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NEW PERSPECTIVES AND INSIGHTS ON THE DETERMINANTS OF
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COMPORTAMENTO PRÓ-AMBIENTAL

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PRO-ENVIRONMENTAL BEHAVIOR

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Aos 29 dias do mês de maio do ano de 2024, às 09:00 horas, por meio de Videoconferência, realizou-se a defesa de TESE DE DOUTORADO de PEDRO AUGUSTO BERTUCCI LIMA, intitulada **NEW PERSPECTIVES AND INSIGHTS ON THE DETERMINANTS OF PROENVIRONMENTAL BEHAVIOR**. A Comissão Examinadora foi constituída pelos seguintes membros: Prof. Dr. ENZO BARBERIO MARIANO (Orientador(a) - Participação Virtual) do(a) Departamento de Engenharia de Produção / Unesp - Faculdade de Engenharia - Câmpus Bauru, Prof.^a Dr.^a JANINE FLEITH DE MEDEIROS (Participação Virtual) do(a) Departamento de Engenharia de Produção e Transportes / Universidade de Passo Fundo, Prof.^a Dr.^a JUDITH IRENE MARIA DE GROOT (Participação Virtual) do(a) Department of Marketing / Faculty of Economics and Business, University of Groningen, Prof.^a Dr.^a LEILA ELGAAIED-GAMBIER (Participação Virtual) do(a) Marketing Department / TBS Education, Prof.^a Dr.^a SARA MARGARIDA MORENO PIRES (Participação Virtual) do(a) Departamento de Ciências Sociais, Políticas e do Território / Universidade de Aveiro. Após a exposição pelo doutorando e arguição pelos membros da Comissão Examinadora que participaram do ato, de forma presencial e/ou virtual, o discente recebeu o conceito final: aprovado. Nada mais havendo, foi lavrada a presente ata, que após lida e aprovada, foi assinada pelo(a) Presidente(a) da Comissão Examinadora.

Prof. Dr. ENZO BARBERIO MARIANO

Enzo B. Mariano

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*“What do you say we become two
Leonardo da Vincis?”*

Richard Feynman

ABSTRACT

Behaviors that minimize or improve the quality of the environment, that is, environmental behaviors (PEBs), are relevant to mitigate environmental problems that affect the planet and people's quality of life. Because of this, it is essential to understand the determinants of these behaviors, so that they can be encouraged. Among the factors used to analyze the PEB, the value-belief-norm theory (VBN) is one of the most used because it was developed especially for the analysis of PEBs through the incorporation of different theories and existing concepts. Although it is widely used, there are still new opportunities and research possibilities regarding this theory, including integrating it with other theories and constructs. Thus, the general objective of this thesis is to propose new perspectives for the VBN theory through its application in different contexts, and to explain different types of PEBs. In order to achieve this objective, this thesis is divided into four articles, each with a specific objective. The first article, through a systematic literature review, set out to map the relationship between the VBN theory and environmental advertisements. As a result, a theoretical framework was proposed that combines the stages of cognitive processes of persuasive messages with the VBN theory, also including contextual factors and personal capabilities as moderators. The second article aimed to analyze how different values used in messages about biological conservation interact with the individual values of the audience. The study was applied in two contexts: the interaction between humans and marmosets in the city of Bauru, Brazil, and the presence of wild boars in the metropolitan region of Barcelona, Spain. The research points out that in the case of Brazil, altruistic and biospheric messages moderate the relationship between individual altruistic and biospheric values and message performance, while in the context of Spain, control messages, that is, informative ones, presented a moderating effect. The third article, which also included Brazilian and Spanish data, analyzed, using 40 structural equation models, how reported recycling behaviors and purchases of recycled products interact with the intention to purchase specific products produced with recycled material. The study also aimed to analyze the role of beliefs, personal and social norms, and attitudes on behavioral intention in the interaction between reported behavior and behavioral intention. The results indicate that the reported behavior of purchasing recycled products is the main predictor of the intention to purchase specific products made with recycled material, with few relationships being found between recycling behavior and purchase intention, which is a barrier to achieving circular economy, see the need to close the cycle of materials and energy in the production and consumption cycles. The psychological variables used showed a

relationship with behavioral intention, but few moderation relationships. Finally, the fourth study, which also used structural equation modeling, aimed to analyze how human capabilities, analyzed in aggregate and by separate dimensions, relate to PEB and what their role is in the interaction between personal norms and intention to behavior. The results indicate that the relationship between human capabilities and PEB is not strong, depending on the dimensions of capabilities and specific categories of PEB. Furthermore, the results indicate that human agency capabilities negatively moderate the relationship between personal norms and environmental behaviors. Thus, the results of this thesis offer new possibilities for VBN theory, in particular the role of the interaction between VBN variables and other variables such as persuasive messages, past behaviors and human capabilities, to explain environmental behaviors. The thesis also presents results that go beyond VBN, presenting one of the few literature reviews in the area of green advertisements, awareness of ecological conservation issues in Bauru and Barcelona, the relationship between past behaviors and behavioral intention in the context of the economy circular, and the development of a reduced instrument to apply capabilities theory in survey studies.

Keywords: environmental behavior; value-belief-norm theory; sustainability; structural equation modeling; green marketing; environmental conservation; circular economy; human development.

RESUMO

Comportamentos que minimizem ou melhorem a qualidade do meio ambiente, isto é, comportamentos ambientais (PEBs), são relevantes para mitigar os problemas ambientais que afetam o planeta e a qualidade de vida das pessoas. Devido a isso, é fundamental compreender os determinantes desses comportamentos, para que eles possam ser estimulados. Dentre os fatores empregados para analisar o PEB, a teoria do valor-crença-norma (VBN, do inglês value-belief-norm) é uma das mais utilizadas por ter sido desenvolvida especialmente para a análise de PEBs através da incorporação de diferentes teorias e conceitos já existentes. Embora seja muito utilizada, ainda existem novas oportunidades e possibilidades de pesquisa com relação a esta teoria, inclusive integrando-a com outras teorias e constructos. Assim, o objetivo geral desta tese é propor novas perspectivas para a teoria VBN mediante a sua aplicação em diferentes contextos, e para explicar diferentes tipos de PEBs. De modo a alcançar este objetivo, esta tese é dividida em quatro artigos, cada um com um objetivo específico. O primeiro artigo, por meio de uma revisão sistemática da literatura, se propôs a mapear a relação entre a teoria VBN e anúncios ambientais. Como resultado, foi proposto um framework teórico que combina os estágios dos processos cognitivos de mensagens persuasivas com a teoria VBN, incluindo também fatores contextuais e de capacidades pessoais como moderadores. O segundo artigo teve como objetivo analisar como diferentes valores utilizados em mensagens sobre conservação biológica interagem com os valores individuais da audiência. O estudo foi aplicado em dois contextos: a interação entre humanos e saguis na cidade de Bauru, Brasil, e a presença de javalis selvagens na região metropolitana de Barcelona, Espanha. A pesquisa aponta que no caso do Brasil, mensagens altruístas e biosféricas moderam a relação entre valores individuais altruístas e biosféricos e a performance da mensagem, enquanto no contexto da Espanha as mensagens de controle, isto é, informativas, apresentaram efeito moderador. O terceiro artigo, que também contou com dados brasileiros e espanhóis, analisou por meio de 40 modelos de equações estruturais como comportamentos reportados de reciclagem e compra de produtos reciclados interagem com a intenção de compra de produtos específicos produzidos com material reciclado. O estudo também teve como objetivo analisar o papel das crenças, normas pessoais e sociais, e atitudes na intenção de comportamento na interação entre comportamento reportado e intenção de comportamento. Os resultados apontam que o comportamento reportado de comprar produtos reciclados é o principal preditor da intenção de comprar produtos específicos feitos com material reciclado, tendo sido encontradas poucas relações entre comportamento de

reciclagem e a intenção de compra, o que é uma barreira para o alcance da economia circular, vide a necessidade de se fechar o ciclo de materiais e energia nos ciclos de produção e consumo. As variáveis psicológicas empregadas apresentaram relação com intenção de comportamento, mas poucas relações de moderação. Por fim, o quarto estudo, que também utilizou modelagem por equações estruturais, teve como objetivo analisar como as capacidades humanas, analisadas de forma agregada e por dimensões separadas, se relacionam com PEB e qual o seu papel na interação entre normas pessoais e intenção de comportamento. Os resultados apontam que a relação entre capacidades humanas e PEB não é forte, dependendo das dimensões das capacidades e de categorias específicas de PEB. Além disso, os resultados indicam que as capacidades de agência humana moderam negativamente a relação entre normas pessoais e comportamentos ambientais. Desse modo, os resultados dessa tese oferecem novas possibilidades para a teoria VBN, em especial o papel da interação entre variáveis da VBN e outras variáveis como mensagens persuasivas, comportamentos passados e capacidades humanas, para explicar comportamentos ambientais. A tese também apresenta resultados que vão além da VBN, apresentando uma das poucas revisões de literatura na área de anúncios verdes, a sensibilização quanto a questões de conservação ecológica em Bauru e Barcelona, a relação entre comportamentos passados e intenção de comportamento no contexto da economia circular, e o desenvolvimento de um instrumento reduzido para aplicar a teoria das capacidades em estudos surveys.

Palavras-chave: comportamento ambiental, teoria valor, crença e norma; sustentabilidade; modelagem de equações estruturais; marketing verde; conservação ambiental; economia circular; desenvolvimento humano.

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*“go, go without drama
without fear of making mistakes,
go without guilt,
and if you want to come back,
come in no hurry
without fear of finding your
place”*

Duca Leindecker and Humberto
Gessinger

1. INTRODUCTION

The world faces severe environmental problems related to climate change, waste generation, biodiversity loss and the pollution of natural ecosystems (UNEP, 2023). The urgency of improving the environmental condition is not only about preserving the planet for its own sake, but also about preserving human beings (SEN, 2013). A degraded environment negatively affects human well-being across different dimensions. It can be the source of different physical and mental problems (GILES-CORTI; LOWE; ARUNDEL, 2020), hinder individuals' capabilities (LIMA et al., 2021), and even impact human happiness (LIMA; MARIANO, 2022). One way to mitigate environmental problems and improve environmental conditions is by adopting pro-environmental behaviors (CLAYTON et al., 2015).

A pro-environmental behavior (PEB) can be defined as “any behavior that harms the environment as little as possible, or even benefits the environment” (STEG; VLEK, 2009, p. 309). Stern (2000) pointed out four types of pro-environmental behavior: environmental activism, non-activist public sphere, private sphere, and other pro-environmental behaviors. Thus, supporting environmental policies (FRIEDRICH; JEFFERSON; GLEGG, 2014), getting involved in environmental volunteering (MCDOUGLE.; GREENSPAN; HANDY, 2011), talking to others about environmental issues (SELINSKE et al., 2020.), choosing more sustainable products and services (SHARMA; ASWAL; PAUL, 2023), recycling (ELGAAIED, 2012), saving water (PARKER et al., 2018) and energy (VAN DER WERFF; STEG, 2015), among many other behaviors, can be considered PEB.

