

**Whose Cup of Tea?:**  
**The Effect of Initiators' Positions and Perceived Values on the Acceptance of Sustainability**  
**Initiatives by University Students**

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### **Abstract**

Climate change is a big problem that needs to be solved with urgency. Possible solutions can come from governments (top-down), or from civilians themselves (bottom-up). The effect of those positions on the acceptability of initiatives was researched in this study, as well as the effect of biospheric and egocentric values on the acceptability, together with their combined effect. Previous research suggested more acceptance could be expected with bottom-up initiators than with top-down initiators. It was expected that initiatives presented with a biospheric value would be accepted more than ones presented with a egocentric value. Perceived endorsement was also researched. 165 Students of the University of Groningen were recruited for an experimental between subjects 2x2 design. They were randomly assigned to a condition and filled out an online questionnaire. The results of this study supported that participants score significantly higher on acceptance of an initiative when they are presented with bottom-up initiators than when presented with top-down initiators. Participants score significantly higher when presented with a biospheric value than with an egocentric value. Only two of the combined conditions were significantly relevant. Significantly higher acceptance was found for participants who rated their perceived endorsement higher than for the participants who rated it more low. These results provide more information on the ways initiators can present their green initiatives and the impact those can have on the acceptance of their ideas.

*Keywords:* environmental initiatives, acceptability, values, initiators' position, perceived endorsement

## **Whose Cup of Tea?:**

### **The Effect of Initiators' Positions and Perceived Values on the Acceptance of Sustainability**

#### **Initiatives by University Students**

This past March provincial elections were held in the Netherlands. The big winner of the elections was a party who explicitly stated that they are against the current plans of the government to deal with nitrogen emissions. The voters seemed to want to make clear their stance on the current government policy.

Nitrogen emission is a big topic in the debate surrounding climate change. Climate change has major consequences and causes issues such as hunger, air pollution and polluted (drinking) water (WHO, n.d.). The WHO (2021) also states that in the period between 2030 and 2050 it is expected that about an additional 250.000 people will pass away due to climate change related illnesses. The UN reported in 2019 that there were only 11 years left before irreversible damage was done to the earth caused by climate change. This appears to imply that little time is left for debates to be had and for potential solutions to be implemented. Nevertheless, a lot has to happen to counter climate change and its effects.

As is shown in the debate surrounding nitrogen emissions, possible solutions for climate change can take a long time to be conceived and implemented. In 2019 the Raad van State (Dutch Council of state) ruled that the Dutch government had to change their approach to the so-called *nitrogen crisis*. The Dutch government still struggles with the consequences of the ruling of the council, and a good solution for all the different parties involved has yet to be found. Simultaneously, a group of Dutch civilians do not seem to agree with the direction the government is headed, as was seen in the most recent elections.

This is just one recent example of the lengthy processes that take place when looking at the problems and causes of climate change. Similar processes can be found when looking into for example the handling of deforestation (Global Canopy, 2023) or plastics and waste disposal (Flores et al., 2021). It would be appropriate to look at solutions that can be installed to counter climate change without this long process of political debates or debates that take place in hierarchical systems.

One of the things that people are trying to do to counter climate change is creating sustainable initiatives. These so-called green initiatives come in many forms. An example of such an initiative are the current Dutch government policies regarding climate. Specifically, these policies are an example of top-down initiatives. These initiatives are designed and put into place, so to speak, from above, by an authority (Jans, 2021). But as was just described, these can take quite some time to be installed. Opposed to these there are bottom-up initiatives. Jans (2021) explains these initiatives as being thought of and being led by members of a group, to induce a certain behaviour within their group. Some examples of these are communal gardens led by communities themselves, local clothing swaps, or a group of colleagues trying to counter the usage of disposable products at their workplace.

In various studies about bottom-up initiatives, otherwise known as *grassroot initiatives*, their potential to have a positive impact on the environment becomes apparent (Middlemis & Parrish, 2010; Seyfang & Haxeltine, 2012). Research by Jans (2021) provides evidence that the bottom-up position of initiators strengthens the pro-environmental identity of their group members. This pro-environmental identity is subsequently positively correlated with environmentally friendly behaviour. In the same study (Jans, 2021) shows that even though top-down presented initiatives also strengthen the pro-environmental identity, the correlation is

not found to be as strong as with bottom-up presented initiatives. Aside from this research, not a lot of other research has been done on the impact of the top-down or bottom-up presented initiatives on acceptability of initiatives.

