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RESEARCH ARTICLE



The Risk of Tradition-Washing: Why Communicating Traditionality Increases Green Perceptions

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ABSTRACT

This study addresses the phenomenon of tradition-washing where consumers may infer that food products staged to appear traditional are green due to the associations of traditionality with naturalness, healthiness, tastiness, safety or authenticity. This inference persists despite limited evidence that traditional production methods result in lower environmental impact. This study tests whether communication of traditionality activates judgments of greenness and the psychological mechanisms that may explain this effect. We also examine two boundary conditions: product category and consumer dispositional nostalgia. An online experiment with 280 participants shows that the communication of traditional production significantly enhances consumer preferences and perceptions of greenness by eliciting feelings of groundedness. The effect is greater among consumers lower in nostalgia and similar across vice and virtue product categories. This study calls attention to the risk of tradition-washing as consumers conflate traditionality with greenness perceptions. Moreover, this study extends past work on the effects of traditional production methods on consumers by showing the mediating role of feelings of groundedness: because traditionality makes consumers more grounded, they elicit product perceptions of being greener and more desirable. Our findings have practical implications for stakeholders, namely companies, policymakers and consumer organizations to attenuate the risk of tradition-washing.

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Lay theories; processed food; groundedness; tradition-washing; perceived greenness

1. Introduction

Food brands growingly stage their products to look traditional; for instance, Danone curd describes the product with these words: “Inspired by the small villages in pastoral areas, where grandmothers used to let delicious milk curdle in little earthenware jars to obtain a soft and tasty curd.” Food produced with traditional methods are perceived as being natural, healthier, tastier (Chousou & Mattas, 2021; Richetin et al., 2021; Thurnell-Read, 2019) or safer (Siret & Issanchou, 2000). Because consumers also associate these attributes with environmentally sustainable (or greener hereafter) food (i.e. Lazzarini et al., 2018), there is a risk of tradition-washing, so that consumers infer that traditional products are greener when traditional production methods do not carry *per se* a lower green footprint.

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Tradition-washing can be an extension of greenwashing (Baum, 2012) that may be explained by the lay theories' consumers hold about traditionality (Judge et al., 2020a; Judge et al., 2020b). Lay theories are people's collective, widely accepted notions or implicit convictions that can impact their perceptual and decision-making faculties (Furnham, 1988). Research in craft ceramics production has shown that cueing traditional methods increases perceptions of greenness (Judge et al., 2020a; Judge et al., 2020b) because individuals hold a lay belief that "if it is made with traditional process, then it is green".

To our knowledge, tradition-washing in processed food has been underexamined. The processed food market size represents \$2939.88 billion in 2023 (The business research company, 2023) and has a strong environmental impact as every individual consumes them thrice daily (Marsh & Bugusu, 2007). Moreover, given that food brands increasingly communicate traditionality (Charmpi et al., 2021), they could be (even inadvertently) misleading consumers. Consumers can then choose these products thinking they are greener which could perpetuate inaccurate choices.

However, our understanding of the psychological mechanisms driving these inaccurate inferences among consumers is limited. Against this backdrop, we theorize that communication of traditional production influences consumer preferences and perceptions by activating feelings of groundedness. Groundedness refers to a feeling of emotional rootedness in three distinct yet interconnected sources: physical (place), social (people), and historical (past) (Eichinger et al., 2022). We defend that traditional production cues create a sense of stability, connectedness, and rootedness, which increases groundedness, which, in turn, positively influences consumers' judgements of product greenness and purchase intent. In our study, we explore the link between perceived greenness and purchase intent because greenness perceptions are not only an outcome of consumer evaluation but also a determinant of purchase intent (Chen & Chang, 2012). Consumers who perceive a product as greener are more likely to consider it favorably and develop stronger purchase intentions (Steenis et al., 2017).

The study also tests two boundary conditions that may attenuate the activation of the emotion of groundedness, namely category type (vice vs. virtue) and dispositional nostalgia. We propose that consumers will rely more on this lay theory when there is greater congruity with the product category (Meyers-Levy & Tybout, 1989), so that the communication of traditional production methods would increase consumers' groundedness more in virtue categories, compared to vice categories. Similarly, because greater consumer involvement would attenuate reliance on lay theories as consumer likely scrutinize more the message (Gómez-Carmona et al., 2021; Petty & Cacioppo, 1984), we expect that dispositional nostalgia moderates the relationship between production methods and groundedness, so that the greater the dispositional nostalgia, the lesser the activation of feelings of groundedness. Individuals with high dispositional nostalgia engage in systematic and effortful processing of nostalgic cues and are thus less prone to be influenced by lay theories (Mai & Hoffmann, 2015). We therefore expect that they are less likely to be persuaded by a single cue of traditionality.

An experiment with 280 participants was conducted to test the hypotheses. Findings show the communication of traditional production boosts consumer preferences and their perceptions of greenness by activating feelings of groundedness. This impact is more pronounced among consumers who have lower levels of nostalgia and remains consistent across both vice and virtue product categories.

This paper makes two contributions to environmental communication literature. First, it extends the potential forms of greenwashing by unveiling another way whereby consumers may be misled about the environmental performance of a product. We show that emotional processes underpin the inaccurate inferences drawn by consumers; even when emotional processes have been found to explain other forms of greenwashing –i.e. use of nature imagery to evoke environmental stewardship (Schmuck et al., 2018)– we identify a specific emotion involved in this effect. Second, we demonstrate the conditions on which consumers rely more on cues of traditionality to make judgements of greenness. By explaining the psychological mechanisms that mediates and moderates the inferences drawn of traditionally produced goods our study offers practical

implications for consumer associations and public authorities as they are better equipped to outline policies and/or educate consumers on environmental sustainability. For companies, understanding the role of traditional production cues in influencing consumer perceptions can help in crafting marketing strategies that emphasize authenticity and substantiation of green claims. This is crucial to avoid tradition-washing and maintain corporate credibility (Keilmann & Koch, 2024).