PEBs differ in terms of the cognitive, physical, or financial efforts necessary for their adoption (KNEEBONE et al., 2020). For example, installing a rainwater tank to supply water for use inside your home is a much more expensive, time-consuming, and complex behavior than turning off the tap when brushing your teeth. Despite these differences, it is generally acknowledged that all kinds of PEBs can contribute to mitigating environmental problems (NIELSEN et al. 2021). A better understanding of the elements that influence the process of forming a PEB can support the development of strategies to increase PEB in general (NIELSEN et al., 2021)

Different conceptual frameworks have been applied to predict PEB (REZVANI; JANSSON; BODIN, 2015). Prior research has adopted many different theories of behavioral change, including the theory of reasoned action (FISHBEIN; AJZEN, 1975), the theory of planned behavior (AJZEN, 1991), self-efficacy theory (BANDURA, 1977) and value-belief-norm (VBN) theory (STERN et al., 1999; STERN, 2000). The present thesis has

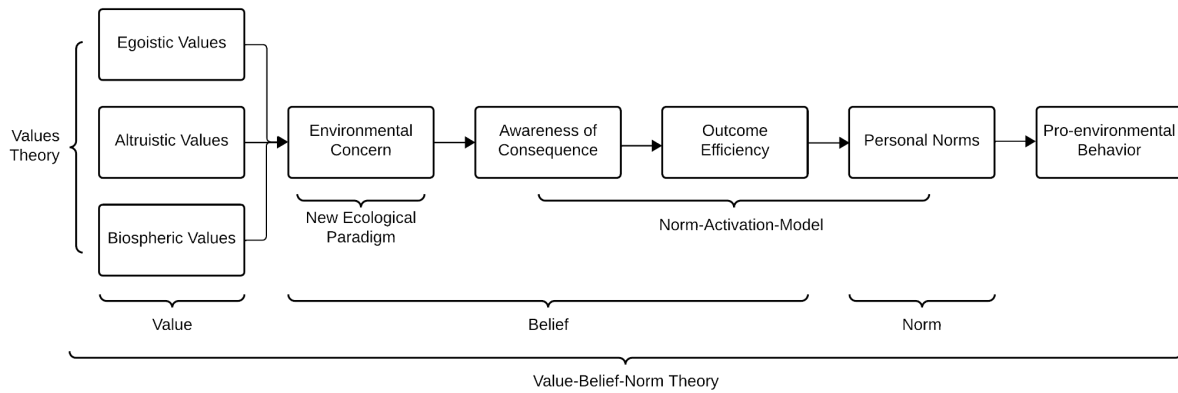
adopted VBN as its focal theoretical framework for two main reasons: (1) unlike other theories, it was designed specifically to understand the antecedents of PEB; and (2) it is inclusive and combines elements of other conceptual frameworks, i.e., values theory (SCHWARTZ, 1992), norm-activation (NAM) theory (SCHWARTZ, 1977) and the new ecological paradigm (NEP) (DUNLAP et al., 2000). A summary of each concept of the VBN theory is presented as follows:

- 1) Values: values theory conceptualizes individual values as criteria used to select and justify the behaviors and evaluations of other individuals and events (SCHWARTZ, 1992). Individual values influence how individuals evaluate costs and benefits involved in behavior (STEG, 2016). Within the scope of the individuals' values investigated by Schwartz (1992), three have been employed more frequently in the PEB literature (DE GROOT; STEG, 2010a; STEG; DE GROOT, 2012):
 - a) Egoistic: the individual perceives a behavior as beneficial to themselves, that is, the personal benefits of the behavior outweigh the personal costs of adopting the behavior. For example, an individual might opt for saving water to reduce their water bill;
 - b) Altruistic: the individual perceives that a behavior benefits the community or society, that is, the societal benefits of the behavior outweigh the personal costs of adopting the behavior. For example, an individual reduces their water consumption to avoid a lack of water for other individuals;
 - c) Biospheric: the individual perceives that a behavior will benefit the ecosystem as a whole, that is, the ecosystem benefits of the behavior outweigh the personal costs of adopting the behavior. For example, an individual decreases their water consumption to avoid water stress on the environment.
- 2) Beliefs: are beliefs that an individual has about environmental concern and the relationships of human beings and nature, beliefs about the consequences of environmental impact, and beliefs about their role in mitigating these environmental issues (DE GROOT; STEG, 2009; DUNLAP et al., 2000; STERN, 2000). In the VBN theory, belief can be divided into the following concepts:
 - a) New Ecological Paradigm: is related to ecological worldviews and environmental concern that an individual might possess, under three main themes: balance of nature, limits of growth, and human domination over nature;

- b) Awareness of Consequence: is the awareness that an individual has about negative consequences that might affect them, other individuals, or other things, if actions are not taken to resolve or mitigate some ongoing event.
 - c) Ascription of Responsibility: is the feeling of responsibility for the negative consequences that might happen if an individual does not act in a determined way. Recent studies have employed the concept of outcome efficiency, i.e., the feeling that an individual can help to mitigate or solve a problem (VAN DER WERFF; STEG, 2015), due to the strong correlation with and difficulty to empirically distinguish between ascription of responsibility and personal norms (STEG & DE GROOT, 2010).
- 3) Norms: the NAM framework asserts that being aware of environmental problems (awareness of consequence) and the perception of the possibility to improve the environmental state (outcome efficacy) activate personal norms which will encourage PEB (Van der Werff & Steg, 2015). Personal norms (or moral norms) are feelings of moral obligation that an individual perceives in terms of a behavior, which in turn can increase or decrease the propensity that the individual will adopt the behavior (SCHWARTZ, 1977). Thus, the stronger the feeling of moral obligation to adopt a behavior, the stronger the probability of engaging in that behavior.

The VBN theory was first proposed by Stern et al. (1999) to explain environmentalism and PEB. VBN posits that pro-environmental action is the result of specific individual values, beliefs and personal norms. The model is based on a causal chain that moves from relatively stable and central elements of personality (individual values) to more focused beliefs about human-environment relationships (beliefs that environmental conditions threaten things valuable to an individual and that an individual can act on to reduce the threat), to personal norms (feelings of a moral obligation to perform a certain behavior) (STERN, 2000). Each variable of the causal chain has a direct impact on the next, but may also have a direct influence on other variables further downstream (STERN, 2000) (Figure 1).

Figure 1 - The Value-Belief-Norm Theory



Source: Adapted from Stern (2000)

There are several PEB determinant categories (e.g., sociodemographic aspects, habits, external elements, social norms, and attitudes), the intrinsic motivation factors covered by the VBN theory being one of these determinants (BLANKENBERG; ALHUSEN, 2019). Thus, by considering other factors, such as external stimulus, theories and concepts, it is possible to increase the explanatory power of VBN and the efficient stimulation of the adoption of further PEB (HAN et al., 2015). Considering the relevance of these aforementioned determinants, the present thesis prioritized an analysis of their interaction with VBN variables and PEB. More especially, the thesis considered the one external factor that has been regarded as a means of stimulating behavioral change, namely persuasive messages, such as green advertisements (BULLOCK et al., 2017; DE GROOT et al., 2013; ELGAAIED-GAMBIER et al., 2018). Green advertisements can be defined as messages that “promote an awareness of environmental issues and/or suggests behaviors useful in minimizing or correcting these environmental issues” (FOWLER III; CLOSE, 2012). Moreover, some researchers have found that social norms (i.e., an individual’s expectation of what the majority of the population does and what other individuals believe should or should not be done) and attitudes (i.e., evaluations that an individual has about something) can increase the explanatory power of moral based models, such as the NAM framework (HAN et al., 2015; KLOCKNER, 2013). Thus, these two variables (social norms and attitudes) were also included in the analysis here presented. Finally, considering that the literature has mainly considered socio demographic aspects as personal capabilities (e.g., BLANKENBERG; ALHUSEN, 2019), which are variables that have been consistently related to different types

of PEB, the present thesis includes the concept of human capabilities, from the capability approach perspective, considering that they might present new insights for this group of determinants. There are two main concepts in the capability approach: functionings and capabilities. Functionings are an individual's being and doing, such as choosing to follow an ecological career or buying a sustainable product. Capabilities, on the other hand, are the opportunities that individuals have to be and have whatever they value (SEN, 2010).

1.1 Research Question and Objectives

The main research question guiding this research is: How can VBN theory affect, fully or partially, directly or indirectly, different types and aspects of pro-environmental behavior? Based on this research question, the main goal of the research is to propose new forms and perspectives by which VBN theory may be used, in association with other theories and concepts (such as persuasive messages, past behaviors, social norms and attitudes, and human capabilities), in order to explain the different types of PEB. To this end, the research:

- 1) Extensively examined the relationship between VBN and green advertising which, despite being an important field of green marketing, has received little attention from the VBN theory;
- 2) Analyzed the relationship of individual values and messages framed within values in order to further the development of more persuasive messages regarding conservation behavior;
- 3) Analyzed the role of an extended version of the NAM framework, considering the relationship between the reported recycling and purchasing behavior of recycled products and the behavioral intention to purchase specific products made of recycled materials; and
- 4) Assessed the direct effect of human capabilities on PEB, and the moderating effect of human capabilities on the relationship between personal norms and PEB.

Thus, the present research sought to investigate those fields that had previously given little attention to the intersection of VBN and PEB, offering new possibilities for their study (i.e., green advertising, conservation ecology, circular economy, and human development). The approach applied in this research is aligned to the necessary multidisciplinary appeal to tackle environmental challenges, as presented by several researchers (CLAYTON et al., 2015; POLYPORTIS; MAGNIER; MUGGE, 2022; SAUVÉ; BERNARD; SLOAN, 2016; VERSCHOOR et al., 2020).

The present thesis has been divided into four articles, each focused on one of the specific objectives of the thesis. While the first article focused on the VBN theory as a whole, the second article focused on the concept of values, the third article on an extended version of the NAM framework (i.e., beliefs and personal norms), and the fourth article focused on personal norms (Table 1).

Table 1 - Specific objectives and corresponding article

Article	VBN variable	PEB type	Objectives
1	Value, Belief, and Personal Norms	Diverse	Review all published research at the intersection of green advertising and pro-environmental motivation (from the VBN theory perspective) and identify the major themes and potential areas of deficit in this work.
2	Values	Conservation PEB	Analyze how values framed in messages interact in the relationship between individual values and attitudes toward such messages and PEB intention related to conservation issues.
3	Awareness of Consequence, Outcome Efficiency, and Personal Norms	Circular PEB	Analyze if reported recycling behaviors and the purchase of recycled products are related to the behavioral intention to buy specific recycled products. Additionally, assess the direct and moderating effect of extended NAM variables on the relationship between reported behavior and behavioral intention.
4	Personal Norms	General, Recycling, and citizenship PEB	Assess the direct relationship of capabilities and their specific dimensions on the adoption of three different kinds of PEB: General PEB, household waste and recycling, and environmental citizenship; and identify the moderating role of these dimensions on the relationship between personal norms and the three types of PEB.

Source: Developed by the author

1.2 Description of the articles and stage of development

A brief description of each article comprising this thesis and their current stage of development (Table 2) is next presented.

1. **Article 1.** Green advertising can be an impactful ally for fostering sustainability, as persuasive messages can positively impact the adoption of PEB (DE GROOT; ABRAHAMSE; JONES, 2013; ELGAAIED-GAMBIER; MONNOT; RENIOU, 2018). However, the adoption of the VBN, which is one of the most used theories from the environmental psychology field to explain PEB (STEG, 2016), have been

sparsely employed. Thus, the present study proposed a holistic mapping of the literature, through the systematic literature review method, of a final sample of 60 articles drawn from the Scopus and Web of Science databases, to gather together the knowledge about VBN applied in green advertising. This article expanded the notion of values to other perspectives rather than only relying on the one proposed by Schwartz (1992), as this increased the number of papers found in the literature search and presented a better picture of what researchers have considered as values in green marketing. Moreover, there has been a lack of systematic investigation of green advertising in general in the literature, the exceptions being a bibliometric study (AGARWAL; KUMAR, 2021) and a recent study about green advertising in social media (KTISTI; HATZITHOMAS; BOUTSOUKI, 2022). Thus, the present study also contributes to the more general perspective of green advertising.

