

# A broader mind: concern with other humans, equality, and animals

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How can we as individuals or groups mitigate climate change? One key issue is whether motives other than the pursuit of material self-interest can be used fruitfully to reduce climate change. In this article I describe recent research that supports three deeply rooted concerns: (a) concern with other humans (prosociality), (b) concern with equality (egalitarianism), and (c) concern with animals (as part of adherence to biospheric values). Because one of the chief issues regarding climate change is its abstractness, it is important in public education to highlight the concreteness of climate change's harm done (a) to other people, such as (grand)children, (b) to people suffering the most (and having contributed the least to climate change), and (c) to key aspects of nature, including not only 'adorable animals' (such as pandas or koalas), but even the suffering and threat of extinction of butterflies and other insects.

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While people are strongly concerned with their own interests, many human decisions are not merely guided by short-term self-interest. Indeed, it is appropriate to describe the human mind in terms of a 'broader mind', equipped with skills and motives to consider broader concerns such as social preferences and future orientation [1<sup>••</sup>,2,3]. This is important because such broader concerns may suggest some new (and potentially effective) ways to behavioral change. What are the key aspects of the broader mind? Which specific social preferences toward other people are most relevant? And do the social preferences also extend to non-humans, even insects?

In this article, I discuss three broader concerns highlighting theory and key findings from the recent literature. In

what follows, I begin with discussing two deeply rooted orientations (or concerns) with which people navigate social life with other humans: prosociality and egalitarianism. After that I discuss concern with nature, with a particular focus on animals that are least likely to elicit prosociality: insects such as butterflies and crickets. In doing so, I will explicate recommendations for policy aimed at mitigating climate change through behavioral change (Table 1).

## Concern with other humans (Prosociality)

While high-cost cooperation is emphasized in the literature on prosociality, many people would agree that everyday life calls for simply a positive approach toward others, such as kindness or being considerate. It does not need to bring about large costs. Friends and strangers do not often ask for large amounts of money, days of effortful helping, but rather a friendly or kind approach – a compliment, quick advice, or as the Beatles expressed it: 'with a little help from my friends'. Clearly, acts of kindness are quite prevalent.

A recent case in point is studies on social mindfulness [4<sup>••</sup>]. An example of social mindfulness might occur at a hotel breakfast. Imagine that there are two flavors of yoghurt, cherry and strawberry, but there is only one cherry left. A guest might take the last cherry yoghurt, but that would deprive anybody who comes later of a choice. The socially mindful option would be to leave the last slice and pick something else (see Ref. [5]). The social mindfulness construct has been operationalized as 'making other-regarding choices involving both skill and will to act mindfully toward other people's control over outcomes' [4<sup>••</sup>, p. 86].

Research has shown that people exhibit social mindfulness. If people are led to believe that there is no second chooser, the percentage of people choosing the non-unique item is only 52% — it becomes a choice based only on preferences for the items themselves. But if people are led to believe that there is a second person, and their choice affects the options for that second person, a large majority (78%) chooses the non-unique item [6,7]. More recent research has also revealed an intriguing association between social mindfulness and the nationwide concern with environment (the so-called Environmental Performance Index, [8]): Countries that are more socially mindful also are more likely to have higher scores on (visible) concern with the environment (e.g. governmental measures aimed at reducing climate change; [9]).

Table 1

**An overview of three concerns (and how to activate them): prosociality, egalitarianism, and concern with animals**

- Prosociality can be activated by emphasizing climate change's harm to those facing the future of our environment, such as (grand)children.
- Egalitarianism can be activated by emphasizing climate change's harm to those suffering the most (and who often have contributed the least to climate change), such as people living in hot and vulnerable climates.
- Concern with animals can be activated by emphasizing climate change's harm to a broad spectrum of animal life, including a wide variety of animals – even insects.

Research on donations, or simply returning wallets, also supports the prosociality of humankind. A striking finding recently reported by Cohn and colleagues [10] is that, contrary to models assuming maximization of economic benefit, people in almost all of 24 different nations were more likely to return a lost wallet *with* than one *without* money. Taken together, there is little doubt that many people, even with strangers, tend to adopt an orientation that we may scientifically describe as 'prosocial' and that entails a broad spectrum of low-cost cooperation, such as acts of kindness, to high-cost cooperation, such as acts of generosity.

