



ARTICLE

Attention and Skepticism: Influence on Ad Evaluation with Greenwashing

Tais Pasquotto Andreoli¹tais.andreoli@unifesp.br |  0000-0002-9173-9294Silvio Augusto Minciotti²silvio.minciotti@online.uscs.edu.br |  0000-0002-3928-8107Leandro Leonardo Batista³leleba@usp.br |  0000-0002-4190-6146

ABSTRACT

The purpose of this study was to analyze the influence of attention and skepticism in the evaluation of false market discourse with an environmental appeal (greenwashing). The theoretical support for the research was based on the study of the attention process (understood in terms of pre-attention and attention), as well as the practice of greenwashing and consumer skepticism. The methodological procedure adopted a hypothetical-deductive approach, carried out through two face-to-face experiments (n=129 and n=159) with a 2 factorial design (attention/pre-attention) x 2 (present/absent skepticism), with the measurement of four interest metrics (attribute evaluation, judgment about the practice of greenwashing, emotional reaction to the advertisement, and environmental purchase behavior), added to eye tracking. One-way ANOVA was used for one-dimensional analyzes and general linear model (GLM) ANOVA for multivariate analyses, with Tukey's post hoc test. As a result, it was possible to observe a better evaluation of the practice of greenwashing when pre-attentiveness and the absence of skepticism were combined, which sets up a potential scenario for the influence of this false marketing discourse on consumer behavior.

KEYWORDS

Greenwashing, Pre-attention, Skepticism, Consumer behavior, ad evaluation with greenwashing

¹Universidade Federal de São Paulo, São Paulo, SP, Brazil

²Universidade Municipal de São Caetano do Sul, São Caetano do Sul, SP, Brazil

³Universidade de São Paulo, São Paulo, SP, Brazil

Received: 03/12/2023.

Revised: 04/11/2023.

Accepted: 04/17/2023.

Published: 06/06/2024.

DOI: <https://doi.org/10.15728/bbr.2023.1539.en>



This Article is Distributed Under the Terms of the Creative Commons Attribution 4.0 International License

RESUMO

O trabalho teve como objetivo analisar a influência da atenção e do ceticismo na avaliação do falso discurso mercadológico com apelo ambiental (*greenwashing*). O suporte teórico da pesquisa assentou-se no estudo do processo da atenção (compreendido em termos de pré-atenção e atenção), assim como da prática de *greenwashing* e o ceticismo do consumidor. O procedimento metodológico adotou uma abordagem hipotético-dedutiva, realizada por meio de dois experimentos presenciais (n=129 e n=159) com desenho fatorial 2 (atenção/pré-atenção) x 2 (ceticismo presente/ausente), com a mensuração de quatro métricas de interesse (avaliação dos atributos, julgamento acerca da prática de *greenwashing*, reação emocional ao anúncio e comportamento ambiental de compra), somada ao monitoramento ocular (*eyetracker*). Foram empregadas a ANOVA *one-way* para as análises unidimensionais e a ANOVA pelo modelo linear geral (GLM) para as análises multivariadas, com o teste *post hoc* de Tukey. Como resultado, foi possível observar uma melhor avaliação da prática de *greenwashing* quando da junção da pré-atenção e da ausência do ceticismo, o que configura um cenário de potencialidade da capacidade de influência desse falso discurso mercadológico no comportamento do consumidor.

PALAVRAS-CHAVE

Greenwashing, Pré-atenção, Ceticismo, Comportamento do consumidor, Avaliação de anúncio com *greenwashing*

1. INTRODUCTION

The growing discussion about the issue of economic models and their consequent impacts on the environment consolidates the dissemination of environmental issues in society, a concern that permeates the organizational sphere. Thus, it is common sense that consumers have become increasingly aware not only of the environmental problem in general, but especially the role of consumption itself in it (Andreoli, Lima & Prearo, 2017). As a result, there is a change in consumer behavior, which become more critical both about one's own buying/consumption habits, but also about the stances disclosed by organizations regarding the environment (Afonso et al., 2016).

Thereby, organizations have been required to adopt practices of environmental responsibility, adopting new marketing strategies, able to embrace not only the needs of consumers, but of the environment and society, as is the case of green marketing (Andreoli, Crespo & Minciotti, 2017; Andreoli, Costa & Prearo, 2022). Nevertheless, some organizations seek to benefit from the benefits of green marketing in an irresponsible way, spreading green appeals and discourses without any real practical backing, a practice called greenwashing (Andreoli & Batista, 2020).

These cases of greenwashing are increasingly reported by the media, which ultimately impacts the credibility of organizations' green practices in general, increasing consumer skepticism (Guo et al., 2017; Rahman, Park & Chi, 2015; Silva, Bernardo & Braga Junior, 2020). As an aggravating factor, skepticism is capable of substantially impacting the entire green market, not only in relation to organizations that practice greenwashing, but also to those that adopt green marketing in a correct manner (Chen & Chang, 2013; Markham, Khare & Beckman, 2014).

It should be noted, however, that skepticism is characterized as a conscious process, which can only be activated when reception and processing happen consciously, as is the case of attention

(Bornstein & D'agostino, 1992). In other words, only if the consumer actually pays attention to greenwashing appeals will it be possible to activate skepticism towards these practices. However, it is estimated that most appeals issued by organizations are processed unconsciously, by pre-attention rather than attention (Fang, Singh & Ahluwalia, 2007; Janiszewski, 1993; Shapiro, MacInnis & Heckler, 1997; Yoo, 2008). As a consequence, as argued by the aforementioned authors, pre-attention, being an unconscious process, makes it impossible for skepticism to be activated, leaving the individual vulnerable to the incoming emission as well as its consequences on his or her behavior.

Therefore, this study aims to analyze the influence of attention and skepticism (present versus absent) in the evaluation of false market discourse with an environmental appeal (greenwashing). Such an effort will enable an unprecedented understanding of the performance of the two aforementioned cognitive processes inherent to consumer behavior in the reception process, and subsequent evaluation of the greenwashing practice. Considering the current context of proliferation of this practice (Andreoli & Nogueira, 2021), in addition to the still incipient inspection in the national context (Andreoli & Batista, 2020), the role of the consumer as a possible agent of regulation and inhibition is highlighted (Andreoli, Costa & Prearo, 2022; Jong, Huluba & Beldad, 2020). Therefore, it is essential to understand the factors that can minimize the incidence and/or influence of the practice of greenwashing, especially those related to the consumer.

Thus, the following justifications for this study are added: the aforementioned research gap, in which the practice of greenwashing is addressed in relation to the factors that can minimize its incidence and/or influence, especially in light of the main interested party—the consumer; unprecedented coverage of two cognitive processes (attention and skepticism) inherent to the process of reception, processing and subsequent evaluation of stimuli; comprehensive use of the hypothetical-deductive method, working with explicit (self-reported) and implicit (visual behavior) data, with the neuroscientific technique of eye monitoring; and consequent managerial implication and social contribution.

2. THEORETICAL REFERENCE

2.1. PROCESS OF ATTENTION

Regarding the process of attention, the processing of stimulus occurs, fundamentally, in two different stages: pre-attention and attention (Rossini & Galera, 2008; Wu, 2014). Some basic differences between pre-attention and attention are pointed out by Janiszewski (1993), Shapiro, MacInnis and Heckler (1997), Ryu et al. (2007) and Andreoli, Veloso and Batista (2016), such as: awareness about the stimulus, the specific purpose of processing, controllability, and demand on cognitive resources.

In this sense, pre-attention is responsible for making a general, quick, and automatic scan of all available stimulus in the environment, in an unconscious way, without the need to mobilize attentional resources. The attentional process, on the other hand, occurs consciously and requires the use of higher cognitive resources, using the serial mobilization of the focus of attention to allow a slower and more specific scanning of certain stimulus in the environment, chosen by the individual.