2. **Article 2.** Several studies have already considered the role of VBN variables in conservation behavior (FORNARA et al., 2020; GOLEBIE; VAN RIPER, 2023; VAN RIPER; KYLE, 2014). However, few studies have considered how to translate these ideas into conservation communication (BATAVIA et al., 2018). Therefore, the present article aims to analyze the relationship between individual values, value framed messages, attitudes toward messages and behavioral intention. To achieve this goal, the article collected data from Brazil and Spain in order to carry out two case studies: (1) the interaction between humans and marmosets in Bauru, Brazil and (2) the presence of wild boars in the metropolitan region of Barcelona, Spain. The findings presented are not only important for the conservation ecology field, but also for the sustainability literature in general, as the relationships between values held by individuals and values in messages have not been studied extensively.
3. **Article 3.** Consumers play a vital role in the circular economy, as their waste management practices - such as recycling and buying behavior - are necessary if organizations closing material and energy loops are to be supported (KIRCHHERR; REIKE; HEKKERT, 2017). Although there are studies analyzing circular economy related behavior (GOMES et al., 2022a), there are claims that consumer behavior is less studied than other aspects of the circular economy (ARIAS et al., 2022). Moreover, there is a lack of understanding regarding the relationship between recycling behavior and buying behavior. Therefore, this research aims to analyze if reported recycling behaviors and the purchase of recycled products are related to the behavioral intention to buy specific recycled products over a traditional option. To

achieve this goal, the research collected data from Brazilian and Spanish undergraduate students and employed structural equation modeling to assess the direct effect of reported recycling and purchasing behavior on the intention to purchase recycled products. The research also assessed the direct and moderating effect of an extended NAM framework (i.e., awareness of consequence, outcome efficiency, personal norms, social norms, and attitudes) in the relationship between reported behavior and behavioral intention. The study included an extended version of the NAM framework in order to increase the explanatory power of the model, thereby including social norms and attitudinal elements that have already been regarded as useful for achieving this goal (HAN et al., 2015; KLOCKNER, 2013).

4. **Article 4.** Human development is closely related to sustainability issues, with several studies analyzing their relationship from a macro perspective (LIMA et al., 2022). The capability approach assumes that the development of a region should be seen according to the expansion of individuals' freedoms to be and have wherever they value (SEN, 2010). Recently, empirical investigations have been conducted in order to assess human capabilities at an individual level (LUIZ, 2022). However, little is known about the role of human capabilities from the point of view of PEB (LEßMANN; MASSON, 2015). Therefore, the present study analyzed the direct relationships between human capabilities and three of its dimensions (i.e., Capabilities related to biological and physical human needs; Capabilities related to the fundamental interests of a human agent; and Capabilities related to the fundamental interests of a social being) and PEB. The study also analyzed the moderating effect of human capabilities and these three dimensions on the relationship between personal norms and PEB.

Table 2 - The current stage of development of each article

Article	Title	Stage	Journal	Impact Factor
1	From green advertising to sustainable behavior: a systematic literature review through the lens of the value-belief-norm framework	Published (2023)	<i>International Journal of Advertising</i>	6.7 (2022)
2	Matching conservation messages with individual values: Promoting social conservation behavior through value-framed messages	To be submitted	-	-
3	Like the windmills of your mind: The role of psychological variables on the spillover effect in circular behavior	To be submitted	-	-
4	More than moral motivations: The moderating role of human capabilities on the relationship between personal norms and pro-environmental behavior	Published (2023)	<i>Journal of Cleaner Production</i>	11.1 (2022)

Source: Developed by the author

“Here, there, and everywhere”
John Lennon and Paul McCartney

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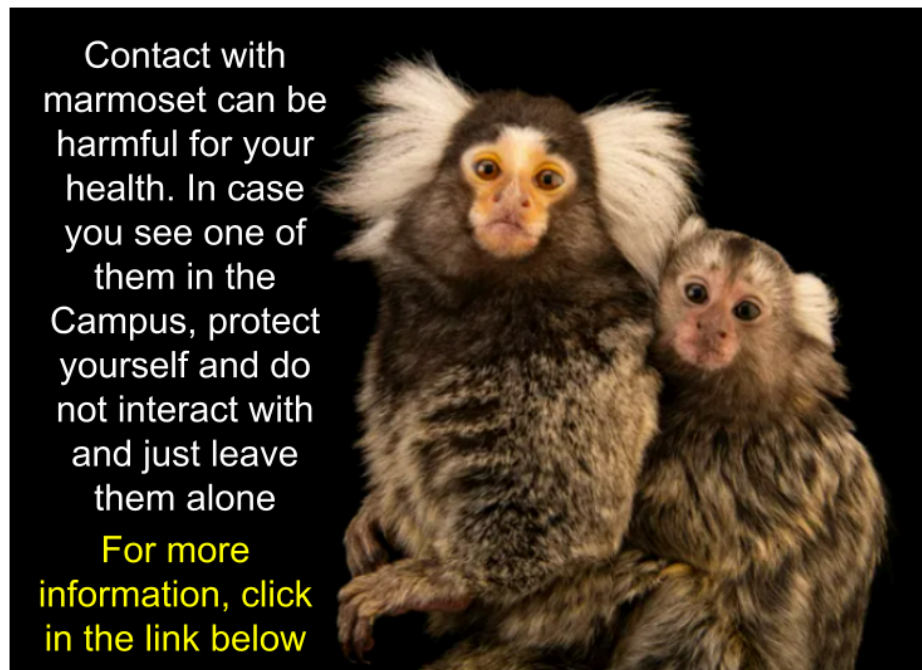
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APPENDICES

