proposal

Making it easier to take environmental actions is not enough: Policymakers must also emphasize why action is necessary

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abstract

A complete policy response to climate change, habitat destruction, plastic pollution, and other Anthropocene challenges requires action by governments, industries, nongovernmental organizations, and individuals. In this article, we focus on ways to persuade individuals to take action, whether that entails making decisions to reduce their own carbon emissions, lobbying for new laws, or providing leadership in their sphere of influence. We argue that interventions will be most effective if they not only make it easier for people to act (as behavioral science suggests) but also highlight moral reasons for taking action and assure people that their actions make a difference. Such steps should increase humanity's chances of surviving and thriving in the Anthropocene.

Newell, B. R., & Moss, J. (2021). Making it easier to take environmental actions is not enough: Policymakers must also emphasize why action is necessary. *Behavioral Science & Policy, 7*(2), 91–99.

Core Findings

What is the issue?
Behavioral interventions often target the ease with which an individual or group can adopt a desirable action. But to address the potentially catastrophic environmental and ecological challenges brought about by the Anthropocene, these interventions should take the moral dimension into account as well so that they can be even more effective.

How can you act?
Selected recommendations include:
(1) Setting the default choice to be the option that most benefits the environment
2) Emphasizing the public good of a behavioral change and combining this with initiatives that require people to publicly commit to changing their behavior

Who should take the lead?
Policymakers, organization leaders, and researchers on environmental issues

During the Southern Hemisphere summer of 2019–2020, the world looked on in horror as Australia burned. Bushfires of unprecedented ferocity wreaked havoc across large swaths of the country. Australia's largest-ever bushfire burned an estimated 20% or more of Australia's forests, leading to the loss of 34 lives, 5,900 buildings, and over 1 billion animals.[1] If ever there was a signature event to represent the negative consequences of the Anthropocene, surely this was it.

The Anthropocene is a proposed geologic time period that has already begun and is marked by human activities' significant effects on Earth's systems.[2] Climate change, wildfires, habitat destruction, plastic pollution, and widespread extinctions are examples of these effects. Accepting that human actions have such negative consequences is uncomfortable for many people, in part because such an acknowledgement leads to the obvious follow-up question of whether such contributions generate any responsibility to address these problems.

Although governments and industry have major roles to play in mitigating these effects, part of the overall response will require persuading individuals to change behaviors that affect the environment. In this article, we argue that those attempting to drive this change must anticipate and answer such questions as "Why should I bother altering my behavior? And if I do change, will my actions make a difference?" We also contend that people will be most motivated to act in pro-environmental ways when the answer to the first question is grounded in firm moral arguments and the answer to second question is a clear "yes."[3,4]

At the most basic level, moral arguments concern how people judge whether an action is right or wrong. Emphasizing the moral aspects of actions is important for two reasons. First, moral arguments can persuade people that they bear some responsibility for problems in the world and that the behavioral changes being asked of them are fair. Second, people are more likely to comply with policies requiring behavior change if they perceive that the policies align with robust moral justifications for making the change. For example, learning of the harms that might be caused to others by not isolating during a pandemic—and the importance of avoiding those harms—is likely to increase compliance.

We should stress that articulating a moral framework for action does not guarantee that individuals will always act in accordance with that framework. But being aware of the right course of action often bolsters the motivation to take that action and avoid immoral ones.

In the first section of this article, we unpack the moral case for taking individual action to protect the planet, emphasizing that the obligations of not causing harm and of doing one's fair share are crucial for motivating people to take pro-environmental actions. In the second section, we discuss ways that messaging can emphasize the efficacy of individual actions and ways to help people determine what constitutes their fair share. In the final section, we propose some ways policymakers can incorporate these ideas into more effective policies and communications about those policies.

The Moral Case for Individual Action

Moral philosophers often speak of people having two kinds of ethical duties. *Positive duties* are actions that people ought to do because they can assist others. *Negative duties* are actions that people can and ought to avoid so as to do no harm. The obligation to do one's fair share is less discussed as a moral imperative but is also a component of morality.

Positive Duties

The notion of positive duty implies having the ability to act. In the case of climate change, the duty required of wealthy individuals might be to provide others with assistance by bearing a greater share of the costs of adaptation (such as building flood barriers or growing heat-resistant crops) and transition (such as installing renewable energy infrastructure). The broader literature on global justice refers to numerous

positive duties—among them, duties based on human rights[5] and duties of beneficence (acting for the benefit of others).[6] In the article "Famine, Affluence, and Morality," Peter Singer claimed that "if it is in our power to prevent something very bad from happening, without thereby sacrificing anything morally significant, we ought, morally, to do it."[7] Singer's is a classic statement of a positive duty argument in that it attempts to motivate action not on the basis of whether one has caused the harm in question but on the basis of whether one can do something about it.