This means that pre-attention acts as a preliminary to attention, analyzing all the stimulus present in the environment, so that, later, based on the information obtained, attention can

direct its focus of analysis to the stimulus considered of interest; the other stimuli, which do not become the target of the focus of attention, continue to be processed pre-attentively. Thus, it should be noted that the responsibility for the unconsciousness of the processing, in the case of the attention process, is the individual himself. That is, all stimuli are available for conscious reception and processing, but it is the individuals themselves who decide which stimulus they want to focus their attention on, processing them consciously, as well as leaving the others without the focus of their attention.

As a result, the registration of information depends on the form of retrieval that is required and is also influenced by the complexity of the processing employed (Yoo, 2008). Explicit memory is attributed to more complex and detailed processes that demand higher cognitive capacity, as is the case of attention, while, differently, implicit memory is likely to occur in all processing, regardless of the cognitive capacity employed (Chatterjee, 2012).

It is explained that explicit memory happens when there is an intentional and conscious retrieval of the memory, usually using direct methods to measure it, with measures such as evocation or recognition capacity (Milosavljevic, 2007). On the other hand, implicit memory is characterized by automatic retrieval, requiring neither conscious recall nor explicit feedback (Lee & Labroo, 2004). Therefore, to measure it, indirect metrics are generally used, investigating possible fluency, priming effects, or analyzing changes in the individual's attitudes towards the target stimulus (Monin, 2002). These effects are characterized by facilitating the recording and activation of stimulus in memory, also increasing the chances of future processing and access in a later situation. That is, by recording a memory of the stimulus processed, a mental representation, future processing is favored, both in terms of ease, agility, probability of occurrence, and effectiveness.

In addition, the evaluation of the stimulus is also influenced by previous exposure, due to the registration of the mental representation of the stimulus in the brain. Thus, when it is necessary to process it again, or even access it in memory and retrieve it, individuals end up feeling more easily (Andreoli, Veloso & Batista, 2016). Lee and Labroo (2004) explain this by arguing that people tend to base their evaluations, above all, on the accessibility of stimulus, that is, on the ease with which associations or interpretations can be triggered. Similarly, there is a tendency for this stimulus to foster feelings of intimacy and closeness, causing it to be felt as familiar (Andreoli, Veloso & Batista, 2016; Janiszewski, 1993), as well as evaluated more positively (Guerreiro, Rita & Trigueiros, 2015; Ryu et al., 2007).

Consequently, the preference for these stimulus increases, contributing to their consideration at a future decision-making moment (Andreoli, Veloso & Batista 2016; Shapiro, MacInnis & Heckler, 1997). Basically, one has three arguments that reinforce this (Campbell & Keller, 2003; Macdonald & Sharp, 2003). First, there is a natural attempt to minimize the effort involved in decision-making; thus, selecting a stimulus that seems somehow more positive or familiar to them makes the decision-making process more effective, both by decreasing the time spent and by making better use of cognitive resources. Second, people tend to refresh information from previous records when again exposed to them, especially those considered familiar. Finally, perceived risk tends to be lower, increasing the chance of favorable processing and inclusion in the consideration.

In this sense, the literature argues that, in general, the evaluation of the stimulus is more favorable in the case of pre-attention, compared to attention (Andreoli, Veloso & Batista, 2016; Chatterjee, 2012; Janiszewski, 1993; Shapiro, MacInnis & Heckler, 1997). This stems from the lack of awareness of the prior exposure in the first case, which makes it impossible for

the individual to know and justify these subsequent positive sensations. On the other hand, upon awareness in the second case, individuals have the possibility to question, interpret, and revise, including engaging in eventual correction processes of the evaluation. As a closure to the discussion, three first hypotheses were elaborated, all related to a better evaluation by pre-attention, compared to attention:

H1: Better evaluation of the attributes is expected when using pre-attention in the processing of environmental appeals, compared to attention.

H2: More favorable judgment about the practice characterized as greenwashing is expected when using pre-attention in processing environmental appeals, compared to attention.

H3: More positive emotional reaction to the advertisement is expected when using pre-attention in processing environmental appeals, compared to attention.

2.2. GREEN MARKETING AND GREENWASHING

In their eagerness to meet the new market demand, and to try and benefit from green marketing, some organizations take an irresponsible path, promoting an environmentally correct speech or image, without this actually being corroborated in their performance, a practice conceptualized as greenwashing (Andreoli, Costa & Prearo, 2022; Andreoli, Crespo & Minciotti, 2017). Thus, greenwashing can be understood as a questionable attempt to take advantage of the benefits of green marketing by merely adapting the promotional variable to ecological desires, selling an image that is not coherent with the rest of the marketing process, without the proper readjustment of the other components of the marketing mix (Andreoli & Batista, 2020).

As a consequence of the practice of greenwashing, consumers' skepticism about green practices has increased substantially (Chen & Chang, 2013; Menegali & Spers, 2020; Silva, Bernardo & Braga Junior, 2020). This is justified, first, by consumers' initial pre-disposition to questioning the real interest of organizations in adopting green marketing, usually visualized as a quest for self-benefit. Moreover, with the proliferation of reported cases, there is a perceived deception, which contributes to further increase distrust.

Skepticism can be understood as a consumer's distrust or lack of belief, which stimulates greater questioning, or criticism about the authenticity or credibility of the disclosure (Guo et al., 2017; Rahman, Park & Chi, 2015). That said, skepticism is an important determinant of green buying behavior, which can negatively affect several concerning factors, as argued by previous studies: increased green confusion and perceived green risk, in general (Chen & Chang, 2013), decreased intention to purchase/consume green products (Rahman, Park & Chi, 2015) and also perceived efficiency in this (Albayrak et al., 2011), decreased declaration of purchases made (Silva et al., 2015), and even increased intention to participate in boycotts (Menegali & Spers, 2020).

Despite this, the individual's defense mechanisms – including skepticism – are conscious, and can only be used in higher-level processing, such as attention, a fact that is not repeated in unconscious processing, as is the case of pre-attention (Bornstein & D'agostino, 1992; Yoo, 2008). These aspects justify the importance of studying pre-attention in the perceptual process of promotional messages. Thus, three other hypotheses are inferred, related to skepticism, which, when absent, should also provide better evaluations.

H4: Better evaluation of attributes is expected when skepticism is absent in the processing of environmental appeals, compared to its presence.

H5: A more favorable judgment about the practice characterized as greenwashing is expected when there is no skepticism in the processing of environmental appeals, compared to its presence.

H6: More positive emotional reaction to the advertisement is expected when there is no skepticism in processing environmental appeals, compared to their presence.

To provide a holistic closure, a last hypothesis refers to the better evaluation when pre-attention is coupled with the absence of skepticism:

H7: Better ad evaluation is expected when combining pre-attention and absence of skepticism in processing environmental appeals, compared to combining attention and skepticism.

3. METHODOLOGICAL PROCEDURES

Adopting a hypothetical-deductive approach, two face-to-face experiments were carried out, both with a factorial design 2 (attention or pre-attention) x 2 (skepticism or not), thus being two independent variables: the level of attention directed in processing greenwashing, manipulated with a request for the direction of the central focus, and skepticism, manipulated with a message prior to displaying the ad (priming). Such manipulations were adjusted according to results obtained with a pre-test (=143), being exposed in Chart 1.

