

Economic gains stimulate negative evaluations of corporate sustainability initiatives

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In recent years, many organizations have sought to align their financial goals with environmental ones by identifying strategies that maximize profits while minimizing environmental impacts. Examples of this ‘win-win’ approach can be found across a wide range of industries, from encouraging the reuse of hotel towels, to the construction of energy efficient buildings, to the large-scale initiatives of multi-national corporations^{1–3}. Although win-win strategies are generally thought to reflect positively on the organizations that employ them, here we find that people tend to respond negatively to the notion of profiting from environmental initiatives. In fact, observers may evaluate environmental win-wins less favourably than profit-seeking strategies that have no environmental benefits. The present studies suggest that how those initiatives are communicated to the general public may be of central importance. Therefore, organizations would benefit from carefully crafting the discourse around their win-win initiatives to ensure that they avoid this type of backlash.

We suggest that the negative response to environmental win-wins results from a fundamental psychological divide between social relationships that are perceived as communally oriented versus those that are perceived as market-oriented (hereafter, ‘communal’ and ‘market’). Previous research has demonstrated that communal versus market relationships invoke fundamentally different norms for behaviour^{4–10}. Specifically, when a communal relationship is established, profits can ‘taint’ the positive value associated with prosocial behaviour because they violate the norm that one should give without receiving something in return. In market contexts, however, this norm is not present, and thus it may be perfectly acceptable, and perhaps even expected, to profit from one’s actions^{11,12}.

Indeed, past research has demonstrated that blurring the lines between communal and market relationships lowers evaluations of individuals and organizations who behave prosocially, and may even reduce individuals’ likelihood of helping others^{6,13,14}. In the environmental domain, previous studies have found that framing environmental benefits in a market-oriented way decreases the adoption of green behaviours and products^{15,16}, whereas altruistic, social-based appeals tend to be more effective in promoting them^{17–20}.

Here we examine the distinction between communal and market norms in the context of environmental win-wins. In a series of four experiments, we document a negative reaction to initiatives that result in both environmental and financial gains. We further identify important boundary conditions of this phenomenon and suggest ways in which organizations undertaking sustainability initiatives can avoid potential backlash.

Our first experiment examined whether an environmental win-win is evaluated less favourably than a ‘business as usual’

approach. Participants were presented with a mock newspaper article that discussed advertisements used by the outdoor apparel company, Patagonia (see Supplementary Information). The advertisements were original campaign advertisements used by Patagonia, although the article was fictitious. In the environmental advertisement conditions, participants read about Patagonia’s pro-environmental ‘Don’t buy this jacket’ campaign, in which the company argued that to help the environment, individuals should simply consume less. The control advertisement featured a more standard ‘Try on adventure’ campaign, which highlighted the performance capabilities of Patagonia products. In commenting on these advertisements, the newspaper article highlighted one of two benefits for Patagonia. Half of the participants read that the advertisement campaign resulted in an increase in profits (which it actually did)²¹ whereas the other half read that the campaign resulted in an increase in brand recognition (reputational benefit). Thus, the factors of advertisement type (environmental versus control) and benefit (monetary versus reputational) were fully crossed in a 2 × 2 between-subjects design. Participant then rated the company on several dimensions.

Most notably, we observed that Patagonia received significantly lower evaluations when the environmental advertisement resulted in profits ($M = 5.41$, $SD = 1.65$) than when the control advertisement resulted in profits ($M = 6.32$, $SD = 1.12$), $t(183.29) = 4.55$, $p < 0.001$, $d = 0.65$. We also observed a significant interaction between advertisement type and benefit type, $F(1,371) = 5.51$, $p = 0.019$, $\eta^2 = 0.02$. In contrast to the profit conditions, when the benefit was reputational, participants had equivalent ratings of the company in both the environmental ($M = 5.96$, $SD = 1.52$) and control advertisement conditions ($M = 6.18$, $SD = 1.22$), $t(181) = 1.09$, $p = 0.28$, ns (see Fig. 1).

The results from Experiment 1 indicated that an environmental win-win was rated worse than an initiative that offered no environmental benefits. Further, they suggested that the negative reaction to environmental win-wins is slightly restricted to monetary gains.

