Sustainable products are designed to reduce environmental, ecological, and human costs of consumption. Not all consumers value sustainable products, and this poses negative societal implications. Using self-expansion theory as a guide, we explore how an individual’s general sense of belonging—or the perception that one is accepted and valued by others in the broader social world—alters their responses to sustainable products. Five experimental studies and a field study demonstrate that individuals lower in belonging respond less favorably to sustainable products in terms of evaluations and willingness to pay than individuals higher in belonging. Process evidence shows that the extent to which individuals low in belonging perceive that collective, sustainable choices will impact them personally drives this result and that belonging does not impact responses to conventional (i.e., non-sustainable) products. However, perceiving a shared human experience—or that individuals share some important, basic similarities with all people—attenuates the negative effect of low belonging on responses to sustainable products for consumers both low and high in belonging. This research has significant implications for businesses and society given the growing sense of disconnect in modern society.

**Keywords** Sustainable products · Belonging · Green products

A sense of general belonging refers to the prevailing, subjective feeling that one fits in and is cared for and valued in relationships with others (Hirsch & Clark, 2019; Lambert et al., 2013; Malone et al., 2012). It differs from belonging to a specific referent group, like one’s colleagues, family, or ethnic group. General belonging, which we will refer to as belonging from here on out, refers to an individual’s broader sense of their relations with others, and of how they as an individual feel they fit into the wider social world (Hirsch & Clark, 2019). With this in mind, we propose that consumers low (vs. high) in belonging will respond less positively to sustainable products, because they perceive that collective, sustainable choices will have little impact on their personal lives.

Drawing from self-expansion theory (Aron et al., 1991), we illustrate why low belonging may lead consumers to respond less positively to sustainable products. According to self-expansion theory, when people feel socially connected, they expand their self-concept to include others (Aron et al., 1991). This blurring of identity between the self and the collective leads individuals to perceive others’ choices have a greater impact on them, and that their choices have a greater impact on others (Swann et al., 2012). In other words, a
sense of belonging indicates an understanding of one’s own and others’ choices and outcomes as inextricably linked.

Conversely, individuals low in belonging do not feel a strong connection to society. This draws their focus away from the interests and motives of others and leads them to rely on themselves (Malone et al., 2012). We argue that this tendency toward self-reliance conflicts with the purpose of sustainable products, which provide long-term benefits for society. Thus, we propose that low belonging may lead consumers to perceive that collective, sustainable choices will have less impact on their personal lives, leading them to respond less positively to sustainable products as compared to those high in belonging.

Our research makes several contributions. First, it bridges the social affiliation literature with the sustainable product literature. To our knowledge, it is the first to establish a relationship between belonging and consumer responses to sustainable products. In establishing this relationship, we explain why consumers low in belonging respond less positively to sustainable products by assessing how consumers perceive that collective, sustainable choices will impact their personal lives. Broadening this concept, individuals low in belonging may have little motivation to engage in consumption choices that rely on collective efforts (e.g., sustainable product purchases). As such, our research may explain other, well-documented phenomena in the cooperation and social affiliation literature in terms of who contributes to the collective and why. Second, our research extends the belongingness literature by showing the effects of low belonging within the context of consumer behavior. This differentiates it from other consumer research, which has focused on related, but distinct constructs, such as loneliness and social exclusion. Thus, we highlight the unique role of belonging in consumption choices. Third, this research contributes to self-expansion theory (Aron et al., 1991) by bringing it to the sustainable consumption literature. We suggest that how we perceive ourselves socially influences not only the products that we purchase, but also the perceived impact of those purchases. Fourth, we identify perceived impact or the belief that collective, sustainable choices have an impact on one’s life as a key driver explaining the effect of belonging on consumer responses to sustainable products. In this, we highlight the important role of a shared human experience in understanding sustainable consumption. Specifically, we find that perceptions of a shared human experience can attenuate the negative effect of low belonging on consumer responses to sustainable products. This is the first work to incorporate perceptions of a shared human experience into the business literature.

Practically speaking, recent societal trends raise concerns about the negative impact of low belonging on consumer responses. People in the United States are experiencing a widespread decline in belonging, with 39% of individuals admitting that they no longer feel close to anyone (Ipsos, 2018). This growing lack of belonging may have wide-reaching, negative effects on society and make it more difficult to promote sustainable products. To address these concerns, we contribute to the business ethics literature by demonstrating that the negative impact of low belonging attenuates when individuals perceive or are exposed to advertising emphasizing a shared human experience. We also show that the effect of belonging on consumer responses to sustainable products is robust across a field study, real brands, and various product categories. Thus, we believe that our results can be generalized to other contexts and that overall, our findings indicate that businesses should consider belonging when marketing and selling sustainable products.

**Literature Review**

**Belonging and Sustainable Consumption**

Belonging reflects the feeling that one fits in, is cared for, and is valued in relationships with others (Hirsch & Clark, 2019; Lambert et al., 2013; Malone et al., 2012). According to belongingness theory, humans have an innate drive to form relationships and maintain social bonds (Baumeister & Leary, 1995). Belonging to a group afforded our ancestors protection and resources. Consequently, social bonds are considered adaptive, and groups typically encourage collective behavior (Buss, 1990). Consumers often use consumption to achieve and express social connections, demonstrate status, signal group membership, contribute to the goals of society, and even display altruism (Griskevicius et al., 2010). The drive to belong is an important source of motivation—particularly in the context of consumption (Derrick et al., 2009). Unfortunately, not everyone may feel they belong.

Self-expansion is related to belonging, as humans often connect and form close relationships with others by expanding their sense of self to include those of others. According to self-expansion theory (Aron et al., 1991), humans are motivated to self-expand to increase their efficacy in the world, and they do so by taking on the resources, perspectives, and identities of others into their own sense of self (Aron et al., 2013). As individuals expand their self-concept, their goals blur with the goals of others, leading them to pursue the interests of others or society more broadly. Self-expansion can occur when one feels close to or connected with someone, but also when one feels a sense of belonging more broadly (De Cremer & Stouten, 2003).

Belonging and self-expansion theory may be particularly pertinent to consumer responses to sustainable products. Given the collective nature of sustainable products, sustainable behaviors—such as protecting the environment—require group cooperation and are often driven by a desire
for research suggests that socially oriented behaviors are among the most influential factors of sustainable consumption (White et al., 2019). Emphasizing social norms and status cues can encourage sustainable consumption (Cialdini et al., 2006; Griskevicius et al., 2010), while valuing group needs strengthens pro-environmental commitment (Cho et al., 2013). Other research suggests that perceptions of social affiliation, social desirability, and self-concept also influence sustainable consumption in important ways (Costa-Pinto et al., 2016). Given this previous research, we begin to see how other social factors—such as belonging—might play an important role in sustainable consumption.