Chart 1

Experiment Manipulations 2x2

	Attention	Pre-attention
Priming skepticism	“Pay close attention to environmental appeals , specifically” and “According to the University of Brazil (2016), more than 90 out of every 100 ads served by organizations have lying content. So watch out! Companies lie in their ads.”	“Pay close attention to the technical information of the product , specifically” and “According to the University of Brazil (2016), more than 90 out of every 100 advertisements served by organizations have lying content. So watch out! Companies lie in their ads.”
Priming no skepticism	“Pay close attention to environmental appeals , specifically” and “According to the University of Brazil (2016), more than 90 out of every 100 advertisements served by organizations present true content. Then believe! Companies tell the truth in their ads.”	“Pay close attention to the product’s technical information ” and “According to the University of Brazil (2016), more than 90 out of every 100 advertisements served by organizations present true content. Then believe! Companies tell the truth in their ads.”

Source: Own elaboration.

The procedure adopted consisted of presenting an advertisement with greenwashing, followed by the evaluation of this material by the participants. The material (Figure 1) adopted was a fictitious advertising piece about a new automotive vehicle, which promises to reduce carbon gas emissions. The ad was intentionally produced according to the guidelines of the Terra Choice report of 2009 (see Andreoli, Costa & Prearo, 2022), making explicit in it several indications of

greenwashing, such as: fake (also fictitious) environmental certification seal; unproven, exaggerated, and quite improbable, or even not credible, “100% ecological” appeal due to the product in question; allusion to nature, environment, and natural, both with suggestive images and explicit phrases; limited environmental benefit (only carbon gas emission reduction).

Therefore, it should be noted that the interest of the study is directed to the analysis of a marketing communication practice characterized as greenwashing, regardless of the detection (or not) of the consumer about it. This is in line with the manipulations employed here, which aim to increase or decrease the consumer’s ability to identify and differentiate the practice. Furthermore, it was intentionally chosen not to disclose any brand in the said piece, in order to avoid possible biases resulting from this. Also intentionally, the choice of a high-involvement product is justified precisely because of the tendency for evaluations to be more expressive.

ADENTRE À ERA DA NATUREZA
Transforme seu espaço, reconecte-se ao natural

UM NOVO CONCEITO EM AUTOMÓVEL
Reduz em mais da metade a emissão de CO₂
Mesmo motor, mesma potência

100% ECOLÓGICO

FICHA TÉCNICA
Motor: 1.6l
Potência: 114cv
Transmissão: Manual
Combustível: Flex
Garantia: 3 anos
Preço: a partir de R\$40 mil

eco

O MEIO AMBIENTE AGRADECE

Figure 1. Adopted AdF

Source: Own elaboration.

Participants were chosen by convenience, composing non-probabilistic samples, with random distributions between groups. The samples had a similar composition, both with most single respondents, female, and with lower-than-average income, the first (n=129) being relatively younger, with an average age of 25 years,) than the second (n= 159), whose average was 21 years. Sample powers were calculated using the G-Power program (F family test, ANOVA omnibus one-way), which indicated high power in both cases (n=129 with 0.81 and n=159 with 0.90). Consistent with the experimental method, the focus was on the internal validity of the results.

The data collection instrument (questionnaire) was validated by a jury of experts, composed of five PhD professors, with relevant research performance in the marketing area, considering the contribution of their knowledge and expertise in this review. Only after this, the instrument was considered suitable for application. The consent form was requested at the beginning and, finally, there was the respondents’ profile.

Four metrics of interest were adopted: attribute evaluation, with its own scale; the judgment of the practice of greenwashing, according to a scale validated by Andreoli, Costa and Prearo (2022); the emotional reaction to the announcement, according to the scale proposed by Hahn et al. (2016); and the environmental purchasing behavior, reflecting an adaptation of the Ecologically

Conscious Consumer Behavior Scale (ECCB), originally developed by Roberts (1996), in which eight statements of interest were selected. All metrics followed the same pattern: variables presented at random for each participant and graded on a scale from 0 to 10.

Also, two manipulation tests were applied: for attention, two questions were used, the first requesting a note assignment for the recall of technical information and the second measuring the recognition capacity with a forced choice; for skepticism, an adaptation of Romeiro's scale (2006) was applied, consisting of four assertions, leaving all of them in the same direction (negative). The complete collection instrument (questionnaire) can be seen in Chart 2.

Chart 2

Data collection instrument and metrics of interest

Attribute evaluation – Quality/ Cost-effective/ Positive image/ Ecologically correct/ Environmental responsibility/ Purchase/consumption intention. Judgment greenwashing practice – It is quite easy for consumers to correctly interpret the environmental claims used by organizations/ The information conveyed by organizations about their green practice clearly demonstrates their environmental impact/ The information conveyed by organizations about their green practice is always easily understood by consumers / The environmental appeals guarantee that the products contribute positively to the preservation of the environment, regardless of the impacts generated in their process / The environmental benefits are completely assured when the product has a green seal / Organizations never intend to confuse consumers with irrelevant information / Organizations always provide proof of the environmental claims adopted to consumers / Consumers are always able to understand the truth about the information contained in environmental claims / The labels, seals and green figures adopted on products are the guarantee that the organization is concerned about the environment / The arguments highlighted in the environmental appeals used by organizations are true / Practically no organization conveys false information about its environmental practices / There is no reason for consumers to doubt the environmental appeals practiced by organizations / Any and all green appeal used by organizations is true. **Emotional reaction to the ad** – This ad is very appealing to me/ I probably wouldn't pay attention to this ad if I saw it in some media/ This is a warm and emotional ad/ This ad is of little interest to me/ I don't like it this ad / This ad makes me feel good / This is a wonderful ad / This is an easily forgotten ad / This is a fascinating ad / I'm tired of this type of ad / This ad gives me goosebumps / This ad is easy to understand / The ad is up to date / This ad is honest / The ad is worth remembering. **Environmental behavior purchase** – I always choose products that have less impact on the environment / I never buy products that harm the environment / When I have to choose between two identical products, I always choose the one that is less harmful to the environment / I have already convinced other people not to buy products that harm the environment / When I know the possible damage that a product can cause to the environment, I do not buy this product / I have already changed or stopped using products for ecological reasons / I do not buy products from companies that harm or disrespect the environment / When I buy products, concerns about the environment decisively interfere with my purchase option

Manipulation tests: Attention – Remember the five technical information seen / Forced choice of technical information; Skepticism – Most environmental claims on packaging or advertising are untrue/ As environmental claims are exaggerated, it would be better for consumers if they were eliminated from packaging labels or advertising/ Most environmental claims on packaging or advertising in advertisements aims to deceive rather than inform the consumer / I do not believe in most of the environmental claims on packaging labels or advertisements.

Source: Own elaboration.

To test the hypotheses raised by this study, different data analysis techniques were employed, such as one-way ANOVA for the one-dimensional analyses and ANOVA by the general linear model (GLM) for the multivariate analyses, with Tukey's post hoc test. Also, exploratory factor analyses were performed for the validation of the scales used, following the recommendations of Hair et al. (2006), which allowed a classification score of the subjects on the metrics evaluated

(single factor). In the previously validated scales, only the Cronbach's alpha coefficient was informed, to attest the reliability and internal consistency.

Finally, in the case of the neuroscientific technique of ocular monitoring (eyetracker), the collection took place on a computer with the Eyetracker Tobii X2-60° eye tracking device and its Tobii Studio® software version 3.4. exposure conditions (25 seconds, time defined through a conceptual pre-test with three respondents), image distance (65 cm from a 19" LCD monitor), brightness, among others.

The resulting data can be analyzed both under a qualitative and quantitative perspective, and this was done, respectively. From a qualitative perspective, there is the Heatmap analysis or "hot spot map", which shows the areas that concentrated the greatest volume of visual fixations (visual stops). Here, there are two extraction possibilities: a black and white version, which illustrates which areas were swept by participants and which were ignored; and a version in color, in which it is possible to map the fixations along with their intensities, which vary between less intense (green), medium intensity (yellow) and higher intensity (red). Still, in a quantitative perspective, the equipment allows the selection of areas of interest, informing specific metrics for them. Considering the manipulation employed, the technical data sheet with product information was selected as an area of interest, exploring the following metrics: time for the first fixation (in seconds) and counting the number of previous fixations, total duration of fixations in the area in question (in seconds) and counting the number of fixations on it.