*Recommendation:* Many people are predisposed to help (and not harm) others. With increasing urgency of climate change, it becomes essential to highlight the prosocial nature of humankind in the most specific ways. Increasing the salience of prosocial actions, especially by a great variety of people and groups, will serve as a strong signal – a descriptive norm – for other people (including political, corporate, and other leaders) to follow [11]. While acts motivated by the goal to mitigate climate change may be most effective in communicating a descriptive norm of sustainable behavior, other acts demonstrating prosociality may also communicate, albeit more indirectly, the norm to be prosocial – or responsible – citizen. In addition to highlighting prosocial acts, it may be good to aim educational campaigns to bring about behavioral change to help those that are most strongly (and genetically) linked to the self and have a future: the next generation of children and grandchildren [12\*\*].

### Concern with equality (Egalitarianism)

Another concern is egalitarianism, an orientation to minimize (absolute) differences in outcomes for self and others. Although not as strong as self-interest, egalitarianism appears to be quite a strong concern, as shown, for example, in research on the so-called dictator game. A typical dictator game is a situation in which one person faces the decision how many coins (or dollars out a 10-dollar endowment, or other currencies) to give to another person, but the other person does not face this decision. A meta-analysis ([13] 2011,  $N = 20\ 813$ ) uncovered three peaks: 36% of all participants gave nothing to the other; 17% gave exactly half the endowment (the equal split), and 5% gave all of the endowment. Egalitarianism is quite basic, and has been shown to gradually develop in

children in between 3 and 8 years old [14]. Indeed, parents may witness or remember their children protesting even when facing the smallest inequality in outcomes: 'That is not fair!'

Research has shown that a concern with the welfare of others is associated with egalitarianism. Those who are considerate to others are also likely to favor equality in outcomes [3]. Indeed, a good number of people, often referred to as prosocials, pursue good outcomes for self and others, as well as equality in outcomes (around 55–60%). In contrast, a sizeable group of people primarily seek to enhance outcomes for self, with little or no regard for outcomes for others or equality (individualists, around 30%). Finally, a minority is classified as competitive (10–15%), they seek to outperform others, thus pursuing relative advantage over others [15]. These differences are associated with various behaviors relevant to climate change. For example, relative to individualists and competitors, prosocials are more prone to read about climate change, to hold pro-environmental attitudes and beliefs, to exhibit pro-environmental behaviors, and support climate change mitigation measures by the government and other authorities [16–18]. Because a prosocial orientation in this tradition of research represents a dual concern, the above findings may be explained by prosociality *and* egalitarianism.

Last but not least, differences in prosocial (versus individualistic and competitive) orientations have been shown one of the most important predictors of donating effort and time to help victims of natural disasters [19]. The next important predictor was social mindfulness, which accounted for greater variance in donations that did education level, political orientation, or religiosity. This is a non-trivial finding, because it shows that prosocial orientation underlies a strong willingness to help people (even outgroups) they have never seen or met. We do not know for sure whether egalitarianism plays a major role, but this possibility seems plausible because egalitarianism in particular seems to cut across group boundaries. One case in point is food-sharing across families in small scale societies. Another example is that egalitarianism often operates as a moral principle — a rule of fairness — that is easily activated when there is a risk that outcomes will not equally distributed [20]. But one may ask the obvious: Why does egalitarianism matter for climate change?

My answer: Because climate change is not created equal — and the effects of climate change are not distributed equally either. Indeed, there is strong consensus among scientists and policy makers that climate change is unfair, for at least two reasons. First, it is the prosperous, especially in the western world, that have contributed to climate change, especially in the past five decades. Massive car use, heating houses, energy use for cooking, have all contributed to climate change, but especially by people living in affluent countries [21].

Second, the effects of climate change are most strong and pervasive in those parts of the globe where the natural climate is already very hot and/or vulnerable to extreme weather and natural disasters (e.g. flooding). The global effects of climate change — increases in temperature and ecological risk of natural hazards — causes stronger detrimental effects in countries that are already hot and relatively poor [22]. Indeed, these consequences are and found to cause an increase in migration, especially in regions most vulnerable to the effects of climate change [23].

Given the fundamental nature of egalitarianism, there is good reason to believe that many people are sensitive to the unfair nature of climate change. While the sensitivity can be easily activated, it is possible that the issue of fairness escapes from people's attention. Reasons are that (a) people facing these issues in relatively hot or poor countries live far away, (b) the effects of climate change are not only distal but also largely gradual rather than abrupt, and (c) as a group, people might first look climate change effects in the own country or be distracted by other local issues or crises that the 'own groups' faces (e.g. COVID-19, economics).

