The Influence of Public Participation and Self-efficacy on Project Acceptability

Bianca Muranyi

s3976076

Department of Psychology, University of Groningen

PSB3E-BT15: Bachelor Thesis

Supervisor: dr. Goda Perlaviciute

Second evaluator:

In collaboration with: Fardau Koster, Jerke Hoekstra, Kira Urmes, Merel van der Ham, Stephanie Zuurman

Month 01, 2022

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

A thesis is an aptitude test for students. The approval of the thesis is proof that the student has sufficient research and reporting skills to graduate but does not guarantee the quality of the research and the results of the research as such, and the thesis is therefore not necessarily suitable to be used as an academic source to refer to. If you would like to know more about the research discussed in this thesis and any publications based on it, to which you could refer, please contact the supervisor mentioned.

Keep the above text as it is.

Abstract

Dietary changes have been discussed as a proper way of reversing the damage to the environment created by human activity, but policies that aim for that are highly controversial among the public. Previous research showed that inviting the public to participate in the decision-making process for such policies will lead to higher acceptability of the project. Nevertheless, factors such as people's values and their self-efficacy in environmental behaviour should also be evaluated as influencers on project acceptability as they determine people's goals and diligence in trying to determine them. In the current study, we explore the effect of introducing values in public participation discussions, with the hypothesis that egoistic people will view the project as more acceptable if personal consequences are discussed, while biospheric people will not very in their acceptance across conditions. Moreover, self-efficacy was hypothesized to play a role in mediating the relationship between having biospheric values and project acceptability. We conducted a between-subjects online experiment (N=122) in the form of a survey which manipulated public participation through presenting the participants with scenarios which reflected different values. Results showed that there was no difference in project acceptability between participants in conditions congruent with their values and the ones in other conditions. Self-efficacy was found to mediate the relationship between biospheric values and project acceptability. It is concluded that value-framed scenarios might not play a big role in project acceptability and that self-efficacy is worth further exploring as a mediator between the biospheric values and project acceptability.

Keywords: public participation, values, self-efficacy, project acceptability, climate change

The Influence of Public Participation and Self-efficacy on Project Acceptability

As human influence is considered to be at fault for the damage to the environment, immediate action is necessary in order to stop it from becoming an irreversible change. Dietary changes have been considered to be a way to tackle climate change through reducing the emission of greenhouse gases, but also the answer to the growing global problem of fulfilling the dietary needs of an increasing population (Foley et al., 2011). Nevertheless, individual change in diet as a means of mitigating climate change is a very polarizing issue that in the best-case scenario gets little support from the population (Funk & Kennedy, 2016). It is very interesting to see how even Democrats, who are significantly more likely to trust the efficiency of an environmental policy, have lower trust in policies that address changes in individuals' personal lives. For instance, 76% of Democrats said that they believe power plant emission restrictions would have a significant impact on climate change, meanwhile only 52% of them considered reducing their individual carbon footprint to be efficient towards addressing climate change. This difference could exist because people believe that the probability of meaningfully impacting climate change through individual changes is lower than the probability of achieving the same goal through changing other factors. Self-efficacy refers to the personal judgement about one's ability to organize and execute actions in the pursuit of achieving a goal and has been reported to influence a person's choice of action (i.e., get involved or not) and their diligence in trying to accomplish it (Bandura, 1982); thus, low self-efficacy in environmental behaviours can be a contributing factor to why people seem to believe that individual changes would not have that much impact on climate change, which in turn makes them support less policies that call for individual change. Therefore, it could be interesting to explore whether self-efficacy in environmental behaviour can influence the acceptability of a policy that aims at altering individual behaviour. Considering how the policy that aimed at restricting citizen's meat consumption was received so negatively by the

Spanish population (Wax, 2021), it would be interesting to explore public acceptability of this sort of project in the context of a carbon tax on food policy which would demand changes in prices for all foods, according to their carbon emissions. Therefore, the current paper will use the context of a carbon tax on food policy as an example of controversial policy that would elicit heated debate among the public.

Moreover, it cannot go without mention that the differences seen in acceptability of pro-environmental projects could stem from a difference in ideologies and values, which can be seen between Republicans and Democrats in the study by Funk and Kennedy (2016). According to it, only 21% of Republicans considered individual changes to be an appropriate solution for climate change. This discrepancy could be due to the kind of values this kind of policies appeal to. Values are considered to be guiding people's behaviour by shaping their goals (Schwartz, 1992). For instance, Republicans might consider that it is not fair that citizens sacrifice their current way of life for climate change mitigation. This kind of thought might arise from the belief that meeting the personal needs and desires of the individual (I.e., not having to change your lifestyle) is more important than climate issues. This belief seems to be built upon egoistic values, which are defined as a stronger interest towards personal resources. In contrast, biospheric issues are represented by a stronger interest in preserving the planet (Perlaviciute & Steg, 2014). There is evidence that highlights that people rate the gravity of the consequences of alternative energy sources depending on their own values (Perlaviciute & Steg, 2015), thus, people's egoistic values might influence the negative way in which they view projects that aim at behavioural changes from the citizens and how acceptable they are of the project.

