull.* **134**, 504–535 (2008).
- Roser-Renouf, C., Maibach, E. W., Leiserowitz, A. & Zhao, X. The genesis of climate change activism: from key beliefs to political action. *Clim. Change* **125**, 163–178 (2014).
- Chen, M.-F. Self-efficacy or collective efficacy within the cognitive theory of stress model: which more effectively explains people’s self-reported proenvironmental behavior? *J. Environ. Psychol.* **42**, 66–75 (2015).
- van Zomeran, M., Spears, R. & Leach, C. W. Experimental evidence for a dual pathway model analysis of coping with the climate crisis. *J. Environ. Psychol.* **30**, 339–346 (2010).
- Rees, J. H. & Bamberg, S. Climate protection needs societal change: determinants of intention to participate in collective climate action. *Eur. J. Soc. Psychol.* **44**, 466–473 (2014).

54. Bamberg, S., Rees, J. & Seebauer, S. Collective climate action: determinants of participation intention in community-based pro-environmental initiatives. *J. Environ. Psychol.* **43**, 155–165 (2015).
55. Hart, P. S. & Feldman, L. The influence of climate change efficacy messages and efficacy beliefs on intended political participation. *PLOS ONE* **11**, e0157658 (2016).
56. Choi, S. & Hart, P. S. The influence of different efficacy constructs on energy conservation intentions and climate change policy support. *J. Environ. Psychol.* **75**, 101618 (2021).
57. Meijers, M. H. C., Wonneberger, A., Azrout, R., Torfadóttir, R. H. & Brick, C. Introducing and testing the personal-collective-governmental efficacy typology: How personal, collective, and governmental efficacy subtypes are associated with differential environmental actions. *J. Environ. Psychol.* **85**, 101915 (2023).
58. Thaker, J., Howe, P., Leiserowitz, A. & Maibach, E. Perceived collective efficacy and trust in government influence public engagement with climate change-related water conservation policies. *Environ. Commun.* **13**, 681–699 (2019).
59. Geiger, N., Swim, J. K. & Fraser, J. Creating a climate for change: interventions, efficacy and public discussion about climate change. *J. Environ. Psychol.* **51**, 104–116 (2017).
60. Geiger, N., Swim, J. K., Mallett, R. K. & Mulvey, L. L. Experience matters: civic discussion increases self-efficacy and reduces forecasted discomfort in future conversations. *Soc. Psychol. Persona. Sci.* **14**, 922–933 (2023).
61. Strauss, A. L. *Qualitative Analysis for Social Scientists*. (Cambridge University Press, 1987).
62. Grinyer, A. The anonymity of research participants: assumptions, ethics, and practicalities. *Pan-Pacific Manag. Rev.* **12**, 49–58 (2009).
63. Wynes, S. & Nicholas, K. A. The climate mitigation gap: education and government recommendations miss the most effective individual actions. *Environ. Res. Lett.* **12**, 074024 (2017).
64. Whitmarsh, L., O'Neill, S. & Lorenzoni, I. Carbon Capability: what does it mean, how prevalent is it, and how can we promote it? In *The Handbook of Sustainability Literacy: Skills for a Changing World*. John Elford, Green Books, Totnes. (2009).
65. Fine, J. Climate conversations: Discursive strategies of climate justice organizing. Harvard Dataverse. <https://doi.org/10.7910/DVN/27FO2A> (2022).

ACKNOWLEDGEMENTS

This study was funded by a NSF-SBE postdoctoral fellowship (Award Number 2103697). The funder played no role in study design, data collection, analysis and interpretation of data, or the writing of this manuscript.

COMPETING INTERESTS

The author declares no competing interests.

ADDITIONAL INFORMATION

Supplementary information The online version contains supplementary material available at <https://doi.org/10.1038/s44168-023-00091-0>.

Correspondence and requests for materials should be addressed to Julia C. Fine.

Reprints and permission information is available at <http://www.nature.com/reprints>

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2024