4. EXPERIMENT 1 – RESULTS PRESENTATION

In general, the attribute evaluation scale ($KMO=0.885$ and $\alpha=0.912$) obtained a positive result, with better averages observed in relation to the attributes of environmental responsibility (7.1), positive image (7.0) and environmentally friendly (6.7), illustrating the ability of the advertising piece to convey a positive image, especially in relation to environmental aspects. On the other hand, the emotional reaction to the ad, in general ($\alpha=0,831$), presented an unfavorable result (4.2), which was repeated for its separation in terms of polarity, in which both positive ($\alpha=0.901$) and negative ($\alpha=0.7$) emotional reactions maintained their averages (4.2), suggesting a certain indifference of the participants, whose reaction was not influenced by the good evaluation of the image.

The participants' judgments about the practice of greenwashing ($\alpha=0,947$) showed a low average (4.0), pointing to a degree of consumer disbelief in relation to environmental practices and disclosures made by organizations. Similarly, skepticism ($\alpha=0.839$) was also unfavorable (4.5), which indicates a consonance with the previous metric. Finally, for the environmental behavior declared by the participants ($KMO=0,908$ e $\alpha=0,931$) also showed an unfavorable trend (4.3), indicating environmentally unengaged behavior.

Initially, the differences regarding **attention manipulation** were verified by comparing the groups that paid attention to the environmental appeals ($n=64$) and those that processed them pre-attentively ($n=65$). No significant difference was found in the manipulation test, which may have occurred, first, due to the declaration of the note in relation to the memory itself, as well as the ease felt in correctly marking the information present in the advertisement, since they were all present, requiring only the distinction between each piece of information against a similar one. No significant difference was found in the other variables either, indicating the absence of influence – at least in isolation – of the attention level on the processing of the advertisement.

Afterwards, the differences regarding the **manipulation of skepticism** were verified, comparing the groups with present (n=67) and absent (n=62) skepticism. First, the manipulation was assured, attesting to the significant difference in the participants' overall skepticism variable ($F=4.450$, $p=0.037$), greater in the presence of skepticism ($M=4.95$, $SD=2.40$) than in its absence ($M=3.97$, $SD=2.67$). Significant differences were identified for three attributes of the assessment, plus a fourth that was near the zone of significance, as well as on the overall scale. The attributes quality ($F=6.053$, $p=0.015$), cost-effectiveness ($F=3.485$, $p=0.06$), positive image ($F=3.648$, $p=0.05$) and environmental responsibility ($F=6.834$, $p=0.010$), as well as the overall evaluation ($F=5.068$, $p=0.026$), all showed better results when skepticism was absent compared to its presence.

In emotional reaction, significant difference was found only in one of the statements ($F=5.710$, $p=0.018$), negative, which was higher in the presence of skepticism. In addition, five statements from the judgment scale about greenwashing practice showed significant differences, as well as the overall judgment about greenwashing practice was close to the significance zone ($F=3.221$, $p=0.07$), all with more favorable judgments in the absence of skepticism ($M=4.35$, $SD=1.98$) compared to its presence ($M=3.22$, $SD=1.75$), adding support to the related hypothesis (H5). Environmental behavior showed no significant difference, a result that was repeated for the respondents' profile variables. The summary of the results is presented in Chart 3.

Chart 3

Synthesis Results – One-dimensional analysis – Experiment 1

Attributes evaluation (H4) $F=5.068$, $p=0.026$	No skepticism ($M=6.96$, $SD=1.94$) > skepticism ($M=6.04$, $SD=2.55$)
Judgment about greenwashing practice (H5) $F=3.221$, $p=0.07^*$	No skepticism ($M=4.36$, $SD=2.20$) > skepticism ($M=3.59$, $SD=2.37$)

Source: Own elaboration.

With the assumptions met (correlation between the dependent variables and homoscedasticity of the variables together), the multivariate generalized linear model (GLM) was conducted with the four dependent variables, the manipulation factors (four groups) and the covariates of general skepticism and of environmental behavior. Since the profile variables did not exhibit significant differences between the groups, it was decided not to include them in the analysis. As a result, a model with significant differences was obtained not only regarding manipulation ($F=1.792$, $p=0.049$, $\eta^2=0.068$ and $\text{power}=0.881$), but also regarding to the covariate of general environmental behavior ($F=5.819$, $p<0.001$, $\eta^2=0.194$ and $\text{power}=0.978$).

In the case of manipulation, significant differences were found in the evaluation of attributes ($F=4,976$, $p=0,003$, $\eta^2=0,130$ and $\text{power}=0,904$), in the judgment about greenwashing practice ($F=4,398$, $p=0,006$, $\eta^2=0,117$ and $\text{power}=0,862$) and in the positive emotional reaction to the ad ($F=2,991$, $p=0,035$, $\eta^2=0,082$ and $\text{power}=0,691$). For the evaluation of attributes, significant differences were present between Pre-attention without skepticism ($M=7.607$, $SD=0.411$) with both Attention with skepticism ($M=5.45$, $SD=0.41$) and Pre-attention attention with skepticism ($M=6.01$, $SD=0.39$). Similarly, the judgment about the practice of greenwashing also showed significant differences between Pre-attention without skepticism ($M=4.94$, $SD=0.40$) and Attention with skepticism ($M=2.99$, $SD=0.40$), as well as close to the significance zone with Pre-attention with skepticism ($M=3.50$, $SD=0.38$). The positive emotional reaction to the ad also showed a significant difference between Pre-attention

without skepticism ($M=4.97$, $SD=0.39$) and Attention with skepticism ($M=3.29$, $SD=0.39$). Thus, it was observed that the groups that are most distinguished are the opposites, that is, pre-attention without skepticism versus attention with skepticism, with a superior influence of the practice of greenwashing in terms of these three variables in the first case, which contributes to adding support to the hypotheses, especially the most general one (H7).

Finally, concerning the co-variable of general environmental behavior ($F=5.819$, $p<0.001$), in addition to the judgment about the practice of greenwashing ($F=15.255$, $p<0.001$), there was also a difference for the positive emotional reaction to the ad ($F=16.354$, $p<0.001$), with positive and moderate correlations between these variables ($R=0.351$, $p<0.001$ and $R=0.363$, $p<0.001$, respectively). In other words, the higher the participants' declaration of engagement in environmental behavior, the better tends to be not only their judgment about the practice of greenwashing, but their own positive emotional reaction to the advertisement. These results are summarized in Chart 4.

Chart 4

Synthesis Results – GLM – Experiment 1

Attributes evaluation – $F=4.976$, $p=0.003$	2-Pre-attention without skepticism ($M=7.607$, $SD=0.411$) > 3- Attention with skepticism ($M=5.453$, $SD=0.411$) and 4-Pre-attention with skepticism ($M=6.015$, $SD=0.391$)
Judgment about greenwashing practice – $F=4.398$, $p=0.006^*$	2-Pre-attention without skepticism ($M=4.947$, $SD=0.401$) > 3- Attention with skepticism ($M=2.992$, $SD=0.401$) and 4-Pre-attention with skepticism ($M=3.507$, $SD=0.381$)
Positive emotional reaction to the ad – $F=2.991$, $p=0.035$	2-Pre-attention without skepticism ($M=4.977$, $SD=0.396$) > 3- Attention with skepticism ($M=3.299$, $SD=0.397$)

Source: Own elaboration.