2. Conceptual background

2.1. Communication of traditionality in food products

Traditional methods are established practices or ways of doing things that are not limited to those originating before the widespread adoption of industrialized production techniques but rather include methods that have resisted change over time, regardless of their origin date (European Commission, 2007). These practices often reflect simple and time-honored approaches that have been maintained across generations (Vanhonacker et al., 2008). Traditional production methods are often treated as an equivalent of craft or artisanal production practices (Rivaroli et al., 2020). Past work has shown that traditional production methods shape perceptions of food so that food produced with traditional methods is perceived as more natural (Etale & Siegrist, 2021), safer and healthier (Schuldt, 2013), tastier (Chousou & Mattas, 2021; Thurnell-Read, 2019), and of better quality (Richetin et al., 2021; Rivaroli et al., 2020; Siret & Issanchou, 2000). Not surprisingly then, consumers have a higher purchase intent of these products due to the perceived link between higher quality (Canavari et al., 2002; Verbeke & Viaene, 2000) and healthiness (Siegrist & Hartmann, 2020). Since these attributes are also associated with green food products, it is plausible that consumers infer that food produced with traditional methods is also greener. Moreover, food produced using traditional methods is perceived as more authentic -genuine, original, and true to its origins (Binninger, 2017; Marozzo et al., 2022); because authenticity conveys perceptions of greenness, consumers can also infer that traditionally produced food is also greener (Ewing et al., 2012). Abounding on this, research in ceramics showed that artisanal or craft vessels and ceramics were perceived green due to the expressed affection or love embedded by the artisan (Judge et al., 2020a; Judge et al., 2020b).

This evidence suggests that consumers' lay beliefs about traditionality guide their inferences about product greenness. Lay theories are the individuals' understanding of the deeper structure of objects and events and it can be true or not (Murphy & Medin, 1985; Niedenthal et al., 1999). Lay theories shape judgments (Chen et al., 2020) and influence inference-making via inter-attribute correlations (Kardes et al., 2004), where consumers often hold lay theories about how product attributes relate to one another. Consumers often make judgments and inferences about products based on their intuitive relationships among attributes (Wright et al., 2013). Judge and colleagues' studies demonstrate that consumers infer that if it is caring, then it is green. It is also plausible that if consumers associate traditionally produced food with naturalness, healthiness and safety, they also infer that it is greener (Richetin et al., 2021).

Consequently, we hypothesize:

H1a: Communicating traditional production methods will lead consumers to perceive food products as greener and will increase their purchase intention

2.2. The mediating role of groundedness

Past studies have also shown that activation of emotional processes is implicated in the inferences drawn by consumers (Schmuck et al., 2018). Specifically, we propose that observation of traditionality cues activate feelings of groundedness. Groundedness refers to the emotional rootedness, resulting from a connection to three distinct yet interconnected sources: one's physical (place), social (people), and historical (past) situations (Eichinger et al., 2022). Groundedness implies a sense of having a stable foundation and being emotionally securely anchored, which gives

consumers a feeling of safety, strength, and stability. Marketing offerings can evoke this experience of groundedness. For instance, products incorporating soundscapes that mimic natural sensations provide a multisensory experience that enhances the feeling of being rooted in a particular “place”; products manufactured by real people (e.g. bakers) can root you to “people” and remind consumers of their childhood to the “past.” Companies can then elicit groundedness in manifold ways. They may elicit place-based groundedness by commercializing their products in farmers’ markets that hail from a well-defined location nearby; people-based by featuring individual producers on the packaging, providing information about food suppliers such as their names and addresses, or establishing direct communication channels through company founders or chief executive officers (Fuchs & Hovemann, 2022) and past-based by communicating traditional and artisanal methods, and similarly, publicizing older, often more natural ingredients (Fuchs & Hovemann, 2022). Then, the communication of traditional methods cues may elicit groundedness in consumers (Eichinger et al., 2022). Formally, we hypothesize:

H1b: Communicating traditional production methods (vs. modern ones) will elicit stronger feelings of groundedness.

Moreover, we defend that this emotion is implicated in inferences of greenness and that it drives consumer preferences. Scholarship on affect-as-heuristic theories shows that the emotions experienced by an individual can bias their judgments and decision-making (Keltner & Lerner, 2010). These theories propose that people often rely on their current emotional state as a heuristic or mental shortcut to make judgments and decisions quickly and efficiently (Slovic et al., 2007), as individuals often use their emotional state as a source of information. When individuals experience positive emotions, they may interpret ambiguous information or situations more favorably, while the experience of negative emotions may lead to more negative interpretations (Loewenstein & Lerner, 2003). Also, emotions can influence the allocation of attention. Strong emotions tend to capture attention and prioritize processing emotionally salient information. This selective attention can lead individuals to focus on specific aspects of a situation while ignoring others, potentially distorting their judgment (Lerner et al., 2015).

Applying these arguments to our study, we contend that consumers will rely on this emotion to make inferences about the product. Because groundedness will direct attention to a sense of connection, stability, and rootedness with the natural environment, and these judgments have been shown to underpin judgements of greenness (Kautish & Dash, 2017), groundedness would shape these judgments. Also, as consumers experience more groundedness, they will be more likely to purchase or recommend the product (Eichinger et al., 2022). Formally, we hypothesize:

H1c: Feelings of groundedness are likely to drive greenness perceptions and purchase intention.

Understanding the relationship between perceived greenness and purchase intent is crucial, as prior research suggests that green attributes often play a significant role in shaping consumer behavior, particularly in contexts where sustainability is highly valued (Sharma & Foropon, 2019). Consumers tend to associate green products with positive outcomes such as environmental protection, ethical production practices, and personal well-being, which may enhance their willingness to buy these products (White et al., 2019).

2.3. Boundary conditions

2.3.1. The moderating role of category type (virtue/vice)

In the food industry, products can be classified, among others, into vice and virtue (Van Doorn & Verhoef, 2015). Vice categories (e.g. potato chips, chocolate, wine, and beer) provide an immediate pleasurable experience but contribute to adverse long-term outcomes for the individual. In contrast, virtue categories (e.g. kefir yogurt, vegetables, fruit) are less gratifying and appealing in the short term but have fewer negative long-term consequences.