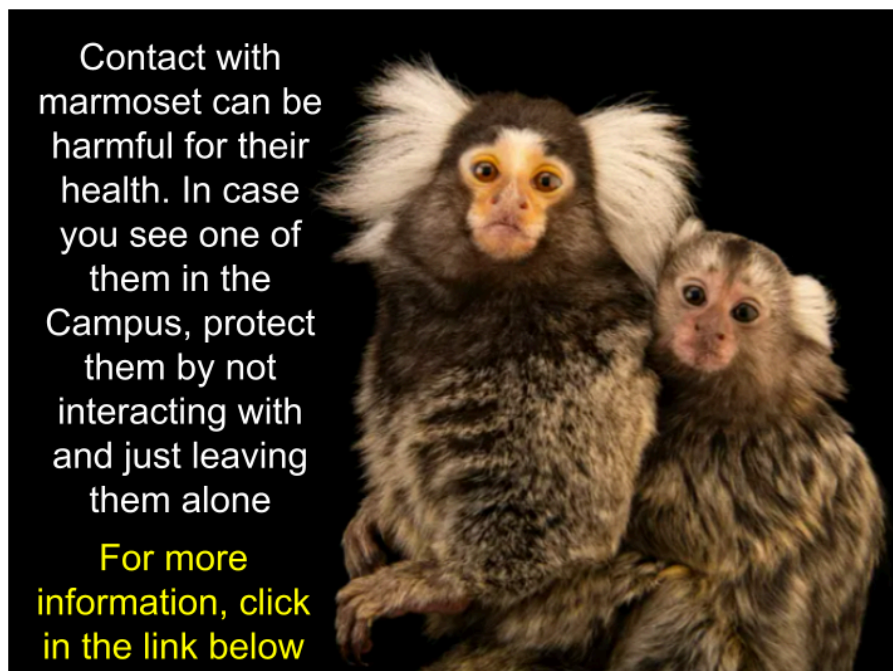
APPENDIX 1 - Appendix from Article 2

Figure A1 - Marmoset conservation advertisement with the egoistic appeal



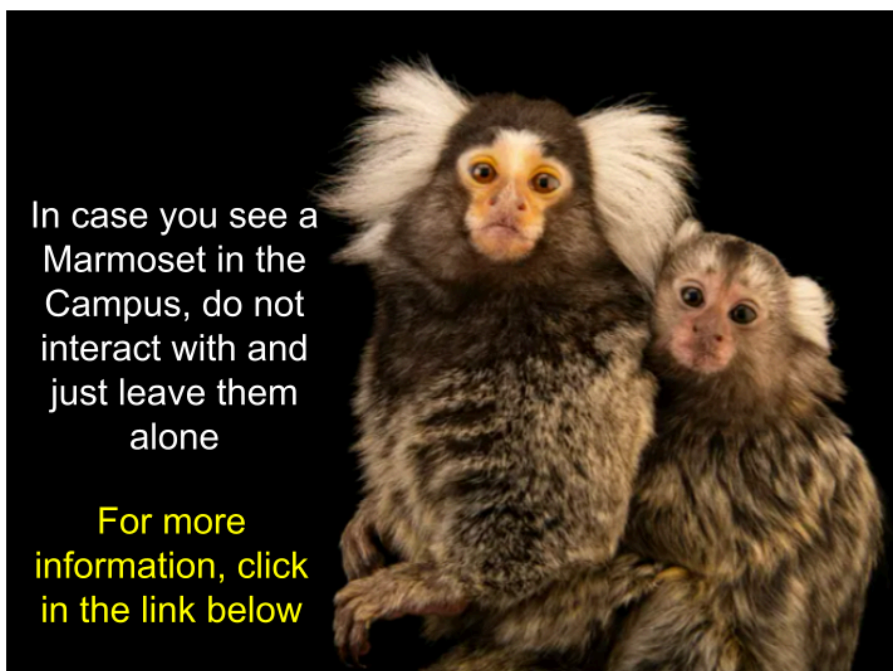
Source: Developed by the authors

Figure A2 - Marmoset conservation advertisement with the biospheric appeal



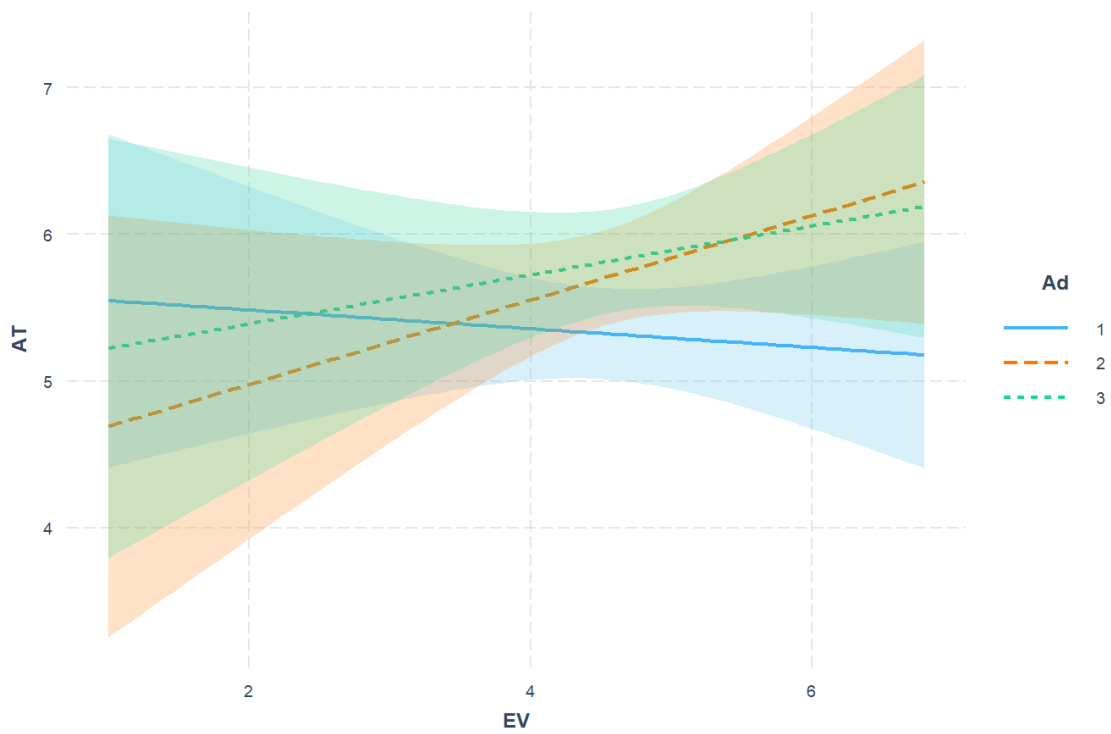
Source: Developed by the authors

Figure A3 - Marmoset conservation advertisement with the control appeal



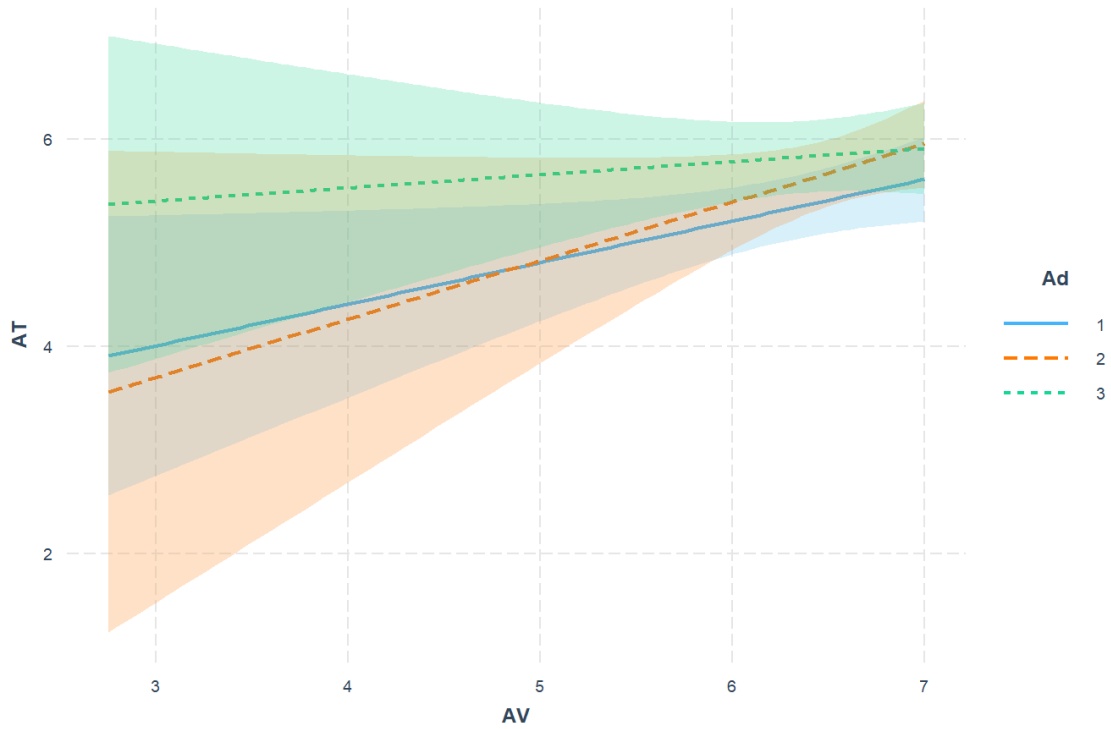
Source: Developed by the authors

Figure A4 - Slope analysis of the interaction of the message version (Ad1 = biospheric version, Ad2 = egoistic version, Ad3 = control version) in the relationship between egoistic values (EV) and attitude towards the message (AT) for the marmoset case in Brazil.



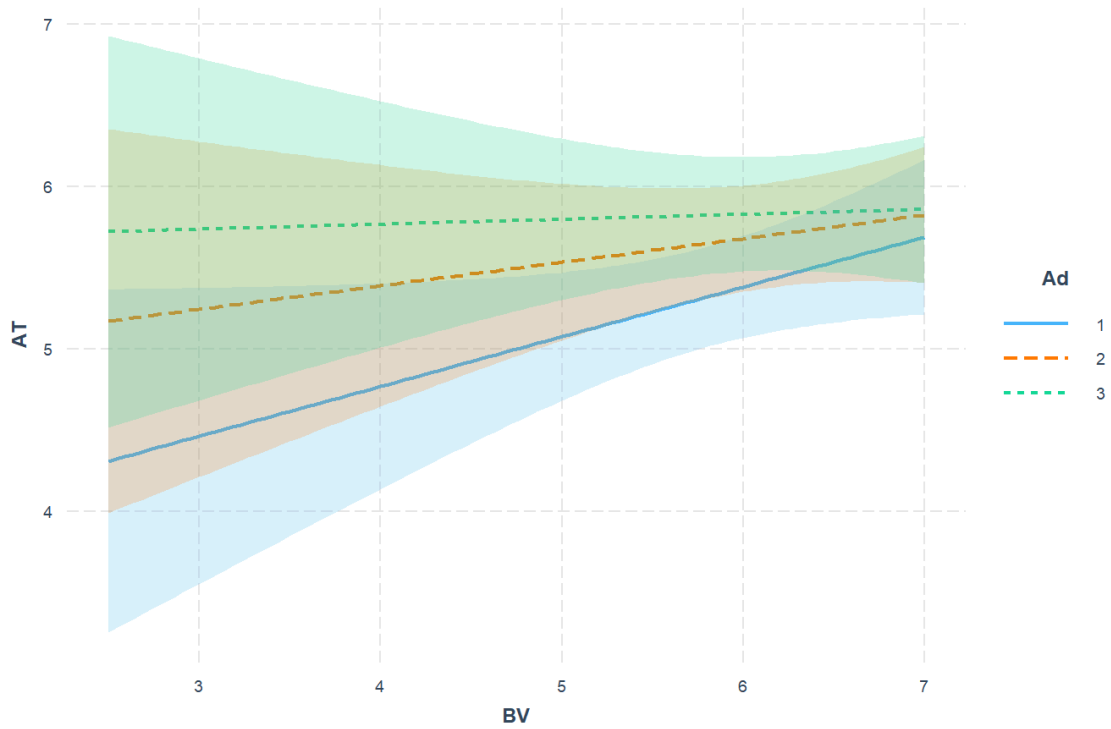
Source: Developed by the authors

Figure A5 - Slope analysis of the interaction of the message version (Ad1 = biospheric version, Ad2 = egoistic version, Ad3 = control version) in the relationship between altruistic values (AV) and attitude towards the message (AT) for the marmoset case in Brazil.



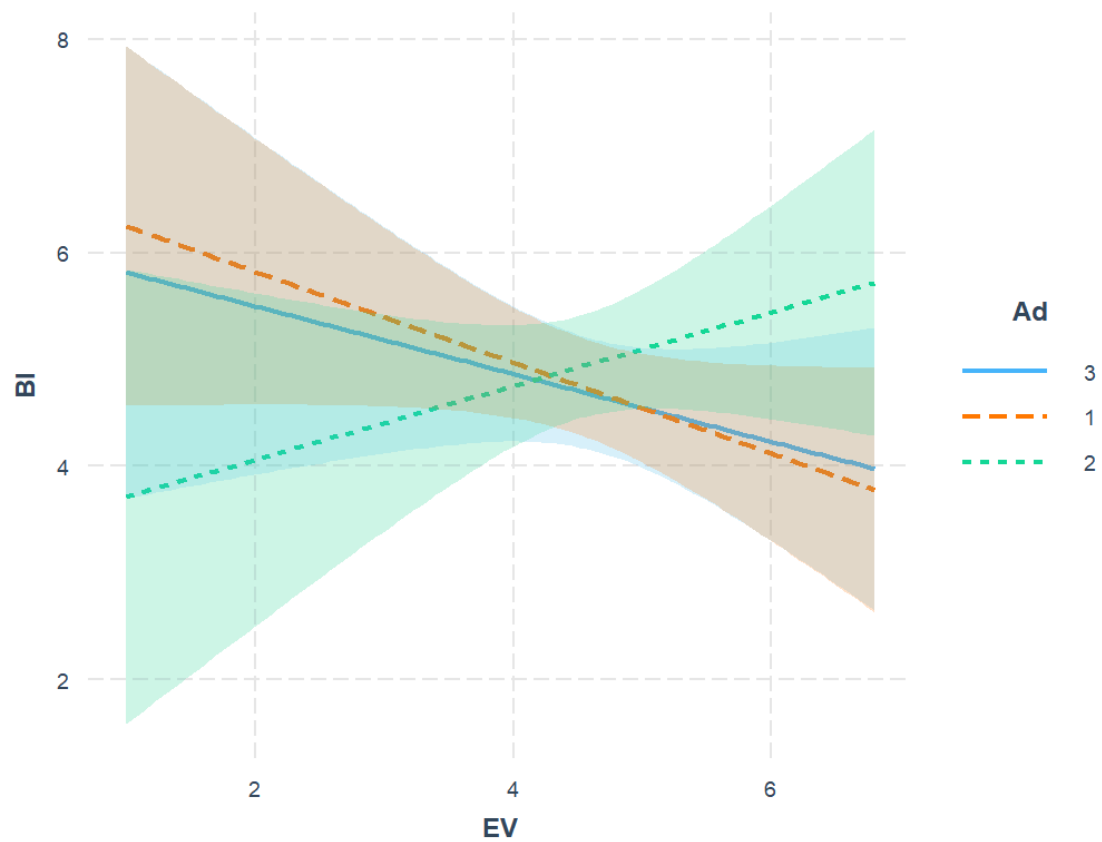
Source: Developed by the authors

Figure A6 - Slope analysis of the interaction of the message version (Ad1 = biospheric version, Ad2 = egoistic version, Ad3 = control version) in the relationship between biospheric values (BV) and attitude towards the message (AT) for the marmoset case in Brazil.



