frontiers | Frontiers in Communication

TYPE Brief Research Report
PUBLISHED 22 January 2026
DOI 10.3389/fcomm.2026.1693311



OPEN ACCESS

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RECEIVED 26 August 2025
REVISED 17 December 2025
ACCEPTED 09 January 2026
PUBLISHED 22 January 2026

CITATION
Radke J, Guan S, Dunn E and Zhao J (2026) How do-more-good frames influence climate action likelihood and anticipated happiness. *Front. Commun.* 11:1693311. doi: 10.3389/fcomm.2026.1693311



# How do-more-good frames influence climate action likelihood and anticipated happiness

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Calls for climate action often emphasize the need to reduce harm, such as by eating less meat, driving less, and shopping less. A more productive approach, however, may be to encourage people to do more good. To compare the two approaches, we conducted two pre-registered online experiments in which participants were randomly assigned to either a do-more-good condition or a do-less-bad condition. The do-more-good condition presented 15 actions framed so that doing more of each action would benefit the environment (e.g., reuse, repair, recycle, or repurpose all of your items). In the do-less-bad condition, the 15 actions were framed so that doing less of each action would benefit the environment (e.g., do not throw away any of your items). In Experiment 1 ($N$ = 779), participants were more likely to take climate action and felt happier about doing so in the do-more-good condition than in the do-less-bad condition. Experiment 2 ($N$ = 770) replicated these results. Exploratory analyses revealed the effects of do-more-good frames differed depending on the action. These findings provide implications for climate communication, suggesting that calls for certain climate actions may benefit from encouraging desired behaviors rather than discouraging undesired behaviors.

KEYWORDS

**climate communication, framing, positive reinforcement, pro-environmental behavior, wellbeing**

## 1 Introduction

Conventional calls for climate action tend to emphasize the need to reduce consumption-related carbon emissions, such as travel less, consume less, eat less meat, and waste less (e.g., zero waste, net zero; Allen et al., 2022; Broome, 2008; Zaman and Lehmann, 2011). These calls may be problematic for at least two reasons. First, emphasizing doing less does not inform people about what they can do instead. Discouraging a climate-unfriendly behavior does not directly encourage the climate-friendly alternative for that behavior, which can leave people guessing what to do. As a result, people may end up doing another behavior that does not actually reduce emissions (Wynes et al., 2020). Second, emphasizing doing less can provoke negative emotions such as shame and guilt (Jacquet, 2017), which can lead to avoidance and decrease climate action (Vlasceanu et al., 2024).

A more productive approach to fostering behavior changes and positive emotions may be to emphasize doing more climate-friendly behavior. Specifically, we developed "do-more-good" frames that highlight the climate-friendly actions that people should do more (e.g., eat more plants). As a comparison, we also developed "do-less-bad" frames that highlight the

climate-unfriendly actions that people should do less (e.g., eat less meat), which is often mentioned in current climate communication. This is distinct from past studies that used gain or loss frames that emphasize the positive or negative consequences of an action (Homar and Cvelbar, 2021), because our frames do not mention the consequences.

Initial evidence for the do-more-good frames suggests that people show greater support for increasing plant-based meals over decreasing meat-based meals in university canteens (Carvalho et al., 2022). Moreover, a global survey with 60,000 people across 23 countries shows that people support climate policies that include the words *upgrading, setting standards*, or *making solutions accessible* more strongly than climate policies that include the words *mandate*, *ban*, or *phaseout* (Marshall et al., 2023). In addition to increasing support, the do-more-good frames may also promote positive emotions. Past work shows that people's intentions to take climate action on a daily basis correlate with the amount of positive emotions (e.g., happiness, delight, pride) they expect to feel (Odou and Schill, 2020). Thus, the do-more-good frames may not only increase people's likelihood to take climate action, but also positive emotions they expect to experience.

The current experiments aimed to examine the impact of do-more-good frames on people's likelihood of climate action and their anticipated happiness from doing the actions. Specifically, we conducted two pre-registered online experiments where we presented 15 climate actions: Nine actions were individual, meaning that people can take the action in their private lives (e.g., increase the lifespan of your clothes); and six were civic, which are actions that require many people to participate (e.g., voting). These actions were identified based on an in-depth review of past studies and reports from government and non-governmental organizations that outlined high-impact climate actions people can take (e.g., Drawdown Solutions Library, 2023; Government of Canada, 2024; Ivanova et al., 2020; Wynes et al., 2020). For example, per person per year, eating a plant-based diet can save up to 2.1 tons of $CO_2$e, taking one less roundtrip with long-haul flights can save up to 4.5 tons of $CO_2$e, and switching to an electric vehicle can save up to 5.4 tons of $CO_2$e (Ivanova et al., 2020).