Consumers have mental frameworks or schemata associated with specific product categories. These schemata align and are congruent with certain benefits or perceptions commonly attributed to those categories (Loken et al., 2008). The schemata of virtue categories comprise perceptions of healthiness and care (Ein-Gar et al., 2012) whereas the schemata of vice categories include interpretations of the food item as unwholesome or detrimental to health (Van Doorn & Verhoef, 2011). Products or brands associated with a set of meanings that matches those of the category schemata are accepted by consumers due to perceived congruity (Gao et al., 2022). In contrast, those products or brands that do not correspond with the category schemata may be rejected due to apparent inconsistency. The incongruity of a product can be defined as the degree of perceived discrepancy between that product and an activated schema in a consumer's mind (Meyers-Levy & Tybout, 1989). To illustrate, consumers perceive an incongruity between vice products and organic extensions because organic is healthy and caring, which is not congruent with vice products (Hernandez-Olalla et al., 2023). This incongruence results in consumers rejecting organic products in vice categories.

Similarly, category incongruity has been shown to explain consumer rejection of sustainability attributes (associated with perceptions of care and kindness) in strength categories (i.e. insecticides). In contrast, green claims are perceived as congruent when found in gentleness-dependent categories (Luchs et al., 2012; Mai et al., 2019). These studies show that congruency with the category explains consumer acceptance or rejection of green products based on zero-sum thinking lay theory (Von Neumann, 1953), where two perceived opposite features (performance and greenness) cannot be achieved simultaneously.

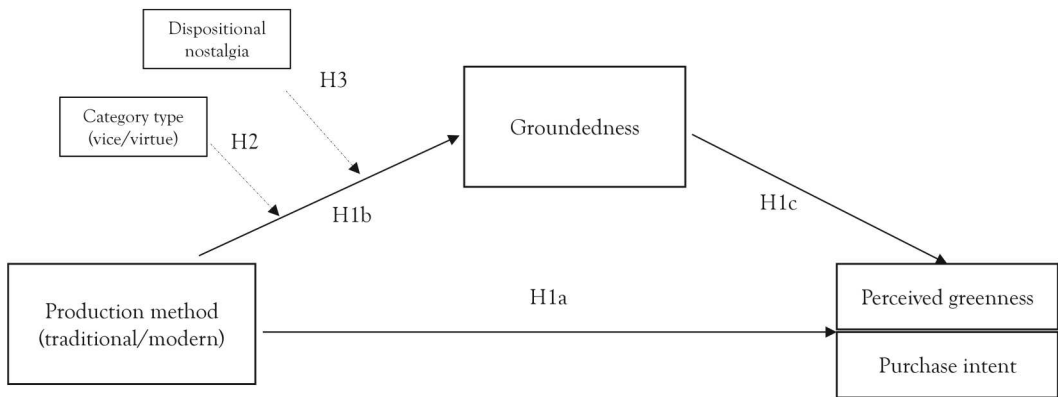
We hold that cues of traditional production are more congruent in virtue categories because tradition often evokes a deep connection to the land, and consuming virtue products can foster a stronger sense of self-connection and self-care (Jain et al., 2023). Conversely, traditional production cues may not be congruent in vice categories because consuming vice categories is unwholesome or detrimental to health (Van Doorn & Verhoef, 2011). Therefore, we defend that consumers will perceive greater congruence when traditional methods cues are found in virtue rather than vice categories. Increased congruence should elicit stronger groundedness. Consequently, combining traditional cues with virtue categories may activate groundedness (Eichinger et al., 2022) and indirectly modulate greenness perceptions and consumer preferences. Hence, we formally hypothesize:

H2: Feelings of groundedness will be higher (lower) if traditional production cues are exhibited in virtue (vice) categories.

2.3.2. The moderating role of dispositional nostalgia

Dispositional nostalgia refers to individuals' emotional attachment to the past and a potential bias in the perception of traditional cues. Nostalgia is characterized by a longing for the past, its personalities, possibilities, and events (Barrett & Carter, 2010; Holbrook, 1993). Dispositional nostalgia is a long-term proneness to experience nostalgia frequently and intensely (Sedikides & Wildschut, 2018). Individuals high in this trait tend to have a solid emotional attachment to their past experiences, memories, and people who have been a part of their lives (Sedikides & Wildschut, 2018). Dispositional nostalgia can provide individuals with comfort, connection, and continuity with their past (Baldwin et al., 2015). It can also help them maintain a sense of identity and continuity over time (Hwang & Hyun, 2013). However, dispositional nostalgia can lead individuals to idealize the past and overlook its flaws and negative aspects (Holbrook, 1993). It can also make it difficult for them to engage fully and appreciate the present moment, as they may constantly long for the past (Verplanken, 2012).

Past work has shown that individuals are less reliant on lay theories when they make an effortful processing of information (Mai & Hoffmann, 2015). Consumers higher in nostalgia engage more in self-reflection (Yang et al., 2022) and their greater involvement with cues of the past will make them



Covariates: age, gender, education, and previous product consumption

Figure 1. Proposed conceptual model.

more prone to scrutinize information. Thus, consumers with higher dispositional nostalgia are less likely to rely on lay theories when processing the information about the product.

Our argument that greater dispositional nostalgia would drive a more elaborated information processing is also consistent with persuasion theories. Drawing from the central tenets of elaboration likelihood model (Petty & Cacioppo, 1984), we propose that individual traits such as dispositional nostalgia can impact feelings. The elaboration likelihood model defends two manners of processing information: the central and the peripheral routes (Petty & Cacioppo, 1984). The central route is featured by more effortful processing, assessing all information at hand, and their judgments are less driven by emotions. Engaging in effortful processing requires mental resources such as attention, working memory, and cognitive effort (Lerner et al., 2015). In contrast, in the peripheral route, consumers do a superficial assessment; their judgment is driven by heuristics, including emotions (Chaiken, 1987). Product involvement affects how cues are processed so that highly involved consumers process *stimuli* more centrally, while in contrast, low-involved individuals engage peripherally so that emotions significantly influence their cognitive processes (Loken, 2006).

Based on these arguments, we defend that individuals with lesser dispositional nostalgia will process information about production methods more peripherally, and the inclusion of a traditional cue will be used as a heuristic guiding consumer choice eliciting emotions to a greater extent. In contrast, individuals with high levels of dispositional nostalgia make effortful processing and will not be persuaded by a single nostalgia-evoking cue. Individuals with lower dispositional nostalgia will then experience more groundedness when exposed to cues of traditional production. Based on this reasoning, we hypothesize:

H3: The level of dispositional nostalgia moderates the relationship between traditional production methods and feelings of groundedness. For individuals with higher dispositional nostalgia, cues of traditional methods will awaken feelings of groundedness to a lesser extent than for individuals with lower dispositional nostalgia.