### **Values**

Jans (2021) described the influence of the top-down and bottom-up positioned initiators presenting a green initiative on pro-environmental identity, hypothetically, it would make sense that people would support an initiative presented by both the top-down and bottom-up initiators when they present it with a biospheric value. This raises the question if the same would be true when initiators present the initiative with a different value.

In research by van Sloot et al. (2021) an appeal was made on different values of the participants. The effect that these values had on the participation in communal environmental initiatives was measured. Biospheric, communal and financial values were examined in this research. Someone with a biospheric value stands for caring for the environment, a person with a communal value stands for commitment to their communities, and someone with a financial value stands for caring about personal resources as money and possession. No difference was found in participation depending on the different appeals that were made. This is in line with what Bolderdijk et al. (2013) and Schwartz et al. (2015) demonstrated in their research. As demonstrated in research by Bouman et al. (2020) values of a group also influence whether or not environmental friendly values are personally endorsed by the individual group members. In this research it's reported that a perceived biospheric group value influences the personal environmental friendly value of individual group members. This shows that group values could potentially influence people to change their behaviours linked to environmental outcomes. The same is shown in research by Nilsson et al. (2004), in which it is found that among policy makers

who work in the public sector and who identify themselves with caring for the environment, the acceptance of environmental policies is higher than when these policy makers identify themselves less with caring about the environment. Most of the research that has been done focuses on the values of the receiver of the presented initiative, and not on the values of the initiator themselves.

### **Perceived Endorsement**

*Perceived endorsement* is another factor that can influence the extent to which a new behaviour or idea is accepted. With this the perceived support that others have for a certain topic as felt by the individual is meant. In the aforementioned research done by Bouman et al. (2020) they demonstrated the importance of group values as perceived by the participants for their own sustainable behaviour. In relation to this, Lewandowsky et al. (2019) demonstrated that internet users' own beliefs about climate change was co-founded by the perceived consensus of other internet users about this topic. Not a lot is known about the effect of perceived endorsement on the acceptance of new initiatives. It would be interesting to see if people with a higher level of perceived endorsement are also more likely to accept a new initiative than people who have a lower level.

### **Current Research**

Considering the identified gaps in research on top-down vs. bottom-up positions of initiators, the presented values of the initiators and the effect of perceived endorsement on acceptability of new initiatives, it was decided to combine these variables in the current study. To do this the following research question was thought of: To what extent is the acceptance of an eco-friendly initiative among students influenced by the top-down or bottom-up position of the initiators? To determine this an initiative was thought of that could be presented in both of these

ways. For practicality it was decided that this was to be an initiative that could be presented from the different positions at a location that was available to the thesis group.

As was mentioned before, waste leads to problems for the environment. Disposable plastic items end up in seas more often than non-disposable ones (European Commission, n.d.). The European Commission (n.d.) also mentions that 70% of litter that can be found on European beaches consists of the ten most commonly found single-use plastic items and fishing gear. Initiatives against the usage of disposable plastic cups can be instated top-down, as the European Commission is also currently trying to implement (n.d), but also have the potential to be thought of by bottom-up initiators. Based on this the decision was made to focus on an initiative that proposed to stop the usage of disposable cups, and encouraged the usage of reusable cups.

The position of the initiator will be researched in combination with biospheric and egocentric values of the presented initiators. The decision for these two values was made as both values are very different, but both come up in the current environmental discussions. As is seen in the example of the current Dutch government plans to counter climate change a good solution has to be made that balances biospheric values and egocentric values, all in a timely manner. This research will try to provide more clarity on the role that position and values of the initiators plays on the acceptance of sustainable initiatives. Furthermore, this research will focus on the presented values of the initiators instead of the values of the participant, since not a lot of research has been done on that before. The effect of perceived endorsement on acceptability of an initiative will be researched in this current study as well.

## **Hypotheses**

The following hypotheses have been devised:



**(H1)** More acceptance of the initiative is expected when bottom-up presented initiators present their initiative than when top-down presented initiators do the same.