The goal of Experiment 2 was to directly test the hypothesis regarding communal versus market norms. Before reading about a sustainability initiative, participants were asked to complete one of two brief writing exercises. The writing exercises were intended to prime different relationship norms (communal versus market), and their effectiveness was verified in a preliminary experiment (see Methods and Supplementary Information). In the communal priming task, participants were asked to write about a time in which they experienced a strong sense of community, whereas in the market priming task, participants wrote about a time in which they participated in an efficient market exchange (see Supplementary Information). Then, participants read about

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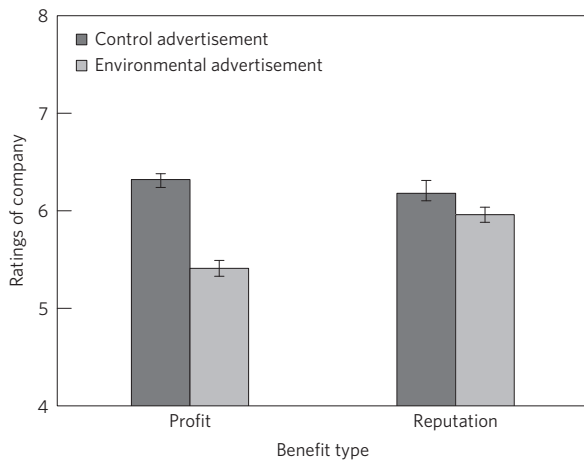


Figure 1 | Experiment 1 results. Company evaluations by condition (control advertisement versus environmental advertisement) and benefit type (profit versus reputational). The error bars represent standard errors.

a sustainability initiative in which trash collectors were planning to institute a new pricing model. Although there was no mention of a specific trash collection company, the pricing system was modelled after real-life ‘pay-as-you-throw’ programmes. For half of the participants, this initiative was framed as having a number of potential environmental benefits (environmental benefit), whereas for the other half of participants, this initiative was framed as having both environmental benefits as well as financial benefits for the company (win-win benefit). Thus, the factors of priming task (communal versus market) and benefit type (environmental benefit only versus win-win) were fully crossed in a 2×2 between-subjects design. Participants then rated the company’s morality.

Consistent with the results of Experiment 1, participants primed with communal norms gave the company significantly lower evaluations in the win-win condition ($M = 5.22$, $SD = 2.13$) compared to the environmental benefit only condition ($M = 6.89$, $SD = 1.62$), $t(119.50) = 5.02$, $p < 0.001$, $d = 0.88$; however, participants primed with market norms gave the company equivalent evaluations in the win-win ($M = 6.55$, $SD = 1.84$) and the environmental benefit only ($M = 6.37$, $SD = 1.96$) conditions, $t(113) = 0.52$, $p = 0.61$ (see Fig. 2). This resulted in a significant interaction between the priming task and the benefit type, $F(1,240) = 14.57$, $p < 0.001$, $\eta^2 = 0.06$. Further comparison of the two win-win conditions indicated that profits led to significantly lower evaluations of the company when participants were primed with communal norms versus market norms, $t(121) = 3.70$, $p < 0.001$, $d = 0.67$.

Experiment 3 tested whether differences in mere temporal order would engender a similar negative win-win effect. Existing research suggests that the initial categorization of an event may strongly affect the processing of subsequent information such that people tend to resist re-categorizing the event even when they encounter conflicting information^{22–24}. Therefore, we hypothesized that even when people are exposed to identical information about an organization, they may have very different evaluations depending on whether environmental benefits or monetary benefits are encountered first. Specifically, if someone first reads about how a company is profitable and then reads about how they support the environment, such efforts may be seen as a net gain, because a market norm has been established first—a person might think, ‘It is great that the company is giving something back.’ In contrast, if someone first reads about the same environmental initiative and then about the company’s profitability, this might be construed as a violation of communal norms.

All participants read identical information about the Patagonia clothing company (see Supplementary Information). Half of the

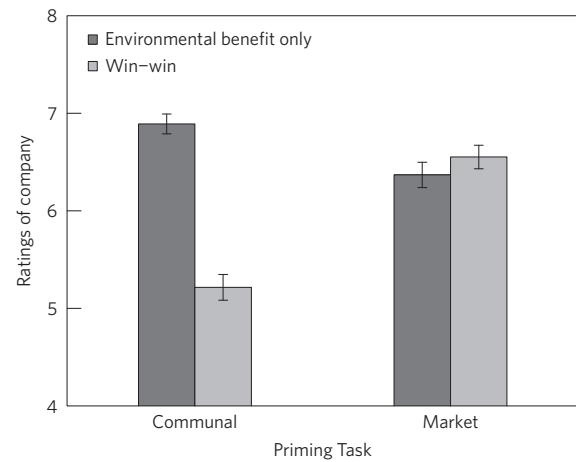


Figure 2 | Experiment 2 results. Morality rankings by priming (communal versus market) and benefit type (environmental benefit only versus win-win). The error bars represent standard errors.

participants read the sustainability information first, and on a subsequent page read the profitability information. The other half of participants first read the profitability information, followed by the sustainability information. Participants then rated the company on the same dimensions as in Experiment 1.