*Recommendation:* The unfairness of climate change can be highlighted in various ways — for example, by showing the devastating effects of heat for well-being and for prospects of (economic) growth. The fact that richer countries (who have largely caused climate change) can do more now than the poorer countries is also a fact that needs to be made concrete, as it may attenuate diffusion of responsibility and strengthen perceived efficacy. A sense of urgency [24] may also be communicated even more effectively when more concrete (even if far away) illustrations about the devastating effects of climate change can be provided. Thus, highlight the unique position of people living in the resourceful, affluent countries, and what they can do much more than others to mitigate climate change.

### Concern with animals (as part of Biospheric Values)

Scientists have outlined the importance of biospheric values, which is defined as a value orientation in which 'people judge phenomena on the basis of costs or

benefits to ecosystems or the biosphere' [25]. And there is considerable research supporting this perspective, revealing that biospheric values make a relatively unique contribution in prediction sustainable behavior (for a review, see Ref. [26]). The key question is how one can make these abstract values concrete? After all, for behavioral change is often important that values are activated or triggered by highlighting examples or concrete information.

From that perspective, Batson *et al.* shared an interesting observation [27]. While having made an enormous contribution to the literature on empathy and altruism among humans, he discovered that empathy may more strongly activated in people by the suffering of a young puppy than by the suffering of a fellow student. Further, when looking at only adults or only young ones, the levels of empathy for humans and dogs were very similar. Recent research not only replicated this pattern, but also extended it [28]. They too examined degree of empathy for a brutally beaten human adult or child versus an adult dog or puppy, as described in a fictitious news report. The main finding was that levels of empathy were similar humans and dogs, with an intriguing twist: A child, a young dog, and an adult dog elicited higher levels of empathy than did an human adult. It is possible that attributions of 'responsibility' played a role, in that an human adult is likely to be viewed as most responsible for his actions. But setting this explanation aside, these findings highlight the idea that people care a lot about an animal — here a dog — to a similar degree as they do for humans.

Of course, this is far from being a complete picture. For example, most people care a lot about the welfare and interests of companion animals (e.g. cats and dogs) and some other animals (e.g. dolphins and chimps), than about food or farm animals (e.g. pigs and sheep) or worse, some reptiles or insects (e.g. snakes, frogs, cockroaches, and spiders) [29,30]. One argument is that animals considered food and with reduced mental capacities are viewed as less part of our moral circle. It is interesting to note that concerns for humans and animals seem strongly interrelated (for a broader review, see Ref. [31]). For example, research has shown that concerns with animal welfare are associated with concerns for other humans, just as empathy toward animals is associated with empathy toward humans [32].

In our own research, we examined two sorts of insects — butterflies and crickets — that are not very high on the list of 'cuddle animals' but that can promote sustainable behaviors. In research on butterflies, we found that beauty of the butterflies mattered. As it turns out, it are especially the butterflies with eyespots that people appreciate in terms of beauty, which in turn helps people to be concerned about the environment, in that

they increasingly support protection of butterflies [33]. Another study focused on crickets, and their lives, in the context of so-called resource dilemma, an economic game that models climate change as a social dilemma [34\*\*]. When players believed that exhausting a resource would lead to the immediate death of live crickets they reduced personal consumption, equating to increased cooperation and greater collective benefit, relative to players given standard instructions. These findings highlight an important way in which sustainable behavior can be promoted: to emphasize the non-monetary — and especially the non-tradable — value of a resource.

*Recommendation:* Many people have biospheric values, but the question is how to activate them. I recommend make key aspects of nature concrete. The findings that even highlighting insects can promote sustainable attitudes and behavior is very promising for the wide variety of ways in which threats to the ecosystem or biosphere can be made salient. Powerful and concrete illustrations of particular species threatened to become extinct can activate motives relevant to sustainable behavior. And they may go beyond cuddle animals.

### Concluding remarks

Scientists and policy makers devote much attention to self-interested motives that can inspire sustainable behavior can vary from installing double glass windows, reducing energy use, to flying less or eating less meat. In this article I advance an analysis of the ways in which three distinct basic concerns can motivate such concrete sustainable behaviors. The conclusion is reached that concern with other humans, equality, and animals can productively motivate sustainable behavior. Prosocial orientations can be highlighted by outlining the costs of climate change for the next generation, such as ones (grand)children. Egalitarianism can be activated by providing concrete information about how people in less developed parts of the world suffer the consequences of climate change, which may also help us understand why refugees sometimes have no choice but to migrate. Biospheric values can be activated by highlighting the costs of climate change to specific species. The psychology revolving around behavioral change, including specific beliefs, emotions, and other drivers of change, can only become active if orientations, however basic, become concrete goals.

### Conflict of interest statement

Nothing declared.

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