Figure 1 graphically depicts our conceptual model.

3. Methodology

3.1. Procedure

An online experiment was conducted with UK participants using Prolific, a well-known consumer panel (Mukherjee & Althuizen, 2020). Participants were randomly assigned to review one of four fictitious *stimuli* (traditional vs. modern production methods) about a kefir yogurt (virtue product)

or potato chips (vice product) called “Goodness.” After seeing the products, they answered a set of questions about it. The *stimuli* (see Figure 2) included a description and a product picture; both products were shown with no packaging materials since past studies show that green perceptions may be triggered by packaging materials or colors (Larranaga & Valor, 2022).

Potato chips are categorized as a vice product they offer immediate pleasure through their taste but are associated with negative long-term health outcomes due to their high fat and calorie content because (Van Doorn & Verhoef, 2015). In contrast, kefir yogurt is considered a virtue product because, while it may be less immediately gratifying, it provides long-term health benefits with



Goodness kefir yogurt is a dairy product made following traditional production methods.

It uses age-old recipes.

The fermentation process is done according to long-established work practices



Goodness kefir yogurt is a dairy product made following modern production methods.

It uses recent recipes

The fermentation process is done according to contemporary work practices.



Goodness Crisps is a potato chip made following traditional production methods.

A selection of the best potatoes is cut according to traditional manual processes.

The potato chip production process is done according to long-established work practices.



Goodness Crisps is a potato chip made following modern production methods.

A selection of the best potatoes is cut according to modern automated processes.

The potato chip production process is done according to contemporary work practices.

Figure 2. *Stimuli* used in the experiment.

fewer adverse health consequences (Van Doorn & Verhoef, 2011). Chips are amply consumed in the UK (Statista, 2022), in our survey 8.7% of respondents do not consume it, 23.9% consume it once, 18.8% twice, 20.3% three times, 10.1% four times, and 18.1% five or more times per week. In the case of kefir yogurt, it enjoys popularity in the UK and is associated with health benefits (Azizi et al., 2021). In our survey, 79.6% of respondents reported not consuming it, 8.5% consuming it once, 7.7% twice, 3.5% three times, and .7 four times per week.

3.2. Participants

A priori power analysis for a two-way ANOVA (main effects and interactions) with a small to medium effect size (.23), power of .90, and alpha of .05 suggested a sample size of 272. Accordingly, we oversampled, reaching 300 respondents to ensure we would reach the required sample size. Of the 300 participants, 20 failed the attention check question and were removed from the analysis (valid sample of 280 respondents).

All participants were UK residents above 18 years old; 51% of the participants were female. In terms of age groups, 29.6% were between 35 and 44 years old, 23.9% of participants were between 25 and 34 years old, 14.3% were between 45 and 54 years old, 13.6% were between 55 and 64 years old, 11.4% above the age of 65 and 7.1% were between 18 and 24 years old. The four scenarios had balanced samples of 68–73 participants each. Planned analysis showed that gender, age, and education were distributed equally in the four scenarios. Age, gender, education, and previous product consumption was included as covariates. None of the covariates were significant.

3.3. Measures

All measures were based on scales adapted from prior literature and measured on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Feelings of Groundedness (6 items) was adapted from Eichinger et al. (2022). Even when the authors developed a shorter scale of 3 items, we used the original one, because using a more comprehensive set of measures can provide a more robust and nuanced understanding of the construct, allowing us to assess its multidimensionality and ensuring that key aspects are not overlooked (DeVellis, 2016).


Dispositional nostalgia was measured with 8 items adapted from (Routledge et al., 2011). Perceived greenness was measured with 4 items adapted from Gershoff and Frels (2015). Purchase intent (4 items) was taken from Dodds et al. (1991). Table 1 shows all the report items for all the constructs.

To avoid common method bias, *ex-ante* measures were taken, such as ensuring anonymity and confidentiality in data collection to encourage participants to respond more honestly and accurately (Meade & Craig, 2012); also, items were randomized (Torgerson & Torgerson, 2008). *Ex-post* measures with Harman's Single-Factor Test (Zhonglin, 2020) were calculated and showed that common method bias was not a risk (36.8% cumulative variance).

Manipulation checks were included for both manipulations. To check the manipulation of traditionality, three self-developed items were used. The items were scaled and averaged so that higher ratings indicated a higher perception of modern practices. For the vice product (chips) the items were: "This brand relies on modern production methods", "The selection of the best potatoes is cut according to manual processes", "The potato chip production process is done according to contemporary work practices". For the virtue product (kefir) the items were: "This brand relies on modern production methods", "This brand uses age-old recipes", "The fermentation process is done accordingly to contemporary work practices". A scale from 1 completely disagree to 7 completely agree was used. Mean differences showed that the manipulation was effective ($M_{\text{traditional}} = 2.91$, $M_{\text{modern}} = 5.30$; $t(278) = 18.39$, $p \approx 0$).

To check the manipulation of category type, two items were used: "In the short term it provides an immediate pleasurable experience but in the long term contributes to negative outcomes" (item 1: vice

Table 1. Summary of the scales used.

Variable	Item(s)	Factor loading
Perceived greenness (adapted from Gershoff & Frels, 2015)	1. This product deserves to be labeled “environmentally friendly.”	.85
Alpha: .94	2. Purchasing this product is a good environmental choice	.88
CR: .94	3. A person who cares about the environment would be likely to buy this product	.80
AVE: .80	4. This product is very environmentally friendly	.88
Purchase intent (adapted from Dodds et al. 1991)	1. If I were going to purchase a kefir yogurt, I would consider buying this brand	.84
Alpha: .94	2. If I were shopping for a kefir yogurt, the likelihood I would purchase this brand is high	.89
CR: .94	3. My willingness to buy this brand would be high if I were shopping for a kefir yogurt	.89
AVE: .81	4. The probability I would consider buying this kefir yogurt brand is high	.81
Feelings of Groundedness (adapted from Eichinger et al., 2022)	1. I feel deep-rooted and firmly anchored	.88
Alpha: .96	2. I feel connected to my environment	.88
CR: .96	3. I can firmly feel my feet on the ground	.87
AVE: .81	4. I feel close to the things, nature, and people that surround me	.85
	5. I have a sense of belonging	.87
	6. In a metaphorical sense, it makes you feel, as illustrated by the following picture	
		