5. EXPERIMENT 2 – RESULTS PRESENTATION

Given the results and feedback from the previous experiment, a few modifications were made for a second experiment, such as: reinforcement of attention manipulation (repeating the request to direct attention); unification of the positive bias in the emotional reaction scale; inclusion of eye tracking prior, which allowed a general mapping of the areas visualized by the respondents and their intensities; with this, elimination of attention manipulation check.

The attributes evaluation scale ($KMO=0,839$ e $\alpha=0,878$) presented, in general, a positive trend (6.1), with better averages observed, again, in the attributes of environmental responsibility (7.1), positive image (7.0) and environmentally friendly (6.9), reinforcing the ad's ability to convey a positive image, especially in the environmental aspects. On the other hand, also according to the previous experiment, the emotional reaction to the ad ($\alpha=0,925$), the result was unfavorable (3.9). The participants' judgment about the practice of greenwashing ($\alpha=0.888$), while the skepticism declared by the participants ($\alpha=0.744$) approached the midpoint (4.4). reiterating the strong disbelief of consumers in relation to the organizations' environmental practices and disclosures. Finally, the stated environmental behavior ($KMO=0.868$ and $\alpha=0.872$) also presented a practically intermediate mean (5.1), indicating a lack of positioning.

First, we tried to verify the differences regarding **attention manipulation**, comparing the groups that paid attention to environmental appeals ($n=81$) and those who processed them pre-attentively ($n=78$). Three assertions of the scale of emotional reaction to the advertisement showed

significant differences, as well as two others which were close to the significance zone, all with better results in the case of pre-attention, compared to attention. In addition, two statements from the stated environmental behavior scale had significant differences, plus one more that was close to the significance zone, all with better result for pre-attention, compared to attention. The other target variables of this study did not show significant differences, a result that was repeated for the respondents' profile variables.

In a second moment, the differences related to the **manipulation of skepticism** were verified, comparing the groups with present skepticism (n=80) and without skepticism (n=79). First, the manipulation was assured, attesting to the significant difference in the participants' overall skepticism variable (F=4.502, p=0.035), higher in the presence of skepticism (M=4.79, SD=1.95) than in its absence (M=4.08, SD=2.25). Significant differences were identified in the evaluation of the attributes, in the positive emotional reaction and in the judgment about the practice of greenwashing. In all cases, better results were observed when skepticism was absent, compared to its presence, managing to add support to the three related hypotheses, respectively (H4, H5 and H6). The environmental behavior showed a difference close to the significant zone only for one assertion, repeating a better result when there was no skepticism. Finally, the profile variables did not show significant differences. The summary of the results discussed above is presented in Chart 5.

Chart 5

Synthesis Results – One-dimensional analysis – Experiment 2

Attributes evaluation (H4) – F=11.014, p=0.001	No skepticism (M=6.64, SD=2.06) > Skepticism (M=5.57, SD=1.97)
Judgment about greenwashing practice (H5) – F=7.097, p=0.009	No skepticism (M=2.63, SD=1.52) > Skepticism (M=2.00, SD=1.40)
Emotional reaction to the ad (H6) – F=9.837, p=0.002	No skepticism (M=4.38, SD=2.12) > Skepticism (M=3.41, SD=1.77)

Source: Own elaboration.

With the assumptions met (correlation between the dependent variables and homoscedasticity of the variables together), a multivariate GLM was conducted with the three dependent variables, the manipulation factors (four groups), and the co-variables of general skepticism and environmental behavior. As a result, we obtained a model with significant differences not only with respect to manipulation (F=2.145, p=0.025, eta squared=0.043 and power=0.883), but also with respect to the co-variable general skepticism (F=5.694, p =0.001, eta squared=0.109 and power=0.943).

In the case of manipulation, significant differences were observed for the first two variables. Regarding the evaluation of the attributes (F=4,334, p=0,006, eta squared=0,084 and power=0,861), the differences were between the two opposite groups, with a better result for group 3-Pre-attention without skepticism (M=6.854, SD=0.30), compared to group 2-Attention with skepticism (M=5.417, SD=0.29). Furthermore, a difference close to the significance zone was also observed between the latter group, 2-Attention with skepticism (M=5.417, SD=0.29), and 4-Attention without skepticism (M=6.499, SD=0.29). Such result was repeated for the emotional reaction to the ad (F=3.871, p=0.011), among the same groups, again with better result from the 3-Pre-attention without skepticism group (M=4.580, SD=0.31), compared to 2-Attention with skepticism (M=3.112, SD=0.30). Thus, as in the previous experiment, it was observed that the groups that differed the most were the opposite ones, with superiority of influence of these two

variables when there was pre-attention without skepticism, presenting support for the hypotheses raised, especially referring to the general hypothesis (H7).

Significant differences were also found regarding the co-variable of general skepticism ($F=5.694$, $p=0.001$, $\eta^2=0,076$ and $\text{power}=0,815$) for the three variables, with weak negative correlations with image evaluation ($R=-0.293$, $p<0.001$), emotional reaction to the ad ($R=-0.227$, $p=0.004$), and judgment about the greenwashing practice ($R=-0.279$, $p=0.001$). In other words, the higher the skepticism of the participants, the worse the overall image evaluation tends to be, as well as the overall emotional reaction to the ad, and the judgment about the greenwashing practice, which contributes to corroborating, again, the hypotheses related to the influence of skepticism. Below, Chart 6 is presented with a summary of the results.

Chart 6

Synthesis Results – GLM – Experiment 2

Attributes evaluation – $F=4.334$, $p=0.006$	3- Pre-attention without skepticism ($M=6.854$, $DP=0.309$) > 2- Attention with skepticism ($M=5.417$, $DP=0.295$)
Emotional reaction to the ad – $F=3.871$, $p=0.011$	3- Pre-attention without skepticism ($M=4.580$, $DP=0.318$) > 2- Attention with skepticism ($M=3.112$, $DP=0.304$).

Source: Own elaboration.

5.1. EYETRACKING

The color Heatmap analysis are shown below (Figure 2), with the four groups, respectively: 1-Pre-attention without skepticism, 2-Attention without skepticism, 3-Pre-attention with skepticism, and 4-Attention with skepticism.

Thus, it could be observed that, in general, the participants' fixations were concentrated, mostly and for more time, on the product disclosure appeals, placed at the top of the ad ("A new concept in automobile / Reduces more than half CO2 emission – Same engine, same power"), as well as on the technical sheet with its information. The green appeals seemed to stay in an intermediate/medium point of identification and fixation time, while the figurative illustration of the product was the least fixed, regardless of the group, even though it was placed in the central region and occupied a large part of the ad.

More importantly, some differences can be discussed. The fact sheet area with product information, for example, seemed to have slightly lower fixations by the 4-Attention with skepticism group, followed by 2-Attention without skepticism. Green appeals, conversely, had superior fixations by these groups (2-Attention without skepticism and 4-Attention with skepticism), especially the environmental certification seal and the "100% eco-friendly" appeal. Such appeals stood out even more respectively, i.e., higher attachment of the environmental certification label by group 2-Attention without skepticism and of the "100% green" appeal by group 4-Attention with skepticism. These results corroborate the manipulation employed, indicating that the visual attention of the participants in the attention groups was indeed directed to the green appeals, compared to the pre-attention groups, while, on the other hand, for the technical card area the result was inverse, with attention directed to it by the pre-attention group, compared to the attention.

