

Review

# Going Green: A Review on the Role of Motivation in Sustainable Behavior

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**Abstract:** Taking sustainable actions in daily life to reduce human impacts on the environment is becoming a matter of great urgency. It is therefore relevant to understand the factors behind people's sustainable behavior. Several psychological frameworks emphasize the role of motivation in sustainable behavior. We conducted a review of the literature to examine the motivation–sustainability relationship, with the following objectives: (1) explore consumers' perception of the value conveyed by green products or services; (2) understand the factors that modulate the relationship between motivation and sustainable behavior; and (3) provide avenues for future research in psychology and formulate recommendations for application. The review of the results from 40 publications indicates that the symbolic value associated with green products or services can influence consumers' preferences, choices, and sustainable behaviors. However, the perceived value of green products or services is modulated by dispositional factors, those specific to the characteristics and history of an individual, and contextual factors, those specific to a product being evaluated or the context in which the evaluation takes place. The results are discussed in light of the motivational, emotional, and attentional processes involved in sustainable behavior.

**Keywords:** sustainability; motivation; emotion; sustainable consumption; green value; dispositional factors; contextual factors



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## 1. Introduction

In recent years, the theme of sustainability has been an area of great relevance for many disciplines, such as ethics, psychology, economy, social sciences, biology, engineering, physics, and politics. The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, includes 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries in a global partnership providing a shared plan to achieve stability between human lives and the planet, now and into the future. Therefore, encouraging individuals to adopt sustainable behaviors is a key aspect in increasing positive environmental outcomes and decreasing the severity of global environmental threats [1–6]. At the same time, adopting sustainable living could promote the satisfaction of people's psychological needs (e.g., personal satisfaction derived from reusing products or components that are not wasted but used again for the same or different purpose), possibly resulting in the improvement of personal well-being [7]. Past studies have reviewed numerous facilitators and barriers affecting sustainable or “green” behavior [8–10], helping to clarify why some people engage in green behaviors, while others engage in unsustainable behaviors despite having environmental worries.

The factors underlying green behavior have been studied from several theoretical perspectives, focusing on the role of intentions and motivation in actual behavior. One influential framework is the theory of planned behavior (TPB), an extension of Fishbein and Ajzen's [11,12] theory of reasoned action, which has proven to be successful in explaining various types of sustainable behaviors [13–19]. According to the theory, intentions are

predictors of behavior and are preceded by individual attitudes toward the behavior, by individual perceptions of the norms and conventions concerning the behavior, and by the extent to which the individuals perceive the behavior at hand to be under their personal control. Another dominant model applied in explaining why people act or do not act pro-environmentally is protection motivation theory (PMT) [20–22], which was originally adopted to predict behavior in the context of personal health threats [23,24]. PMT emphasizes the cognitive mechanisms underpinning the choice to embrace or not to embrace a recommended behavior and focuses on the role of motivation in explaining sustainable behavior [25]. More specifically, PMT posits that individuals intend to engage in protective behavior when they believe that a lack of action poses a threat to themselves (high threat appraisal) and that acting in protective behavior mitigates that threat (high coping appraisal) [23,24].

Concepts and variables from these theoretical frameworks have been integrated, highlighting similarities between these models [26] and emphasizing the role of motivation in understanding consumers' sustainable behavior [26–28]. Specifically, the TPB proposes a list of factors that motivate individuals, while the PMT explains whether these factors are part of threat or coping appraisals; i.e., a behavior is determined by the individual's intention to engage in it, and motivation is among the factors that facilitate intentions. Motivation is defined as a state that can determine one's actions and can be driven by primary incentives (e.g., hunger, thirst) and secondary or symbolic incentives (e.g., money, social appreciation). Motivated behavior is characterized by a direction (toward, away from) and intensity (low to high) with which it is achieved [29,30]. The analysis of motivation as a predictor of intentions to engage in sustainable behaviors has been addressed by self-determination theory (SDT) [31–34]. SDT distinguishes between different types of motivation based on the diverse reasons that give rise to an action. The most basic distinction is between intrinsic motivation, which refers to doing an activity simply for the reward of the activity itself, and extrinsic motivation, i.e., which refers to doing an activity for instrumental value or to obtain some external reinforcements or rewards (e.g., to meet preexisting personal desires or beliefs or to satisfy current social schemes). Several authors have reported that attitudes toward sustainability can drive behavior and thus suggest that green value can be considered a symbolic incentive [32,34–36]. Here, we provide an overview of psychological studies that investigated the relationship between motivational factors and sustainable behaviors.