The results indicated a significant effect of information order on company evaluations, $F(1,121) = 6.65$, $p = 0.011$, $\eta^2 = 0.05$. As predicted, Patagonia was evaluated significantly more positively when participants first read about how they were profitable before reading about their environmental efforts ($M = 7.15$, $SD = 1.51$) compared to when they instead read about their environmental efforts before reading about how they were profitable ($M = 6.45$, $SD = 1.52$).

In a final experiment, participants read about a new programme by a cellphone provider to collect unwanted mobile devices (bound for landfills) and resell them to consumers. In all cases, the programme was both beneficial for the environment (diverted millions of devices from landfills), as well as profitable for the company (see Supplementary Information). Participants in the communal framing condition read that the primary motivation for the programme was to help the environment, whereas participants in the market framing condition read that the primary motivation for the programme was to earn a profit. The two framings presented the same information, changing only the details and background information regarding the stated purpose of the programme.

In both conditions the programme resulted in identical environmental and financial benefits, yet the company was evaluated significantly less favourably when the programme was presented in a communal framing ($M = 5.15$, $SD = 1.83$), compared to when the programme was presented in a market framing ($M = 6.19$, $SD = 1.23$), $t(143.39) = 4.40$, $p < 0.001$, $d = 0.66$. These results suggest that the negative win-win effect can be overcome by adopting a market-oriented framing strategy. However, although resale can be seen as a form of recycling, participants may also have attributed some degree of deception to the company when it professed environmental goals compared to when the motives were described as market-oriented.

Our findings suggest that uninformed messaging regarding environmental ‘win-wins’ might not only fail to capitalize on the potential PR benefits of being a good environmental citizen—it may actually do more harm than good. Indeed, as Experiment 1 demonstrates, participants gave lower ratings to a company when it profited from an environmental advertisement campaign compared to when the advertisement campaign simply focused on increasing profits.

Together these studies suggest that the risk of eliciting negative public responses following the adoption of green business practices is not limited to 'greenwashing' or other forms of disinformation previously examined^{2,25,26}. Hence, even if an organization's actions are truly in line with the environmental goals professed, it is still at risk of drawing a negative reaction if it is not careful to control the communication of those activities. We show that this negative backlash can be avoided by reframing the efforts as market-oriented, or by simply altering the order in which individuals encounter information regarding the initiative. At the same time, companies that publicize their environmental goals may play an important role in the transition to a more sustainable future by encouraging consumers and industry peers to follow suit. Thus, this research highlights the difficult balance between adopting progressive strategies that align financial and environmental goals, and the effective communication of those efforts to the broader public.

Although we examined the effect of win-wins in the context of businesses, our results could also be relevant for government agencies and NGOs seeking win-win solutions for environmental challenges (for example, the OECD's 'Green Growth' strategy). In addition, previous research highlights a green attitude-behaviour gap, showing that although consumers often express a willingness to pay a premium for green products and services, in practice this is seldom the case²⁷⁻²⁹. It is possible that here too, the contrast between a communal setting (related to the prosocial motivations for green behaviour) and a market setting (triggered by price comparisons in the market) has a negative impact on how consumers view green products.

Finally, we have employed one particular approach to assessing environmental attitudes—the use of behavioural experiments. Although this methodology allows one to isolate variables of interest, it may lack ecological validity and the complexities involved in real-world decision-making. Relatedly, these studies were conducted with English-speaking participants living in the United States and, as such, can be seen as only representative of that sample. Understanding the implications of our research for broader questions, for example surrounding the use of 'market-based' instruments for environmental policy (such as, payment for ecosystem services or carbon tax)¹⁵ on a global scale, will require further research.

In theory, communicating one's pro-environmental actions should lead to positive consumer responses. However, the present studies demonstrate that, under certain predictable conditions, this can also backfire. Although win-win strategies may prove to be advantageous for many organizations (and for society at large), our findings question the conventional assumption that the general public will respond favourably to environmental initiatives. Organizations should attempt to manage the way that these strategies are discussed, not only in their direct communications with the public, but also through media outlets which may not be under their direct control.

Methods

Methods and any associated references are available in the [online version of the paper](#).

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Author contributions

Both authors designed Experiments 1–4, analysed the data from Experiments 1–4, and wrote the manuscript.