Negative Duties

Negative duty arguments assert that people should avoid violating others' interests in a significant way. In other words, it is not acceptable to cause harm to others in pursuit of individual goals, especially if the harm can be avoided; if people do cause harm to others, they are plausibly liable for the consequences. Dumping toxic waste on another person's property is not justified even when it is greatly beneficial to the person doing the dumping. According to the same argument, activities that result in emissions of carbon dioxide and other greenhouse gases cause harm to others by contributing to climate change.

Whatever the disagreements over whether people have a positive duty to aid, many will agree that people have a duty not to harm. The injunction to avoid causing harm should influence people's actions more strongly than the motivation to do good does. Therefore, in this article, we focus more on negative duty than on positive duty.

Doing One's Fair Share

Beyond the duty to help and not harm others as they are able, people concerned about morality might also be motivated by the responsibility to do their fair share. One way to motivate action is to convince people that they are being unfair if they do not join in with others to make a difference.

Consider the example of taxation. People may ask themselves, "What is wrong with my not paying my taxes? They are just a tiny portion of the overall taxes paid in one country." But they may be moved to pay taxes if they realize it is unfair to avoid making any sacrifices to pay for all the social goods that taxes provide while everyone else has to do their share. Tax avoidance is wrong because a member of a group that has agreed to take action to provide something worthwhile does not participate in that action while others do.[6]

"people have a duty not to harm"

The same kind of argument can be made in relation to climate change. When people are reminded that many other individuals have collectively agreed to take action to reduce emissions because of the harms emissions can cause, they ought to be motivated to do their part to ensure emissions are reduced. Not doing so is a kind of moral free riding. *Free riding* typically means receiving a benefit from a collective good but failing to contribute, such as when someone rides the bus but fails to buy a ticket. In the climate case, the duty to contribute does not depend on gaining a direct personal benefit but merely on being a member of some group that has agreed to sacrifice to fix a problem.

Ways to Demonstrate That Individual Actions Are Effective

Even if moral arguments convince people that they need to take action, they may be deterred by the belief that any action they take would be too insignificant to make a difference. In one sense, they would be right: The emissions produced by the average individual are only a very tiny fraction of the world's annual emissions. The average citizen of the United States emits 16.24 metric tons of carbon dioxide annually, whereas the world's annual emissions were around 26 billion tons in 2017.[8]

Or take the example of polluting the oceans with plastic waste. The Great Pacific Garbage Patch, made up of millions of tons of plastic waste, covers an area larger than Texas.[9] Surely

throwing a single bag into the sea will make only an insignificant difference to the problem?[10]

But thinking about preventing emissions or plastic pollution in this way is incomplete, because small contributions add up. Yet if people do not believe that their actions are effective, they are less likely to be persuaded to act.[11] Therefore, efforts to alter behavior should demonstrate that the requested action truly makes a difference.

Demonstrate Effectiveness by Aggregating Actions Across Time

People's individual emissions become more troubling to them when they consider those emissions over the course of their lives. For instance, John Broome has estimated that the average person born in 1950 will emit around 800 tons of carbon dioxide in their lifetime.[12] Broome combined these figures with the World Health Organization's estimates of the number of deaths caused by climate change, and found that the average person in the United States is responsible for the destruction of around six months of healthy life.[12–14]

1 billion animals were lost in Australia's 2019–2020 bushfire season

Global carbon dioxide emissions in 2017 totaled 26 billion metric tons

The average US citizen is responsible for 16.24 metric tons of carbon dioxide emissions annully

These calculations assume that the harm resulting from climate change increases linearly as emissions increase, which may not be the case. But in general, these calculations demonstrate that the harm posed by an individual's emissions—whatever their exact quantity—is real.

If people accept the argument that each individual's emissions are contributing to harm, then they should also accept that each individual can do good by engaging in a mitigating action, even if that action feels like a mere drop in the bucket at the time.

Demonstrate Effectiveness by Aggregating Actions Across Groups

Another way to highlight effectiveness is to encourage people to consider the collective effect of many individuals' actions. For example, participants in one study were more effectively persuaded to reduce their TV watching when told that 1,000 people can prevent the emission of 1,190 pounds of carbon dioxide by watching 20% less TV for a week than when told that one individual can save 1.19 pounds of carbon dioxide emissions the same way. The two statements are, of course, mathematically equivalent, but the aggregated number has greater psychological impact.[15]

It is interesting that the aggregation effect appears to work better when the aggregation occurs across people rather than time, even though one person taking the same action every day for 1,000 days achieves the same impact as 1,000 people taking action on one day. It seems that people's tendency to discount the effects of actions that occur in the future (such as 1,000 days hence)[16] reduces the persuasiveness of a message that aggregates data across days as compared with a message that aggregates data across people.