Dispositional nostalgia (adapted from Routledge et al., 2011)	1. It gives me pleasure to think about my past.	.65
Alpha: .83	2. I often think of what I should have done differently in my life. (reversed)	.74
CR: .83	3. On balance, there is much more good to recall than bad in my past	.75
AVE: .41	4. I think about the good things that I have missed out on in my life (reversed)	.58
	5. Happy memories of good times spring readily to mind	.76
	6. The past has too many unpleasant memories that I prefer not to think about (reversed)	.79
	7. I get nostalgic about my childhood.	.66
	8. I think about the bad things that have happened to me in the past (reversed)	.68

Scale: 1 = Strongly disagree; 7 = Strongly agree.

check) and “In the short term it is less appealing than other products, but in the long-term have positive consequences” (item 2: virtue check). The scale was designed in such a way that if respondents gave lower ratings to item 1, it meant they saw the product as more of a “vice” and less of a “virtue”. A lower score on this item reflected a stronger perception that the product was vice and not virtue. Mean differences showed that this manipulation was effective (item 1: $M_{\text{virtue}} = 3.32$, $M_{\text{vice}} = 4.70$; $t(278) = 8.86$, $p < .01$; item 2; $M_{\text{virtue}} = 3.78$, $M_{\text{vice}} = 5.06$; $t(278) = 9.41$, $p < .01$).

3.4. Analytical strategy

To test the main effects between the production method and perceived greenness and purchase intent (hypothesis 1a) ANOVA were used. To test the mediating effects, a conditional process analysis was run using PROCESS model 4 for SPSS v.26 (Hayes, 2018) with production methods as an independent variable and groundedness as a mediator (hypothesis 1b, 1c). PROCESS model 7 for SPSS v.26 (Hayes, 2018) was used to test the moderating roles of category type and dispositional nostalgia with the same procedures indicated above (Hypothesis 2a, 3). Each model was

estimated twice, considering perceived greenness and purchase intent as separate dependent variables. Modern production methods and virtue products were coded as 1. As recommended in the literature, we used 10,000 bootstrap estimations resamples and reported unstandardized coefficients (Hayes, 2018).

4. Results

Table 2 presents the descriptive statistics.

When traditional products methods are communicated, participants exhibit a significantly higher purchase intent ($M_{\text{traditional}} = 5.04$, $M_{\text{modern}} = 4.32$, $t(278) = -4.84$, $p = .01$; $d = .57$) than when modern methods are communicated. Greenness perception is not greater in products claiming traditional production methods ($M_{\text{traditional}} = 4.34$, $M_{\text{modern}} = 3.98$, $t(278) = -2.66$, $p = .20$, $d = .31$). These results support H1a for purchase intent but not for perceived greenness. Purchase intent and greenness are measured in the same scale (1–7). The significance of the differences is explained as follows: The mean difference of 0.21 in purchase intent is relatively small but significant, likely due to lower variability in how respondents assess their intention to purchase based on whether a product is a virtue or vice. The larger mean difference of 0.55 in greenness perception does not translate into statistical significance, likely due to higher variability in responses regarding product greenness or a less direct influence of the virtue/vice distinction on perceived greenness. We observed a correlation between perceived greenness and purchase intent (Pearson $r = 0.546$). However, it is important to note that this relationship is correlational. Other factors not included in the model – such as consumer perceived quality, risk (Wasaya et al., 2021), price, and brand loyalty (Panda et al., 2020) – are also likely to influence purchase intent.

The mediation of groundedness is tested using PROCESS model 4 for SPSS v.26 (Hayes, 2018). Results (see Table 3) show that traditional production cues activate groundedness (unstandardized $b = .80$; 95% CI from .46 to 1.13) which support H1b. Also, groundedness enhances the perception of greenness (unstandardized $b = .47$; 95% CI from .39 to .55), and purchase intent (unstandardized $b = .49$; 95% CI from .40 to .58). These results support H1c. These results confirm that food communicating traditional methods elicits feelings of feeling grounded which, in turn, shape judgments of greenness and purchase intention (Figure 3).

The second hypothesis posited that in virtue categories (vs. vice categories), communicating the use of traditional production methods (vs. modern production methods) would increase consumers' groundedness. PROCESS model 7 for SPSS v.26 (Hayes, 2018) was used and H2 is rejected, meaning that traditional production methods cues elicit similar feelings of groundedness regardless of the category type (Table 4).

To test the third hypothesis (the moderating role of dispositional nostalgia), PROCESS model 7 for SPSS v.26 (Hayes, 2018) was used. Results (Table 5) support a significant interaction between production methods and dispositional nostalgia on groundedness. The direction of the interaction is as expected: higher (lower) dispositional nostalgia weakens (strengthens) the positive relationship between the production method and groundedness ($r = .47$), which supports hypothesis 3. Table 5 presents the influence of traditionality cue on groundedness conditioned by nostalgia and Figure 4 the model with the path coefficients for hypothesis 3.

Further analysis of the ranges for moderator variables, following Hayes (2018), reveals an inflection point at high levels of dispositional nostalgia (>5.04), beyond which the relationship between the production method and groundedness ceases to be significant. This inflection point suggests that at very high levels of nostalgia, the ability of traditional cues to evoke feelings of groundedness diminishes, potentially because individuals with strong nostalgic tendencies are already deeply rooted in their past experiences. As a result, additional traditional cues may not further enhance their sense of groundedness. The moderated mediation index remains significant at $p < .05$ for purchase intent (index = $-.16$; CI from $[-.33$ to $-.0006]$) and is marginally significant for perceived greenness at $p = .1$ (index = $-.15$; CI from $[-.29$ to $-.02]$), indicating that while nostalgia moderates

Table 2. Descriptive statistics.