Experiment 1 aimed to test whether the do-more-good frames can increase the likelihood of taking climate action and anticipated happiness (Kumalasari et al., 2022) about taking action compared to the do-less-bad frames. Experiment 2 aimed to replicate Experiment 1 and further extend it by examining the perceived difficulty of the actions or clarity of how to implement the actions in their lives as potential mechanisms.

# 2 Experiment 1

We hypothesized that action likelihood and anticipated happiness would be higher in the do-more-good condition than in the do-less-bad condition. Pre-registrations and datasets for both experiments are available at: https://osf.io/2tjmb/. Both experiments were approved by the University's Behavioral Research Ethics Board (H22-02906), and all participants provided informed consent. All statistical analyses were conducted in R (Version 2022.12.0 + 353).

## 2.1 Method

### 2.1.1 Participants

We conducted an *a priori* power analysis in G*Power 3.1, assuming a minimum effect size of $d = 0.2$, $a = 0.05$, power = 0.8 for between-subject comparisons of two groups, and a minimum of $N = 620$ participants (at least 310 per condition) were required. An initial group of 886 participants from the US on CloudResearch took part in the 5-min experiment in November 2023. Based on our pre-registered exclusion criteria, 90 participants failed the attention check, which asked how likely or how happy they were to jetpack to work and prompted them to select "completely unlikely" or "completely happy" if they were paying attention, respectively. If they selected any other response, they were automatically redirected out of the study. Of those remaining, 4 gave the same answer to all questions and 13 retook the survey after initially failing the attention check. Thus, a final sample of 779 participants were included in the analysis (age: $M = 40.50$ years, SD = 13.03; 49.81% male, 47.75% female; cultural background: 68.60% European, 11.81% African; 60.46% had a bachelor's degree or above; 55.20% liberal, 25.42% conservative; median annual household income of USD$65,000; see Supplementary material A). The final sample size exceeded the minimum required because we did not look at the data during data collection and could not predict how many participants would be excluded, so we erred on the side of caution and over-recruited participants. Each participant received US$1 for completing the study.

### 2.1.2 Materials and procedure

Participants were randomly assigned to the do-more-good condition ($N = 392$) or the do-less-bad condition ($N = 387$). In each condition, participants were presented with 15 actions containing the same number of words (see Table 1). The order of the actions was randomized to minimize order effects. In the do-more-good condition, the actions were framed such that doing more of the action would benefit the environment (e.g., increase your use of reusable products). In the do-less-bad condition, the actions were framed such that doing less of the action would benefit the environment (e.g., decrease your use of single-use products).

In both conditions, participants were first asked how likely they were to take the action on an 11-point Likert scale (1 = completely unlikely, 11 = completely likely), then how happy taking the action would make them feel on an 11-point Likert scale (1 = completely unhappy, 11 = completely happy, see Supplementary material B). Afterwards, participants answered demographic questions (e.g., age, gender, political orientation).

## 2.2 Results

### 2.2.1 Pre-registered analyses

Due to violations of the normality assumption (see Supplementary material C), one-tailed Mann–Whitney U tests were used for all analyses per pre-registration. To examine whether action likelihood was higher in the do-more-good condition than in the do-less-bad condition, we first averaged the likelihood across the 15 actions for each participant, and then compared the average likelihood between the two conditions. The test showed that action likelihood was significantly higher in the do-more-good condition ($M = 7.46$, SD = 1.75) than in the

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TABLE 1 Climate actions in the do-more-good and do-less-bad conditions.