Furthermore, there is evidence that people are more likely to act if they know they are part of a large group of people taking the same action, because they perceive group effort to be more effective.[17] Specifically, when pro-environmental outcomes are described as deriving from the effort of many people rather than just one, participants are more likely to believe that their own actions and those of others would be effective at achieving a collective goal, such as addressing the threat of climate change.[15]

Help People Define Their Fair Share

Once people are convinced that they need to take an action, they may need guidance in deciding what their fair share entails. Does taking one kind of pro-environmental action give a person moral license to engage in other behaviors that are less environmentally friendly? For example, does giving up the family car make it OK to fly more, or does saving water allow the use of more electricity?[18] Several lines of research suggest that people engage in this form of moral calculus, which can reduce the overall effectiveness of efforts to encourage the public to engage in a set of behaviors having related goals.[19] For example, because a household is reducing water use, its members may feel entitled to not reduce or even increase electricity use.

David Hagmann and his colleagues are among those who make the case that such calculations can reduce the effectiveness of interventions aimed at inducing pro-environmental behavior.[20] They argue that people who respond to simple, low-cost actions might get the impression that they are doing enough and thereby neglect to take more efficacious actions or to support green policies.

To explore this idea, the researchers ran a set of experiments using hypothetical scenarios in which different groups of participants were asked to indicate their support for actions to reduce societal carbon emissions. The key comparison was between a tax on carbon use and a plan in which electricity that powered residents' homes would be generated by renewable energy sources unless residents took the trouble to opt out of the program (the "default-renewables option"). One group of participants (the "single-implementation" group) was asked whether they supported a carbon tax. A second group (the "joint-implementation" group) was told about both the tax and the default-renewables option and asked whether they supported the tax, the default, both, or neither. The team found that support for the tax was higher in the single-implementation group (70% of participants supported it) than in the joint-implementation group (55%). This was similar to the result in another experimental variation in which the researchers manipulated the order in which details about the tax and the default-renewables option were presented to participants. When the tax information came first, 60% of respondents supported it, but when the default-renewables option information was presented first, support for the tax dropped to 40%.[20] This pattern of results implies that the default-renewables option provides false hope of a solution that does not require resorting to costly interventions like taxes, which would be much more effective at reducing emissions.

Hagmann and his colleagues found that nonexpert participants rated the default-renewables option as being at least as effective as the tax in reducing carbon emissions. Perhaps even more worrisome, so did a subgroup of participants who were graduates of the Heinz College of Public Policy at Carnegie Mellon University, half of whom had professional roles shaping public policy. Whether this belief was driven by skepticism in the ability of a government to actually implement a carbon tax or a genuine misconception about the effectiveness of the two approaches is unclear. However, only when a heavy-handed intervention was used to explain the relative ineffectiveness of the default-renewables option did support for the tax rise to the level seen when it was presented as single option.[20]

"does saving water allow the use of more electricity?"

A further aspect of assessing one's fair share concerns the actions that best meet an individual's duty to contribute to collective action against climate change. A fair share could mean simply reducing one's personal emissions. Although this action is important, it is not the only way or even the most effective way an individual could contribute. If carbon taxes or other policies are the most effective ways of reducing emissions, then policymakers need to make this effectiveness clear, and individuals ought to work to put such policies in place. Indeed,

Arguments That Encourage Individual Action

Moral Arguments
• Positive duty: If individuals can take an action to help others, they should do so. • Negative duty: If individuals can take an action to cease harming others, they should do so. • Fair share: To tackle problems that require collective effort, each person should do their fair share.[a]
Arguments Indicating That Individual Actions Matter
• Aggregating data on the effects of actions across a lifetime can make it easier for people to appreciate the significance of small daily actions. • Aggregating data on the effects of the actions of a large group of individuals can make it easier for people to appreciate the significance of those actions.

[a] In invoking the need to do one's fair share, be cognizant of potential unintended consequences: When people do their fair share in one arena (such as water conservation), they tend to do less than their fair share in another arena (such as energy conservation).

"implicit social interactions play a role"

if collective measures are necessary to achieve lasting and effective emissions reductions, then acting to influence the political process is likely to be more effective than reducing one's personal emissions. Individuals might take action to push political change by voting, campaigning, lobbying, persuading others, or donating to political parties. (See the sidebar Arguments That Encourage Individual Action for a summary of effective strategies.)