Nevertheless, many of the current issues our society is facing require more than just a plan of action, but also consensus among those affected by it. Thus, public support is a necessary factor when discussing a successful implementation of a policy. Public participation

is defined as the systematic process of involving citizens into the decision-making processes about policies and communal issues, such as the implementation or design of a policy (Perlaviciute, 2019). According to Liu and colleagues (2020), policies regarding sustainable alternatives to energy production received less support from citizens if the citizens were not a part of the decision-making process of that policy. This being said, there is reason to speculate that the acceptability of a policy such as the carbon tax on food could be increased through inviting the public to participate in the decision-making process.

Public Participation and Values

One of the IAP2 (2007) principles of public participation refers to the necessity of presenting participants with the information needed for the project in a way that they can understand it and use it in order to meaningfully contribute to the discussion. This principle should not be limited to the use of natural language as opposed to technical terms when presenting the participants with the aspects of the issue. It should rather take into consideration the focus and framing of the presentation of the issue. For instance, the participants could be presented with consequences of the policy in terms of how it would affect their immediate environment (e.g., less pollution in their city) or how it would affect their health. The carbon tax on food policy used in the paper has an environmental goal that can be accomplished through individual sacrifice, so the values that will be discussed are biospheric and egoistic values. Theory about values (Perlaviciute & Steg, 2015) submits to the idea that people tend to pay more attention to information that is line with their values than other information. However, currently, environmental issues are still seen and presented to people as a moral issue (Knez, 2016). There is research that found people with egoistic values to be more willing to take part in pro-environmental behaviours if they believe that the personal beneficial consequences exceed the negative ones (Jia et al., 2017), as opposed to when moral motivations are given. This goes to show that people who have egoistic values do

pay attention to the personal consequences of the policy and then act accordingly.

Consequently, the same environmental issue (I.e., high carbon footprint) and the same pro-environmental solution (I.e., dietary changes) could become acceptable even to people who do not consider the environment's safety as a priority in their lives. This kind of framing could make people with egoistic values become more acceptable of this kind of projects by providing them with a chance to discuss the positive personal consequences that exceed the disruption created in their lives by the project. However, it is interesting to note that the same approach might not necessarily work when the citizens already have biospheric values. A study (Nilsson et al., 2016) found that presenting citizens with value-congruent arguments for the implementation of a pro-environmental policy increased the acceptance of the policy in the case of individuals with egoistic values, but not for the ones with biospheric values. This could be because acceptance of pro-environmental policies is already high among people with biospheric values. Consequently, it can be argued that people with biospheric values would not increase their acceptance of the project by being presented with consequences of the policy that align with their values.

Nevertheless, an individual might feel interested in pursuing a goal, but fail to do so because of their own low self-efficacy in that domain (Clayton et al., 2017). So, although having strong biospheric values means that the person has a stronger interest in caring for the environment, it does not necessarily mean they will engage in individual changes in order to achieve their goal. For example, someone might have biospheric values and want to protect the planet, but they do not believe they can do it by changing their diet. Thus, self-efficacy could act as a mediator between having strong biospheric values and the acceptability of the project. Self-efficacy in environmental behaviour has been found to influence recycling behaviours (Tabernero & Hernandez, 2010), so it is interesting to see if the same pattern

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

extends to behaviours that require more disturbance in people's lives, such as changing their diet.

The Present Study

Considering that a policy that focuses on environmental goals will be more appealing to people who have strong biospheric values, the current paper will focus on how an environmental policy can be translated in terms of other values so that it seems more attractive to people who do not value the environment in the first place. In addition, it is hypothesized that people with biospheric values will already have a high acceptability of the project, thus, being presented with consequences that reflect their values will not lead to higher acceptability of the project. Self-efficacy in environmental behaviour will be assessed as the mediator between having strong biospheric values and being more acceptable towards the project according to the mediation model designed by Baron & Kenny (1986). Thus, the third hypothesis will be split into three hypothesis which will represent the mediation model shown in Figure 1.