Variables	M (SD)			Correlations & Fornell and Larcker Criterion				
	Total sample	Modern production methods <i>n</i> = 143	Traditional production methods <i>n</i> = 137	Method of production	Feelings of Groundness	Dispositional nostalgia	Perceived greeness	Purchase intent
Method of production				1				
Feelings of Groundness	3.57 (1.45)	3.16 (1.47)*	3.96 (1.32)*	.27*	.90			
Dispositional nostalgia	4.04 (1.04)	4.04 (.93)	4.04 (1.13)	.00	.23*	.64		
Perceived greeness	4.16 (1.16)	3.98 (1.25)	4.34 (1.04)	.15*	.59	.16*	.89	
Purchase intent	4.69 (1.30)	4.32 (1.36)*	5.04 (1.14)*	.27*	.57*	.19*	.52*	.90

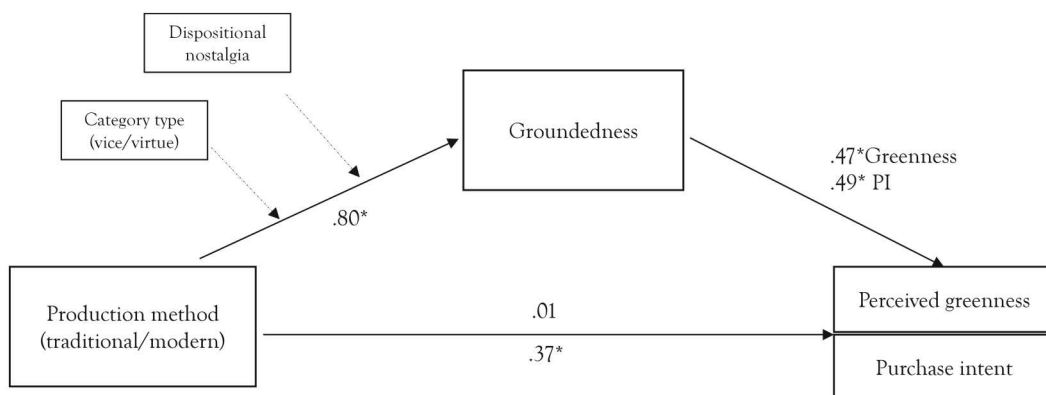
Diagonal in bold shows the square root of correlation.

*Differences between groups *p* < .01.

Table 3. Results of PROCESS model 4 for hypothesis 1.

	unstandardized b	95% LLCI	95% ULCI
Production method → Groundedness	.80*	.46	1.13
$R^2 = .09$; $F(5, 274) = 5.45$, $p < .001$			
Groundedness → Perceived greenness	.47*	.39	.55
Production Method → Perceived greenness	-.01	-.24	.21
$R^2 = .36$; $F(6, 273) = 26.22$, $p < .001$			
Groundedness → Purchase Intent	.49*	.40	.58
Production Method → Purchase intent	.37*	.46	1.06
$R^2 = .36$; $F(6, 273) = 26.15$, $p < .001$			
Indirect effect-Perceived greenness	.37	.21	.55
Indirect effect-Purchase intent	.39	.22	.58

*Significant at $p < .05$.



Covariates: age, gender, education, and previous product consumption

Figure 3. Model with the path coefficients for hypothesis 1.**Table 4.** Results of PROCESS model 7 for hypothesis 2.

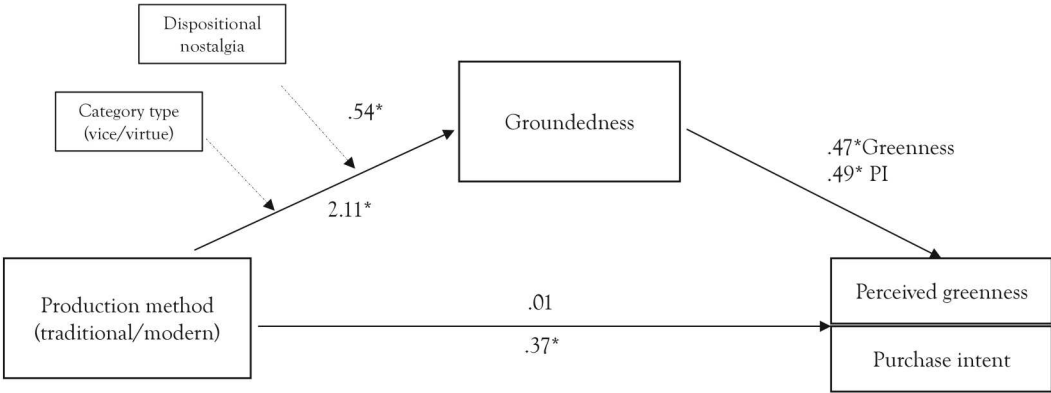
	unstandardized b	95% LLCI	95% ULCI
Production method → Groundedness	.87	.39	1.34
Category → Groundedness	.58	.02	1.14
Production method × category	-.13	-.78	-.52
$R^2 = .10$; $F(7, 272) = 4.75$, $p < .001$			

Table 5. Results of PROCESS model 7 for hypothesis 3.

	unstandardized b	95% LLCI	95% ULCI
Production method → Groundedness	2.11*	.80	3.42
Nostalgia → Groundedness	.54*	.29	.79
Production method × nostalgia	-.32*	-.64	-.01
$R^2 = .16$; $F(7, 272) = 7.54$, $p < .001$			

*Significant at $p < .05$.

the effect of traditional production methods on groundedness, its impact is most pronounced at moderate levels of nostalgia. Table 6 illustrates how the influence of traditionality cues on groundedness varies according to different levels of dispositional nostalgia.



Covariates: age, gender, education, and previous product consumption

Figure 4. Model with the path coefficients for hypothesis 3.

Table 6. Effects of communication of traditionality on groundedness among high and low nostalgic consumers.

Nostalgia level	Conditional Effect	Lower boundary	Higher boundary
Low (0–3)	1.12*	.66	1.58
Medium (3.01–4.12)	.75*	.43	1.07
High (4.12–7)	.42	–.04	.89

*Significant at $p < .05$.

Johnson-Neyman significance region = 5.04; Lower boundary = –.19 and higher boundary=.178.

5. Discussion and implications

This study demonstrates the risk of tradition-washing and explains an affective mechanism whereby it occurs. We found that the communication of traditionality activates feelings of groundedness and this emotion bias consumers so that they assess the product as green. The findings indicate an indirect-only mediation, where the independent variable influences the dependent variable solely through the mediator, without a direct effect (Zhao et al., 2010). This suggests that the mediator fully accounts for the relationship between the independent and dependent variables. The significance of the indirect effect, alongside the non-significant direct effect, aligns with the argument that emotions influence judgments (Evans & Stanovich, 2013) and highlights groundedness as a crucial pathway through which traditional production methods shape consumer perceptions.