From a quantitative perspective, the average times elapsed until the first fixation in the area of the technical sheet were close to each other, around 8 to 9 seconds, a result that was repeated for the count of previous fixations, made in the surroundings, which was close to 30. More

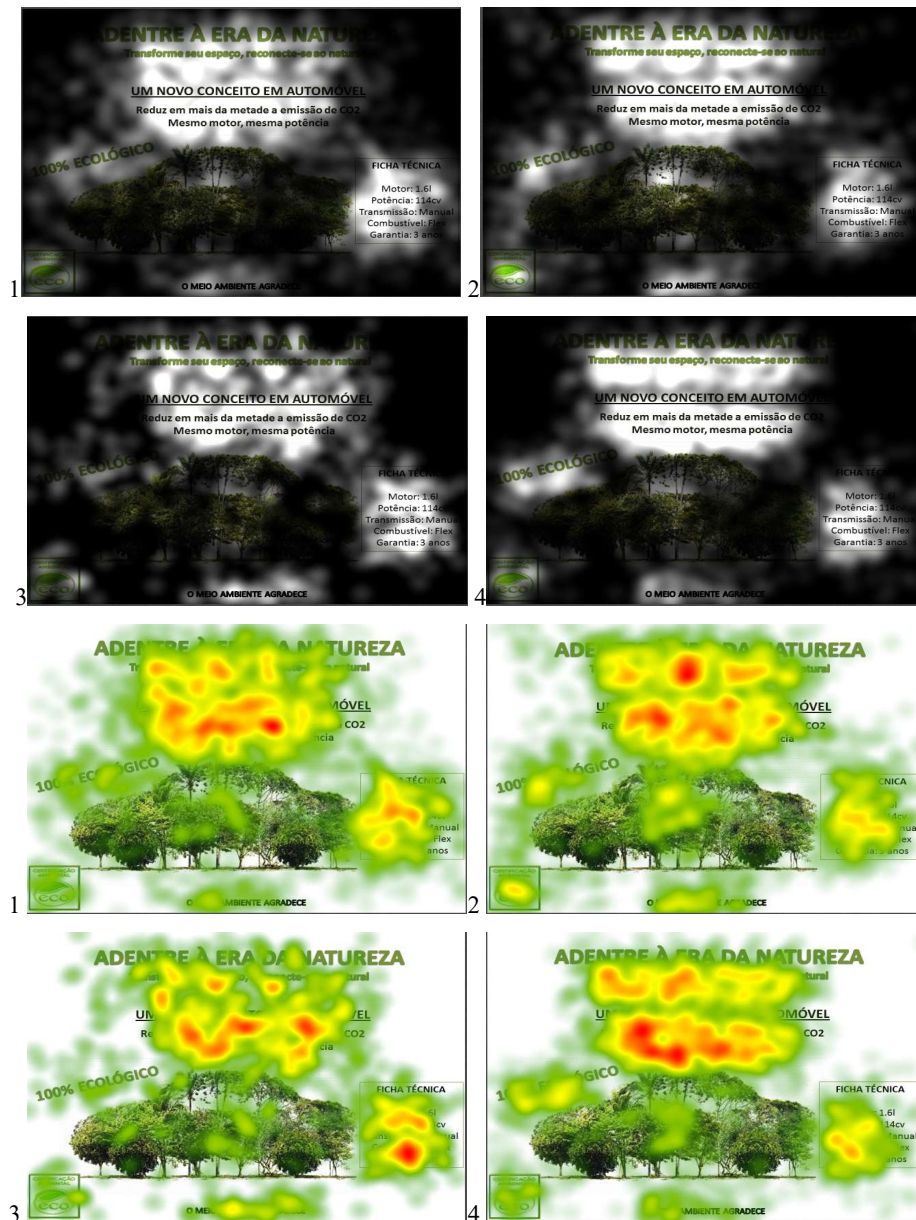


Figure 2. Heatmap analysis in black and white and color scale
Source: Images obtained with the Eyetracker device and program.

important, the metrics of total fixation time and fixation count between the four groups were compared, running an ANOVA, with Tukey's post-hoc test, in which statistically significant differences were obtained in both cases. In the total fixation time ($F=8.802$, $p<0.001$), higher means were verified in the pre-attention, 1-Pre-attention without skepticism ($M=4.93$, $SD=2.32$) and 3- Pre-attention groups -attention with skepticism ($M=5.08$, $SD=2.37$), compared to attention, 2- Attention without skepticism ($M=3.26$, $SD=1.71$) and 4- Attention with skepticism ($M=3.31$, $SD=1.49$), from which the greater attentional direction is inferred, validating the manipulation performed. Also in this sense, the count of fixations ($F=5.409$, $p=0.001$) showed a greater result in the groups of pre-attention, 1-Pre-attention without skepticism ($M=11.31$, $SD=7.29$) and 3- Pre-attention with skepticism ($M=12$), compared to attention, 2- Attention without skepticism ($M=7.83$, $SD=4.48$) and 4-Attention with skepticism ($M=7.49$, $SD=4.27$),

which corroborates the aforementioned inference, adding greater validation to manipulation. Chart 7 below summarizes these results.

Chart 7

Synthesis Results – Eyetracking – Experiment 2

Total fixation time – F=8.802, p=0.000	1-Pre-attention without skepticism (M=4.93) and 3-Pre-attention with skepticism (M=5.08) > 2-Attention without skepticism (M=3.26) and 4-Attention with skepticism (M=3.31)
Count fixings – F=5.409, p=0.001	1-Pre-attention without skepticism (M=11) and 3-Pre-attention with skepticism (M=12) > 2-Attention without skepticism (M=8) and 4-Attention with skepticism (M=7)

Source: Own elaboration.

6. GENERAL DISCUSSION OF THE RESULTS

In both experiments, one can notice a good evaluation of the ad by the participants, which shows the ability of the advertisement that adopts green appeals characterized as greenwashing to convey a favorable image, fair and especially in relation to environmental aspects. This result is congruent with the relevant studies, which argue for the growing proliferation of greenwashing practices, in particular due to their attested ability to influence (Andreoli & Batista, 2020; Andreoli, Lima & Prearo, 2017; Jong et al., 2020).

Despite this, the emotional reaction to the ad presented divergent results, with an evaluation between unfavorable and intermediate, which indicates a statement of emotionally indifferent or even negative reaction to the piece in question. It is worth pointing out that an assertion that proved favorable in both cases was that the ad is easy to understand, an aspect that can be questioned, having in mind precisely the purpose of this study, that is, considering their perception about the green appeals and the ability to ponder, question and understand them.

More importantly, it should be emphasized that such results occurred even in the face of a considerable critical sense declared by the participants, demonstrated both by the high skepticism and by the even more judicious judgment about the practice of greenwashing. In other words, even though there seems to be a rather deteriorated belief on the part of the participants in relation to the adoption and dissemination of green appeals by organizations, they themselves ended up buying the idea of green image, positively evaluating the image communicated. A similar result was obtained by Andreoli and Nogueira (2021), in which the declared critical sense was not enough to undermine the false image easily bought by consumers.

The declared environmental purchasing behavior was also between unfavorable and intermediate, indicating an indifference to actually assume more environmentally correct attitudes. This result is a cause for concern, considering, first, the importance of consumers engaged environmental behavior and, consequently, its impacts not only in terms of consumption, but also in relation to charging for a change in attitude and demand for new organizational practices (Gonçalves-Dias & Moura, 2007). Thus, it is not enough for consumers to declare themselves increasingly critical of environmental issues and the actions taken by organizations that adopt green appeals (Andreoli, Lima & Prearo, 2017); it is necessary to raise awareness to the point that such concern

is internalized and reflected in real changes, questioning, and modifying their choice patterns and consumption habits.

The summary picture that can be formed from this is that the participants, despite being quite critical of the green practices disclosed by the organizations and actually reacting in an emotionally negative or indifferent way to the announcement, such criticality does not seem to drive them to an engaged environmental behavior, nor does it show itself capable of decreasing the image evaluation. Thus, the possibility of dissemination and proliferation of the practice of greenwashing by organizations (Andreoli, Lima & Prearo, 2017), presents itself as not only possible, but dangerously likely to occur.