The carbon tax on food policy was chosen because it is a divisive topic among people, as it was seen in Spain (Wax, 2021) when a similar policy was proposed. The carbon tax policy aims at reducing harmful behaviours, such as purchasing high carbon products, and to compensate for the ones that are being bought. The policy would extend to any type of food, but it would mostly influence animal products and imported products. Moreover, in order to respect the IAP2(2007) principle of meaningful contribution, the researchers decided to engage the participants through making them think about the policy's consequences. The three conditions to which the participants were assigned can be found described in the method section. Thus, the current study will test the following hypotheses:

Hypothesis 1: Participants with stronger egoistic values will view the project as more acceptable if they are presented with consequences that concern their personal values.
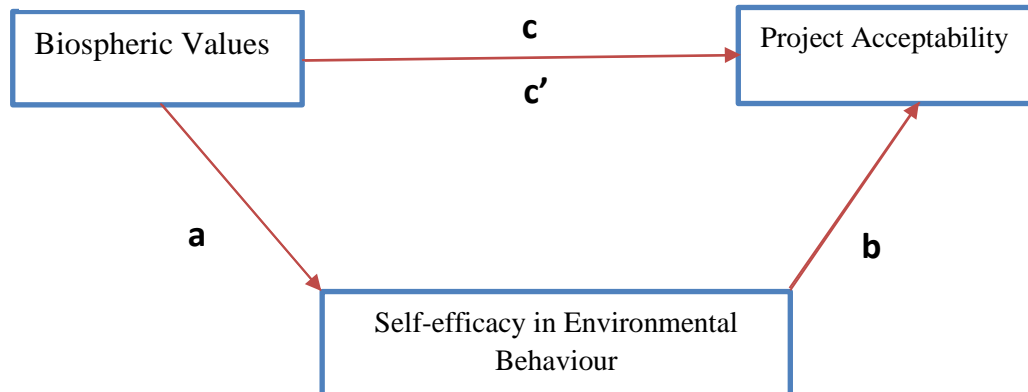
PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

Hypothesis 2: There will be no difference among conditions for the participants with strong biospheric values.

Hypothesis 3: Participants with strong biospheric values will view the project as more acceptable if they have higher levels of self-efficacy in environmental behaviour.

Figure 1

Mediation Model

Method

Participants and Design

The sample was recruited within the researchers' personal social networks by means of sharing the survey via WhatsApp private messages and group chats, Instagram stories, and email. Out of 202 recorded responses, we included 122 participants in our analysis.

When looking at the data, it became clear that participants who left questions unanswered, had not answered either a few questions (up to three) or more than 10 questions. Thus, we chose to exclude participations who left more than three questions unanswered, as well as participants who answered the second attention checks wrong were excluded[1], and who gave the answer 'do not use my data' at the final question of the survey. The sample consisted of 80 females and 42 males. The participants' average age ranged from 17 to 63 ($M = 25.4$, $SD = 10.64$). Most participants were Dutch (71.7%) or German (14.8%). The most common educational level in our sample was bachelor's degree (60.2%), followed by master's degree (22.2%) and high school (14.8%).[2]

The results of an a priori power analysis based on an analysis of covariance (ANCOVA) test, showed that 74 participants were needed to achieve an effect size of $f = .4$ and a power of .95.

Manipulation of Public Participation Conditions

The participants were instructed to read a scenario which describes that their local government is considering the implementation of a carbon tax on food. The motivation that was described for a carbon tax on food was the increasing urgency of reducing carbon

---

[1] When excluding the participants who did not pass the first attention check, the sample consisted of 61 participants.
[2] For the sample with 61 participants, the sample consisted of 44 females and 17 males. The participants' average age ranged from 17 to 56 ($M = 23.7$, $SD = 6.7$). Most participants were Dutch (68.9%) or German (14.8%). The most common educational level in our sample was bachelor's degree (62.3%), followed by master's degree (24.6%) and high school (13.1%).

emissions to meet the requirements of the Paris agreement (See Appendix A for the full text of the scenarios). The scenario described that the participants were invited to a meeting to discuss the implementation of the carbon tax and that the government would consider the public's opinion in their definitive decision about policy. It was described how the meeting would focus on specific consequences of the carbon tax on food policy, followed by some examples of consequences. Participants were assigned to one of three experimental conditions, in which they were informed that they would discuss either environmental, personal, or both environmental and personal consequences of a carbon tax on food policy during this meeting. Examples of the consequences differed per condition. Specifically, in the biospheric value condition, environmental consequences (e.g., less deforestation) of the carbon tax on food were proposed to be focused on. In the egoistic value condition, the consequences were personal (e.g., ensuring personal safety), and in the combined value condition, both environmental and personal consequences were mentioned. In each condition two positive and two negative consequences were mentioned. To assure the effectiveness of the manipulation, the participants were asked to list some consequences of the carbon tax that they would like to discuss during a meeting about the policy.