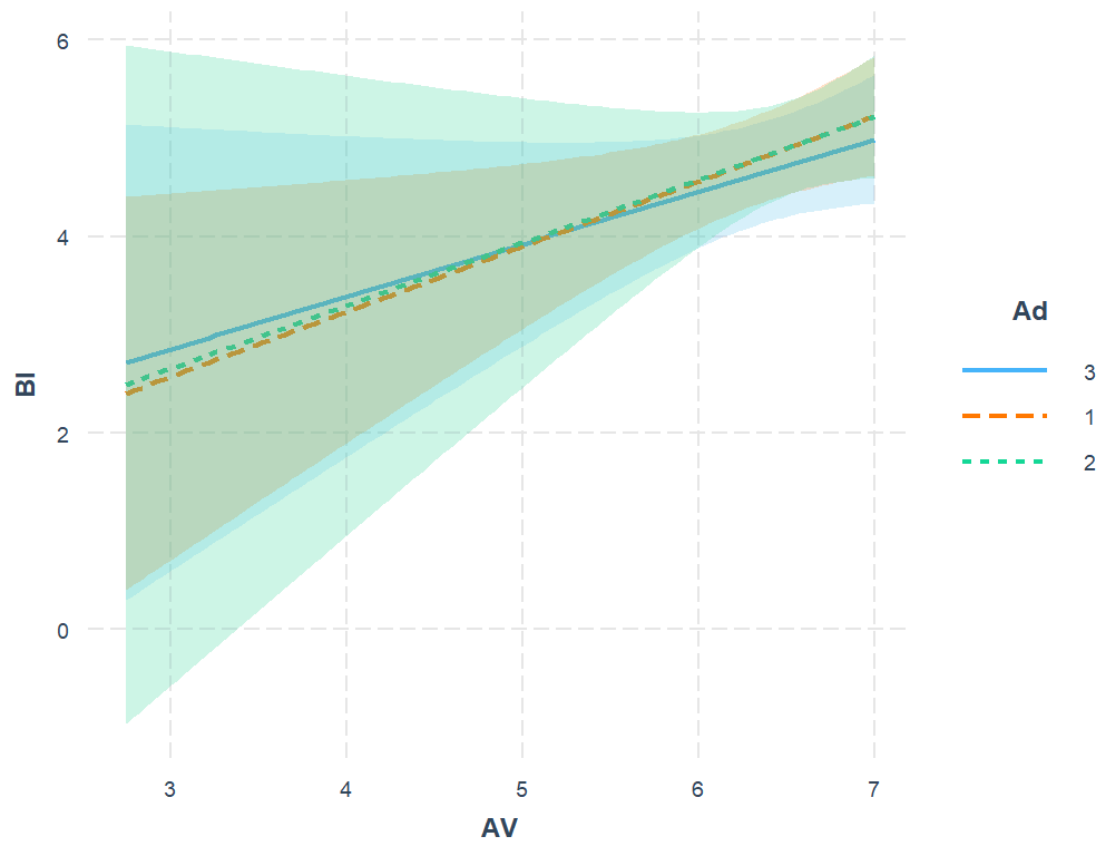
Source: Developed by the authors

Figure A7 - Slope analysis of the interaction of the message version (Ad1 = biospheric version, Ad2 = egoistic version, Ad3 = control version) in the relationship between egoistic values (EV) and behavior intention (BI) for the marmoset case in Brazil.



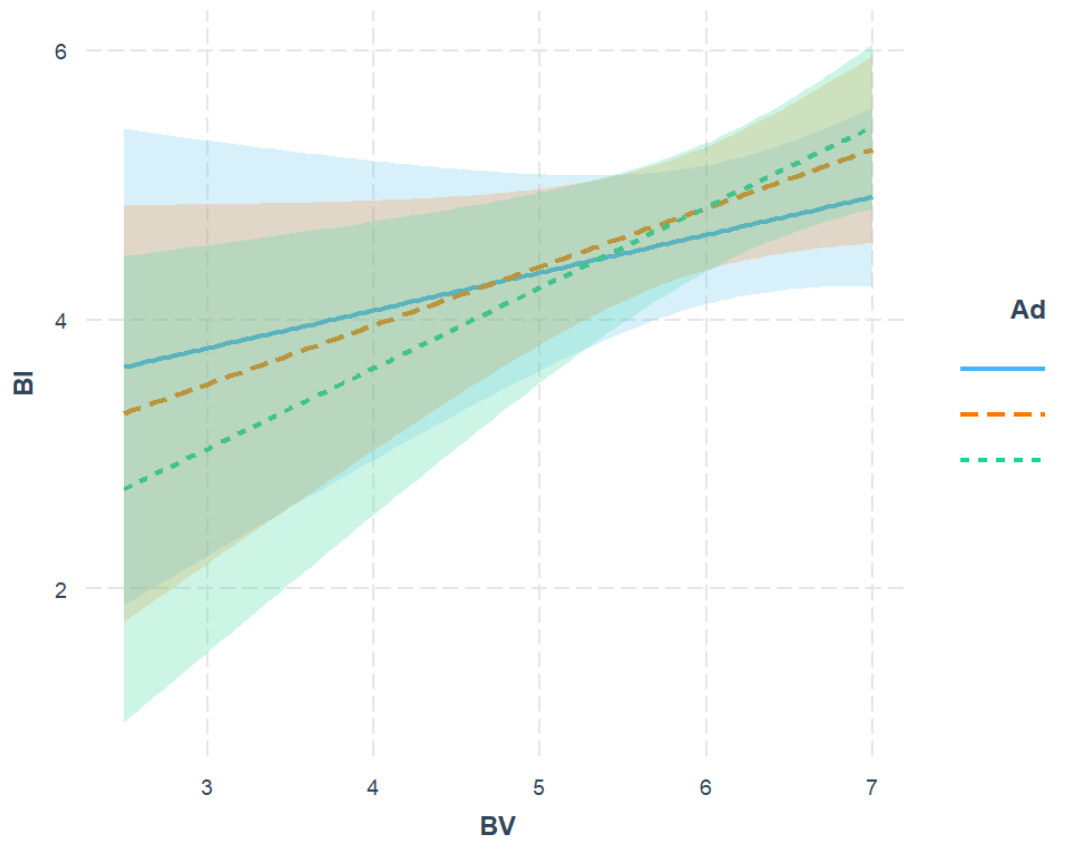
Source: Developed by the authors

Figure A8 - Slope analysis of the interaction of the message version (Ad1 = biospheric version, Ad2 = egoistic version, Ad3 = control version) in the relationship between altruistic values (AV) and behavior intention (BI) for the marmoset case in Brazil.



Source: Developed by the authors

Figure A9 - Slope analysis of the interaction of the message version (Ad1 = biospheric version, Ad2 = egoistic version, Ad3 = control version) in the relationship between biospheric values (BV) and behavior intention (BI) for the marmoset case in Brazil.