Analyzing the influences of the manipulations in isolation, we had, in the first place, an expressivity of skepticism, which when present, showed itself capable of decreasing all metrics. Thus, support was obtained to all the hypotheses related to this, adding evidence to the role of skepticism as an important defense mechanism of consumers, capable of raising their critical sense, in congruence with the theoretical foundation outlined (Chen & Chang, 2013; Guo et al., 2017; Lyon & Montgomery, 2013; Rahman, Park & Chi, 2015; Silva et al., 2015; Testa, Boiral & Iraldo, 2018). Second, attention was less expressive, exhibiting impact only on emotional reaction to the ad, also in agreement with the literature surveyed (Bornstein & D'agostino, 1992; Chatterjee, 2012; Shapiro, MacInnis & Heckler, 1997; Yoo, 2008)

In a minimal way, even the environmental purchase behavior ended up being influenced by both manipulations, separately, in the same direction as the previous results, that is, lower when both skepticism and attention were present. Such results seem to corroborate the claims of studies concerning greenwashing that defend the worrying possibility of ballast of this practice, not only to the whole sustainable market and other aspects related to it (Markham, Khare & Beckman, 2014; Testa, Boiral & Iraldo, 2018), but especially to the very environmental behavior of individuals in the face of it (Albayrak et al., 2011).

When comparing the four groups, the situation with the best evaluation of the practice of greenwashing (in the three investigated metrics) occurred when pre-attention was combined with the absence of skepticism, compared to, on the other hand, the worst evaluation related to the combination of attention and skepticism, which contributes to add support to the seventh hypothesis. This result shows the influence of the two independent variables in a crossed way, exposing the scenario of greater potential for the ability to influence this false marketing discourse on consumer behavior.

As a summary of the discussion, as shown in the chart 8, it is believed that, in the first experiment, it was possible to add support to all seven hypotheses outlined, a result that was not repeated for the second experiment, in which two hypotheses did not obtain full support.

Chart 8

Summary of the results – Hypothesis test

Hypotheses	1	1	2	2
H1: Better evaluation of the attributes is expected when using pre-attention in the processing of environmental appeals, compared to attention.	x	√	x	√
H2: More favorable judgment about the practice characterized as greenwashing is expected when using pre-attention in processing environmental appeals, compared to attention.	x	√	x	x
H3: More positive emotional reaction to the advertisement is expected when using pre-attention in processing environmental appeals, compared to attention.	x	√	√	√
H4: Better assessment of attributes is expected when skepticism is absent in the processing of environmental appeals, compared to its presence.	√	√	√	√

Hypotheses	1	1	2	2
H5: A more favorable judgment about the practice characterized as greenwashing is expected when there is no skepticism in the processing of environmental appeals, compared to its presence.	√	√	√	x
H6: More positive emotional reaction to the advertisement is expected when there is no skepticism in processing environmental appeals, compared to their presence.	√	√	√	√
H7: Better ad evaluation is expected when combining pre-attention and absence of skepticism in processing environmental appeals, compared to combining attention and skepticism.	-	√	-	√

Source: Own elaboration.

7. FINAL CONSIDERATIONS

The objective of this work was to analyze the influence of attention and skepticism in the evaluation of false market discourse with an environmental appeal (greenwashing). As a result, it was possible to observe a better evaluation of the practice of greenwashing when pre-attentiveness and the absence of skepticism were combined, which sets up a potential scenario for the influence of this false marketing discourse on consumer behavior.

In this sense, in contrast, the importance of attention and skepticism is argued as potential consumer defense mechanisms in the process of reception and subsequent evaluation of the practice of greenwashing. In a preponderant way, skepticism proved capable of undermining all the metrics of interest in this study, making the evaluation of the ad more critical (and therefore less favorable) with the practice of false marketing discourse. Secondly, the potential of attention was less expressive, but even so it was able to partially undermine several of the metrics of interest, making the aforementioned assessment more aware (and therefore less favorable). The conjunction of the two processes, concomitantly, proved to be decisive for the worsening of the evaluation of the advertisement, reducing the effectiveness of the ability to influence the practice of greenwashing.

The study contributes by investigating the factors that can minimize the incidence and/or influence of the practice of greenwashing from the perspective of the main interested party, according to their own behavior. Thus, two cognitive processes were concatenated that proved to be important defense mechanisms, emphasizing the importance of understanding the model of reception and processing of stimuli more comprehensively. Furthermore, unpublished evidence could be added, especially using the hypothetical-deductive method, in addition to the use of the neuroscientific technique of eye monitoring (eyetracker), which corroborated the extent of the analyzes carried out.

Important managerial implications could also be inferred, which revolve around the need for greater awareness and engagement on the part of the interested publics, especially organizations, consumers, and the government. Only then will it be possible to know and understand the current situation of organizational practice in relation to the environment and its possible critical consequences, as discussed. As a result, it will be possible to apprehend the importance of their roles as agents responsible for reflections, questioning, inspections and demands, capable of demanding and promoting substantial changes in the green scenario.

Despite the results obtained, in view of the lack of validation found, the limitations of this study must be considered, especially those related to the methodological procedure. In this sense, it is emphasized that this is a study with a procedure and materials specifically developed for these purposes. Meanwhile, it is reiterated that the study focused on the internal validity of the results, thus limiting itself to the specific context of application.

Finally, recommendations for future studies are diverse. Slight variations can be used in the structure of the methodological procedure used, such as, for example, verifying the influence of the time of exposure to the advertisement (free versus controlled), as well as the waiting time between receiving the instructions and viewing the advertisement and the questionnaire response (delay effect and permanence ballast). Another possibility refers to the inclusion of the ad in media such as newspapers, online news portals or social networks, in order to simulate the experience of everyday exposure.

REFERENCES

- Afonso, M. H. F., Bornia, A. C., Echegaray, F., & de Andrade, D. F. (2016). Comportamento de consumo sustentável: mensuração com o uso da Teoria da Resposta ao Item. *Revista Eletrônica de Gestão Organizacional*, 14, 16-29. <https://doi.org/10.21714/1679-18272016v14Esp.p16-29>
- Albayrak, T., Caber, M., Moutinho, L., & Herstein, R. (2011). The influence of skepticism on green purchase behavior. *International Journal of Business and Social Science*, 2(13), 189-197.
- Andreoli, T. P., & Batista, L. L. (2020). Possíveis ações regulatórias do Greenwashing e suas diferentes influências na avaliação de marca e no julgamento dos consumidores. *Revista Brasileira de Marketing*, 19(1), 29-52. <https://doi.org/10.5585/remark.v19i1.14755>
- Andreoli, T. P., & Nogueira, A. C. V. (2021). Falsos discursos mercadológicos. *Revista Pensamento Contemporâneo em Administração*, 15(2), 69-87. <https://doi.org/10.12712/rpca.v15i2.48890>
- Andreoli, T. P., Costa, E. S., & Prearo, L. C. (2022). Julgamento dos consumidores acerca da prática do greenwashing: desenvolvimento e validação de escala. *Brazilian Business Review*, 19(5), 508-524. <https://doi.org/10.15728/bbr.2022.19.5.3.pt>
- Andreoli, T. P., Crespo, A., & Minciotti, S. (2017). What has been (short) written about greenwashing: A bibliometric research and a critical analysis of the articles found regarding this. *Revista de Gestão Social e Ambiental*, 11(2), 54-72. <https://doi.org/10.24857/rgsa.v11i2.1294>
- Andreoli, T. P., Lima, V. A., & Prearo, L. C. (2017). A (in) eficácia dos selos verdes sobre o comportamento dos consumidores: um estudo experimental. *Revista Eletrônica de Ciência Administrativa*, 16(1), 62-79. <https://doi.org/10.21529/RECADM.2017003>
- Andreoli, T. P., Veloso, A. R., & Batista, L. L. (2016). Atenção no processamento de marcas. *Revista de Gestão, Finanças E Contabilidade*, 6(2), 6-30. <https://doi.org/10.18028/2238-5320/rgfc.v6n2p6-30>
- Bornstein, R. F., & D'agostino, P. R. (1992). Stimulus recognition and the mere exposure effect. *Journal of Personality and Social Psychology*, 63(4), 545-552. <https://doi.org/10.1037/0022-3514.63.4.545>
- Campbell, M. C., & Keller, K. L. (2003). Brand familiarity and advertising repetition effects. *Journal of Consumer Research*, 30(2), 292-304. <https://doi.org/10.1086/376800>
- Chatterjee, P. (2012). The role of varying information quantity in ads on immediate and enduring cross-media synergies. *Journal of Marketing Communications*, 18(3), 217-240. <https://doi.org/10.1080/13527266.2011.567458>