As Table 1 indicates, most recent research on the social aspects of sustainable consumption (except status and cultural research) emphasizes social identity theory, which focuses on the perception of the self in terms of in- and out-groups (Tajfel & Turner, 1979; Wright et al., 2013). For example, previous research shows that identifying with pro-environmental (van der Werff et al., 2013) or Christian groups (Graaffland, 2017) increases sustainable consumption. In contrast, because many people associate sustainable products with femininity, high masculinity decreases sustainable consumption (Brough et al., 2016). Other research shows that physical, social, and psychological proximity to workers of fair-trade companies increases consumer engagement and the purchasing of the companies’ products by building a sense of connection to those workers (Gillani et al., 2021).

While the social identity theory literature offers valuable insights, social behavior is complex. Therefore, we expand the sustainability literature by focusing on self-expansion theory and how consumers relate to others more broadly by expanding themselves to others as a consequence of belonging. While self-expansion theory has informed our understanding of how consumers build relationships with brands (Reimann & Aron, 2014), the sustainability literature has yet to incorporate this theory. This omission is notable, given a growing body of work linking prosocial consumer behavior with factors associated with social affiliation (see White et al., 2019).

Previous research has explored consumer behavior through the lens of social exclusion and loneliness (Duclos et al., 2013; Jiao & Wang, 2018). While these constructs share some similar attributes, they are distinct from belonging. For example, though social exclusion can serve as an antecedent to a decline in one’s sense of belonging, this impact may be slow to develop. A diminishment of one’s sense of belonging may occur following multiple experiences of rejection. Thus, a person who is rejected once or twice may still feel they belong (Asher & Weeks, 2014). Belonging is also distinct from loneliness or the transient feeling that one’s relationships do not align with one’s expectations (Asher & Weeks, 2014). Specifically, one can feel a general sense of belonging, but periodically feel lonely and momentarily crave interaction. Meanwhile, a sense of belonging refers to the broader extent to which one feels they “fit in,” contribute, and have a close “bond” with others (Malone et al., 2012).

Since sustainable products typically cost more and are viewed as inferior in quality (Luchs et al., 2010), purchasing them often necessitates stalling one’s desires to “prioritize behaviors with ill-defined consequences that are focused on others” (White et al., 2019, p. 30). However, this collective perspective conflicts with the experiences of those low in belonging, who do not feel a strong sense of connection to society and feel less dependent on others (Malone et al., 2012). Accordingly, we propose that a low sense of belonging creates a belief that one’s personal life will not be impacted based on others’ or one’s own consumption choices, leading to less favorable responses to sustainable products. This prediction is consistent with self-expansion theory (Aron et al., 1991), which holds that humans are motivated to connect with others to increase their efficacy in the world and do so by incorporating the knowledge, experiences, and identities of others into their own sense of self (Aron et al., 2013). As individuals develop a broader self-concept, they begin to align their interests with those of others, which encourages them to pursue the interests of others or society more broadly.

Drawing from self-expansion theory, we predict that belonging (low vs. high) and product type (sustainable vs. conventional product) will interact to affect consumer responses (evaluations and willingness to pay).

**H1** Individuals low (vs. high) in belonging will have less (vs. more) positive consumer responses (evaluations and willingness to pay) to sustainable products, while individuals’ sense of belonging will not affect consumer responses to conventional products.

**Perceived Impact of Sustainable Choices**

We argue that consumers low in belonging respond less positively to sustainable products because belonging impacts the extent to which they perceive that collective, sustainable choices will impact them personally. According to self-expansion theory, people often adopt the identity of and purchase products aligned with the group to which they belong. Moreover, they feel like the choices other individuals make have an impact on them and that their choices impact others (Swann et al., 2012). Thus, the process of self-expansion is a powerful motivator that activates the goal of mutual cooperation. Belief about the group’s effectiveness may also be objectively higher for those high in belonging as opposed to other individuals (De Cremer & Stouten, 2003; Schultz et al., 2017), leading individuals to perceive their own and
| Table 1 Literature review: effects of social aspects on consumer responses to sustainable products |
|-------------------------------------------------|---------------------------------|----------------------|---------------------------------|---------------------------|-------------------------------------------------|
| Journal                                         | Research type                   | Methods             | Underlying theory              | Sample size               | Main findings                                                                 |
| Cho et al. (2013)                               | Quantitative                    | Survey              | Value-belief norm theory       | n = 726                   | Horizontal (vs. vertical) collectivism positively influences perceived consumer effectiveness, which positively affects environmental attitudes and results in pro-environmental commitment. |
| van der Werff et al. (2013)                     | Quantitative                    | Experiment, survey  | Theories of identity           | Study 1 (468); Study 2 (138); Study 3 (99) | Biospheric values lead to positive environmental preferences, intentions, and behaviors via one’s environmental self-identity. |
| White and Simpson (2013)                        | Quantitative                    | Experiment, field study | Social identity theory, self-construal | Study 1 (119); Study 2 (676); Study 3 (358); Study 4 (133) | Activating the individual self makes self-benefit and descriptive appeals most effective at encouraging sustainable behaviors; activating the collective self makes injunctive and descriptive norm appeals more effective. |
| Yang et al. (2015)                              | Quantitative                    | Experiment          | Social identity theory, construal theory | Study 1 (89); Study 2 (156); Study 3 (165) | Abstract appeals encourage green product purchase intentions more effectively than concrete appeals when advertising the benefit of the product using other (vs. self) appeals. |
| Brough et al. (2016)                            | Quantitative                    | Experiment, field study | Social identity theory          | Study 1 (127); Study 2 (194); Study 3 (131); Study 4 (403); Study 5 (472); Study 6A (322); 6B (73) | Males (vs. females) show lower preferences toward green products because consumers associate green products with femininity. |
| Costa-Pinto et al. (2016)                       | Quantitative                    | Experiment          | Values theory, identity-based motivation | Study 1 (157); Study 2 (120) | Self-transcendence (vs. self-enhancement intentions) increases green consumption when personal identity is salient. However, when social identity is salient, self-transcendence and self-enhancement intentions similarly impact green consumption. |
| Journal                      | Research type   | Methods                          | Underlying theory                              | Sample size | Main findings                                                                 |
|------------------------------|-----------------|----------------------------------|------------------------------------------------|-------------|--------------------------------------------------------------------------------|
| Graffland (2017)             | *Journal of Business Ethics* | Quantitative Survey              | Social identity theory, theory of planned behavior | n = 1030    | Christian religiosity increases positive attitudes toward and the purchase of socially responsible products |
| White et al. (2019)          | *Journal of Marketing*      | Conceptual Literature review      | SHIFT Framework, which includes social identity theory | –           | The paper develops a framework for encouraging sustainable behavior change (SHIFT), with some focus on social aspects |
| Gillani et al. (2021)        | *Journal of Business Ethics* | Quantitative Survey              | Social identity theory                          | n = 323     | Higher levels of physical, social, and psychological proximity increase consumer engagement and purchasing behaviors of fair-trade products. Consumer hypocrisy, consumer empathic concern, and consumer nationality moderate this effect |
| This study                   | –                | Quantitative Experiment, field study | Self-expansion theory                           | Study 1A (293); Study 1B (353); Study 2 (102); Study 3 (256); Study 4A (414); Study 4B (183) | Individuals low (vs. high) in belonging have less (vs. more) positive consumer responses (evaluations and willingness to pay) to sustainable products. Perceptions of a shared human experience moderate this effect |
others’ choices as having a greater impact on social and environmental issues. This, in turn, may cause them to value collective actions, such as purchasing sustainable products, more positively.