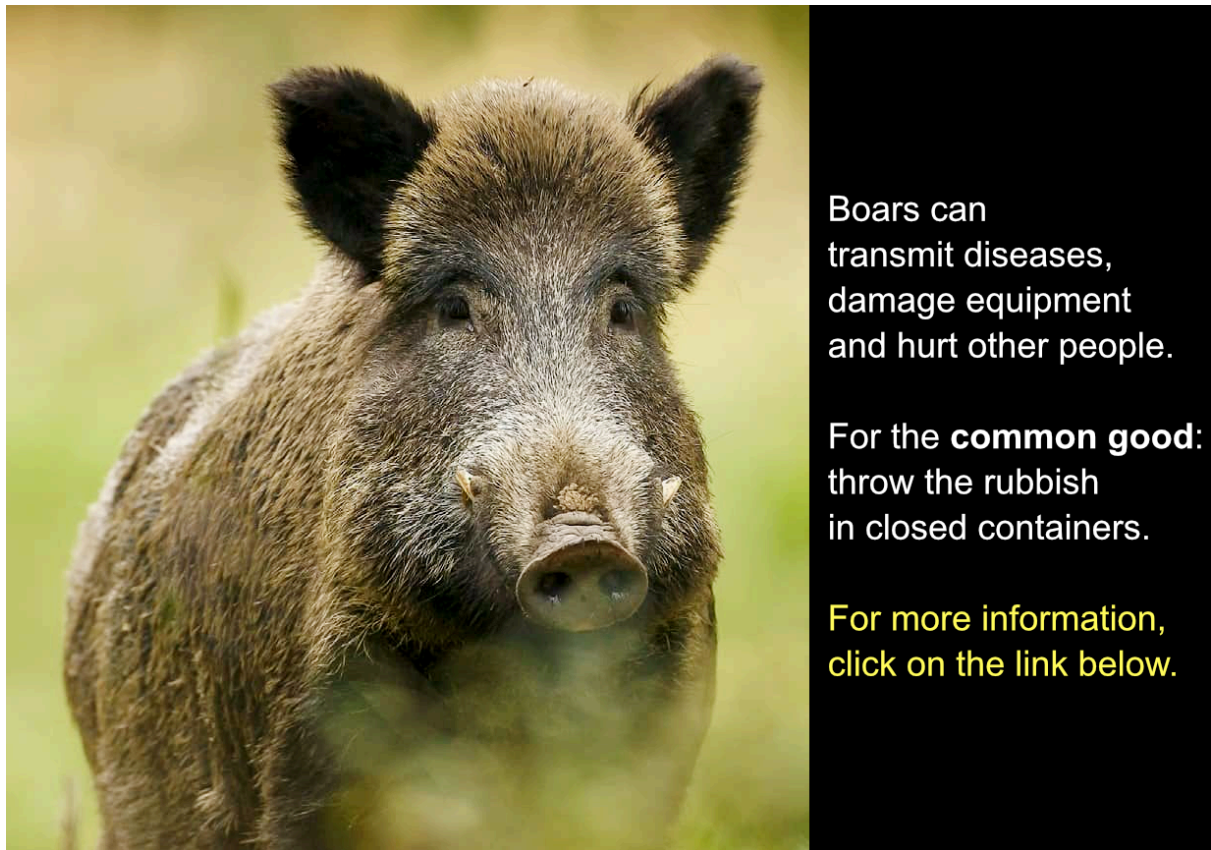
Source: Developed by the authors

Figure A10 - Wild boar conservation advertisement with an egoistic appeal



Source: Developed by the authors

Figure A11 - Wild boar conservation advertisement with an altruistic appeal



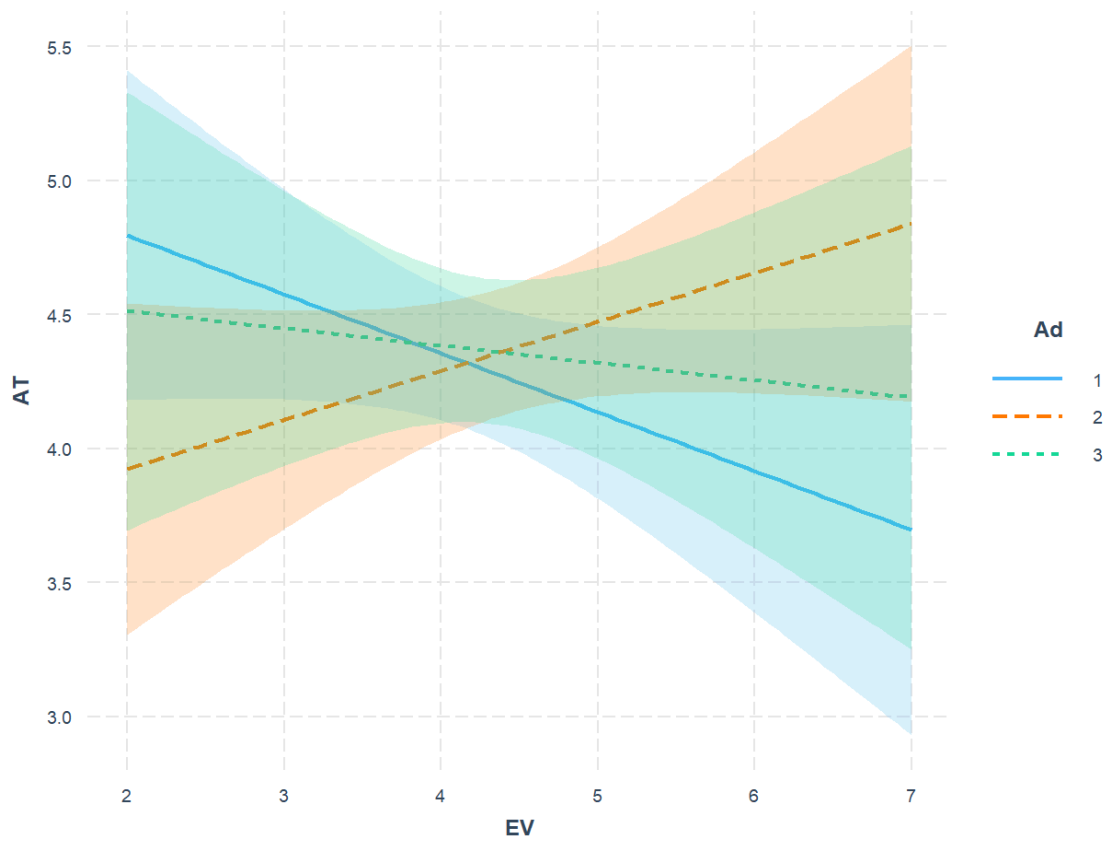
Source: Developed by the authors

Figure A12 - Wild boar conservation advertisement with a control appeal



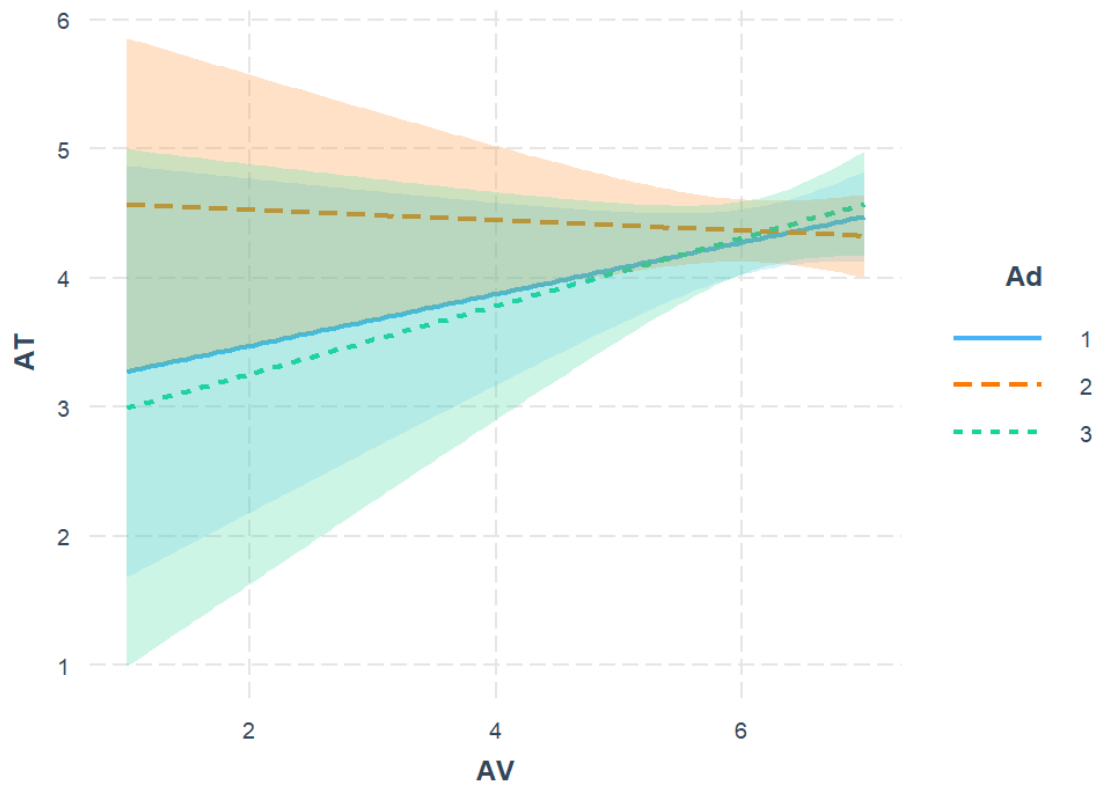
Source: Developed by the authors

Figure A13 - Slope analysis of the interaction of the message version (Ad1 = altruistic version, Ad2 = egoistic version, Ad3 = control version) in the relationship between egoistic values (EV) and attitude towards the message (AT) for the wild boar case in Spain.



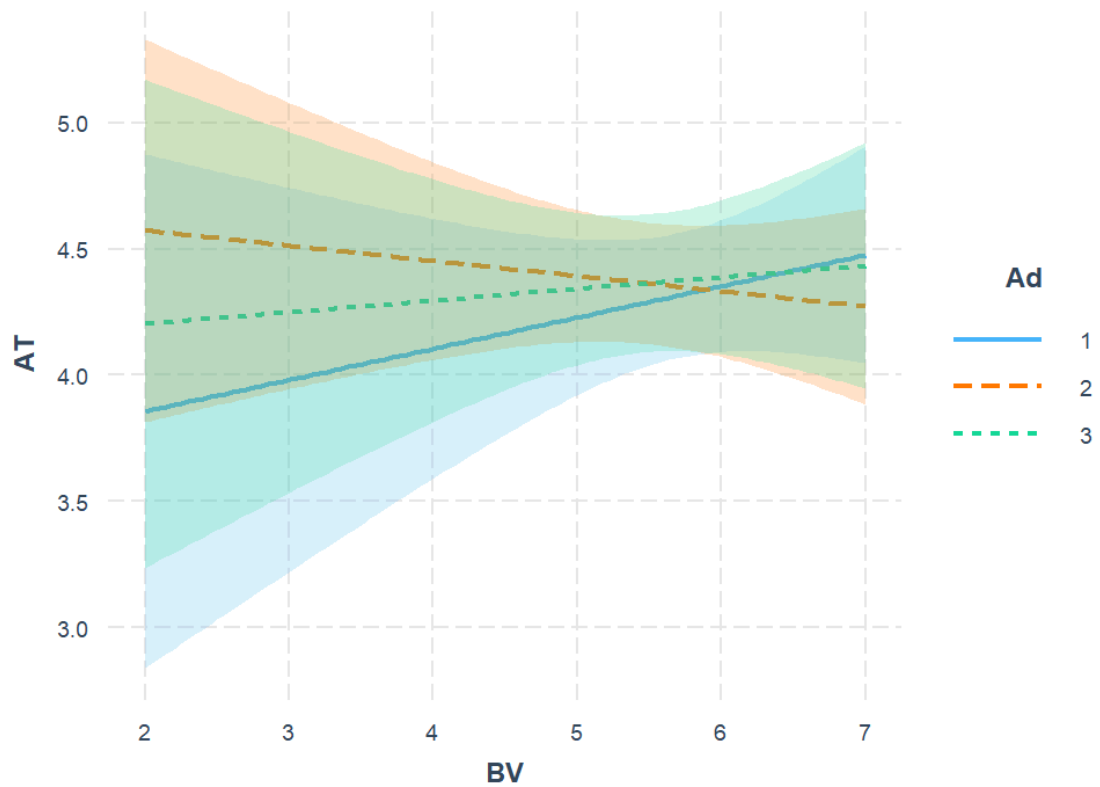
Source: Developed by the authors

Figure A14 - Slope analysis of the interaction of the message version (Ad1 = altruistic version, Ad2 = egoistic version, Ad3 = control version) in the relationship between altruistic values (AV) and attitude towards the message (AT) for the wild boar case in Spain.



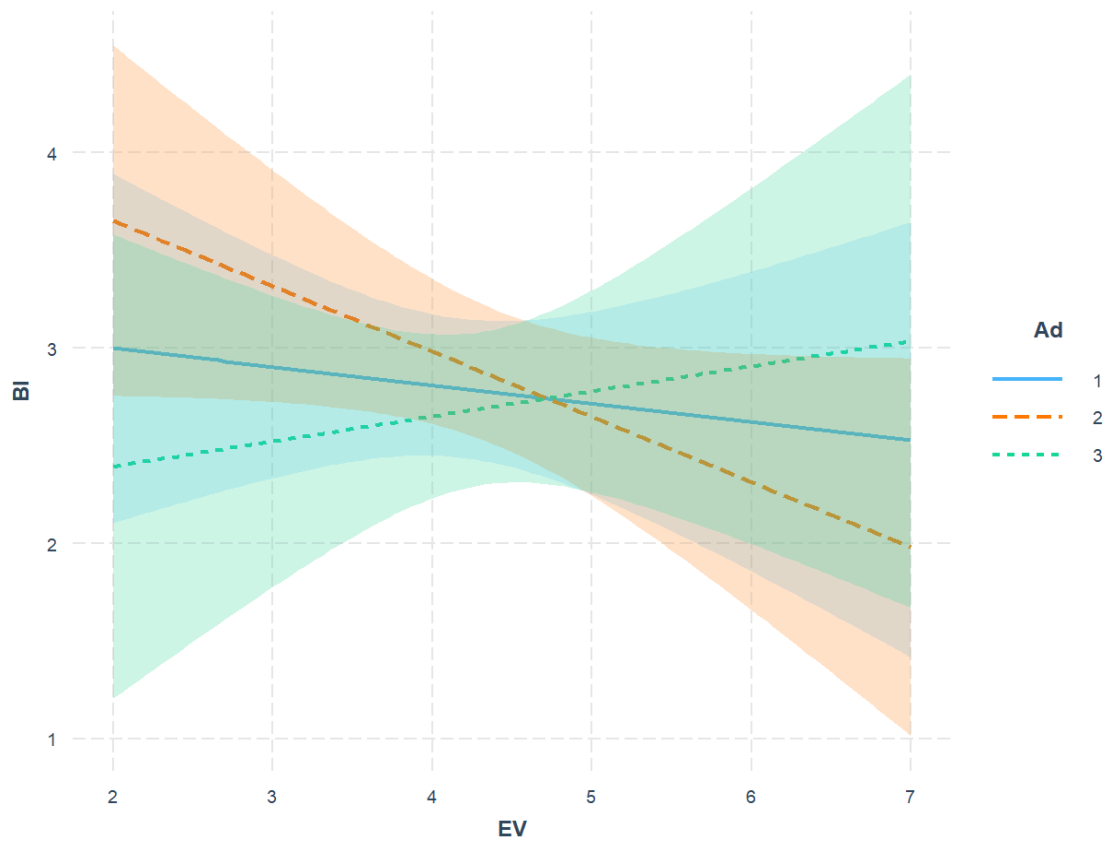
Source: Developed by the authors

Figure A15 - Slope analysis of the interaction of the message version (Ad1 = altruistic version, Ad2 = egoistic version, Ad3 = control version) in the relationship between biospheric values (BV) and attitude towards the message (AT) for the wild boar case in Spain.