Whereas in craft ceramic products, traditional methods directly conveyed greenness perceptions because more love is perceived to be embedded in the product (Judge et al., 2020a; Judge et al., 2020b), we found that for processed food, this effect is not direct but mediated through groundedness. One possible explanation for this difference is that traditional production methods may influence greenness perceptions differently across product categories, so that they elicit greenness perceptions in craft products such as ceramics and less so in food product. Judge and colleagues tested distinct vessel materials, namely wooden and metal bowls; in this case, the significance of traditional creation history is key. Our experiment extends the analysis by studying processed foods (kefir yogurt and potato chips) usually commercialized in supermarkets and produced massively and calls for studying the type of product that might serve as a potential moderator of the influence of production methods on greenness perceptions.

Not only do these findings demonstrate the risk of tradition-washing, they also show for whom the risk is greater: individuals with lower dispositional nostalgia rely more on traditionality to assess

the greenness of products. This occurs because the traditionality cue awakens more groundedness among them. However, individuals with higher nostalgia tend to seek more nuanced representations of the past, as their deep emotional attachment to nostalgic elements makes them prioritize authenticity and coherence (Sedikides & Wildschut, 2018). Research indicates that nostalgia-prone individuals are more critical of superficial cues and are drawn to narratives that provide a sense of continuity and connection to their personal or collective history (Baldwin et al., 2015).

Contrary to our expectations, we found that traditional production method cues elicit similar groundedness, and thus similar greenness perceptions, across vice and virtue categories. A possible explanation is that traditional cues on vice products can act as a neutralizer to appease consumer guilt (Van Doorn & Verhoef, 2015) and elicit groundedness. This conjecture could be examined in further work.

5.1. Theoretical contributions

This paper makes two contributions to the environmental communication literature. First, it presents the risk of tradition-washing. Similar to what occurs with greenwashing that exploits emotional connections (Gómez-Carmona et al., 2021), tradition marketing tactics leverages the emotional and cultural associations consumers have with tradition, such as authenticity, craftsmanship, and a return to simpler times. When a product claims to be made through traditional techniques, consumers may instinctively trust these products as being of higher quality or more ethical, reflecting a yearning for past times and a perceived escape from modern industrial practices. This can lead to an uncritical acceptance of the product's value and benefits without verifying whether these traditional methods deliver on promises of better quality or ethical standards.

The study also highlights that the risk is higher when consumers are less involved in processing information, which is the case when purchasing processed food (Haws et al., 2017). We have argued that when individuals are less involved -in our study involvement was captured by dispositional nostalgia-, they are more likely to make inferences of greenness probably because they engage in a peripheral route of processing, with less careful consideration of information. As a result, they increase their reliance on traditional cues, leading to less critical evaluation and increased susceptibility to traditional methods cues.

Second, the study underscores the role of emotions as a mechanism explaining how lay theories influence consumer perceptions and preference. Emotions are integral to understanding how lay theories shape how people perceive, interpret, remember, and respond to information. Our findings suggest that emotions interact with and influence the activation and application of lay theories. Previous authors undertook the cognitive mechanisms that lay theories mobilize. For instance, Haws et al. (2017) studied how the “if it is healthy, then it is expensive” lay theory impacts a variety of variables related to food decision-making, including inferences, judgment, choice, and information search. Mai and Hoffmann (2015) examined the potential of health consciousness to resolve the so-called “if it is unhealthy, then it is tasty” lay theory. To our knowledge, only Luchs et al. (2012) studied the role of emotions in lay theories. They discovered that consumer feelings of distress make them unconsciously subscribe to the lay theory that “if it is sustainable, then it may compromise functional performance” until a minimum threshold of functional performance is achieved. Moreover, when faced with this trade-off (sustainability vs. performance), the resulting choice is mediated by how much they value sustainability and their feelings of confidence and guilt. Aesthetic design is presented as a moderator in this individual choice, as a superior aesthetic design can overcome the potential lack of confidence in sustainable products. We enrich the study of the role of emotions in lay theories, presenting groundedness as a mediator between lay theories about traditionality and greenness and consumer preferences.

Additionally, our study supplements recent work by Eichinger et al. (2022), introducing a new outcome of feelings of groundedness that is judgements of greenness. Groundedness explains the psychological process behind the relationship between traditional production methods and

perceptions of product greenness and presents a complementary emotional explanation of perceived authenticity as the mechanism underpinning the influence of traditional cues on consumer preferences (Marozzo et al., 2022; Napoli et al., 2016).

5.2. Practical contributions

This research provides key insights for developing communication strategies that avoid tradition-washing by ensuring that traditional methods are substantiated, offering practical guidance for companies, policymakers, consumer organizations, and academia to influence consumer perceptions of greenness effectively and honestly.

For companies, marketing strategies that leverage and communicate traditional production methods to significantly influence consumer perceptions of a product's greenness as long as these practices substantiated. The need for authenticity in green claims is critical, as the relationship between marketing strategies and consumer trust can lead to significant backlash if consumers perceive greenwashing (Keilmann & Koch, 2024). Emotions play a crucial role in environmental messaging, and companies can harness this effectively to boost the impact of sustainability campaigns. Recent research by Huang et al. (2024) demonstrates that nostalgia can make climate change issues felt more immediate by reducing their perceived temporal distance. This suggests that strategically leveraging emotions can greatly diminish psychological barriers to environmental engagement, leading to increased consumer involvement. By invoking the concept of groundedness, communicators can foster a deeper emotional connection to environmental issues, thus enhancing campaign effectiveness.

Policymakers are urged to take proactive steps towards fostering a greener future. Policymakers play a crucial role in enhancing consumer trust and promoting genuine greenness practices by advocating for stricter regulatory frameworks to prevent tradition-washing. The importance of credible communication is underscored by Mladenovic et al. (2024), examining its impact on consumer reactions to green food product communications and showing how trustworthy information is essential in fostering consumer confidence and supporting authentic environmental initiatives. This calls policy makers and regulators to take measures to prevent misleading or deceptive communication of traditionality.