In our between-subjects experimental design, participants were randomly assigned to the conditions using the "evenly present elements" in Qualtrics, which makes sure that there are approximately the same number of participants in each condition. The "Environmental" condition had 38 participants, the "Personal" condition 36 participants, and the "Environmental and Personal" condition 34 participants. [3]

---

[3] For the sample with 61 participants, the "Environmental" condition had 15 participants, the "Personal" condition 15 participants, and the "Environmental and Personal" condition 31 participants.

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

Procedure and Materials

Participants were invited to further distribute the questionnaire within their own social networks. As mentioned before, the survey link was distributed via various digital social platforms. Data collection took place from 17.11.2021 to 29.11.2021. The online questionnaire was accessible through a link to the digital survey platform Qualtrics. The participants could fill in the survey on their own, using their laptop, desktop, smartphone, or tablet. Participants were able to contact one of the researchers in case there were questions before, during or after finishing the survey. Participation was voluntary, with no rewards granted, and participants were asked for their informed consent. The survey exclusively consisted of self-reports. Filling out the questionnaire took about 15 minutes. The participants were presented with the debriefing and a link for further sharing the questionnaire. Our research was ethically approved by the Ethics Committee Psychology of the University of Groningen.

The questionnaire was piloted between 1.11.2021 and 4.11.2021 by people from the personal social circles of the thesis group members. We asked these pilot participants to provide feedback on how understandable the questionnaire was, and whether anything could be changed to improve the questionnaire. The feedback obtained during this pilot was used to rephrase some questions to make them clearer.

The final survey was constructed with the measures described below. As this paper is part of a group project, additional measures were included in the survey; the only measures relevant to the present paper will be described.

Measures

Attention checks

To check whether participants read the scenarios carefully and understood which consequences of the carbon tax on food would be discussed, we asked the following question: "According to the text you just read, what type of consequences of the carbon tax on food will be discussed in the public meetings?". Answer possibilities were "Environmental consequences" (the right answer in the biospheric value condition), "Personal consequences" (the right answer in the egoistic value condition) and "Environmental and personal consequences" (the right answer in the combined value condition). Results showed that in the final sample, 23 participants in the biospheric condition, 21 people in the egoistic condition, and 3 people in the combined condition answered this question incorrectly. A closer look at the data showed that those participants could still be assumed to have answered the remaining questions attentively, mainly because the large majority of these participants passed the second attention check. Additionally, these participants filled out answers for the question about what consequences they would like to discuss during a public meeting about the carbon tax on food policy. Therefore, we did not exclude all participants who failed to provide the right answer to the first attention check. However, 63 participants filled out a consequence that was mentioned in the text they read or filled out something very similar for the open question that followed the scenario. This might indicate a limitation to the strength of our manipulation; therefore, I also ran the analyses when excluding these participants in order to see whether that would change the patterns of results.

As the second attention check, halfway through the survey the participants were asked if they were still paying attention and to mark the answer option 'somewhat disagree'. Participants who chose another answer option were excluded from the final analysis.

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

Demographics

Participants were asked to indicate their age, gender, nationality, and educational

level.

Values

In order to measure the participants' values a shorter version of Schwartz's value scale

(1992) was used. This modified scale was developed by Steg and his colleagues (2014). The

questionnaire used consists of 16 items that consist of the value and a description of it which

could be rated on a 9 points scale. Participants were instructed to rate the significance of each

of the values as principles that guide their lives from -1, meaning opposed to my values, to 7,

meaning of supreme importance. There were 5 items reflecting egoistic values, for example

"WEALTH: material possessions, money". The scores on these items were averaged in order

to create a scale for egoistic values with good reliability of Cronbach's alpha of $\alpha = .68$ ($M =$

2.62, $SD = 1.24$)[4]. For the biospheric values there were 4 items, such as "RESPECTING THE

EARTH: harmony with other species". The scores on these items were averaged in order to

create a scale for biospheric values with good reliability of Cronbach's alpha of $\alpha = .89$ ($M =$

5.01, $SD = 1.39$)[5].

Project Acceptability

To measure the acceptability of the carbon tax policy, we used 4 items on a 7-point

Likert scale from Liu et al. (2020). This included the following items: The extent to which

participants found the proposed policy necessary (from 1 = *very unnecessary* to 7 = *very*

necessary), acceptable (from 1 = *not at all acceptable* to 7 = *very acceptable*), good or bad

(from 1 = *very bad* to 7 = *very good*) and negative or positive (from 1 = *very negative* to 7 =

very positive). The mean responses of the 4 items were combined to form the acceptability

---

[4] For the smaller sample of 61 participants, the following descriptives were computed (M = 2.58, SD = 1.21).

[5] For the smaller sample of 61 participants, the following descriptives were computed (M = 5.12, SD = 1.37).

scale. Higher scores indicate a higher acceptability of the carbon tax policy. Project

acceptability displayed good reliability with Cronbach's alpha of $\alpha = .89$ ($M = 4.94$, $SD = 0.48$).