| Climate action | Action type | Do-more-good condition | Do-less-bad condition |
|---|---|---|---|
| Food choice | Individual | Eat more plants going forward | Eat less meat going forward |
| Driving | Individual | Drive more people in your car going forward | Drive fewer miles in your car going forward |
| Waste reduction | Individual | Adopt a lifestyle where you reuse, repair, recycle, or repurpose all of your items | Adopt a zero-waste lifestyle where you do not throw away any of your items |
| Clothing | Individual | Increase the lifespan of your clothes | Decrease your purchase of new clothes |
| Environmental behavior | Individual | Engage in more environmentally friendly behaviors | Engage in fewer environmentally harmful behaviors |
| Flying | Individual | Combine your trips that require flying going forward | Minimize your trips that require flying going forward |
| Washing machine | Individual | Buy a washing machine that is more energy-efficient | Buy a washing machine that uses less energy |
| Campaign support | Civic | Support a campaign to improve environmental sustainability | Support a campaign to curtail environmental devastation |
| Vehicle choice | Individual | Drive a vehicle that uses more renewable energy | Drive a vehicle that uses less fossil-fuel-based energy |
| Product use | Individual | Increase your use of reusable products that last a long time | Decrease your use of single-use products that are often thrown away |
| Voting | Civic | Vote for a politician who aims to accelerate green energy growth | Vote for a politician who aims to cut emissions to zero |
| Petition signing | Civic | Sign a petition to amplify political action in addressing plastic pollution | Sign a petition to reduce political inaction in addressing plastic pollution |
| Attending a rally | Civic | Attend a local rally to support a carbon tax policy to increase air quality | Attend a local rally to support a carbon tax policy to decrease air pollution |
| Writing to elected official | Civic | Write to your elected official expressing your support for reforestation (planting more trees) | Write to your elected official expressing your opposition to deforestation (cutting down trees) |
| Supporting repair policy | Civic | Support a policy that mandates repair services to increase the longevity of consumer products | Support a policy that mandates repair services to decrease the waste of consumer products |

do-less-bad condition ($M = 6.85$, SD = 1.89; $W = 89{,}685$, $p < 0.001$, $r = 0.18$). We ran the same test for anticipated happiness, which showed that anticipated happiness was significantly higher in the do-more-good condition ($M = 7.88$, SD = 1.39) than in the do-less-bad condition ($M = 7.41$, SD = 1.50; $W = 89{,}860$, $p < 0.001$, $r = 0.18$).

### 2.2.2 Exploratory analyses

To see if the effects held for all actions, we conducted one-tailed Mann–Whitney U tests to examine the likelihood and anticipated happiness levels for each action and corrected for 15 comparisons with Bonferroni corrections ($p \times 15$; Figure 1; see Supplementary material D for descriptives). The likelihood of food choice, waste reduction, clothing, product use, voting, and supporting a repair policy was significantly higher in the do-more-good condition than in the do-less-bad condition ($W$'s $\geq 85{,}120$, $p$'s $\leq 0.02$, $r$'s $\geq 0.12$). Interestingly, the opposite was true for driving, where action likelihood was higher in the do-less-bad condition (i.e., driving fewer miles) than in the do-more-good condition (i.e., driving more people; $W = 61{,}798$, $p < 0.001$, $r = -0.19$). For anticipated happiness, the do-more-good frames outperformed the do-less-bad frames for food choice, waste reduction, clothing, and product use ($W$'s $\geq 88{,}944$, $p$'s $< 0.001$, $r$'s $\geq 0.17$). The opposite was true for driving, where driving more people had lower anticipated happiness than driving fewer miles ($W = 67{,}122$, $p = 0.03$, $r = -0.12$). Two-tailed tests did not change the significance of any of the actions, except the backfire effect on anticipated happiness for driving, which becomes non-significant with a two-tailed test ($W = 84{,}582$, $p = 0.063$).

To account for clustering and increase the generalizability of the findings, we also conducted cross-classified multilevel models for grand mean centered action likelihood and anticipated happiness, with participants and actions specified as random effects. The model included a fixed effect of condition, random intercepts for participants, and random intercepts and slopes for condition across actions. Action likelihood remained significantly higher in the do-more-good condition than in the do-less-bad condition ($\beta = 0.61$, SE = 0.28, $t_{(21.66)} = 2.163$, $p = 0.042$), as did anticipated happiness ($\beta = 0.47$, SE = 0.19, $t_{(27.21)} = 2.503$, $p = 0.019$). Parametric bootstrapping was used to obtain confidence intervals for the true slopes of each action, which revealed the same pattern for action likelihood and three additional actions as significant for anticipated happiness (see Supplementary material E). To examine whether framing effects differed between individual and civic actions, we added an interaction term between condition and action type to each model, which were both non-significant ($p$'s $> 0.25$), as were the main effects of action type ($p$'s $> 0.58$).

Lastly, we conducted two mediation analyses using Structural Equation Modeling (SEM; see Supplementary material F), which showed a significant indirect effect of condition on action likelihood through anticipated happiness, and a significant indirect effect of condition on anticipated happiness through action likelihood.