However, individuals low in belonging do not feel a strong sense of connection to society, and thus, feel a greater distinction between themselves and others. This shifts their focus away from others and onto the self (Alhouti et al., 2021; Malone et al., 2012). As consumers feel more disconnected, they may perceive that others’ choices have less impact on their personal lives, and that their own choices have less impact on others. This may lead consumers low in belonging to respond less positively to sustainable products because they perceive collective efforts toward challenging social issues or climate change as having less impact on them personally.

Thus, we propose that the perceived impact of collective, sustainable choices will mediate the interactive effect of belonging (low vs. high) and product type (sustainable vs. conventional product). Specifically, we expect that individuals low (vs. high) in belonging will perceive less (vs. more) collective impact from sustainable choices on their personal life, and result in less (vs. more) positive consumer responses to sustainable products.

H2 Individuals low (vs. high) in belonging will have less positive consumer responses to sustainable products because they will perceive less (more) impact from collective sustainable choices on their personal lives.

**Shared Human Experience**

To address the negative implications associated with H1 and H2, one might ask, “What can brands do to encourage low-belonging individuals to respond more positively to sustainable products?” We argue that individuals low in belonging feel a narrower sense of self—that is, a self-concept that is less inclusive of others—and that this impacts their response to sustainable products. If true, emphasizing similarities between the self and others should motivate an individual to expand their self, leading to more positive consumer responses to sustainable products. For example, an advertisement highlighting beliefs or values that people share with others, which Motyl et al. (2011) referred to as “shared human experiences,” may enhance consumer responses to sustainable products.

We note that while perceptions of a shared human experience may encourage people to see others as more similar to themselves and to feel more affected by the behaviors of others, it is unlikely that this will lead low-belonging individuals to feel like they suddenly belong. There are important distinctions between shared human experiences and feelings of belonging. First, as captured by traditional measures of belonging (Malone et al., 2012), those high (vs. low) in belonging feel a sense of acceptance and inclusion (vs. rejection and exclusion). Conversely, shared human experiences simply reflect various attributes and features that one has in common with others (Oveis et al., 2010). Knowledge of these similarities, however, does not ensure a sense of acceptance or inclusion—elements fundamental to a sense of belonging.

In summary, perceiving a shared human experience should increase individuals’ tendency to perceive that collective, sustainable choices have a greater impact—which, in turn, should result in comparable consumer responses to sustainable products between individuals higher and lower in belonging.

H3a When individuals hold lower perceptions of a shared human experience, low-belonging individuals will have less positive consumer responses to sustainable products than high-belonging individuals. H3b When individuals hold higher perceptions of a shared human experience, consumer responses to sustainable products will not significantly differ between low- and high-belonging individuals.

Figure 1 summarizes our conceptual framework.

**Overview of the Present Studies**

Five experimental studies and a field study reveal that a consumer’s sense of belonging affects their responses to sustainable products. Studies 1A and 1B show that consumers lower in belonging evaluate sustainable products less favorably than consumers higher in belonging. Study 2 demonstrates that individuals lower (vs. higher) in belonging were less willing to pay for a sustainable product over a conventional product in a field setting. Study 3 provides process evidence for this effect. We find that low (vs. high) belonging decreases perceptions of the collective impact of sustainable choices, which reduces consumers’ willingness to pay for sustainable products. Studies 4A and 4B provide additional support for our proposed underlying mechanism (perceived impact of collective, sustainable choices) by showing that individual differences in perceptions of a shared human experience and exposure to advertising emphasizing a shared human experience can attenuate the impact of low belonging on consumer responses to sustainable products.

**Study 1A**

Study 1A provided the initial test of whether consumer responses to sustainable (vs. conventional) products differ depending on their level of belonging.
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Method

Three hundred and three participants were recruited on Amazon Mechanical Turk, which uses a subject pool known for a high level of data quality (Goodman & Wright, 2022; Wright & Goodman, 2019). We dropped 10 participants for not taking the survey seriously or missing the attention check. When asked, “In all honesty, how seriously did you take this study?” on a scale from 0 = “not seriously” to 100 = “very seriously,” these participants reported a score of 50 or lower. This left a final sample of 293 participants (M_age = 37.68 years, 52% female). The study consisted of a between-subjects design with one manipulated factor (product type: sustainable or conventional product) and one measured variable (belonging).

Participants read a passage about a fictitious coffee brand called Ony, where the product was manipulated to be either a sustainable or a conventional product. In the sustainable product condition, participants read that Ony provides consumers with a sustainably sourced cup of coffee in a “socially responsible” manner. Alternatively, in the conventional product condition, participants read that Ony provides consumers with the coffee they want in an “effective” manner (see Appendix 1). Afterward, participants indicated their evaluations of Ony by answering a series of 7-point, bipolar scale items: bad/good, unfavorable/favorable, and negative/positive (adapted from Walters & Hershfield, 2020). These items were combined to create a scale measuring overall evaluations of Ony (α = .96), which served as our dependent variable. Next, participants completed a manipulation check of the sustainable (vs. conventional) product type condition, participants read that Ony provides consumers with the coffee they want in an “effective” manner (see Appendix 1). Afterward, participants indicated their evaluations of Ony by answering a series of 7-point, bipolar scale items: bad/good, unfavorable/favorable, and negative/positive (adapted from Walters & Hershfield, 2020). These items were combined to create a scale measuring overall evaluations of Ony (α = .96), which served as our dependent variable. Next, participants completed a manipulation check of the sustainable (vs. conventional) product type manipulation by responding to a 7-point, bipolar measure: not sustainable product/very sustainable product. This was followed by a filler task where participants rated a series of brand logos on various characteristics (e.g., attractive, unique, etc.). Participants then completed the 12-item General Belonging Scale from Malone et al., (2012; α = .96). Finally, participants answered demographic questions. Embedded in the demographic questions was an attention check and a question asking participants to indicate how seriously they took the study.

Results

Manipulation Check

Participants in the sustainable (vs. conventional) product type condition were significantly more likely to agree that Ony provides sustainable coffee (M_sustainable = 5.25; M_conventional = 4.13; F(1, 291) = 83.13, p < .01). This suggests that we successfully manipulated sustainable product perceptions of the brand Ony.

We also tested whether the product type impacted ratings on the belonging scale, as exposure to a sustainable product could prime belonging. As expected, product type did not significantly influence belonging (M_sustainable = 5.18; M_conventional = 5.24; F(1, 291) = .12, p = .73).