### *Aim of the Review*

In light of the aforementioned models explaining the mechanism through which individuals engage in adaptive actions when confronted with environmental issues, a narrative review is conducted here to investigate the motivation–sustainability relationship. Specifically, we pursue three objectives: (1) explore consumers' perception of the value conveyed by green products or services as one of the key determinants of sustainable motivation; (2) analyze the factors that reduce (or boost) the relationship between motivation and sustainable behavior, specifically focusing on dispositional and contextual factors; and (3) provide avenues for future research in consumer psychology and formulate reflections and recommendations to foster value-consistent sustainable behaviors among individual consumers. Overall, the present review incorporates constructs and measures related to sustainability-oriented consumer behavior, including preferences, choices, and more general psychological tendencies concerning green consumption (which can be in favor of or against), along with specific behaviors related to sustainable living (e.g., the use of eco-friendly products, buying energy-saving goods, etc.).

## **2. Methods**

### *Study Search Strategy, Selection and Analysis*

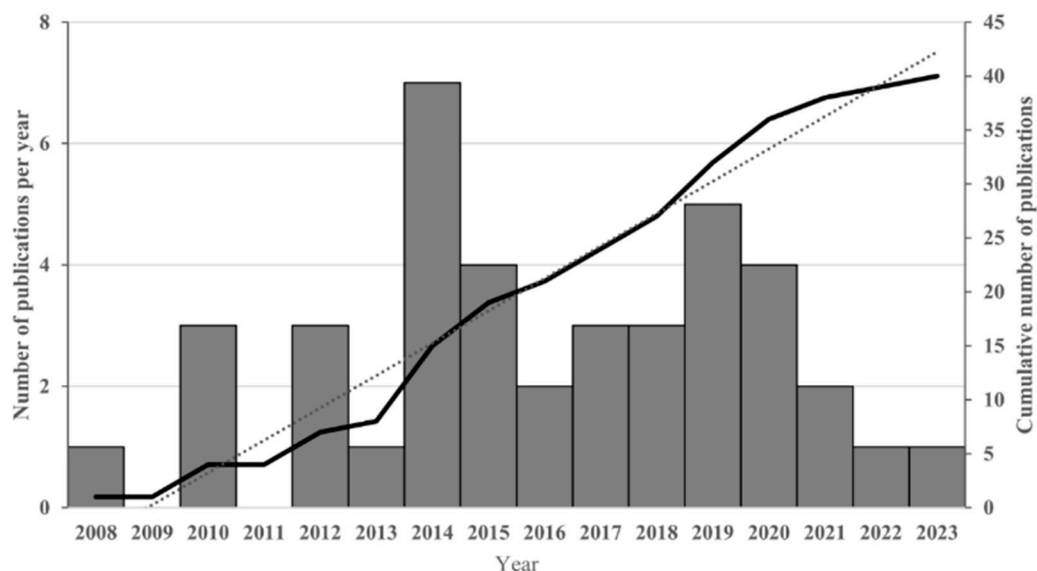
For the present narrative review, we searched the Scopus, PubMed, and Google Scholar databases for papers focusing on green value, sustainable consumption, sustainability be-

liefs, environmental preferences, sustainable behavior, green behavior, green products, ecological purchases, eco-friendly choices, and sustainable buying. The search was performed in July 2023. The reference lists from previous reviews were also examined, as well as citation-based searches using Google Scholar. For each of the selected papers, we summarize different aspects of the study (see Table 1 for an overview).

**Table 1.** Summary of the aspects reported for each study included in the present review.

Aspect	Variable	Explanation
Study methodology	Population	Sample size
	Measure characteristics	Type of measure (i.e., subjective, behavioral and/or neurophysiological)
		Measure description (i.e., details of the measure)
	Task	Procedure
		Materials
Study problem and advances	Aim	Research question
	Conclusion	Main results

A total of 40 papers published between 2008 and 2023 were identified, as shown in Table S1. Figure 1 represents the distribution of papers by year of publication, showing that the cumulative number of research papers is well fitted by a linear function and indicating constant interest in this area. Nearly half of the studies examined ( $n = 19$ ) were used to frame the first section, which was dedicated to clarifying whether and how green perceived value influences consumers' behavior or judgments. The remaining 21 papers represented the second section, which was dedicated to analyzing some of the major factors affecting motivation for green consumption behavior; these studies were mainly divided into those examining dispositional factors ( $n = 9$ ) and contextual factors ( $n = 12$ ).