## 3 Experiment 2

This experiment aimed to replicate Experiment 1 and explore potential mechanisms. One mechanism is that it may seem easier to take the climate-friendly actions than to avoid the climate-unfriendly actions. Another mechanism is that people may have a clearer idea of

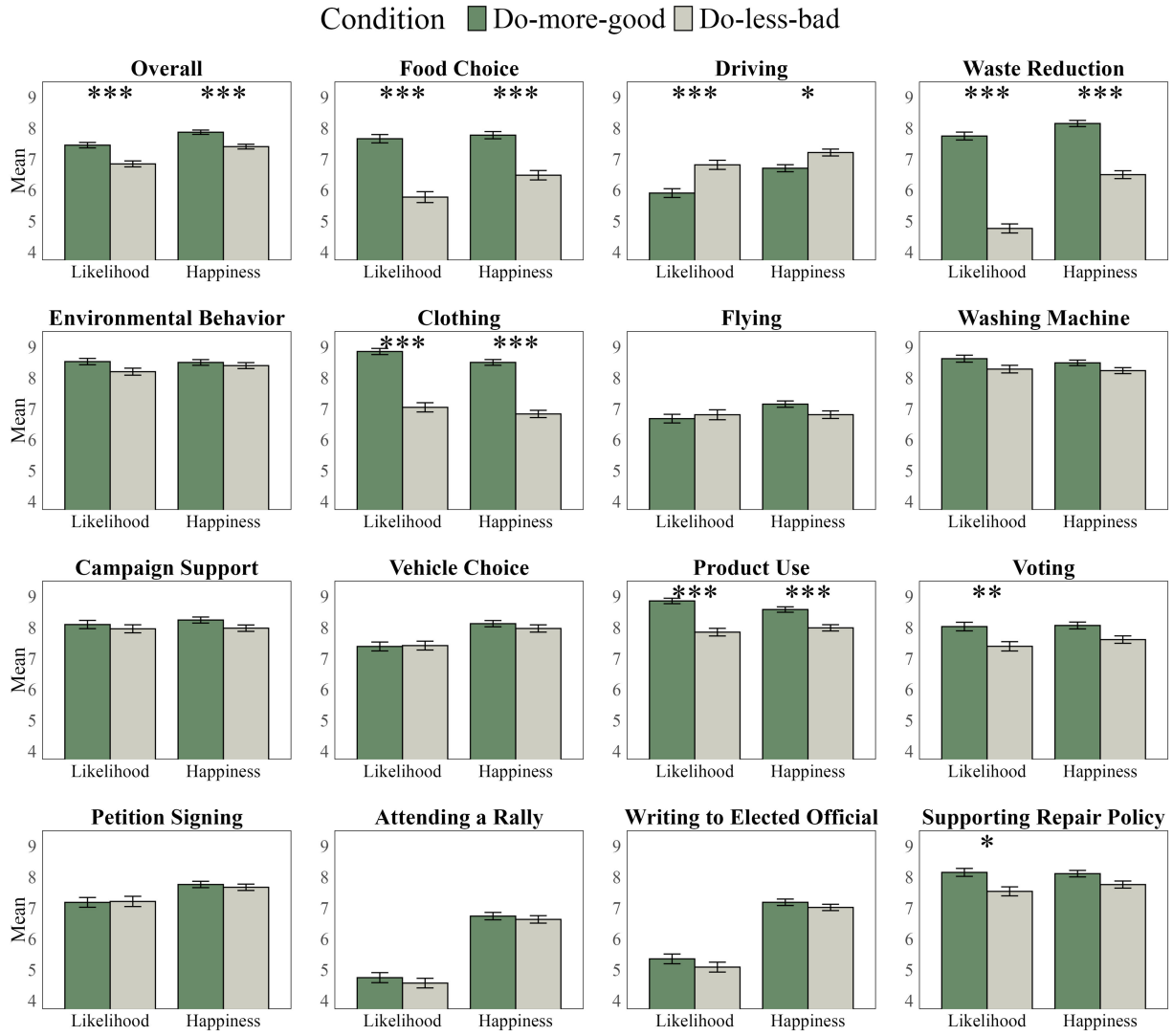


FIGURE 1
Likelihood and anticipated happiness for all actions (error bars reflect ±1 SEM; *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$).

how to implement the climate-friendly actions in their lives (e.g., eat more plants), as opposed to avoiding the climate-unfriendly actions (e.g., eat less meat). As before, we hypothesized that action likelihood and anticipated happiness would be higher in the do-more-good condition than in the do-less-bad condition. We also hypothesized that the actions would be perceived as easier to take and clearer to implement in the do-more-good condition than in the do-less-bad condition.