**(H2)** More acceptance of the initiative is expected when the initiative is presented with a biospheric value than when it is presented with an egocentric value.

**(H3)** Most acceptance of the initiative is expected with the bottom-up + biospheric condition, followed by the bottom-up + egocentric condition, then the top-down + biospheric condition, with the least acceptance expected by the top-down + egocentric condition.

**(H4)** It is expected that when participants are measured having a high perceived endorsement of other students their acceptance, a higher acceptability of the initiative will be found than when they are measured having a low perceived endorsement.

## Methods

### Participants and Procedure

Through our online questionnaire, we recruited a total of 165 participants. All participants are students at the University of Groningen. 74% of the participants identified as female ( $n = 122$ ), 24% of participants identified as male ( $n = 40$ ), and 1% of the participants identified as other ( $n = 2$ ). 1 participant (1%) preferred not saying their gender. 64% of the participants stated they are from the Netherlands ( $n = 105$ ), 16% of the participants stated they are from Germany ( $n = 27$ ), 15% stated they are from a different EU country ( $n = 24$ ) and 6% of participants stated they are from a country outside of the EU ( $n = 9$ ). The mean age was 20.4 ( $SD = 1.89$ ), with a range from 18 to 31. Participants below the age of 18 were excluded from the dataset for ethical reasons. An a priori power analysis based on an Analysis of Variance (ANOVA) test, showed that 279 participants were required to achieve a medium effect size ( $f^2 = .25$ ) and power .95%.

Since we did not ask our participants for sensitive personal information (e.g., political preference or sexual orientation), our research was approved through the fast-track procedure of the Ethics Committee of Psychology at the University of Groningen. After receiving the approval, we uploaded our Qualtrics questionnaire to SONA. SONA is an online research portal, through which first-year psychology students can participate in research projects from other students at the University of Groningen. Participants were rewarded with 0.3 ‘SONA points’ for their participation.

At the beginning of the questionnaire, participants were told that they would be participating in a research project that would investigate their opinions on a new initiative that would be replacing disposable coffee cups by bringing their own mugs to the university. Furthermore, participants were told their participation was voluntary, and that the research would take about 10 minutes of their time. They were also informed that there was no risk in participating in the research, and that their data would be handled securely. The actual research purposes were held back, to ensure the participants were not primed or biased towards answering in a certain way. An informed consent form was shown to participants, and they were asked for their permission to share their data and answers with us.

After permission was given, participants were randomly assigned to one of the four texts and posters we designed to measure their responses. The texts consisted of a made up ‘U-krant’ article about the replacement of paper cups by students bringing their own cups. After reading the article, participants were asked to give their opinion on the initiative. Furthermore, participants were asked to rate certain values and rate their identification with certain groups on a Likert Scale. After completing all the questions, the participants received a debriefing, stating the actual purposes of the research.

## **Design**

We designed an online questionnaire in the form of a 2x2 between-subjects experimental design. Through Qualtrics, participants were automatically placed in one of four experimental conditions randomly. Each condition had its own unique manipulation text, which was a fictional ‘U-Krant’ article. Through our first manipulation, conditions varied in the initiators of the initiative: students of the university (Bottom-Up) vs. the Executive Board (Top-Down). Through the second manipulation, the initiator’s motivation behind the initiative varied (biospheric values vs. egocentric values). These two manipulations created four unique ‘U-krant’ articles (Appendix A, figures A1, A2, A3 and A4). The independent variables in this study are the position of the initiators, the values of the initiators, and perceived endorsement. The dependent variable in this study is acceptability of the initiative.

We informed participants that participation was voluntary, that they could end their participation at any time and that their answers would be made anonymous.

## **Materials and Instruments**

The materials used for this study consisted of four different manipulation texts in both Dutch and English with complementing posters (Appendix A, figures A1, A2, A3, A4) and our questionnaire, in both English (Appendix B) and Dutch (Appendix C).