**Figure 1.** Number of publications per year (bars) and the cumulative number of publications on sustainable consumer behavior from 2008 to 2023 (solid line). The dotted line indicates the result of a linear regression on the cumulative number of publications over time ( $R^2 = 0.98$ ).

### 3. Results

#### 3.1. Green Perceived Value as a Motivator

In most cases, the perceived value of environmentally friendly products corresponds with the experience/anticipation of benefits resulting from the fact that such goods have a

reduced impact on the environment. Referring to Patterson and Spreng's [37] definition, "green perceived value" is a consumer's overall evaluation of the net benefit of a product or service in terms of what is obtained and what is provided based on the consumer's environmental desires, expectations related to sustainability, and green needs [37,38]. Consumers' perceived value is a key strategic variable to explain the relationship between motivation and behavior [33] and possibly the maintenance of a behavior over time. In the following, we examine empirical research investigating whether the perceived value of green products or services can act as a symbolic incentive in influencing preferences, choices, intentions, and actual behaviors that are related to environmental needs.

Green perceived value influences green purchase intention positively, and this influence is mediated by satisfaction and green trust [36]. Satisfaction refers to the fulfillment of consumers' expectations related to sustainability, environmental desires, and green needs, whereas trust results from consumers' belief in the brand's environmental credibility, benevolence, and ability [38,39]. Since customer satisfaction is one of the major factors that influences the assessment of a product's green value, the authors stress the importance of adopting green marketing strategies that enhance this aspect [36]. Moreover, if a green product or service meets consumers' expectations, wishes, or needs, then this enhances self-reported purchase intention. It has also been demonstrated that green perceived value may positively impact loyalty toward green products [38]. Some researchers have further investigated consumers' subjective perception of products with sustainable features by comparing pictures of eco-friendly products and conventional products as a function of individuals' self-reported sensitivity to environmental issues [40]. It was observed that only participants who showed a high interest in sustainability issues perceived green products as being more innovative, while the opposite happened for other consumers. This was interpreted as the result of eco-friendly products meeting the expectations of environmentally sensitive consumers [40].

A number of studies have examined the possibility that the anticipation of future negative events or feelings may orient individuals to engage in sustainable actions, e.g., using public transportation to go to work or engaging in household recycling [41]. This implies that anticipated emotions associated with a particular sustainable behavior may act as drivers of sustainable actions. For instance, in the context of social marketing communication, the activation of a sense of anticipated shame in consumers via negatively framed messages (e.g., "by choosing to buy these batteries you will deeply contribute to the destruction of the environment") leads them to engage in green behaviors, such as supporting a pro-environmental cause [42–44]. Overall, such empirical research based on subjective self-assessment agrees on the key role played by emotional and hedonic aspects associated with the perceived value of green products or the outcomes of sustainable actions in modulating behavior.

According to the IBM Consumer survey performed in over 28 countries in 2020 [45], more than half of consumers (57%) are willing to change their purchasing habits to help reduce the negative environmental impact, and among those who reported that sustainable living is fundamental for them, this proportion increases to 77%. Actual purchase behavior has often been assessed either through marketing surveys [42,46–48] or by examining individual participants' purchase intentions in laboratory settings [49–51]. In a study investigating consumers' preferences toward eco-labeled products (which contribute to reducing environmental impact), participants' intention to purchase eco-labeled items was significantly superior to that for non-labeled products [49]. Finally, a higher price is generally accepted for goods when consumers know that the company implements sustainable practices [52].

When inspecting the environment (e.g., labels of off-the-shelf products), elements that are relevant to personal goals attract attention; one index of attention is the overt direction of one's gaze (i.e., the act of physically pointing the eyes to an object). Attention toward ecological products has therefore been studied using overt gaze during purchase decisions. Some of the examined studies reported that consumers rely on ecolabels to