Ony Evaluations

Using PROCESS Model 1 (Hayes, 2017), we conducted a 5000-sample bootstrapped multiple regression to test the effect of the product type (contrast coded: sustainable = 1, conventional = − 1) and belonging (continuously measured), as well as their interaction, on evaluations of Ony. We found a significant main effect of product type, such that participants overall reported more favorable evaluations of the sustainable product (M_sustainable = 5.84) than the conventional...
product ($M_{\text{conventional}} = 5.12, \beta = -.74, t(1, 289) = -2.67, p < .01$). Belonging also had a significant positive association with evaluations of Ony ($\beta = .17, t(1, 291) = 3.25, p < .01$). In addition, the analysis revealed a significant two-way interaction of belonging and product type on evaluations of Ony ($\beta = .21, t(1, 289) = 4.14, p < .01$).

A floodlight analysis (Spiller et al., 2013) revealed a significant positive effect of product type on product evaluations among participants higher in belonging ($B_{\text{HN}} > 4.30, \beta = .17, SE = .09; p < .05$). As anticipated, in the sustainable product condition, we found that as an individual’s level of belonging decreased, their evaluations of the sustainable product significantly decreased ($\beta = .38, t = 5.51, p < .01$). In contrast, belonging and evaluations of Ony had no significant relationship in the conventional product condition ($\beta = -.05, t = -.60, p = .55$).

**Discussion**

Results from Study 1A provide evidence for H1. Specifically, individuals low (vs. high) in belonging had less (vs. more) positive consumer responses to sustainable products, while the individuals’ sense of belonging did not affect consumer responses to conventional products.

**Study 1B**

Study 1B was created to accomplish four goals. First, we tested the robustness of Study 1A’s finding that consumers lower (vs. higher) in belonging respond less positively to sustainable products. Second, we tested social exclusion and loneliness as alternative explanations for our findings given their potential relation to belonging. Third, to alleviate confound concerns, we measured belonging at the beginning of the study, manipulated product type, and then measured the dependent variable at the end of the study. Finally, we tested our conceptual framework in another product category (water bottles) to further generalize the findings.

**Method**

Using Amazon Mechanical Turk, we recruited 364 participants. Using the same exclusion criteria from Study 1A, we dropped 11, leaving a final sample of 353 participants ($M_{\text{age}} = 36.66$ years, 53% female). The study consisted of a between-subjects design with one manipulated factor (product type: sustainable or conventional product) and one measured variable (belonging).

Participants were first told that they would take part in two separate studies, although in actuality, the studies were connected. In the “first study,” participants completed a series of scales in the following order: the General Belongingness Scale (Malone et al., 2012; $\alpha = .94$) from Study 1A, the UCLA Loneliness Scale (Russell et al., 1980; $\alpha = .94$), and a social exclusion scale (Su et al., 2017; $\alpha = .93$). Next, participants took part in the filler task from Study 1A. Afterward, participants were told they had completed the first study and proceeded to the second study.

In the “second study,” really Part 2 of the second study, participants read a brief passage about a fictitious, reusable water bottle brand called Copla, where the product was manipulated to be either a sustainable or a conventional product. In the sustainable product condition, participants read that Copla provides consumers with sustainably sourced water bottles in a socially responsible manner. Alternatively, in the conventional product condition, participants read that Copla provides consumers with essential water bottles in an effective manner (see Appendix 2). Next, participants completed the same scale from Study 1A to measure overall evaluations of Copla (adapted from Walters & Hershfield, 2020; $\alpha = .93$), which served as our dependent variable. Afterward, participants completed the sustainable product manipulation check from Study 1A by responding to a 7-point, bipolar measure: not sustainable product/very sustainable product. Finally, participants answered demographic questions, an attention check, and a question asking participants to indicate how seriously they took the study.

**Results**

**Manipulation Check**

Participants in the sustainable (vs. conventional) product type condition were significantly more likely to agree that Copla offers sustainable water bottles ($M_{\text{sustainable}} = 5.09; \bar{M}_{\text{conventional}} = 4.13; F(1, 351) = 60.47, p < .01$). This suggests that we successfully manipulated sustainable product perceptions of the brand Copla.

**Copla Evaluations**

Using Hayes PROCESS Model 1 (Hayes, 2017), we conducted a 5000-sample bootstrapped multiple regression to test the effect of the product type (contrast coded: sustainable = 1, conventional = −1) and belonging (continuously measured), as well as their interaction, on evaluations of Copla. The analysis revealed a significant two-way interaction of belonging and product type on evaluations of Copla ($\beta = .11, t(1, 349) = 2.12, p = .03$) (see Fig. 2). No other effects were significant.

As anticipated, a floodlight analysis revealed a significant positive effect of the product type on product evaluations among participants higher in belonging ($B_{\text{HN}} > 3.82, \beta = .16, SE = .08; p < .05$). In the sustainable product condition, we found that as an individual’s level of belonging decreased,
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their sustainable product evaluations significantly decreased ($β = .14, t = 2.03, p = .04$). In contrast, there was no significant relationship between belonging and evaluations of Copla in the conventional product condition ($β = −.07, t = −.99, p = .32$). These results replicate our findings from Study 1A and further support H1 or that individuals lower in belonging reported significantly less favorable evaluations of the sustainable product than individuals higher in belonging.

Alternative Explanations

Repeating the earlier analysis from Study 1B, we tested social exclusion and loneliness as alternative explanations in place of our belonging measure. We found no evidence that either alternative explanation accounts for our results (see Web Appendix A for results).

Discussion

Study 1B results provide additional evidence for H1. Specifically, individuals lower in belonging evaluated sustainable products less favorably than consumers higher in belonging. Study 1B also ruled out social exclusion and loneliness as alternative explanations and generalized our findings by using a new product category (water bottles).

Study 2

We designed Study 2 to test whether our prior results would replicate in the field and extend to an individual’s willingness to spend actual money on a sustainable product.

Method

At a park in the Northeastern region of the United States, a research assistant invited individuals to participate in a field study in exchange for $3, telling them she represented a local marketing company testing a product. The data were collected over a week. Following a brief introduction, individuals were asked to review two product descriptions: one sustainable description and one conventional description of the brand Cashmere’s toilet paper, which were adapted from Luchs et al., (2010; see Appendix 3). The descriptions were presented side by side and counterbalanced. Next, individuals read that they would receive a free roll of the conventional toilet paper valued at $1 from Cashmere. However, they could give up some of their $3 participation money to instead receive the sustainable version of the brand’s toilet paper. Specifically, they read “How much of your $3 participation money would you give up to receive the sustainable toilet paper instead of the regular toilet paper? Please write a value between $0.00 and $3.00.” The amount of money they were willing to give up served as our dependent variable. Individuals then completed the General Belongingness Scale (Malone et al., 2012; $α = .96$). Finally, individuals answered demographic questions, were debriefed, and received payment.