Self-efficacy

In order to measure participants' self-efficacy in their ability to contribute with the final

decision, the General Self efficacy Scale (GSF) (Schwartzer & Jerusalem, 1995) was used.

The original scale contains 10 items, but only 3 items were used. These items were chosen

because the other items referred to resilience in face of adversity, which would not refer to

climate change mitigation, but to adaptation to climate change issues. They were slightly

modified to fit the content of the paper as the authors themselves advised for accommodation

of the theme of the paper in their items. Thus, the problems mentioned in the items were

defined as environmental problems, as follows: "I can contribute to solving most

environmental problems if I invest the necessary effort."; "It is easy for me to stick to my

aims and accomplish my goals regarding the current environmental issues."; "I can

significantly contribute to solving difficult problems regarding the environment if I try hard

enough.". The items could be responded to on a scale from 1 (= strongly disagree) to 7 (=

strongly agree). The scores to the 3 items were averaged together in order to form a final

assessment of the participants' personal beliefs in their ability to contribute to the final

decision (I.e., self-efficacy). A higher score in this variable would reflect higher self-efficacy.

The scale had good reliability of Cronbach's alpha = .8 ($M = 4.14$, $SD = 1.21$).

Results

The statistical analyses presented below have been performed twice. In the first analysis participants who did not pass one of the attention checks were included (N = 122). The second analysis was performed with those participants excluded (N=61) and the results are displayed in the footnotes.

In order to code the three experimental conditions dummy coding was used. The combined condition was used as a reference group.

In order to test hypothesis 1 a regression analysis was performed having project acceptability as a dependent variable and scores on egoistic value, the dummy codes and interaction[6] between them as independent variables. The differences in project acceptability scores for the three conditions were not significant $(F(2,116) = .057 = p = .945)$[7]. This shows no support for hypothesis 1, meaning that asking participants with egoistic values to think about personal consequences of the policy did not determine them to be more accepting of the project.

In order to test hypothesis 2 a regression analysis was performed having project acceptability as the dependent variable and the scores on biospheric value, the dummy codes and the interaction[8] between them as independent variables. The differences in project acceptability scores for the three conditions were not significant $(F(2,116) = .774 = p = .464)$[9]. This evidence supports the second hypothesis that states that participants with biospheric

---

[6] The interaction effects were created by multiplying the egoistic value scores and the dummy code for the personal condition (InteractionEgoPers), and respectively the environmental condition (InteractionEgoEnv).

[7] For the sample with 61 participants the results were not significant: $(F(2,55) = .505 = p = .606)$.

[8] The interaction effects were created by multiplying the biospheric value scores and the dummy code for the personal condition (InteractionBioPers), and respectively the environmental condition (InteractionBioEnv).

[9] For the sample with 61 participants the results were not significant: $(F(2,55) = 2.942 = p = .064)$.

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

values will not view the project as more acceptable if they were asked to think about consequences that reflected biospheric values.

In order to test hypothesis 3 there were 4 regression analyses that were run. Firstly, path c was tested using a regression analysis with the scores on biospheric value as an independent variable and project acceptability scores as dependent. The biospheric scores significantly predicted how acceptable the participants viewed the project $F(1,120) = 11.08$, $p = .001$, $R^2_{adjusted} = .077$[10]. Thus, path c can be said to be significant. Moreover, the second regression analysis for path a with the scores on biospheric value as an independent variable and self-efficacy in environmental behaviour scores as dependent was run. The biospheric scores predicted a significant amount of self-efficacy scores $F(1,120) = 14.718$, $p < .001$, $R^2_{adjusted} = .102$[11], therefore, supporting path a. Furthermore, the third regression for path b analysis was run having self-efficacy scores as independent variable and project acceptability as dependent variable, which was significant $F(1,120) = 7.515$, $p = .007$, $R^2_{adjusted} = .051$[12]. Finally, the fourth regression analysis was run having both the scores on biospheric values and self-efficacy as independent variables, and project acceptability scores as dependent variable in order to determine the significance of path c'. It was found that the relationship between biospheric values scores and project acceptability is smaller once self-efficacy scores are added in. So, the relationship between the two is smaller in path c' ($b = .2$) than in path c ($b = .289$). A Sobel test was performed in order to assess if the difference in relationships was statistically significant, and it was found to be so t(2.23), p = 0.02. These results[13] support hypothesis 3, thus, there is support for the idea that people with biospheric values will be

---

[10] For the smaller sample of 61 participants, the results were not significant F(1,59) = 2.971, p = .09, $R^2_{adjusted}$ = .032.