make purchase decisions [50,53,54]. Environmental labeling, also termed “green claims”, indicates assertions made by organizations regarding the environmentally beneficial characteristics of their goods and/or services. Green claims can take the form of words, symbols, logos, pictures, and product brand names, appearing on a product (i.e., good or service) label, its packaging, advertising material, or other forms of marketing. Labels are a key communication channel between producers and consumers, and the information they display concerning green consumption attracts attention and might stimulate emotional reactions, influencing the evaluation of products and purchase behavior. For example, Songa et al. [55] observed a modulation of ocular behavior and a change in pupil size (which is regulated by the activity of the locus coeruleus-norepinephrine system and is modulated by arousal [56,57]) in response to packages with labels that indicate recyclability compared with those without. Similarly, it has been shown that a longer fixation time while viewing nutrition and sustainability claims was associated with a greater perceived importance and increased likelihood of purchase, with particular regard to healthy and sustainable food choices [58]. Finally, one study seems to indicate that tendencies toward environmental protection are positively associated with gaze behavior toward images depicting environmental damage [59]. Specifically, participants with strong positive preferences toward low-carbon-footprint products also spent more time looking at negative images of climate change compared with positive images of nature. Taken together, these findings suggest that ecolabels capture consumers’ visual attention and lead to positively biased green purchase choices and decisions.

While the above laboratory studies indicate that ecolabels modulate overt gaze and behavior, in more complex environments that are closer to real-life situations, several other factors further modulate purchase intentions. Specifically, when examining the effectiveness of ecolabels in a naturalistic shopping environment using eye-tracking glasses, ecolabels attracted little attention, mainly due to distraction caused by competing information on the product packaging, such as price, product appearance, and nutritional table. Based on these data, the visibility of ecolabels needs to be improved to promote sustainable consumption [54]. Moreover, consumers’ understanding of the claims (i.e., high versus low levels of label understanding) plays a crucial role in visual attention toward food label claims and, consequently, in purchase behavior [50]. Specifically, participants with a high level of label understanding spent more time looking at sustainability-related information presented on the label than participants with a low level of label understanding, and this increase was associated with positive purchase decisions [50]. Finally, another eye-tracking study focused on the effectiveness and perception of environmental labels in the context of energy consumption [60]. Researchers have pointed out that although the presence of energy labels on different pictures of products (e.g., television) triggers attentional resources to energy-related information, this does not always result in more energy-friendly choices on the part of the participant [60].

Taken together, the research mentioned in this section generally agrees on the key role played by the emotional and hedonic value of green products in sustainable consumption behavior. The perceived value of green products or services seems to attract attentional resources, possibly influencing green purchase intentions and choices. However, these effects are fleeting because of modulating factors at the individual as well as at the contextual level. Green label information competes with eye-catching information for attentional resources and would benefit from more effective presentation. Moreover, it is crucial that satisfaction of customer sustainable long-term goals is met, i.e., a sense of accomplishment that the consumption has fulfilled a desire, a long-term goal, or a need about the worries over the environmental issues and that this feeling of fulfillment has brought along pleasure [38,39].

### *3.2. Factors Influencing Sustainable Motivation*

While motivation can influence sustainable behavior, several other factors moderate this relationship. In this section, we focus on internal or dispositional factors, i.e., factors that are specific to the characteristics and history of an individual, and on external or

contextual factors, i.e., factors that are specific to a product being evaluated or the context in which the evaluation takes place.

### 3.2.1. Dispositional Factors

Building on the theory of planned behavior, dispositional factors are internal, stable, individual characteristics that influence individuals' behavior and responses to various situations, such as personality traits, attitudes, and beliefs [12]. Concerning the moderating role of dispositional factors in the relationship between intention and green behavior, some studies showed that attitudes toward sustainability predict green purchasing behavior [61–66], although sufficient knowledge of environmental issues is a prerequisite for green behavior [47]. Consumer choice behavior regarding green products is associated with the perception of green products in terms of emotional value (i.e., consumer emotions toward green products), conditional value (i.e., the measure of utility in a specific situation), and epistemic value (i.e., inclination of the consumer to desire knowledge and seek novelty) [48]. Several studies have shown a positive relationship between attitudes toward green products and buying behavior, measured by means of self-report questionnaires [67–70]. At the same time, several other studies showed that not all attitudes toward the protection of the environment translate into sustainable actions [71–73]. For instance, in a recent study, it was observed that attitudes toward environmental concerns had no significant impact on buying behavior, whereas personal norms (i.e., altruistic beliefs and moral considerations) and the willingness to pay for green products significantly predict behavior, measured as green buying behavior in the context of daily consumer goods [74]. When interpreting these apparently contrasting results centered on the attitudes–behavior relationship, it is important to consider the heterogeneous facets of individual green attitudes. For instance, attitudes toward the environment (e.g., “The environment has a high priority for me compared with a lot of other things”) and attitudes regarding green product consumption (e.g., “I would buy the green product instead of conventional products when green products are available”) have a different focus (i.e., oriented toward the environment vs. toward a green product and the actual act of purchasing it), and this variation may impact behavior differently [75]. More specifically, the actual purchase of a sustainable good may be better predicted by attitudes regarding green product consumption than by more general attitudes toward the environment.