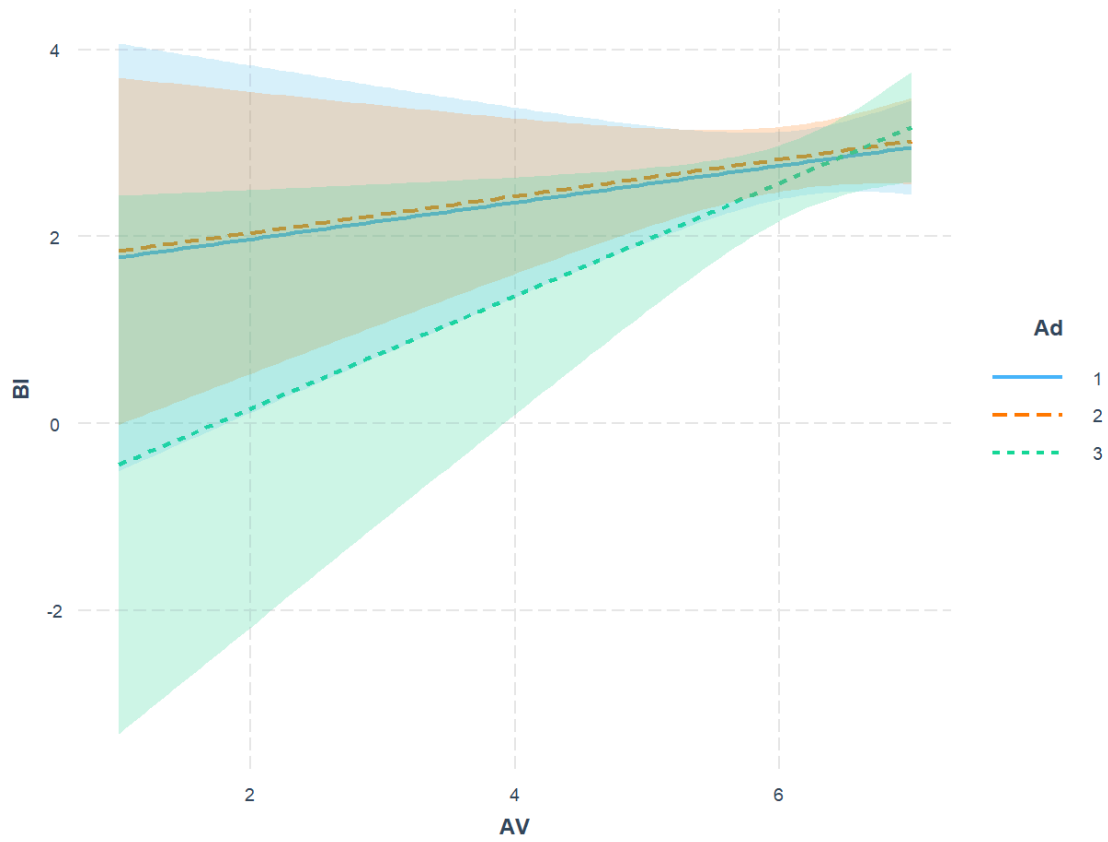
Source: Developed by the authors

Figure A16 - Slope analysis of the interaction of the message version (Ad1 = altruistic version, Ad2 = egoistic version, Ad3 = control version) in the relationship between egoistic values (EV) and behavior intention (BI) for the wild boar case in Spain.



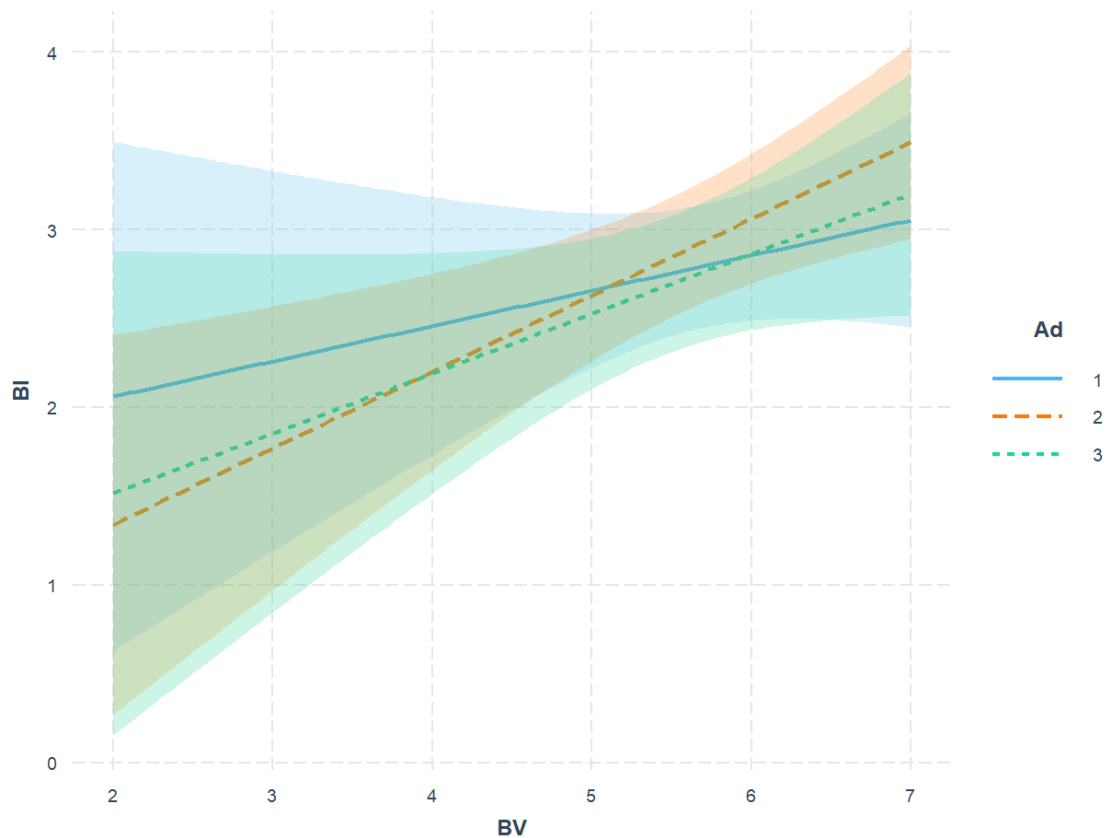
Source: Developed by the authors

Figure A17 - Slope analysis of the interaction of the message version (Ad1 = altruistic version, Ad2 = egoistic version, Ad3 = control version) in the relationship between altruistic values (AV) and behavior intention (BI) for the wild boar case in Spain.



Source: Developed by the authors

Figure 18 - Slope analysis of the interaction of the message version (Ad1 = altruistic version, Ad2 = egoistic version, Ad3 = control version) in the relationship between biospheric values (BV) and behavior intention (BI) for the wild boar case in Spain.



Source: Developed by the authors

Table A1 - Full questionnaire

Variable	Question	Reference
Individual Values	Please rate the importance of the following values as a guiding principle in your life. Answer each question according to a scale from 1 (Not importante for my values) to 7 (Extremely important for my values). Please, avoid considering more than two values as being extremely important.	De Groot and Steg (2008)
	Social power: control over others, dominance 1 = Not important to my values	De Groot and Steg (2008)

2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

Wealth: material possessions, money

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

De Groot and Steg (2008)

Authority: the right to lead or command

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

De Groot and Steg (2008)

Influential: having an impact on people and events

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values

De Groot and Steg (2008)

6 = Very important to my values
7 = Extremely important to my values

Ambitious: hard-working, aspiring

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

De Groot and Steg (2008)

Equality: equal opportunity for all

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

De Groot and Steg (2008)

A world at peace: free of war and conflict

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

De Groot and Steg (2008)

Social justice: correcting injustice, care for the weak

De Groot and Steg (2008)

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

Helpful: working for the welfare of others

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

De Groot and Steg (2008)

Preventing pollution:
protecting natural resources

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values
5 = Important to my values
6 = Very important to my values
7 = Extremely important to my values

De Groot and Steg (2008)

Respecting the Earth:
Harmony with other species

1 = Not important to my values
2 = Hardly important to my values
3 = Little important to my values
4 = Somehow important to my values

De Groot and Steg (2008)

	5 = Important to my values 6 = Very important to my values 7 = Extremely important to my values
	Unity with nature: fitting into nature 1 = Not important to my values 2 = Hardly important to my values 3 = Little important to my values 4 = Somehow important to my values 5 = Important to my values 6 = Very important to my values 7 = Extremely important to my values
	Protecting the environment: preserving nature 1 = Not important to my values 2 = Hardly important to my values 3 = Little important to my values 4 = Somehow important to my values 5 = Important to my values 6 = Very important to my values 7 = Extremely important to my values
Advertisement	Next you are going to see one piece of communication, followed by a link that you can check if you want (not mandatory to conclude your answer) and a few questions about the advertisement. [advertisement image] <i>Link to the website</i>
Questions about the marmoset/wild boar	Have you ever fed a marmoset/wild boar? 1 = Yes

	2 = No	
	Have you ever had any problem with marmosets/wild boars?	
	1 = Yes	
	2 = No	
	Have you ever heard of any negative issue related to the marmoset/wild boar?	
	1 = Yes	
	2 = No	
	Please, rate the credibility in the advertisement that you have just seen based on a scale from 1 (Completely disagree) to 7 (Completely agree)	MacKenzie and Lutz (1989)
	The allegations presented in this ad are true	
	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	MacKenzie and Lutz (1989)
Advertisement Credibility	This ad is unbiased	
	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	MacKenzie and Lutz (1989)
	I believe the claims presented in this ad	
	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	MacKenzie and Lutz (1989)
Attitude toward the ad	Please, rate it aspect of the advertisement that you have	MacKenzie and Lutz (1989)

	just seen based on the presented the scale In a scale from 1 (bad) to 7 (good) what do you think of the advertising 1 = bad 2 = 3 = 4 = 5 = 6 = 7 = good In a scale from 1 (unpleasant) to 7 (pleasant) what do you think of the advertising 1 = unpleasant 2 = 3 = 4 = 5 = 6 = 7 = pleasant In a scale from 1 (unfavorable) to 7 (favorable) what do you think of the advertising 1 = unfavorable 2 = 3 = 4 = 5 = 6 = 7 = favorable	MacKenzie and Lutz (1989) MacKenzie and Lutz (1989) MacKenzie and Lutz (1989)
Behavior intention	Please, rate the probability that you would engage in one of the following behaviors in the future using a scale from 1 (Totally unlikely) to 7 (Totally unlikely) In the future, how likely are you to talk to your college friends about how to properly interact with marmosets? / In the future, how likely are you to talk to your college friends about not feeding wild boars or to properly manage food waste? 1 = Totally unlikely 2 = Partially unlikely 3 = Somewhat unlikely	Markle (2013) and Kaiser and Wilson (2004) Markle (2013) and Kaiser and Wilson (2004)

Socio demographic questionnaire		4 = Neither unlikely, nor likely 5 = Somewhat likely 6 = Partially likely 7 = Totally likely In the future, how likely are you to talk to your friends outside university about how to properly interact with marmosets? / In the future, how likely are you to talk to your friends outside university about not feeding wild boars or to properly manage food waste? Markle (2013) and Kaiser and Wilson (2004) 1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree In the future, how likely are you to talk to your family about how to properly interact with marmosets? / In the future, how likely are you to talk to your family about not feeding wild boars or to properly manage food waste? Markle (2013) and Kaiser and Wilson (2004) 1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	
		How old are you?	
		What is your gender?	
		1 = Female 2 = Male 3 = I do not identify as female nor male 4 = I prefer not to answer	
		How would you describe yourself? 1 = White 2 = Black 3 = Pardo (Brazilian connotation for multiracial individuals)	

4 = Indigene (Indigenous person) 5 = Yellow (East asians) 6 = I prefer not to answer
What is the amount of money you can spend each month (shopping, food, housing, etc)
Do you currently live with your parents?
1 = Yes 2 = No
What course are you currently enrolled in?
Which semester are you currently enrolled in? (in case you are not in an specific semester, try to inform to most close to it)
Have you done or begun another undergraduate course before the current one? 1 = Yes 2 = No
In case yes, which one?