- Chen, Y. S., & Chang, C. H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. *Journal of Business Ethics, 114*(3), 489-500. <https://doi.org/10.1007/s10551-012-1360-0>
- Fang, X., Singh, S., & Ahluwalia, R. (2007). An examination of different explanations for the mere exposure effect. *Journal of Consumer Research, 34*(1), 97-103. <https://doi.org/10.1086/513050>
- Guerreiro, J., Rita, P., & Trigueiros, D. (2015). Attention, emotions and cause-related marketing effectiveness. *European Journal of Marketing, 49*(11/12), 1728-1750. <https://doi.org/10.1108/EJM-09-2014-0543>
- Gonçalves-Dias, S. L. F., & Moura, C. (2007). Consumo Sustentável: muito além do consumo “verde”. *Encontro da ANPAD, 31*, Rio de Janeiro, 2007.
- Guo, R., Tao, L., Li, C. B., & Wang, T. (2017). A path analysis of greenwashing in a trust crisis among Chinese energy companies: The role of brand legitimacy and brand loyalty. *Journal of Business Ethics, 140*(3), 523-536. <https://doi.org/10.1007/s10551-015-2672-7>
- Hahn, I. S., Scherer, F. L., De Oliveira, M. C. S. F., & Scheid, R. (2016). Resposta emocional à publicidade em mídias sociais. *Revista Pensamento Contemporâneo em Administração, 10*(1), 140-151. <https://doi.org/10.12712/rpca.v10i1.11252>
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.
- Janiszewski, C. (1993). Preattentive mere exposure effects. *Journal of Consumer Research, 20*(3), 376-392. <https://doi.org/10.1086/209356>
- Jong, M. D., Huluba, G., & Beldad, A. D. (2020). Different shades of greenwashing: Consumers' reactions to environmental lies, half-lies, and organizations taking credit for following legal obligations. *Journal of Business and Technical Communication, 34*(1), 38-76. <https://doi.org/10.1177/1050651919874105>
- Lee, A. Y., & Labroo, A. A. (2004). The effect of conceptual and perceptual fluency on brand evaluation. *Journal of Marketing Research, 41*(2), 151-165. <https://doi.org/10.1509/jmkr.41.2.151.28665>
- Lyon, T. P., & Montgomery, A. W. (2013). Tweetjacked: The impact of social media on corporate greenwash. *Journal of Business Ethics, 118*(4), 747-757. <https://doi.org/10.1007/s10551-013-1958-x>
- Macdonald, E., & Sharp, B. (2003). *Management perceptions of the importance of brand awareness as an indication of advertising effectiveness* [Doctoral dissertation, Massey University, Department of Marketing].
- Markham, D., Khare, A., & Beckman, T. (2014). Greenwashing: A proposal to restrict its spread. *Journal of Environmental Assessment Policy and Management, 16*(04), 1450030. <https://doi.org/10.1142/S1464333214500306>
- Menegali, G. S., & Spers, E. E. (2020). Greenwashing: Uma análise das propagandas sobre a ótica do discurso da percepção dos consumidores. *Brazilian Journal of Business, 2*(3), 3151-3171. <https://doi.org/10.34140/bjbv2n3-085>
- Miloslavjevic, M. (2007). *The effects of preattention in an online advertising context: A neuroscience perspective*. ProQuest.
- Monin, B. (2002). *The warm glow heuristic: When liking leads to familiarity*. Princeton University.
- Rahman, I., Park, J., & Chi, C. G. Q. (2015). Consequences of “greenwashing”: Consumers' reactions to hotels' green initiatives. *International Journal of Contemporary Hospitality Management, 27*(6), 1054-1081. <https://doi.org/10.1108/IJCHM-04-2014-0202>

- Roberts, J. A. (1996). Green consumers in the 1990: profile and implications for advertising. *Journal of Business Research*, 36, 217-231.
- Romeiro, M. D. C. (2006). *Um estudo sobre o comportamento do consumidor ambientalmente favorável: uma verificação na região do ABC paulista* [Doctoral dissertation, Universidade de São Paulo].
- Rossini, J. C., & Galera, C. (2008). Seleção e análise de estímulos na tarefa de busca visual. *Psicologia: Reflexão e Crítica*, 21(1), 20-27. <https://doi.org/10.1590/S0102-79722008000100003>
- Ryu, G., Lim, E. A. C., Tan, L. T. L., & Han, Y. J. (2007). Preattentive processing of banner advertisements: The role of modality, location, and interference. *Electronic Commerce Research and Applications*, 6(1), 6-18. <https://doi.org/10.1016/j.elerap.2005.11.001>
- Shapiro, S., MacInnis, D. J., & Heckler, S. E. (1997). The effects of incidental ad exposure on the formation of consideration sets. *Journal of Consumer Research*, 24(1), 94-104. <http://doi.org/10.1086/209496>
- Silva, M. M., Bernardo, C. H. C., & Braga Junior, S. S. (2020). Relação entre características de greenwashing e lealdade dos consumidores: uma revisão bibliográfica sistemática. *Research, Society and Development*, 9(12), e16391210900. <https://doi.org/10.33448/rsd-v9i12.10900>
- Silva, D., Urdan, A. T., Merlo, E. M., & Dias, K. T. S. (2015). Influências da preocupação ambiental e do ceticismo frente à propaganda no consumo de produtos verdes. *Revista Brasileira de Marketing*, 14(4), 529-544. <https://doi.org/10.5585/remark.v14i4.3155>
- Testa, F., Boiral, O., & Iraldo, F. (2018). Internalization of environmental practices and institutional complexity: Can stakeholders pressures encourage greenwashing?. *Journal of Business Ethics*, 147(2), 287-307. <https://doi.org/10.1007/s10551-015-2960-2>
- Wu, M. C. (2014). *The effects of task demand and web information type on recognition of verbal emotional advertising*. Twentieth Americas Conference on Information Systems, Savannah, 2014.
- Yoo, C. Y. (2008). Unconscious processing of web advertising: Effects on implicit memory, attitude toward the brand, and consideration set. *Journal of Interactive Marketing*, 22(2), 2-18. <https://doi.org/10.1002/dir.20110>


AUTHOR'S CONTRIBUTION

TA author was responsible for the idealization, planning and execution of the article, working on the development as a whole; SM acted as advisor and reviewer; while LB, in addition to guiding, also provided the laboratory with the device and the eye monitoring program, especially supervising this procedure.

CONFLICTS OF INTEREST

The authors certify that there is no conflict of interest.

EDITOR-IN-CHIEF

Talles Vianna Brugni 

ASSOCIATE EDITOR

Emerson Mainardes 