## 3.1 Method

### 3.1.1 Participants

To replicate Experiment 1, we aimed to recruit a minimum of 620 participants (at least 310 per condition) from the same power analysis in Experiment 1. A total of 888 participants from the US on CloudResearch initially took part in the 6-min experiment in April 2024. A total of 95 participants failed the attention check, and of those remaining, 9 failed the captcha verification and 14 repeated the study; we removed these participants based on our pre-registered exclusion criteria. After exclusion, a final sample of 770 participants were included in the analysis (do-more-good: $N = 393$, do-less-bad: $N = 377$; age: $M = 38.05$ years, SD = 12.89; 46.23% male, 50.91% female; cultural background: 63.25% European, 10.52% Hispanic or Latine; 58.18% had a bachelor's degree or above; 55.84% liberal, 22.34% conservative; median annual household income of $43,400; see Supplementary material G). As in Experiment 1, we erred on the side of caution and over-recruited participants to ensure we met the minimum required sample size after exclusions, resulting in the final sample size exceeding the minimum required. Each participant received US$1 for completing the study.

### 3.1.2 Materials and procedure

The materials and procedure were identical to Experiment 1, except that we added two additional questions for each action on perceived difficulty and clarity of the actions (see Supplementary material H). Specifically, participants were asked to rate how easy or difficult each action would be for them to take on a scale from 1 (extremely easy) to 11 (extremely difficult) and whether they have a clear idea of how they can implement this

action in their life on a scale from 1 (completely unclear) to 11 (completely clear). The order of the four questions was randomized.

## 3.2 Results

### 3.2.1 Pre-registered analyses

Due to violations of the normality assumption (see Supplementary material I), one-tailed Mann–Whitney U tests were used for all analyses per pre-registration. First, the test showed that action likelihood was significantly higher in the do-more-good condition ($M = 6.38$, SD = 1.65) than in the do-less-bad condition ($M = 6.06$, SD = 1.80; $W = 81{,}376$, $p = 0.009$, $r = 0.10$). Additionally, we found that anticipated happiness was significantly higher in the do-more-good condition ($M = 7.39$, SD = 1.37) than in the do-less-bad condition ($M = 7.00$, SD = 1.55; $W = 89{,}860$, $p < 0.001$, $r = 0.18$). These results replicate the findings from Experiment 1. We also found no difference in perceived difficulty between the do-more-good condition ($M = 5.49$, SD = 1.24) and the do-less-bad condition ($M = 5.62$, SD = 1.26; $W = 69{,}286$, $p = 0.060$, $r = -0.06$). Finally, the test showed no difference in clarity between conditions (do-more-good: $M = 7.50$, SD = 1.36; do-less-bad: $M = 7.57$, SD = 1.46; $W = 71{,}868$, $p = 0.76$, $r = 0.03$).

### 3.2.2 Exploratory analyses

To see if the effects held for all actions, we conducted one-tailed Mann–Whitney U tests to examine the likelihood and anticipated happiness levels for each action and corrected for 15 comparisons with Bonferroni corrections ($p \times 15$; Figure 2, see Supplementary material J for descriptives). The likelihood of food choice, waste reduction, clothing, and product use was significantly higher in the do-more-good condition than in the do-less-bad condition ($W$'s $\geq 92{,}638$, $p$'s $< 0.001$, $r$'s $\geq 0.25$). The opposite was true for driving and flying, where action likelihood was higher in the do-less-bad condition (i.e., driving fewer miles, minimizing trips) than in the do-more-good condition (i.e., driving more people, combining trips; $W$'s $\geq 8{,}736$, $p$'s $< 0.001$, $r$'s $\geq -0.30$). For anticipated happiness, the do-more-good frames outperformed the do-less-bad frames for food choice, waste reduction, clothing, and product use ($W$'s $\geq 88{,}466$, $p$'s $< 0.001$, $r$'s $\geq 0.19$), but were less effective for driving ($W = 53{,}386$, $p < 0.001$, $r = -0.28$).