Another study pointed out that consumers are more likely to select sustainable options (i.e., green products over more luxurious nongreen products) when they think this would signal something positive about them to themselves or others, i.e., being prosocial, especially if consumers shop in public, which is the case for daily consumer goods [76]. Calling attention to an individual's own prosocial actions, Mazar and Zhong [77] found that participants simply exposed to green products in a consumer study donated more money than participants who were exposed to more conventional products. Green product perception can have a positive societal effect by inducing prosocial and ethical acts, contributing to a more general sense of moral self [77].

Overall, it emerges that green behavior is based on beliefs and attitudes associated with environmental benefits and social/ethical considerations, but sometimes consumers' beliefs and attitudes do not directly translate into green behavior. In this context, it is necessary to distinguish between attitude toward the environment and attitude toward green product consumption, as the measured constructs are far from being the same. It is desirable that a particular attitude (e.g., toward green product consumption) be associated with the corresponding behavior (e.g., actual purchase of green goods).

### 3.2.2. Contextual Factors

In addition to dispositional factors, contextual factors moderate the relationship between individual motivation and behavior, facilitating or constraining sustainable actions [78–80]. For example, the availability of recycling services, the quality of public transport, and product price can affect people's engagement in sustainable behavior [81,82].

In this section, we focus on the role of communication strategies and product features in promoting green behavior.

Communication strategies are one of the most relevant determinants of consumers' willingness to choose these products. In the context of sustainable behavior, previous research has examined the effectiveness of valenced message frames in fostering the adoption of responsible and appropriate green-promoting behaviors [42,83,84]. Positively framed messages emphasize the possible environmental benefits arising from the purchase of their green options; on the other hand, negatively framed messages highlight the damaging environmental consequences deriving from the consumer's decision to buy unsustainable options [85]. Some studies have found that positive frames have a greater effectiveness in promoting sustainable behaviors than negative frames. For instance, in a study that focused on willingness to buy green products such as disposable cups, shopping bags, and batteries, after viewing three types of message frames (positive, negative, and neutral), consumers revealed higher green purchase intentions after positively framed messages than after negatively and neutrally framed messages [83]. Some studies focused on discrete emotions in the environmental communication domain, suggesting links between specific emotions (e.g., feelings of guilt, pride, shame) and sustainable behavior. The advantage of positive over negative message framing on participants' purchase intentions was also observed in a study in which green products were followed by either positive (pride) or negative (guilt) framing messages [84]. In line with these results, when consumers believe that their decisions can significantly affect environmental and social issues, feelings of pride and guilt, experienced after a consumption episode, can influence future sustainable choices [86]. This happens even when the responsible purchase is not presented as an intentional decision, i.e., presented as forced by external circumstances [87].

In addition to the general framing effect described above, some studies have indicated that sensitivity to negative or positive frames depends on the type of good being advertised (e.g., essential vs. nonessential goods) [42,83,88], individual-specific characteristics of the consumer (e.g., motivation and knowledge) [89], and the behavior under consideration (e.g., purchase intention vs. donating to a cause) [42]. Studies on nonessential goods [42,83] showed that information with negative valence (e.g., if you decide to buy this T-shirt, you actively contribute to the collapse of the environment) increases sustainable choices and behaviors more than information with positive valence (e.g., if you decide to buy this T-shirt, you certainly contribute to the improvement of the environment). On the other hand, studies on essential goods (e.g., food) found that positively framed messages are more effective than negatively framed messages in prompting consumers to engage in green behaviors [88]. Moreover, dispositional factors such as environmental motivation and knowledge also modulate the response to negative vs. positive framed messages, with individuals high in environmental motivation and knowledge being more sensitive to negative frames in terms of behavioral intentions [89]. Finally, when focusing on people's willingness to donate money to a pro-environmental cause, negatively framed messages elicit a sense of anticipated shame in consumers, which is associated with a negative judgment of the self in performing actions that others might consider censurable. This may encourage consumers to engage in sustainable behaviors, such as donating money to pro-environmental causes [42]. This effectiveness of negative over positive message framing has also been observed with other types of green behaviors, such as recycling [43,90], brand attitudes [44], energy conservation, and solid waste reduction [91], possibly depending on the attentional and emotional mechanisms involved in processing the message's frame.