Additional information

Supplementary information is available in the [online version of the paper](#). Reprints and permissions information is available online at www.nature.com/reprints. Correspondence and requests for materials should be addressed to G.E.N.

Competing financial interests

The authors declare no competing financial interests.

Methods

Participants in Experiment 1 were 463 adults who were recruited via Amazon's Mechanical Turk in exchange for \$0.50 compensation. Participants who failed to answer two comprehension checks presented at the end of the experiment (see Supplementary Information) were excluded from the study ($n = 88$). The 375 remaining participants (61.0% male; $M_{\text{age}} = 32.5$; $SD = 11.5$), were randomly assigned to one of four between-subjects conditions in a 2 (advertisement type: environmental versus control) \times 2 (benefit type: monetary versus reputational) design. Participants rated the company on a series of nine-point Likert-type scales along the following dimensions: ethical, acceptable, moral, altruistic, competent, trustworthy, manipulative, selfish, liking of company, approval of company, and willingness to purchase company's products. The order in which each item was presented was randomized for each participant. These items formed a reliable scale ($\alpha = 0.91$) and were averaged to produce a single dependent measure.

Participants in the priming manipulation pre-test were 201 adults who were recruited from Amazon's Mechanical Turk in exchange for \$0.50 compensation. Individuals who failed to correctly answer a quality assurance question or those who participated more than once (based on repeating IP addresses) were disqualified ($n = 11$). The remaining 190 eligible participants (60.0% male; $M_{\text{age}} = 34.0$; $SD = 10.0$) were randomly assigned to one of two writing tasks (communal versus market, see Supplementary Information). Once completing the writing task participants were asked rate three abstract statements relating to market norms on a seven-point Likert-type scale (lower numbers indicated higher agreement). These items formed a reliable scale ($\alpha = 0.71$) and were averaged to produce a single dependent measure. As predicted, participants who had completed the market writing task were more likely to agree with exchange norms ($M = 3.78$, $SD = 1.13$) compared to participants who completed the communal writing task ($M = 4.17$, $SD = 1.21$), $t(188) = -2.27$, $p = 0.024$.

Participants in Experiment 2 were 299 adults who were recruited from Amazon's Mechanical Turk in exchange for \$0.50 compensation. Individuals who participated in previous studies or those who participated more than once (based on repeating IP addresses) were disqualified ($n = 55$). The remaining 244 eligible participants (61.8% male; $M_{\text{age}} = 34.2$; $SD = 12.1$) were randomly assigned to one of four between-subjects conditions in a 2 (priming task: communal versus exchange) \times 2 (benefit type: environmental versus win-win) design. After completing the priming writing exercises and reading about the new initiative, participants were

asked to rate the company's morality on a nine-point Likert-type scale. At the end of the study, participants also completed a ten-item environmental attitude scale³⁰ (see Supplementary Information). Subsequent analyses indicated that whereas participants who were more concerned about environmental issues showed more favourable reactions to the proposed initiative overall, $r = 0.28$, $p < 0.001$, this factor did not interact with reactions to the win-win scenario, all p values greater than 0.54.

Participants in Experiment 3 were 123 adults (39.8% male; $M_{\text{age}} = 37.9$; $SD = 13.9$) who were recruited via an online subject pool maintained by a private university in exchange for \$0.50 compensation. Participants rated the company on the same dimensions as Experiment 1. The order in which each item was presented was randomized for each participant. These items formed a reliable scale ($\alpha = 0.92$) and were averaged to produce a single dependent measure. This study included three additional comprehension checks at the end of the study. However, after completing the study the authors concluded that one of the comprehension checks (check #1, see Supplementary Information) was ambiguous. Therefore, in the main analysis, no participants were excluded based on their responses to the comprehension checks. When participants are excluded based on the remaining two comprehension checks ($n = 10$), the effect of temporal order remains statistically significant, $F(1,111) = 4.45$, $p = 0.037$, $\eta^2 = 0.04$.

Participants in Experiment 4 were 201 adults who were recruited via Amazon's Mechanical Turk in exchange for \$0.50 compensation. Participants who failed to answer a comprehension check presented at the end of the experiment (see Supplementary Information) or those who participated more than once (based on repeating IP addresses) were excluded from the study ($n = 25$). The 176 remaining participants (51.0% male; $M_{\text{age}} = 35.8$; $SD = 10.5$) were randomly assigned to one of two between-subjects framing conditions (environmental versus market). Participants rated the company on the same dimensions (presented in random order) as Experiments 1 and 3. Similar to the other experiments, these items formed a reliable scale ($\alpha = 0.94$) and were averaged to produce a single dependent measure.

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