We also conducted one-tailed Mann–Whitney U tests with Bonferroni corrections to examine the difference in perceived difficulty and clarity for each action ($p \times 15$; see Supplementary material K for descriptives). The perceived difficulty of food choice, waste reduction, environmental behavior, and product use was significantly lower in the do-more-good condition than in the do-less-bad condition ($W$'s $\geq 39{,}782$, $p$'s $< 0.006$, $r$'s $\geq -0.14$), but the opposite was true for driving and flying ($W$'s $\geq 84{,}260$, $p$'s $< 0.007$, $r$'s $\geq 0.14$). The clarity of waste reduction and environmental behavior was significantly higher in the do-more-good condition than in the do-less-bad condition ($W$'s $\geq 85{,}068$, $p$'s $< 0.002$, $r$'s $\geq 0.15$), but was lower for clothing and flying ($W$'s $\geq 34{,}000$, $p$'s $< 0.001$, $r$'s $\geq -0.30$). Two-tailed tests did not change the significance of any of the results.

We conducted cross-classified multilevel models for grand mean centered action likelihood, anticipated happiness, perceived difficulty, and clarity with participants and actions specified as random effects. The model included a fixed effect of condition, random intercepts for participants, and random intercepts and slopes for condition across actions. There were no main effects of condition ($p$'s $> 0.15$). Parametric bootstrapping was used to obtain confidence intervals for the true slopes of each action, which revealed the same pattern for action likelihood, anticipated happiness, and perceived difficulty, with two additional actions as significant for clarity (see Supplementary material L). To examine whether framing effects differed between individual and civic actions, we added an interaction term between condition and action type to each model, which were all non-significant ($p$'s $> 0.21$), as were the main effects of action type ($p$'s $> 0.13$).

We conducted multiple mediation analyses using SEM (see Supplementary material M), which replicated the significant indirect effects of condition on action likelihood through anticipated happiness, or on anticipated happiness through action likelihood from Experiment 1. There were no significant indirect effects of condition through perceived difficulty or clarity on action likelihood or on anticipated happiness. Finally, a two-tailed Mann Whitney U test showed that overall likelihood ($W = 207{,}272$, $p < 0.001$, $r = -0.31$) and anticipated happiness ($W = 248{,}480$, $p < 0.001$, $r = -0.17$) were lower in the second experiment than in the first experiment.

# 4 General discussion

## 4.1 Overall findings

The current studies examined the impact of do-more-good frames on the likelihood of climate action and the anticipated happiness of taking action. Both experiments showed that overall action likelihood and anticipated happiness were higher with the do-more-good frames than the do-less-bad frames.

There are at least two explanations for these findings. First, do-less-bad frames may induce negative emotions such as shame and guilt, which can increase reactance (Gausel et al., 2015; Tangney et al., 2007). People may experience frustration or anger at being told what they cannot do and act in opposition as a result (e.g., Brehm, 1966; Miron and Brehm, 2006; Palm et al., 2020). Therefore, the do-less-bad frames may have lower action likelihood and anticipated happiness due to negative emotions and reactance.

Second, do-more-good frames may sound better to people because of the more-is-better heuristic, or the addition bias (Adams et al., 2021; De Kwaadsteniet et al., 2023; Winter et al., 2023). Previous research shows that people default to additive changes and overlook subtractive ones when asked to alter the status quo (Adams et al., 2021). People tend to associate additive concepts such as 'more' with evaluative concepts such as 'better' (Winter et al., 2023). For example, people tend to anticipate that reductions in consumption will lower their affective wellbeing, even though previous research has shown the opposite to occur (Riefler et al., 2024). People are also reluctant to subtract because of attentional and evaluative processes or cultural influences that favor the status quo (Adams et al., 2021; De Kwaadsteniet et al., 2023), which can lead to neglect of climate actions that emphasize doing less (Suter et al., 2025). Therefore, the do-more-good frames may have higher action likelihood and anticipated happiness due to these biases.

Moreover, Experiment 2 showed no difference in the difficulty or the clarity of the actions between the two frames. These null results