Implications for Policy Design

Policymakers and practitioners can highlight in at least two ways moral concerns that motivate people to act responsibly toward the environment: They can use behavioral science–based interventions that implicitly convey the message that the actions are the ethical thing to do, and they can incorporate explicit moral components into communications. In the first case, a policy could set the default choice to be the option that most benefits the environment. Even if an individual does nothing, the most desirable environmental outcome is realized.[21] Such techniques are effective,[22] and they implicitly communicate the moral motivation because individuals infer that the default option is the right thing to do for the environment.[23,24]

Implicit moral recommendations can also be embedded in other types of policies. For example, evidence suggests that charging for plastic bags in shops reduces usage more effectively than does providing an equal discount for shoppers who bring their own bags.[25] One factor contributing to the efficacy of this policy might be social sensemaking—inferring what policies say about the intentions of the policy setter.[24] In this case, shoppers might infer that the surcharge implies that the policy setter (the government in this case) thinks most shoppers already bring their own bags and this is what shoppers ought to be doing. In this way, the policy aligns the use of reusable bags with social norms that are both descriptive (what other people do) and injunctive (what people ought to do), indirectly appealing to the moral need for everyone to do their bit for the environment. Naturally, other factors might also contribute to the success of such policies, such as the fact that people dislike additional costs, but a growing body of evidence suggests that implicit social interactions between policy-setters and the public play a role in the success of interventions.[24,26]

Turning to more explicit methods, we note that moral arguments can be directly incorporated into policy communication. For instance, Omar Asensio and his colleagues found that explicitly framing the benefits of an energy conservation scheme in terms of reducing harm to public health and the environment improved rates of energy savings,[27] perhaps because such explanations engaged individuals' sense of being part of a collective with a responsibility not to harm other members of the collective. This framing is a different and plausibly more effective alternative to explaining how an action may affect someone individually.

Approaches that explicitly emphasize the public good can be combined with initiatives that require people to publicly commit to changing their behavior (for example, to reduce plastic bag usage). Commitments can markedly increase the likelihood that people will engage in a behavior.[28] They also can potentially overcome the perception that individuals' actions are too small to make a difference by demonstrating that a large number of people are taking the action, essentially aggregating action across groups, as described earlier in this article. In turn, these records help to establish a descriptive social norm for the desired behavior. If the targeted behavior is, in fact, uncommon, practitioners could motivate people to participate by emphasizing the large effect that would result from 1,000 people adopting the desired behavior.[15]

Different sectors of the population are sometimes motivated by different moral arguments. For example, evidence suggests that conservatives are more effectively persuaded to begin recycling when a sense of authority and civic

duty are emphasized, whereas liberals respond more readily to arguments highlighting the need to care for others and reduce harm to the environment.[29] Similarly, if a sector of the population values economic growth and low energy prices, it can be effective to explain that rapid emissions reduction is not necessarily at odds with those concerns. Evidence that some renewable energy sources have already reached parity with fossil fuels could be particularly convincing for this audience.[30,31] More research is needed to explore whether individuals view pro-environmental behaviors as moral obligations and how best to match moral messaging to the attitudes of different populations.[11] (See the sidebar Ways to Improve Policies & Policy Communications for a summary of tips for effective messaging.)

Ways to Improve Policies & Policy Communications

Implement Policies That Provide Implicit and Explicit Moral Motivations
• Use policies in which the default option is the desired option. Defaults convey the implicit message that the default option is morally right. • Use policies that impose fees for undesired actions. These convey the implicit message that the undesired behavior is wrong and that most people do the desired action. • Use messaging that gives explicit moral explanations for policies. Explicit messaging can improve participation rates.
Tailor Moral Arguments to the Audience
• Evidence shows conservative audiences are more receptive to messages that refer to authority, civic duty, and a considerate society. • Liberal audiences are more receptive to messages that refer to taking care of others and protecting the environment.

Conclusion

Although moral arguments alone are not sufficient to alter behavior, they may add important motivation for individuals to change their behavior. Our analysis provides pointers to the kinds of moral arguments that future research should address. However people come to act in moral ways, the warm glow that results from doing the right thing may provide motivation for maintaining a long-term commitment to pro-environmental behavior that is more powerful than what externally imposed rewards and penalties can achieve.[3,4,32,33] It is only through such intrinsically motivated commitment that humankind will not just survive but thrive in the Anthropocene.

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We thank Belinda Xie and Kitty-Jean Laginha for comments on a draft of this article. A grant from the University of New South Wales Digital Grid Futures Institute for the project A Just Energy and Climate Transition provided funding for the research.

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