In terms of product features, a strong relationship was observed between the price of green products and consumers' purchasing behavior [92–96]. Price indeed emerged as one of the most relevant factors that modulate the actual purchase, compared with other factors that could potentially affect consumers' purchase behaviors of green products (e.g., their availability) [97,98]. Eco-friendly products are indeed frequently more costly than other alternative products, and the price can represent an obstacle for consumers, even when they are motivated to purchase a sustainable product. It is interesting to note that price has

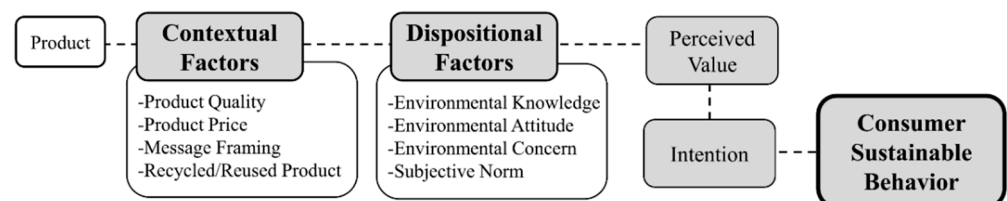
been defined not only in economic terms but also in terms of the value and desirability of a specific good or service, again referring to the importance of green motivation, which has been discussed in the first section of the present review [99]. It has been shown that, along with price, other factors, i.e., green product quality, the focus on the environmental benefits of such a product [97] and financial scarcity [100], play a major role in consumers' buying behaviors. Altogether, lower prices, higher perceived product quality and environmental benefit, and the availability of adequate economic resources are associated with greater sustainable product purchase decisions [97,100].

### 3.3. A Practical Example: The Adoption of Reusable Items

Adopting sustainable practices involve, among others, activities that reuse and recycle materials in the processes of production, distribution, and consumption. Reusing is about repurposing items and products for extended use; recycling, on the other hand, means turning an item into raw materials that can be used again, usually for a completely new product. A well-functioning circular economy also requires both reuse and recycling to be applied to packaging solutions. For this reason, one intrinsic characteristic of the green product is associated with its life cycle, or in other words, its "previous life". However, consumers' acceptance and purchase intention of recycled and reused goods depends on both individual dispositions and product characteristics. For instance, the type of packaging material (reusable packaging vs. single-use packaging) impacts not only the purchase decision but also the perception of product sustainability [101]. Indeed, not everyone is inclined to reuse materials, products, or components at the end of the product life or to turn reprocessed materials into products, materials, or components for other purposes. Most consumers declare that they are inclined to consume reused products or recycled materials and components, although they do not always do so in practice. What are the reasons for this gap? Some recent research using self-report measures highlights that the perceived image and safety of recycled and reused products plays a key role in consumers' purchase intention [102]. Specifically, on the one hand, the image of recycled or reused products is intrinsically positive because of their role in reducing risks for the environment. This enables a greater acceptance and willingness to purchase such recycled products. On the other hand, a recycled product can also be perceived as unsafe due to potential contamination, which has a negative impact on consumers' purchase intention [102]. Altogether, these results seem to indicate that while the positive image of recycled goods enhances the consumer's intention to purchase these products, the negative perception of safety associated with them decreases their actual adoption.

## 4. General Discussion

In light of some of the most widely used models explaining the potential motivational influences on sustainable behavior, the present narrative review aimed to investigate the impact of green perceived value on consumer behavior. In addition, we clarified the factors that modulate the relationship between motivation and sustainable behavior (see Figure 2 for an overview). The relevance of these results is discussed here, with final recommendations for both future psychological research and marketing practice.



**Figure 2.** Overview of the discussed factors modulating the relationship between motivation and consumer sustainable behavior.