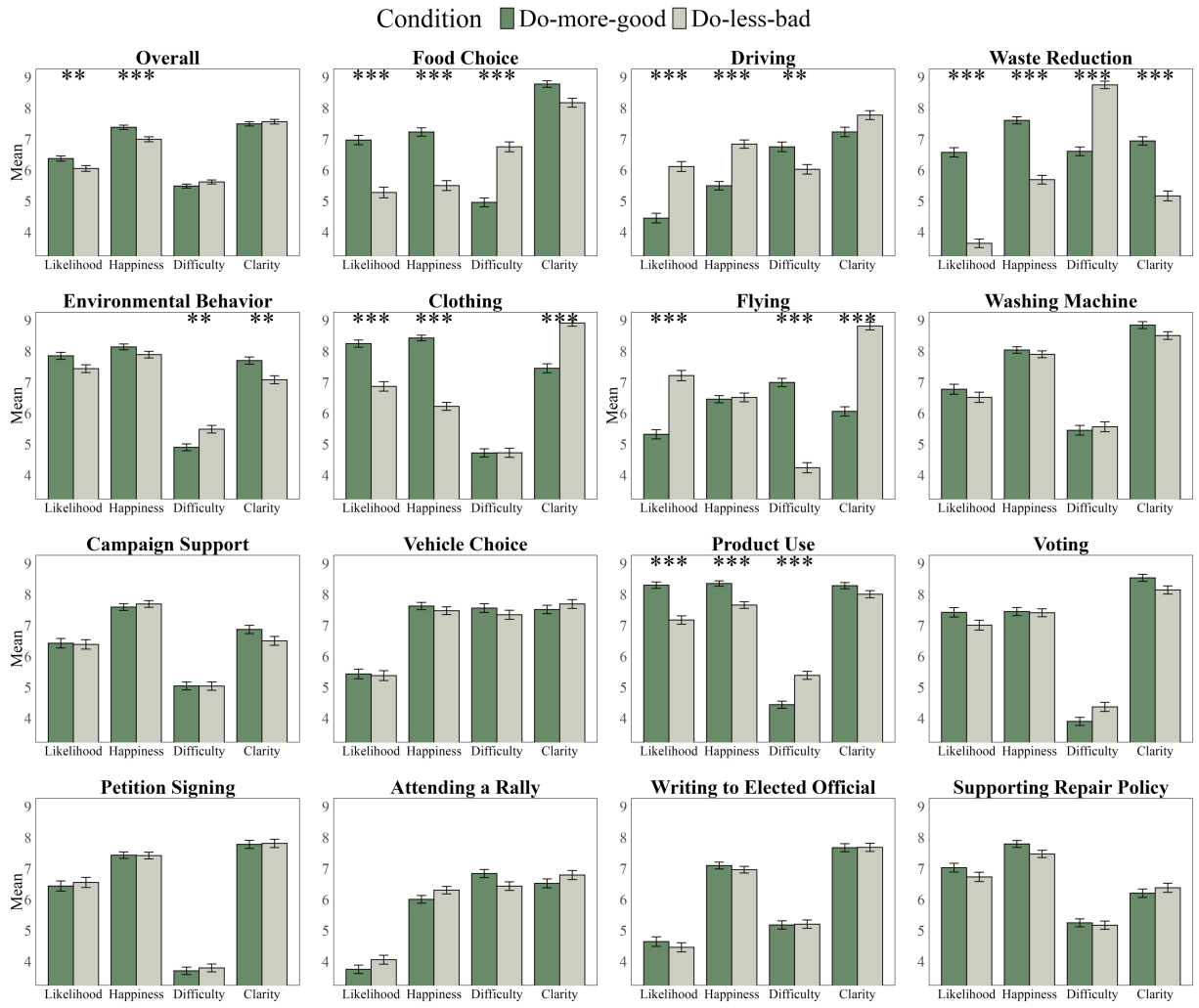


FIGURE 2
Likelihood, anticipated happiness, perceived difficulty, and clarity for all actions (error bars reflect ±1 SEM; *$p < 0.01$, **$p < 0.001$).

may be due to participants being more familiar with the actions in the do-less-bad frames, given their prevalence in climate communication today. Thus, the availability bias may contribute to people's perceptions of the difficulty and clarity of climate action (Davidai and Gilovich, 2016).

Exploratory analyses showed that the do-more-good frames consistently improved action likelihood and anticipated happiness for some actions (i.e., food choice, waste reduction, clothing, and product use), but not others. This suggests that the benefit of do-more-good frames is specific to the climate action. Yet, we found no main or interaction effects of action type on any of the dependent variables, suggesting that this difference is not a function of individual versus civic action. Therefore, more work is needed to identify the reasons why the do-more-good frames increase the likelihood and anticipated happiness of certain climate actions but not others.

Additionally, exploratory analyses showed a consistent backfire effect on action likelihood and anticipated happiness for driving, while Experiment 2 showed another backfire effect on action likelihood for flying. The backfire effects on action likelihood may be due to the increased perceived difficulty of driving more people or combining trips. The backfire effect on anticipated happiness for driving more people may be due to an affective forecasting error (Wilson and Gilbert, 2003), in which people underestimate the positive impact of carpooling on their future happiness (Echeverría et al., 2021). On the other hand, participants may be right in thinking that driving more people would make them less happy than driving less miles, since one study showed that driving less by getting rid of a vehicle is associated with greater feelings of joy up to 3 years later (Hess, 2022).