Consumer organizations can design and implement training programs to attenuate the risk of tradition-washing while educating consumers. It has been well-documented that novel information can captivate the human mind, making it an excellent tool for promoting deeper information processing (Mai et al., 2019). Initiatives can encompass the development of interactive workshops where consumers engage with real-life examples of products marketed with traditional cues. Through these sessions, participants can compare such products with genuinely green alternatives, thereby learning to distinguish between tradition-washing and legitimate green claims. Another approach involves the creation of games or mobile apps that simulate shopping experiences (De Canio et al., 2021; Doğan-Südaş et al., 2023), requiring consumers to identify green products amidst those employing tradition-washing tactics. The gamification of this learning process can enhance engagement and retention of novel information. Additionally, educational campaigns can leverage visually engaging infographics to break down the concepts of tradition-washing and greenwashing, coupled with the launch of social media challenges designed to prompt consumers to identify tradition-washing in everyday products. These challenges may incorporate quizzes, polls, or comparison tasks, fostering deeper information processing by making the identification process both interactive and competitive.

5.3. Limitations and future research lines

This study has limitations that result in avenues for future research. First, while the study suggests that traditional production cues and emotional appeals can positively influence consumer behavior,

it is crucial to recognize that their effectiveness may vary as product characteristics, cultural differences (Manta et al., 2022), or target audience characteristics may moderate its effect. For example, this study focuses on two specific consumer goods products, and this fact could have an impact on the results. Testing other food categories would allow us to explore whether the tradition-washing effect is consistent across different types of food products. For instance, other food items – such as beverages, confectioneries, or organic products – may activate different cognitive or emotional responses due to their specific associations with health, indulgence, or naturalness (Román et al., 2017). And testing nonfood categories, such as fashion and apparel, where traditional production methods, such as handcrafting, use of heritage fabrics, and artisanal techniques, are often heavily marketed (Pookulangara & Shepard, 2013) can provide further insights. These cues are associated with notions of authenticity, quality, and sustainability (Gwilt & Rissanen, 2012). Given the prominence of these attributes in fashion, testing the effect of tradition-washing in this category can reveal whether consumers similarly conflate traditional methods with greenness, as they might with food products. Moreover, if the tradition-washing effect is found in both food and fashion categories, it would suggest a more pervasive cognitive bias where traditional cues are misinterpreted as indicators of environmental sustainability across different product domains.

Regarding target audience characteristics, although demographic and psychographic variables (dispositional nostalgia) are considered in the experiment, the role of other psychographic factors such as lifestyle, values, or attitudes could be included in additional studies.

Second, this study focused solely on the interaction between production methods and a psychographic variable (dispositional nostalgia), neglecting other potential factors that could influence perceived greenness and purchase intent. Further research could consider pricing, convenience, brand reputation, and product perceived quality as other moderators of traditional production methods. Moreover, it would be compelling to explore whether the inclusion of substantive of traditionality cues increase perceptions of greenness among consumers high in dispositional nostalgia.

Third, we found that groundedness is a key mechanism to explain consumer inferences of greenness from traditional cues. Other emotions, i.e. trust-related emotions (Chen et al., 2020; Cologna et al., 2022) could be examined further. Additionally, traditional production methods can evoke a sense of pride in consumers who value heritage, craftsmanship, and supporting local or traditional industries (Rivaroli et al., 2020). When consumers perceive traditional cues in products, they might feel proud to associate themselves with such items' cultural or historical significance. Anticipated pride could then influence their intention to purchase products made through traditional methods. This warrants further investigation.

Fourth, other involvement measures, such as product knowledge (Deval et al., 2016) or environmental concern (Albayrak et al., 2013), could be examined in further work. Product knowledge refers to the extent to which a consumer is informed about a particular product or product category. It encompasses familiarity with the product's features, benefits, usage, and history. Examining the impact of product knowledge on consumer involvement can yield valuable insights into how informed consumers are more likely to engage with and make informed choices about products. Environmental concern refers to an individual's awareness and commitment to environmental issues. Research could explore how consumers more environmentally concerned might exhibit higher involvement with green products and are less prone to draw judgments of greenness.

Fifth, scholars are encouraged to adopt a comprehensive inter-disciplinary approach to studying communication and environmental science by integrating insights from consumer psychology, marketing, environmental science, linguistics, semiotics, law, and public policy. This interdisciplinary strategy is advantageous for several reasons. First, incorporating principles from consumer psychology enhances the understanding of the emotional and cognitive mechanisms driving consumer behavior. For example, exploring factors like groundedness, nostalgia, and trust – as highlighted by Cologna et al. (2022) – can shed light on how consumers perceive and respond to green cues and traditional appeals in marketing. Additionally, integrating cultural studies provides valuable

insights into how diverse cultural backgrounds and societal norms influence the effectiveness of marketing communications.

Second, drawing from environmental science ensures that sustainability claims in marketing are accurate, credible, and scientifically substantiated. This reduces the risk of greenwashing or tradition-washing by grounding marketing messages in verified environmental data and practices, thereby enhancing consumer trust and engagement. Moreover, applying concepts from linguistics and semiotics helps refine the language, symbols, and imagery used in marketing communications. This contributes to crafting more persuasive and relatable messages that effectively convey the intended values and benefits across different psychographic and demographic segments. And finally, collaboration with legal and ethical studies is crucial for developing and advocating for regulations that prevent misleading marketing practices, protecting consumers from deceptive claims, and promoting transparency and honesty in marketing communications. Engaging with public policy experts further guides the creation of policies that encourage truthful and transparent communication strategies. Such collaboration ensures that marketing practices align with broader societal and environmental goals, fostering corporate responsibility and sustainability.

6. Conclusions

This study tests whether tradition-washing is a risk for consumers. It explores the emotional mechanism whereby traditional production methods influence consumer preferences and cognitions and the conditions under which this mechanism operates. The findings from an online experiment suggest that communicating traditionality shape judgements of greenness and consumer preferences, because these cues activate emotions of groundedness. This effect is observed both in vice and virtue categories. Moreover, the risk of tradition-washing is greater among consumers with lesser dispositional nostalgia, since they seem to rely more on lay theories. In sum, this research highlights the risk of tradition-washing and calls stakeholders to act to mitigate it.

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Data availability statement

The authors confirm that the data supporting the findings of this study are available in <https://doi.org/10.7910/DVN/0BGOOW>. The authors have not used generative AI in this manuscript.

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