APPENDIX 2 - Questionnaire from Article 3

Table A2 - Full questionnaire

APPENDIX 3 - Questionnaire from Article 4

Table A4 - Questions from the article's 4 questionnaire

Construct	Items	Adapted from
General capabilities	How often does your health in any way limit your daily activities, compared to most people of your age?	
	1 = Never	
	2 = Rarely, in less than 10% of the time	Luiz (2022); Simon et al. (2013)
	3 = Occasionally, in about 30% of the time	
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
	How often are you able to meet socially with friends or relatives?	
	1 = Never	
General capabilities	2 = Rarely, in less than 10% of the time	Luiz (2022); Simon et al. (2013)
	3 = Occasionally, in about 30% of the time	
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
	In the past 4 weeks, how often have you lost sleep over worry?	
	1 = Never	
	2 = Rarely, in less than 10% of the time	Luiz (2022); Simon et al. (2013)
	3 = Occasionally, in about 30% of the time	
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
General capabilities	In the past 4 weeks, how often have you been able to enjoy your recreational activities?	
	1 = Never	
	2 = Rarely, in less than 10% of the time	Luiz (2022); Simon et al. (2013)
	3 = Occasionally, in about 30% of the time	
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
	How suitable is your accommodation for your current needs?	
	1 = Totally unsuitable	
General capabilities	2 = Partially unsuitable	Luiz (2022); Simon et al. (2013)
	3 = Somewhat unsuitable	
	4 = Neither unsuitable nor suitable	
	5 = Somewhat suitable	
	6 = Partially suitable	
	7 = Totally suitable	
	Please indicate how safe you feel walking alone in the area near your home:	Luiz (2022); Simon et al. (2013)

1 = Totally unsafe 2 = Partially unsafe 3 = Somewhat unsafe 4 = Neither unsafe nor safe 5 = Somewhat safe 6 = Partially safe 7 = Totally safe	
Please indicate how likely you believe it to be that you will be assaulted in the future (including sexual and domestic assault):	
1 = Totally unlikely 2 = Partially unlikely 3 = Somewhat unlikely 4 = Neither unlikely, nor likely 5 = Somewhat likely 6 = Partially likely 7 = Totally likely	Luiz (2022); Simon et al. (2013)
How likely do you think it is that you will experience discrimination (including discrimination for your race, religion, gender, sexual orientation, age, or health/disability)?	
1 = Totally unlikely 2 = Partially unlikely 3 = Somewhat unlikely 4 = Neither unlikely, nor likely 5 = Somewhat likely 6 = Partially likely 7 = Totally likely	Luiz (2022); Simon et al. (2013)
I am able to influence decisions affecting my local area.	
1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Luiz (2022); Simon et al. (2013)
If I want, I can express my opinions without constraints, such as my political and religious opinions	
1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Luiz (2022); Simon et al. (2013)
In my life, I have many opportunities to be in contact with nature.	
1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Luiz (2022); Simon et al. (2013)
I respect, value and appreciate people around me.	Luiz (2022); Simon et

		al. (2013)
	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	
	I find it easy to enjoy the love, care and support of my family and friends.	
	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Luiz (2022); Simon et al. (2013)
	I am free to decide for myself how to live my life.	
	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Luiz (2022); Simon et al. (2013)
	I have opportunities to use my imagination and to express myself creatively (e.g., through art, literature, music, etc.).	
	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Luiz (2022); Simon et al. (2013)
	I have access to interesting forms of activity (or employment).	
	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Luiz (2022); Simon et al. (2013)
	My biological and physical needs are fulfilled (Human needs CAP)	
Capabilities related to biological and physical human needs	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Self-developed
Capabilities	I have autonomy to develop myself in the areas that I desire (Human agency CAP)	Self-developed

related to fundamental interests of a human agent	1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	
Capabilities related to fundamental interests of a social being	I am integrated into society as much as I would like (Social being CAP) 1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Self-developed
	I try to act in a pro-environmental way as much as I can (General PEB1) 1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Obery and Bangert (2017)
General PEB	When I have the chance to make a more environmentally-friendly choice, I tend to do so (General PEB2) 1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Self-developed
	I do things to help conserve the environment (General PEB3) 1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Obery and Bangert (2017)
	I always think about how my actions affect the environment before doing them (General PEB4) 1 = Totally disagree 2 = Partially disagree 3 = Somewhat disagree 4 = Neither disagree, nor agree 5 = Somewhat agree 6 = Partially agree 7 = Totally agree	Obery and Bangert (2017)

Household Waste and recycling	How often do you use returnable shopping bags? (Household waste PEB1)	
	1 = Never	
	2 = Rarely, in less than 10% of the time	Kaiser and Wilson
	3 = Occasionally, in about 30% of the time	(2004)
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
	How often do you separate used paper for recycling? (Household waste PEB2)	
	1 = Never	
	2 = Rarely, in less than 10% of the time	Kaiser and Wilson
	3 = Occasionally, in about 30% of the time	(2004)
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
	How often do you bring empty bottles to a recycling bin? (Household waste PEB3)	
	1 = Never	
	2 = Rarely, in less than 10% of the time	Kaiser and Wilson
	3 = Occasionally, in about 30% of the time	(2004)
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
	How often do you avoid buying single-use items? (Household waste PEB4)	
	1 = Never	
	2 = Rarely, in less than 10% of the time	Ribeiro-Rodrigues et
	3 = Occasionally, in about 30% of the time	al. (2021)
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
	How often do you buy products in bulk or with minimal packaging? (Household waste PEB5)	
	1 = Never	
	2 = Rarely, in less than 10% of the time	Ribeiro-Rodrigues et
	3 = Occasionally, in about 30% of the time	al. (2021)
	4 = Sometimes, in about 50% of the time	
	5 = Frequently, in about 70% of the time	
	6 = Almost always, in about 90% of the time	
	7 = Always	
	How often do you put dead batteries in the garbage? (Household waste PEB6)	
	1 = Never	Kaiser and Wilson
	2 = Rarely, in less than 10% of the time	(2004)
	3 = Occasionally, in about 30% of the time	
	4 = Sometimes, in about 50% of the time	

Environmental citizenship	5 = Frequently, in about 70% of the time 6 = Almost always, in about 90% of the time 7 = Always	
	How often do you reuse plastic or glass packaging, such as jelly jars? (Household waste PEB7)	
	1 = Never 2 = Rarely, in less than 10% of the time 3 = Occasionally, in about 30% of the time 4 = Sometimes, in about 50% of the time 5 = Frequently, in about 70% of the time 6 = Almost always, in about 90% of the time 7 = Always	Ribeiro-Rodrigues et al. (2021)
	How often do you buy products that have reusable packaging? (Household waste PEB8)	
	1 = Never 2 = Rarely, in less than 10% of the time 3 = Occasionally, in about 30% of the time 4 = Sometimes, in about 50% of the time 5 = Frequently, in about 70% of the time 6 = Almost always, in about 90% of the time 7 = Always	Ribeiro-Rodrigues et al. (2021)
	How often do you boycott companies with an unecological background? (Citizenship PEB1)	
	1 = Never 2 = Rarely, in less than 10% of the time 3 = Occasionally, in about 30% of the time 4 = Sometimes, in about 50% of the time 5 = Frequently, in about 70% of the time 6 = Almost always, in about 90% of the time 7 = Always	Kaiser and Wilson (2004), and Markle (2013)
	How often do you talk to others about their environmental behavior? (Citizenship PEB2)	
	1 = Never 2 = Rarely, in less than 10% of the time 3 = Occasionally, in about 30% of the time 4 = Sometimes, in about 50% of the time 5 = Frequently, in about 70% of the time 6 = Almost always, in about 90% of the time 7 = Always	Kaiser and Wilson (2004), and Markle (2013)
	How frequently do you read or watch television programs, movies, or internet videos about environmental issues? (Citizenship PEB3)	
	1 = Never 2 = Rarely, in less than 10% of the time 3 = Occasionally, in about 30% of the time 4 = Sometimes, in about 50% of the time 5 = Frequently, in about 70% of the time 6 = Almost always, in about 90% of the time 7 = Always	Kaiser and Wilson (2004), and Markle (2013)
	How often do you contribute money to an environmental, conservation, or wildlife protection group? (Citizenship PEB4)	
	1 = Never	Kaiser and Wilson (2004), and Markle (2013)

-
- 2 = Rarely, in less than 10% of the time
 - 3 = Occasionally, in about 30% of the time
 - 4 = Sometimes, in about 50% of the time
 - 5 = Frequently, in about 70% of the time
 - 6 = Almost always, in about 90% of the time
 - 7 = Always
-

How often do you buy organically grown fruits and vegetables?
(Citizenship PEB5)

- 1 = Never
 - 2 = Rarely, in less than 10% of the time
 - 3 = Occasionally, in about 30% of the time
 - 4 = Sometimes, in about 50% of the time
 - 5 = Frequently, in about 70% of the time
 - 6 = Almost always, in about 90% of the time
 - 7 = Always
-

Kaiser and Wilson
(2004),
and Markle (2013)

How often do you buy food or products with eco-labels?
(Citizenship PEB6)

- 1 = Never
 - 2 = Rarely, in less than 10% of the time
 - 3 = Occasionally, in about 30% of the time
 - 4 = Sometimes, in about 50% of the time
 - 5 = Frequently, in about 70% of the time
 - 6 = Almost always, in about 90% of the time
 - 7 = Always
-

Ribeiro-Rodrigues et
al. (2021)

Figure A13 - Scatterplot of the relationship between the composite index created with the capabilities dimensions questionnaire and the Oxford capabilities questionnaire-Mental Health (OxCAP-MH)

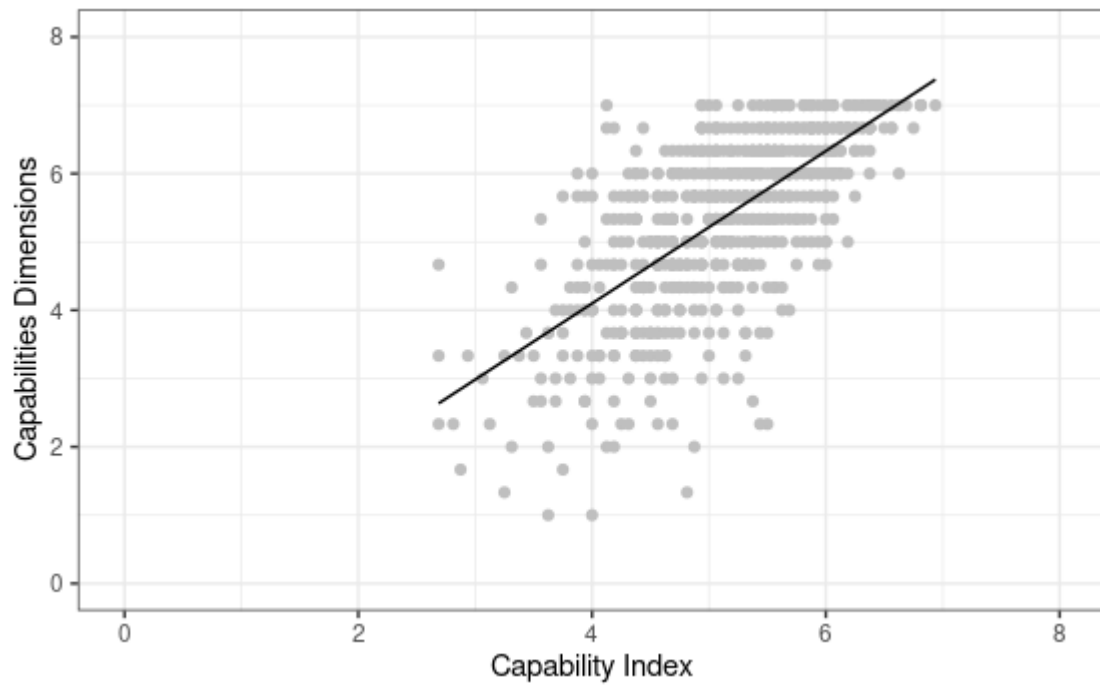


Figure A14 - Scatterplot of the relationship between the composite index created with the capabilities dimensions questionnaire and the Quality of Life