[11] For the smaller sample of 61 participants, the results were significant F(1,59) = 7.774, p = .007, $R^2_{adjusted}$ = .101

[12] For the smaller sample of 61 participants, the results were not significant F(1,59) = 1.072, p = .305, $R^2_{adjusted}$ = .001.

[13] According to the power analysis the sample of 61 participants was too small to show an effect at the effect size required by the Baron and Kenny (1986) mediation model. This aspect will be discussed as a limitation further on in the paper.

more inclined to accept a project like the carbon tax on food if they have higher self-efficacy

in environmental behaviour.

Discussion

The current study looked at the impact value-based framing has on project acceptability for people with egoistic values, as well as for people with biospheric values. Moreover, it was also assessed how self-efficacy in environmental behaviour influences the relationship between strong biospheric values and environmental project acceptability. Based on previous research (Jia et al., 2017) the author hypothesized that presenting highly egoistic people with positive and negative personal consequences they can evaluate, will lead to more project acceptability than when they are presented with consequences that are linked to moral judgements (e.g, less deforestation). Also, according to (Nilsson et al., 2016) it was hypothesized that there is no difference in project acceptability across conditions for people with biospheric values. In addition, the third hypothesis was based on a study conducted by Tabernero and Hernandez (2010) and proposed that self-efficacy can act as a mediator between having strong biospheric values and acceptability of a project that entails personal dietary changes.

The first hypothesis has not been supported by the results in this paper, thus, it cannot be said that people with strong egoistic values rate a project more acceptable if personal consequences are being presented. However, there was evidence to support the second hypothesis that stated that participants with biospheric values will be accepting towards the project, regardless of the condition they are assigned to. Furthermore, the results were in line with the third hypothesis, showing evidence for self-efficacy being a mediator between biospheric values and project acceptability.

Limitations and Directions for Future Research

The current study has some limitations. Firstly, there were many participants who failed the attention checks, leaving a rather small sample. A total of 47 participants were eliminated for failing the first attention check, which had the aim to evaluate whether the participants

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

read and understood the scenario correctly. The sample size left consisted of 62 participants

which was too small for the present study, considering that the power analysis showed that

there was a need for 74 participants in order to have a power of .95 as required for the Baron

and Kenny model of mediation (1986). Out of the participants who were excluded because of

the first attention check, 43 of them were presented with personal or environmental scenario

and when asked what consequences will be discussed they wrongly answered that both

personal and environmental consequences will be part of the discussion. This could reflect

that the manipulation did not work because participants were not engaged with the scenarios

and did not pay enough attention. Another possibility is that the question was ambiguously

phrased, and they did not understand what was asked of them.

Furthermore, the manipulation consisted of the participants being asked to imagine the

scenario while they read it and to answer an open question where they had to mention a

consequence they would discuss if they were in that situation. It is possible that this situation

did not simulate reality well enough, thus, not allowing for the manipulation to work as

desired, or that the scenarios were not clear enough. The open question might have not been

well structured as many participants did not come up with a consequence on their own but

chose to copy one from the scenario, showing that they might have interpreted the question

different than intended. This is an opportunity for future research, as the current results could

have been different if the experiment would not have been done using a survey but through

in-person discussions. It would feel more realistic to participants if they can actually engage

in a conversation about consequences they care about, rather than just typing them out.

In addition, the positive consequences in the personal condition could be worked on so that

they appeal more to participants with egoistic values. Currently, the negative consequences in

this paper reflect long-term achievements which do not promote a tangible gain for people

who, for example, do not live in areas where they are not used to natural disasters or

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

pollution. Future research could present the monetary consequence of this type of policy in terms of gains instead of losses and use it as a positive consequence – 'by reducing meat consumption you can cut down on food costs'.

Finally, the sample was gathered through the snowball method, thus, the majority of the participants were part of the same demographic. It could be seen that the acceptance towards the project was already quite high among our sample, which could be because they were all young highly educated people and mostly female. Younger people and women in general were found to be more worried about climate change on average (Knez et al., 2013), thus, a study with a more diverse sample might lead to a bigger difference among conditions, given that the levels of acceptance towards the project might be more diverse.

Theoretical and Practical Implications of This Study

The current study aimed at following the idea that highly egoistic people will engage with pro-environmental initiatives if they believe that the positive personal consequences exceed the negative ones (Jia et al., 2017) by presenting participants with both types of consequences of the policy in order to increase their project acceptability. The results obtained are not in line with what it has been expected. A reason for that happening could be that participants did not view the positive consequences (I.e., personal safety against natural disasters) as more valuable than the negative ones (I.e., increased cost of grocery). This can be explained by the idea that egoistic people have less perceived control over their behaviour (Knez, 2016), thus, they tend to prefer instant gratifications than long-term rewards. All the positive consequences presented in the personal conditions reflected long-term achievements, while all the negative ones reflected short-term losses in their lifestyles, so it could be that the participants did not view the positive consequences surpassing the negative ones because of that.