The selected literature explores a wide variety of constructs related to sustainability-oriented consumer behavior, including preferences, choices, and actions related to sustainable living. We found that perceived green value conveys positive information associated with satisfaction and rewarding properties, as reflected at the level of reported preferences [36,38,68,103], attentional processes [50,83,104–106], and choice behavior [58,97]. The studies examined suggest that customers experience reward in using green products or services, derived from the awareness of having benefitted the environment, and suggest that green value might act as a general motivating factor that affects a wide range of preferences and choices. Moreover, individuals not only have an overall positive evaluation of (i.e., positive approach toward) green behavior but are also more prone to engage in sustainable behavior when they anticipate feeling good when doing so.

The symbolic meaning associated with eco-friendly products or services, derived from the pleasure resulting from doing the right thing and by benefiting the environment, can motivate generalized consumer behavior, as other symbolic rewards, such as monetary and nonmonetary incentives, do. For instance, financial incentives (e.g., direct payments, cash bonuses, discount fees, coupons, gifts or wins at lotteries) have been employed to encourage sustainable behaviors [107] and are particularly effective in motivating behavior change in recycling and transport [108]. However, although such incentives are successful for an initial behavior change, their sustained effect over time is still questioned [109]. Interestingly, in line with protection motivation theory [20–22], consumers may also consider the negative emotional consequences of either engaging or not engaging in sustainable behaviors. Indeed, the more individuals are aware of the negative environmental consequences of their potential behavior, the more they feel they can help to reduce these problems by acting pro-environmentally, as suggested by studies that manipulated the emotional framing of messages about sustainability [42,44]. Negative emotional appeals may reasonably be able to be persuasive because they generate a sense of discomfort in the recipients, forcing them to engage in the desired actions to minimize this feeling.

An additional goal was to understand the factors that modulate the relationship between motivation and sustainable behavior and yielded two main results. First, personal norms or attitudes concerning a sense of personal obligation are linked to one's self-standards and may encourage (or discourage) consumers to act in a sustainable way [74], in line with the TPB model [28]. Individual differences in personal norms regarding sustainability indeed predict behaviors, such as recycling, choosing sustainable food and being willing to pay more for sustainable alternatives. Making people realize the (adverse) effects of their actions concerning things they value is likely to activate their sense of obligation, which, in turn, can result in more sustainable behavior. Second, other studies have demonstrated an inconsistency between what consumers feel or say (i.e., positive attitudes toward sustainable behaviors) and what they do (i.e., sustainable actions); it is well known that the intention–behavior gap is still an important challenge for marketers, enterprises, public policy makers, and organizations aiming to stimulate sustainable consumption [110,111]. Most of these studies showing inconsistency between the awareness of environmental issues of respondents and their green buying behavior measured this latter by means of self-report questionnaires incorporating items on consumers' preferences and/or purchase intentions [67–70]. However, it is important to highlight that responses to self-report questionnaires are vulnerable to self-image manipulation, which might distort responses to present a more positive self-image that adheres to expected social norms (i.e., social desirability bias), especially regarding sensitive issues such as environmental protection [75]. Therefore, an important avenue for future studies is to maximize the information concerning actual sustainable behavior in real-life contexts.

Sustainable consumer behavior involves actions that result in a reduction in unfavorable environmental impact as well as in a reduced utilization of natural resources across the lifecycle of a product or service. In other words, an assessment of future benefits and costs requires an assessment by the individual consumer at the moment of performing a behavior or purchase. To understand this evaluation process, it is important to distinguish between

contextual factors (e.g., price, product availability, brand image, and eco-labeling, among others) and dispositional factors. Among contextual factors, communication strategies seem to have immediate consequences on sustainable behaviors. One explanation could be that since eco-friendly products, actions, or outcomes are typically abstract, vague, and distant from the self [112], good communication can make them more relevant and concrete in terms of the self. This could leverage the abovementioned concept of green satisfaction, i.e., a pleasurable level of consumption-related fulfillment to satisfy a customer's environmental desires, expectations related to sustainability, and green needs [38,39], which is considered a means of predicting customer behavior. Some of the studies we examined indeed showed that communicating the immediate impacts of environmental problems can lead to more sustainability-oriented behaviors [42,83,84,89]. In this regard, the level of consumers' understanding of the real environmental impact of a product or service may play a crucial role in behavior change [50].