Results

One hundred and two individuals participated in the study ($M_{\text{age}} = 35.49$ years, 63% female). To analyze the data, we conducted a linear regression analysis to examine the association between belonging (continuously measured) and how much money individuals would give up for the sustainable toilet paper (from $0.00$ to $3.00$). Consistent with our hypothesis, the analysis revealed a significant positive relationship ($β = .28, p = .03$).

Discussion

Results from this field study demonstrate that individuals lower (vs. higher) in belonging are less willing to pay additional money for a sustainable product than they are for a conventional product. The predicted positive relationship between belonging and willingness to pay more for a sustainable product than a conventional product was observed in the field with actual money. Thus, these results provide real-world support for H1.

Study 3

Study 3 was created to accomplish three goals. First, while Studies 1A, 1B, and 2 provide support for H1, it is unclear if other factors co-vary with belonging. Thus, in Study 3, we manipulated belonging. Second, we tested mood as an alternative explanation. Third, we tested H2 or whether our proposed process mechanism—perceived impact of collective,
sustainable choices—accounts for the observed effects. We expected that individuals low (vs. high) in belonging would perceive less (vs. more) impact from collective, sustainable choices on their personal life and as a result, have less (more) positive consumer responses to sustainable products.

Pretest

One-hundred and eighteen Amazon Mechanical Turk workers ($M_{age} = 34.98$ years, 67% female) were randomly assigned to pretest our belonging manipulation. In the high (vs. low) belonging condition, participants wrote about a time in their lives when they felt they did (vs. did not) belong. After the writing task, participants answered the two-item belonging scale from Lambert et al. (2013): “Right now, I have a sense of belongingness on my mind,” and “I really feel like I belong with others,” on a scale from 1 = “Strongly disagree” to 7 = “Strongly agree” (r = .78). The scale served as our manipulation check. Finally, participants answered demographic questions.

Participants in the low-belonging condition experienced significantly lower levels of belonging ($M_{low~belonging} = 3.84$) than those in the high-belonging condition ($M_{high~belonging} = 5.40$) ($F(1, 116) = 43.72, p < .01$). This suggests that we successfully manipulated a low and high sense of belonging.

Method

The sample for Study 3 consisted of 263 participants recruited on Amazon Mechanical Turk. Using the same exclusion criteria from the prior studies, we dropped seven participants. This left a final sample of 256 participants ($M_{age} = 36.46$ years, 53% female). The study consisted of a between-subjects design with two manipulated factors: product type (sustainable or conventional product) and belonging (high or low belonging).

Participants first completed the writing task from the pretest to manipulate low belonging (vs. high belonging). Next, participants read the passage from Study 1A about the coffee brand Ony to manipulate product type (sustainable or conventional product). Participants then answered our dependent variable, “How much would you be willing to pay for one serving (12 oz.) of Ony Coffee?” using a scale ranging from “$0” to “$10.” Afterward, participants answered a four-item scale to measure the perceived impact of collective, sustainable choices (adapted from Jones et al., 2017; $\alpha = .79$) on a 7-point Likert scale (1 = “Strongly disagree” to 7 = “Strongly agree”). For example, “If people do not make sustainable choices, the biggest negative impact will be experienced by people like me” (see Appendix 4 for scale). This scale served as our mediator.

Participants then answered questions to assess positive ($\alpha = .80$) and negative mood ($\alpha = .66$) that we adapted from the PANAS scale (Watson et al., 1988). Finally, participants answered demographic questions, an attention check, and a question asking participants to indicate how seriously they took the study.

Results

Willingness to Pay

We conducted an ANOVA to test the effect of belonging (contrast coded: low belonging = 1, high belonging = −1) and product type (contrast coded: sustainable product = 1, conventional product = −1), as well as their interaction, on willingness to pay. As predicted, we found a significant two-way interaction of belonging and product type on willingness to pay ($F(1, 252) = 4.04, p = .045$). Product type had a marginally significant main effect, such that participants were willing to pay more for the sustainable product over the conventional product ($M_{sustainable} = $2.99 vs. $M_{conventional} = $2.53; $F(1, 252) = 3.44, p = .07$). Simple contrasts revealed the nature of the interaction. As anticipated, participants in the low belonging (vs. high belonging) condition were willing to pay significantly less for the sustainable product ($M_{low~belonging,~sustainable} = $2.68 vs. $M_{high~belonging,~sustainable} = $3.28; $F(1, 252) = 3.81, p = .05$). On the other hand, the belonging conditions had no significant impact on willingness to pay for the conventional product ($M_{low~belonging,~conventional} = $2.72 vs. $M_{high~belonging,~conventional} = $2.39; $F(1, 252) = .92, p = .34$). This supports our prior findings and H1.

Mediating Role of Perceived Impact of Sustainable Choices

We used PROCESS Model 8 to test our moderated mediation model (Hayes, 2017; Preacher et al., 2007). The index of moderated mediation was significant, as the confidence interval did not contain zero ($\beta = − .11, 95\% CI [− .255, − .008]$). Consistent with our predictions, within the sustainable product condition, the pathway from belonging to willingness to pay through perceived impact of collective, sustainable choices was significant ($\beta = − .11, 95\% CI [− .221, − .035]$). However, within the conventional product condition, the pathway from belonging to willingness to pay through perceived impact of collective, sustainable choices was not significant ($\beta = .001, 95\% CI [− .087, .087]$), demonstrating full moderated mediation (Web Appendix B). These results support H2 and our theoretical framework.
Mood

We conducted several analyses to test mood as an alternative explanation for our results and found no evidence of impact (see Web Appendix C for results).

Discussion

Study 3 provides support for H2 and demonstrates process evidence for the effect identified in Studies 1A, 1B, and 2 via mediation. Specifically, a low (vs. high) sense of belonging led to lower perceptions of the impact of collective, sustainable choices, which, in turn, lowered willingness to pay for sustainable products. In contrast, belonging had no effect on willingness to pay for a conventional product. This suggests that belonging alters consumers’ response to sustainable products because it influences the extent to which they perceive collective, sustainable choices as impacting their personal lives. Thus, these results (1) replicate those from our earlier studies, (2) manipulate (rather than measure) belonging, (3) rule out mood as an alternative explanation, and (4) demonstrate initial process evidence for our proposed mediator (perceived impact of collective, sustainable choices).

Study 4A

Study 4A was designed to provide additional support for our underlying process explanation (perceived impact of collective, sustainable choices) and to demonstrate a boundary condition showing when the negative impact of belonging on consumer responses to sustainable products would be attenuated. To accomplish this, we investigated whether perceptions of a shared human experience could moderate our effect. We expect that perceptions of a shared human experience will make sustainable products more attractive to individuals lower in belonging and attenuate the effect of belonging on consumer responses to sustainable products.