The second hypothesis received support from the results and was in line with the previous research (Nilsson et al., 2016). People with biospheric values were found to be just as

accepting towards the project when they were in other conditions than the one congruent with their values. This could be because they already have pro-environmental goals in mind and would be more acceptable towards policies that match those goals. An alternative explanation would be that the manipulation used in the current study was not strong enough and did not work as expected. Nevertheless, it shows that for people with biospheric values there is more need of understanding of what leads to their pro-environmental goals to manifest into behaviour. A variable that could possibly influence the relationship between biospheric values and project acceptability is discussed further below.

Furthermore, the third hypothesis was in line with previous research (Taberno & Hernandez, 2010) as self-efficacy was found to mediate the relationship between biospheric values and project acceptability. The reason for these findings could be that self-efficacy in environmental behaviour dictates whether the goals of protecting the environment are worth pursuing. For instance, if an individual does not believe that eating less carbon producing foods will lead to a change in the environment it is less likely that they would pursue such a dietary change. It could also be that people do not believe that their change in diets is enough to overturn the amount of pollution created by other factors, thus, lowering their self-efficacy and motivation for action, despite their clear interest in protecting the environment.

When it comes to practical implications of these findings, it should be considered that some people might not want to sacrifice short-term pleasures for long-term goals, thus, the choice of consequences of a policy should be pondered upon more. It also might be because the positive consequences shown in the personal condition were less tangible and guaranteed. While the prices increase was going to be felt immediately after the policy was enforced, participants knew that "increased well-being due to less air pollution" was more uncertain in terms of the moment in which it will happen and the intensity at which it will be felt. Thus, it

might be better to find consequences which have similar timelines of unfolding and similar impacts on their lives.

Moreover, although self-efficacy was found to be a mediator between having biospheric values and being more acceptable of the project, there is still uncertainty as to what this means in a practical setting. It would be necessary to research how people's self-efficacy in environmental behaviour can be raised so that more people act upon their biospheric goals. A study by Hunter and Jordan (2020) mentions three reasons for which people felt low self-efficacy in environmental behaviour and those were: considering that the environmental problem is too big to be tackled through individual change, they were already engaging in activities that were highly harmful for the environment (I.e., flying) and they did not think they can compensate for that, and that true change would only happen if multiple areas in our society change. Following these reasons, low self-efficacy can be addressed by assuring people that changes will be made in other spheres of the society too – such as stricter policies about factory pollution – but also by informing people about how to shift their behaviour to match pro-environmental initiatives in a gradual way (Klockner, 2013).

Conclusion

The results of the current paper show that involving people in the decision-making process of a policy by discussing consequences of the policy does not lead to them being more acceptable towards the policy. Nevertheless, self-efficacy in environmental behaviour acts as a mediator between biospheric values and project acceptability. This is an interesting finding as it highlights that people having goals of care for the environment will not necessarily translate into corresponding action. It is just as important to address how people feel about the current options through which they can act pro-environmentally so that we can make sure they have the proper knowledge about their impact onto the environment. I would like to

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

encourage research that focuses on ways to increase self-efficacy in populations, as well as

current mistakes that lower this characteristic.

References

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American psychologist*, *37*(2), 122.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173.

Foley, J. A., Ramankutty, N., Brauman, K. A., Cassidy, E. S., Gerber, J. S., Johnston, M., ... & Zaks, D. P. (2011). Solutions for a cultivated planet. *Nature*, *478*(7369), 337-342.

Funk, C., & Kennedy, B. (2016). The politics of climate. *Pew Research Center*, *4*.

Hunter, R. H., & Jordan, R. C. (2020). "I have a little, little, little footprint on the world" and "I'm not political": feelings of low self-efficacy and the effect of identity on environmental behaviour in educators. *Environmental Education Research*, *26*(5), 666-683.

IAP2. (2007). IAP2 spectrum on public participation. Retrieved from http://c.ymcdn.com/sites/www.iap2. org/resource/resmgr/imported/IAP2%20Spectrum_vertical.pdf

Jia, F., Soucie, K., Alisat, S., Curtin, D., & Pratt, M. (2017). Are environmental issues moral issues? Moral identity in relation to protecting the natural world. *Journal of Environmental Psychology*, *52*, 104-113.

Klöckner, C. A. (2013). A comprehensive model of the psychology of environmental behaviour—A meta-analysis. *Global environmental change*, *23*(5), 1028-1038.