Furthermore, exploratory cross-classified multilevel models showed that the effect of do-more-good frames on action likelihood and anticipated happiness remained significant for Experiment 1 but not for Experiment 2. This discrepancy may be explained by the additional questions posed in Experiment 2. Given that Experiment 2 also asked participants how easy or difficult it would be to take the action and how clear of an idea they had of how to implement the action in their life, these questions may have inadvertently prompted participants to think about the difficulty and clarity of the actions to a higher degree than usual, influencing their likelihood and anticipated happiness ratings. This may also explain why supporting a repair policy and voting showed a significant effect in the anticipated direction in Experiment 1 and not in Experiment 2, as well as the backfire effect for flying present in Experiment 2 but not in Experiment

1. Moreover, this may explain why the overall likelihood and anticipated happiness levels were lower in Experiment 2 than in Experiment 1.

Finally, both experiments showed that anticipated happiness mediated the effect of do-more-good frames on action likelihood and vice versa. While we cannot establish the causal direction of this relationship from these analyses, this finding supports previous theoretical work that has proposed a positive feedback loop between pro-environmental behavior and positive emotions such as anticipated happiness (Brosch, 2021; Schneider et al., 2021; Schneider and van der Linden, 2023).

### 4.2 Implications for climate communication

The current research offers initial evidence that using do-more-good frames has the potential to increase people's likelihood of taking climate action and their anticipated happiness about doing so. Therefore, climate communication may benefit from using do-more-good frames instead of do-less-bad frames for certain climate actions, such as adopting a lifestyle where you reuse, repair, recycle, or repurpose all of your items. Do-more-good frames may also be easier and less costly to implement than educational campaigns on the benefits of climate action. To prevent potential backfire effects, consideration should be given to the difficulty and impact of the action.

### 4.3 Limitations and future research

A limitation of the current study is that some do-more-good actions are different from their corresponding do-less-bad actions. For example, driving more people is a different action than driving less miles, even though both actions reduce driving-related emissions. Similarly, combining trips that require flying is a different action than minimizing trips that require flying. This said, we have tried to equate the actions as much as possible by inversing the frames, where taking the do-less-bad action means taking the do-more-good action (e.g., eating less meat would necessitate eating more plants). Nevertheless, we observed similar results for actions that are largely equivalent and actions that are different under the two frames.

Given that action type, difficulty, or clarity did not explain the heterogenous effects of the do-more-good frame, further research is needed determine why the do-more-good frames increase the likelihood and anticipated happiness of certain climate actions but not others. Future research can also examine how increasing action likelihood might improve anticipated happiness, and how increasing anticipated happiness can improve action likelihood. Finally, future studies would benefit from evaluating the effect of do-more-good frames across various populations and in real-world scenarios.

### 4.4 Conclusion

In conclusion, do-more-good frames are a novel and potentially effective way to increase people's likelihood of taking climate action and their anticipated happiness about doing so compared to the do-less-bad frames most often used today. Further, using do-more-good frames may be easier to implement in climate communication than informational campaigns on the positive consequences of climate action, which has been the focus of previous research to date. More research is needed to determine why the do-more-good frames are effective for some actions and not others. For actions such as eating more plants, future climate communication should consider encouraging climate-friendly behaviors people can do more, rather than focusing on discouraging harmful behaviors that they should do less.

## Data availability statement

The datasets presented in this study can be found in online repositories. The names of the repository/repositories and accession number(s) can be found in the article/Supplementary material.

## Ethics statement

The studies involving humans were approved by the University of British Columbia Research Ethics Board. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

## Author contributions

JR: Writing – original draft, Visualization, Formal analysis, Writing – review & editing, Methodology, Conceptualization, Investigation, Data curation. SG: Writing – review & editing, Formal analysis, Methodology, Investigation, Data curation, Conceptualization. ED: Writing – review & editing, Methodology, Conceptualization. JZ: Methodology, Conceptualization, Validation, Supervision, Writing – original draft, Writing – review & editing, Data curation.

## Funding

The author(s) declared that financial support was received for this work and/or its publication. This work was supported by the SSHRC Doctoral Fellowship (to JR), UBC's Indigenous Graduate Fellowship (to JR), the Canada Research Chairs program (to JZ), and the SSHRC Insight Grant (AWD-024614 to JZ and ED).

## Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Generative AI statement

The author(s) declared that Generative AI was not used in the creation of this manuscript.

## Publisher's note



## Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fcomm.2026.1693311/full#supplementary-material

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