Method

For Study 4A, 450 participants were recruited on Amazon Mechanical Turk. Using the same exclusion criteria from prior studies, we dropped 36 participants, leaving a final sample of 414 participants ($M_{age} = 36.38$ years, 42% female). The study consisted of a between-subjects design with one manipulated factor (product type: sustainable or conventional product) and two measured variables (belonging and perceptions of a shared human experience).

First, participants read the same passage from Studies 1A and 2 about the coffee brand Ony to manipulate product type (sustainable or conventional product). Afterward, participants indicated their evaluations of Ony by rating the same series of items from Studies 1A and 1B (adapted from Walters & Hershfield, 2020; $\alpha = .93$). This measure served as our dependent variable. Next, participants completed a manipulation check of the sustainable (vs. conventional) product type by responding to a 7-point, bipolar measure: not sustainable product/very sustainable product. The same filler task from the prior studies followed. Participants then completed the General Belonging Scale (Malone et al., 2012) from Studies 1A and 1B ($\alpha = .92$) and answered the Shared Human Experience scale adapted from Motyl et al., (2011; $\alpha = .81$) on a scale from 1 = “Strongly disagree” to 7 = “Strongly agree.” Scale items consisted of “I see many parallels between others and myself,” “When one member of a community suffers, the whole community suffers,” “Almost all people are motivated by similar hopes and dreams,” and “As people we share similar values.” Finally, participants answered demographic questions, an attention check, and a question asking them to indicate how seriously they took the study.

Results

Manipulation Check

Participants in the sustainable (vs. conventional) product type were significantly more likely to agree that Ony provides sustainable coffee ($M_{sustainable} = 5.97$; $M_{conventional} = 5.05$; $F(1, 412) = 55.12, p < .01$).

Ony Evaluations

Using the PROCESS Model 3 (Hayes, 2017), we conducted a 5000-sample bootstrapped multiple regression to test the effect of belonging (continuously measured), product type (contrast coded: sustainable = 1, conventional = −1), and shared human experience (continuously measured), as well as their interactions, on evaluations of Ony. We found a main effect of shared human experience on evaluations of Ony, such that as perceptions of a shared human experience increased, evaluations of the product increased ($\beta = .46$, $t(1,406) = 3.49, p < .01$). Product type had a significant main effect, such that participants reported more favorable evaluations of the sustainable product than the conventional product ($M_{sustainable} = 6.03$ vs. $M_{conventional} = 5.32$; $F(1, 406) = 2.42, p = .01$). Replicating earlier studies, the two-way interaction between belonging and product type was significant ($\beta = .53$, $t(1,406) = 2.84, p < .01$) and the planned contrasts were consistent with our prior studies. Importantly, the analysis also revealed a significant three-way interaction of belonging, product type, and shared human experience ($\beta = -.07$, $t(1,406) = -2.03, p = .04$) on evaluations of Ony.
To explore the three-way interaction, we conducted a floodlight analysis (Spiller et al., 2013). As anticipated, when participants perceived a lower shared human experience \( (B_{IN} \leq 5.95, \beta = .11, SE = .05) \), we found a significant interaction of belonging and product type \( (p < .05) \) on evaluations of Ony. The results revealed that as an individual’s level of belonging decreased, they evaluated the sustainable product significantly less favorably \( (\beta = .29, p < .01) \), but no association existed between belonging and product evaluations for the conventional product \( (\beta = -.06, p = .38) \). Thus, at lower levels of shared human experience, our results replicate earlier findings, showing that low belonging weakens the positive effects of sustainability (see Fig. 3).

However, and as anticipated, when participants perceived a higher shared human experience \( (B_{IN} > 5.95) \), belonging no longer had a significant effect on product evaluations \( (\beta = .11, SE = .05, p > .05) \). These results suggest that perceiving a shared human experience may encourage individuals lower in belonging to view sustainable products as favorably as do those higher in belonging (see Fig. 4).

**Discussion**

Results from Study 4A replicate and extend earlier findings. Specifically, we find that individuals lower (vs. higher) in belonging evaluate sustainable products less favorably—but interestingly, only when individuals perceive less of a shared human experience; thus, supporting H3a. In contrast, when people perceive a higher shared human experience, the effect attenuates; thus, supporting H3b. We speculate that this occurs because perceiving a widely shared human experience allows consumers lower in belonging to perceive collective, sustainable choices as having greater impact, which leads them to respond to sustainable products comparably to those higher in belonging.

**Study 4B**

In Study 4B, our primary goal was to provide further evidence for our conceptual framework, and to highlight actionable strategies to enhance low-belonging consumers’ responses to sustainable products. Specifically, we investigated whether advertisements emphasizing a shared human experience can attenuate the negative effect of low belonging on consumer responses to sustainable products. We also used a real, sustainable brand (Green Mountain Coffee) to test whether our findings apply to established brands.

**Pretest**

In exchange for course credit, 58 undergraduate students were recruited \( (M_{age} = 21.07 \text{ years}, 66\% \text{ female}) \). They were randomly assigned to view one of two different versions of a Green Mountain Coffee advertisement. In the shared human experience appeal condition, participants reviewed an advertisement emphasizing that “as people, we share similar hopes, values, and dreams” and encouraged people to embrace those similarities. In the non-shared human experience appeal condition, the advertisement emphasized that “as people, we share different hopes, values, and dreams” and encouraged people to embrace those differences (see Appendix 5). Next, participants reviewed a definition of “Shared human experience” and proceeded to answer a three-item measure: “The advertisement above makes me perceive a shared human experience,” “The advertisement above makes me experience feelings of a shared human experience,” and “The advertisement above makes me perceive that we all share similar experiences in our lives,” on a scale from 1 = “Strongly disagree” to 7 = “Strongly agree” \( (\alpha = .89) \). The scale served as our shared human experience...
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manipulation. Finally, participants answered the General Belongingness Scale (Malone et al., 2012; α = .94) and demographic questions.

Participants in the shared human experience appeal condition perceived significantly higher levels of shared human experience (M_{shared human experience} = 4.70) than those in the non-shared human experience appeal condition (M_{non-shared human experience} = 3.79) (F(1, 56) = 6.16, p < .05). When belonging was added as a covariate, the effect remained significant (F(1, 55) = 4.30, p < .05). Furthermore, we found no effect of our shared human experience manipulations on belonging (F(1, 56) = 2.56, p > .10, NS). These findings suggest that we successfully manipulated situational perceptions of a shared human experience (and did not manipulate belonging). The results of an additional pretest demonstrate the divergent validity of shared human experience from belonging (see Web Appendix D for additional details).

Method

In exchange for course credit, 200 undergraduate students participated in Study 4B. Using the same exclusion criteria from the earlier studies, we dropped 17 participants, which left a final sample of 183 participants (M_{age} = 19.46 years, 60% female). The study consisted of a between-subjects design with two manipulated factors: advertisement appeal type (shared human experience or non-shared human experience) and belonging (high or low belonging).