Liu, L., Bouman, T., Perlaviciute, G., & Steg L. (2020). Public participation in decision making, perceived procedural fairness and public acceptability of renewable energy projects. *Energy and Climate Change, 1*. https://doi.org/10.1016/j.egycc.2020.100013

Nilsson, A., Hansla, A., Heiling, J. M., Bergstad, C. J., & Martinsson, J. (2016). Public acceptability towards environmental policy measures: Value-matching appeals. *Environmental science & policy*, *61*, 176-184.

Perlaviciute, G., & Steg, L. (2014). Contextual and psychological factors shaping evaluations and acceptability of energy alternatives: Integrated review and research agenda. *Renewable and Sustainable Energy Reviews, 35,* 361–381. https://doi.org/10.1016/j.rser.2014.04.003

Perlaviciute, G., & Steg, L. (2015). The influence of values on evaluations of energy alternatives. *Renewable energy*, *77*, 259-267.

Schwartz, S.H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25,* 1–65. https://doi.org/10.1016/S0065-2601(08)60281-6

Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. *J. Weinman, S. Wright, & M. Johnston, Measures in health psychology: A user's portfolio. Causal and control beliefs*, *35*, 37.

Tabernero, C., & Hernández, B. (2011). Self-efficacy and intrinsic motivation guiding environmental behavior. *Environment and Behavior*, *43*(5), 658-675.

Wax, E. (2021, July 13). *Spain's carne conflict highlights scale of Europe's meat emissions*

   changes. https://www.politico.eu/article/spain-europe-livestock-meat-emissions-

   challenge/

Appendix A

Full text conditions

Biospheric condition

Due to the increasing urgency of reducing carbon emissions to meet the requirements of the Paris agreement, your local government is considering implementing a carbon tax on products like meat, cheese, avocados, bananas etc. A carbon tax on food is a policy that influences the price of food, based on how much carbon dioxide (CO_2) is emitted through the production of these foods. To address any possible public concerns, the government will invite the public to a meeting to discuss the implementation of the carbon tax, aiming to find a well-adjusted consensus on the topic. The discussion will focus on the **environmental consequences**, of which a few are mentioned below.

The government will consider the public's opinion about the environmental consequences of the carbon tax on food in their definitive decision in January 2022 about whether the carbon tax is an appropriate measure to meet the Paris agreement.

Examples of environmental consequences of the carbon tax on food to be discussed in public meetings:

Positive consequences:
- Reduced global warming
- Less deforestation

Negative consequences:
- People may feel that they are entitled to consume high-carbon-emitting products if they can pay for them, which could lead to more purchases of such products
- Neglecting the effect of other greenhouse gasses like methane and water vapor that harm the environment even more

Personal condition

Due to the increasing urgency of reducing carbon emissions to meet the requirements of the Paris agreement, your local government is considering implementing a carbon tax on products like meat, cheese, avocados, bananas etc. A carbon tax on food is a policy that influences the price of food, based on how much carbon dioxide (CO_2) is emitted through the production of these foods. To address any possible public concerns, the government will invite the public to a meeting to discuss the implementation of the carbon tax, aiming to find a well-adjusted consensus on the topic. The discussion will focus on the **personal consequences**, of which a few are mentioned below.

PUBLIC PARTICIPATION AND PROJECT ACCEPTABILITY

The government will consider the public's opinion about the personal consequences of the carbon tax on food in their definitive decision in January 2022 about whether the carbon tax is an appropriate measure to meet the Paris agreement.

Examples of personal consequences of the carbon tax on food to be discussed in public meetings:
Positive consequences:
- Ensuring personal safety by preventing increasingly intense natural disaster
- Increased individual well-being due to reduced pollution of water and air

Negative consequences:
- Increased costs of daily groceries
- Decreased choice of products because of insufficient alternatives to high-emission products

Personal and egoistic condition
Due to the increasing urgency of reducing carbon emissions to meet the requirements of the Paris agreement, your local government is considering implementing a carbon tax on products like meat, cheese, avocados, bananas etc. A carbon tax on food is a policy that influences the price of food, based on how much carbon dioxide (CO2) is emitted through the production of these foods. To address any possible public concerns, the government will invite the public to a meeting to discuss the implementation of the carbon tax, aiming to find a well-adjusted consensus on the topic. The discussion will focus on **environmental consequences and personal consequences**, of which a few are mentioned below.
The government will consider the public's opinion about the environmental and personal consequences of the carbon tax on food in their definitive decision in January 2022 about whether a carbon tax is an appropriate measure to meet the Paris agreement.

Examples of environmental and personal consequences of the carbon tax on food to be discussed in public meetings:
Positive consequences:
- Reduced global warming
- Ensure personal safety by preventing increasingly intense natural disasters

Negative consequences:
- Neglecting the effect of other greenhouse gasses like methane and water vapor that harm the environment even more
- Increased costs of daily groceries