In addition to communication strategies, the type of product [86,87] and product characteristics such as price, quality, and availability [97,98] have an important impact on consumer behavior. In this regard, contextual factors may either influence behavior directly, or their effect might be mediated by dispositional factors such as attitudes, values, or personal norms. A direct contextual effect would be in the case of an exceedingly high price, which would result in a decrease in the purchase of a product [113,114]. Otherwise, the effects of contextual factors on behavior may depend on personal factors [115,116]. For example, a free bus ticket may promote bus ridership only among individuals high in environmental concern.

#### *4.1. Recommendations and Future Directions*

Can we find more promising ways to influence consumer behavior, encouraging consumers to tread a more environmentally sound path? In answering this question, we provide examples of relevant strategies to foster value-consistent sustainable behaviors in the long run. First, interventions that reinforce personal norms [74], favorable attitudes toward green products [75], and prosocial status perceptions [77], as well as those that enhance the overall perceived green value of a product [48], may have the potential to overcome the gap between intention and behavior, thereby promoting green behavior. Second, consumers may become more likely to choose the more environmentally friendly option when companies interested in promoting their green options use messages that make consumers sensitive to environmental issues, regardless of their dispositional concern for the environment. In particular, companies could employ messages that explicitly emphasize the positive (for essential goods) or negative (for nonessential goods) implications that might occur from consumers' potential green vs. nongreen actions, thereby fostering their emotional engagement. Stressing the possible environmental benefits (or damages) through emotionally framed messages may result in long-term effects on behavior. Similarly, emphasizing the existing relationship between environmental and personal health may further encourage sustainability-oriented behaviors. Third, strategies promoting the choice of sustainable alternatives to conventional products could aim to strengthen individual awareness of environmental problems, thereby encouraging people to act in line with the perceived green value of sustainable alternative products. For instance, providing reward feedback on one's behavior or environmental performance could be useful in promoting specific sustainable actions, particularly if this evaluation is delivered frequently and immediately after the behavior occurs. Indeed, time plays a key role in our appreciation of rewards. Since we have a preference for immediate gratification [117,118], behaviors that offer an immediate reward may seem more interesting than behaviors that offer only a delayed reward. The processing of information associated with sustainability and the characterization of the mechanisms linking product properties, beliefs, self-image, and behavior are important avenues of psychological research in the field of sustainability. Future research would particularly benefit from investigating which types of sustainability messages are more effective and in what way a specific message impacts an audience.

Therefore, an application that might be drawn from the present results is that marketers could benefit from framing messages to promote desired sustainable behaviors; in particular, the impact of negatively framed messages on individuals' tendency to engage in eco-friendly behaviors has been reported as particularly effective in several of the examined studies [42–44,89,91].

#### 4.2. Limitations

In addition to the main issues discussed above, some potential limitations of the current review should be mentioned. First, the present narrative review is restricted to the investigation of the relationship between motivational factors and sustainable behaviors, rather than offering an exhaustive analysis of sustainable behaviors. This would have required a systematic review of the literature of the theories, methodologies, and paradigms adopted in sustainable behavior research that go beyond the scope of the present work. Second, we reviewed studies focusing on actions, choices, preferences, and more general psychological tendencies concerning green consumption (e.g., buying eco-friendly products). A further topic would be the investigation of larger-scale behaviors that are aimed at sustainable goals (e.g., "save the planet") and that span large, rather than small, time scales. Third, the current work provides an overview of the studies on the motivation–sustainability relationship adopting a psychological perspective. However, sustainability issues are not just psychological problems; they are also technological or sociocultural problems, for example. An interdisciplinary perspective would therefore be needed to effectively address these issues.

### 5. Conclusions

The examined literature suggests that the symbolic meaning associated with eco-friendly products or services can influence consumer behavior in the context of green marketing to the extent that satisfaction of customer sustainable goals is met. The effectiveness of green value seems to decline with external constraints (e.g., contextual factor: steep product price) or personal characteristics (e.g., dispositional factor: low sense of obligation). The present review goes beyond mere associations between positive environmental attitudes and pro-environmental behavior emphasizing the importance of distinguishing between different dimensions of sustainable behavior: (a) the type of sustainability-related action (e.g., willingness to donate, willingness to buy), (b) the context of marketing communication (e.g., via positively or negatively framed messages), and (c) the type of product (e.g., essential vs. nonessential goods) or packaging (reusable packaging vs. single-use packaging) being advertised. Perception and decision making in the context of sustainable behavior should be investigated in light of the motivational, emotional, and attentional processes involved.

**Supplementary Materials:** The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su152115429/s1>, Table S1: Summary of the studies included in the present review.

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