First, participants completed the writing task from Study 3 to manipulate low belonging (vs. high belonging). Next, participants looked at either the shared human experience or the non-shared human experience ad featured in the pretest. Participants then answered our dependent variable question: “How much would you be willing to pay for one serving (12 oz.) of Green Mountain Coffee?” using a scale ranging from “$0” to “$10.” This was followed by scales to measure perceived self-concept alignment—the extent to which participants felt the choice to purchase Green Mountain Coffee matched with characteristics of their true self (α = .90; modified from Dixon & Mikolon, 2021) and warm glow feelings (α = .88; modified from Tezer & Bodur, 2020; see Web Appendix E for items). Next, participants engaged in the filler task from the prior studies. Participants then completed the following scales in their respective order: moral character (α = .87; Spielmann, 2021), self-construal (collectivism: α = .76, individualism: α = .78; Singelis, 1994), individual (r = .76) and collective (r = .69) impact and the Schwartz Value Survey Dimensions (universalism: α = .86, self-enhancement: α = .81; Schwartz, 1992; Web Appendix E) to see if any of these constructs serve as alternative explanations for our findings. Finally, participants answered demographic questions, an attention check, and a question asking them to indicate how seriously they took the study.

Results

Willfulness to Pay

We conducted an ANOVA to test the effect of belonging (contrast coded: low belonging = 1, high belonging = −1) and advertisement appeal type (contrast coded: shared human experience = 1, non-shared human experience = −1), as well as their interaction, on willingness to pay. We found a significant two-way interaction of belonging and advertisement appeal type on willingness to pay (F(1, 179) = 4.65, p = .03). No other effects were significant. As anticipated, when participants viewed the non-shared human experience appeal, participants in the low (vs. high) belonging condition were willing to pay less (M_{low belonging, non-shared human experience} = $3.44 vs. M_{high belonging, non-shared human experience} = $3.96, F(1, 179) = 3.64, p = .06). These findings replicate our earlier findings. However, when participants viewed the shared human experience appeal, belonging no longer had an effect on willingness to pay (F(1, 179) = 1.27, p = .26), suggesting that the shared human experience appeal type encouraged individuals higher and lower in belonging to pay similar amounts for a sustainable product (see Fig. 5).

Alternative Explanations

Repeating the earlier analysis, we tested several alternative explanations in place of our belonging manipulation, such as perceived self-concept alignment, warm glow, moral character, collectivism, individualism, individual and collective impact, universalism, and self-enhancement. We also repeated our analysis from Study 4B, but this time added each aforementioned scale individually as a covariate to our initial model. Across all analyses, we found no evidence that any of these alternative explanations account for our results. In addition, our initial results held with the addition of each respective covariate (see Web Appendix E for results).

Discussion

Results from Study 4B extend the findings from Study 4A by manipulating (rather than measuring) perceptions of a shared human experience in an advertisement. Specifically, in Study 4B, individuals lower (vs. higher) in belonging are less willing to pay for sustainable coffee from Green Mountain Coffee—but only when exposed to advertising appeals that do not emphasize a shared human experience. In contrast, when individuals view advertising appeals emphasizing a shared human experience, the significant difference
between individuals higher and lower in belonging in their willingness to pay for sustainable coffee from Green Mountain Coffee disappears. These results provide support for H3a and H3b and suggest that marketers can use advertising appeals that emphasize a shared human experience to attenuate the negative effect of low belonging on consumer responses to sustainable products. Finally, we rule out several alternative explanations, use a real brand (Green Mountain Coffee), and provide further evidence of the underlying process mechanism “perceived impact” via moderation.

### General Discussion

Encouraging sustainable consumption has the potential to greatly improve consumer well-being and society. Drawing on self-expansion theory (Aron et al., 1991), the current research demonstrates a novel reason why individuals may devalue sustainable products as well as approaches on how to overcome this negative effect. Across five experimental studies and a field study, we find that feelings of low belonging diminish the extent to which consumers perceive that collective, sustainable choices will impact them personally (Study 3), which results in less positive consumer responses (evaluations and willingness to pay) to sustainable products (Studies 1A, 1B, and 2). When individuals perceive a shared human experience or view ads emphasizing a shared human experience, however, the impact of belonging on consumer responses to sustainable products disappears (Studies 4A and 4B).

### Theoretical Contributions

This research makes several important contributions to the existing literature. First, these findings bridge the social affiliation literature with the sustainability literature, and, to our knowledge, we are the first to establish a relationship between belonging and consumer responses to sustainable products. Past research on sustainable consumption predominantly examined how individual and contextual factors such as price, eco-labeling, ethical ideologies, and incentives impact sustainable product consumption (Gleim et al., 2013; Hosta & Zabkar, 2021). This initial research exhibited a limited focus on social factors; however, a growing body of work has begun to establish the importance of how certain social aspects affect sustainability outcomes. Likewise, social factors such as social norms and social desirability have a well-documented impact on sustainable consumption (see White et al., 2019), and humans have a fundamental need for belonging even as most are experiencing a diminishing sense of belonging in society (Ipsos, 2018). Yet the question of how belonging might impact sustainable consumption has remained unanswered.

This study’s second contribution to the literature lies in introducing self-expansion theory (Aron et al., 1991) to the sustainability literature. Prior to the current research, no research has used self-expansion theory to study sustainability. Research to date had applied self-expansion theory to study other phenomena such as the formation of brand relationships (see Reimann & Aron, 2014), and the sustainability literature had relied on other theoretical frameworks such as social identity theory (Tajfel & Turner, 1979), which restricts the perception of the self to that of salient referent groups (i.e., in- and out-groups). For example, social identity theory has informed why identification with various groups memberships, such as pro-environmental groups (van der Werff et al., 2013), Christianity (Graafland, 2017), and femininity (Brough et al., 2016) increase sustainable consumption (for more examples, see Table 1). This omission of self-expansion theory from the sustainability literature is surprising given a growing body of work linking prosocial consumer behavior with factors associated with social affiliation (see White et al., 2019). By applying self-expansion theory, we advance our understanding of sustainable consumption.

Third, we identify perceived impact as a driving force in terms of sustainable consumption. More specifically, we find that low belonging, relative to high belonging, impedes the ability to perceive collective sustainable choices as impacting one’s personal life. This mechanism deviates from previous process mechanisms identified in the sustainability literature. For example, individuals often form positive evaluations of sustainable products because these products help to create and maintain positive impressions.

![Fig. 5 Study 4B: the effect of low (vs. high) belonging as a function of advertising appeal type on green mountain coffee willingness to pay](image-url)
(Green & Peloza, 2014) or because they have incentives or have been prompted to favor these products (Osbaldiston & Schott, 2012). In contrast, we introduce a distinct account based on perceived impact. This new account allows us to demonstrate a boundary condition for the effect of belonging on consumers’ response to sustainable products: when individuals perceive a shared human experience or view ads emphasizing a shared human experience. Thus, our results also contribute to existing research by introducing a new construct to the business literature—shared human experience—which we find can encourage consumers who feel low in belonging to respond positively to sustainable products.

Finally, we disentangle our effect from other plausible accounts. Prior research within marketing has primarily focused on social exclusion and loneliness—which, while related, differ from low belonging (Duclos et al., 2013; Jiao & Wang, 2018). Results from our studies provide evidence that variations in social exclusion or loneliness do not explain the results. Thus, the motivational underpinnings between sustainable consumption and similar constructs likely vary and should be studied separately. Our findings highlight belonging as a unique construct influencing consumer behavior in novel ways from other social aspects.

Managerial and Societal Implications

Our finding that consumers low in belonging respond less positively to sustainable products than high-belonging consumers has important, practical implications for businesses, policymakers, and society. As individuals’ sense of belonging can be readily measured and manipulated, our findings provide businesses and policymakers with actionable insights. For example, businesses and policymakers could measure and monitor belonging over time and strategically promote sustainable products to individuals when their sense of belonging is naturally elevated. Businesses could also enhance the perceived value of sustainable products by simply encouraging a sense of belonging. For example, businesses may want to consider establishing brand communities, given their ability to enhance value co-creation amongst their members and create community-building practices that likely foster a sense of belonging (Schau et al., 2009). Lululemon does this, for example, encouraging community-building practices (e.g., brand ambassadors and free group workout classes) that bring consumers together and reinforce their sense of belonging (Danziger, 2019). Volunteering similarly promotes a sense of belonging (Luque-Suárez et al., 2021) and increases the perception that one has greater impact and influence on the world (Deloitte, 2017). Starbucks, for example, encourages volunteering through its Starbucks Giving Match program, which helps partners and community members interact and work toward common goals (Starbucks Corporation, 2022). Further, in the public policy sphere, governmental partners may want to incentivize and promote nationwide environmental advocacy organizations (e.g., the Sierra Club, The Nature Conservancy) that not only encourage volunteerism, but emphasize that through collective action, individuals can improve their communities (which will likely increase the perceived impact of sustainable choices among those individuals).

We also identify strategies to encourage individuals low in belonging to respond more positively to sustainable products. For example, we find that consumer responses to sustainable products vary according to the extent to which an individual perceives that they share important, basic similarities with all people. Thus, by focusing on and fostering similarities amongst their consumer base, marketers could increase perceptions of a shared human experience—which we show can improve consumer responses to sustainable products among individuals lower in belonging. Based on our findings showing the effectiveness of advertising strategies to mitigate the impact of low belonging on consumer responses to sustainable products, marketers and public policymakers may want to consider adopting these strategies to increase sustainable consumption.

Limitations and Future Research

Although we show consistent results across five experimental studies and a field study, our research has limitations. Our research focused on a general sense of belonging versus belonging to a specific referent group. While this is a common practice in the belonging literature (Cockshaw et al., 2013; Malone et al., 2012), future research may explore the distinction between a general sense of belonging and belonging to a specific referent group, especially within the context of sustainable consumption. Furthermore, all respondents in our study are from the United States. Samples from other cultures might produce different results. While our research used a variety of broad, representative samples, such as samples from lab studies, Amazon Mechanical Turk, and the field, future research may wish to obtain panel data through alternative sources, such as Prolific. Further research may also wish to extend our findings longitudinally and connect actual consumer scanner data with measures of belonging.

Future research could also explore how low belonging impacts businesses that do not sell sustainable products. For example, low belonging might affect how consumers interact with companies through social media and respond to community-focused campaigns. Other researchers might examine how brand communities can help low-belonging consumers experience a greater sense of purpose.

Last, researchers might explore whether belonging affects behaviors relating to public health (e.g., compliance with disease prevention guidelines like face coverings and vaccination against COVID-19). Since face coverings are more likely to keep others safe than the wearer (Cheng et al., 2020), wearing...
a mask—much like purchasing a sustainable product—contributes to collective well-being. Based on our findings, we might expect lower mask use among individuals low (vs. high) in their sense of belonging. Overall, we hope our research will inspire other researchers, businesses, and policymakers to consider the unique role of belonging in sustainable consumption.

Appendix 1: Ony Product Manipulations

Sustainable Product Condition

At Ony, we provide you with the most ethical coffee experience. The objective of our company is to operate in a socially responsible manner to deliver an ethical cup of coffee to you. We embrace a green mindset in which we treat our customers to the most sustainably sourced coffee out there. Ony, a truly ethical place to buy your next cup of coffee.

Conventional Product Condition

At Ony, we provide you with a typical coffee experience. The objective of our company is to operate in an effective manner to deliver a cup of coffee to you. We embrace a mindset in which we treat our customers to the coffee you want. Ony, a place to buy your next cup of coffee.

Appendix 2: Copla Product Manipulations

Sustainable Product Condition

At Copla, we provide you with the most ethical water bottles. The objective of our company is to operate in a socially responsible manner to deliver ethical water bottles to you. We embrace a green mindset in which we treat our customers to the most sustainably sourced water bottles out there. Copla, a truly ethical place to buy your next water bottle.

Conventional Product Condition

At Copla, we provide you with essential water bottles. The objective of our company is to operate in an effective manner to deliver great water bottles to you. We embrace a mindset in which we treat our customers to the water bottles you want. Copla, a place to buy your next water bottle.

Appendix 3: Sustainable and Conventional Products

Please read the Product Descriptions for the Two Types of Toilet Paper:

| Feature                  | Cashmere Regular Toilet Paper | Cashmere Sustainable Toilet Paper |
|--------------------------|-------------------------------|-----------------------------------|
| Size                     | 9 rolls                       | 9 rolls                           |
| SPC rating (see below)*  | 5 (average)                   | 10 (superb)                       |
| Main benefit             | Better cleaning and absorption| Better for the environment and society |

*The Sustainable Product Council (SPC) rates similar products based upon their pro-environmental and societal behaviors, actions, and processes and provides independent judgements of each product’s sustainability.
Appendix 4: Perceived Impact of Sustainable Products Scale

Perceived Impact of Sustainable Products Scale (Jones et al., 2017)

If people do not make sustainable choices, the biggest negative impact will be experienced by people like me.

The impact of not making sustainable choices is likely to have a big, negative impact on people like me.

Not making sustainable choices will definitely negatively affect me and my family.

I don’t think that people’s lack of sustainable choices will negatively impact people I know (reverse coded).

Appendix 5

Shared Human Experience Ad Appeal

Non-Shared Human Experience Ad Appeal
Supplementary Information  The online version contains supplementary material available at https://doi.org/10.1007/s10551-022-05257-0.

Funding  This research was supported by a CAFR grant from Providence College and funding from the Arthur F. and Patricia Ryan Center for Business Studies at Providence College.

Declarations

Conflict of interest The authors have no relevant financial or non-financial interests to disclose.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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