The condition texts were written in such a way that they mostly consisted of the same information. Based on the different conditions some parts were altered. The text and poster based on the conditions top-down + biospheric value (Appendix A, figure A1) presented the reader with the information that the initiative was thought of by members of the Executive Board, motivated by a biospheric value. The text and poster based on the conditions top-down + egocentric value (Appendix A, figure A2) contained the same top-down information as the first

condition, but with the egocentric value added. The bottom-up + biospheric value condition text contained information about the initiators being students and their biospheric motivation (Appendix A, figure A3). The bottom-up + egocentric value condition (Appendix A, figure A4) text contained the same bottom-up information about the student initiators, but now motivated by an egocentric value. A more in-depth explanation of the different condition texts and posters can be found in Appendix A.

### **Measures**

After reading one of the articles and the included poster, participants filled in the questionnaire. In the first block, participants were asked to indicate their acceptability regarding the initiative. They could answer different items on a seven-point Likert scale. The items that are included in this scale were based on previously conducted research by Judge et al. (2021) and Perlaviciute et al. (2016). The descriptive statistics and reliability of this scale, as well as the items that were included can be found in Appendix D, table D1.

In the second block, the willingness to adapt to the initiative was measured. This block will not be discussed further, since it is not relevant to this research.

In the third block of the survey, we asked about the personal values of the survey participants. This information is not useful for this research, so it will not be discussed any further.

The fourth block assessed the values that participants perceived the initiators to prioritize. Eight different items could be answered using a seven-point Likert scale. The items for this block were based on previous research by Steg et al. (2012). The items in this block were divided into two different scales, one for biospheric value score and one for egocentric value score. The reliability and descriptive statistics of the initiators' perceived biospheric value scale, as well as

the included items and their descriptive statistics can be found in Appendix D, table D2.

Appendix D, table D3 includes the same information for the initiator's perceived egocentric value scale.

In the fifth block, participants had to indicate to what extent they feel connected to the University of Groningen. Since this block is not relevant to the research, it will not be discussed any further.

The sixth block of the questionnaire measured the perceived endorsement and consisted of four items. The participants answered these items on a seven-point Likert scale. This block also contained items that questioned perceived endorsement from RUG board members, but since this is not relevant to the current research, these will not be discussed further. The items in this block were based on previous research by Bouman and Steg (2022), Bouman et al. (2020) and Lewandowsky et al. (2019). The descriptive statistics, reliability and included items of this scale can be found in Appendix D, table D4.

In the seventh block, we asked participants to answer questions about the extent to which they identify with two groups, the Executive Board and students of the University of Groningen. This block will not be discussed further, since it is not relevant to the current research.

The eight block asked the participants to fill in some personal and demographic information about themselves. Since this is not relevant to the current research, this will not be discussed any further.

### **Attention Check**

At the end of the questionnaire, a question was included to check whether the participants were paying attention during their participation. In this multiple choice question, participants were asked what they had read about in the article. The options were as follows: 1: *"I read about*

*a group of students from the University of Groningen that wants to encourage people to bring their own cup or mug to save money”, 2: “I read about a group of students from the University of Groningen that wants to encourage people to bring their own cup or mug to help the environment”, 3: “I read about the Executive Board of the University of Groningen that wants to encourage people to bring their own cup or mug to save money”, 4: “I read about the Executive Board of the University of Groningen that wants to encourage people to bring their own cup or mug to help the environment”.*

Before the analysis of the collected data the attention check was performed. Participants who failed to correctly fill in the attention check were removed. Even though this removed 67 of the still remaining  $n = 235$  participants, it was decided that there was a probability that a number of these participants did not have the assigned condition in mind while filling out the questionnaire. Based on this, the decision was made to remove them from the dataset.

### **Manipulation Check**

The scales of perceived values of the initiators were used to check for the success of the manipulation. The description of these scales can be read above, where the fourth block is discussed. The descriptive statistics and the reliability of these scales, as well as the included items can be found in Appendix D, table D2 and table D3.

Before the manipulation check was conducted, the collected data was cleaned. Participants who did not want their data to be used in the analysis were taken out of the dataset ( $n = 2$ ). One participant was removed from the data as they filled out the complete questionnaire in under two minutes. After inspecting their answer pattern in which they consistently filled out only the fourth option and later on in the questionnaire only the fifth option on the Likert scale, it

was concluded that the provided answers could not have been given while making a serious attempt to participate. In the end 165 participants remained.

The manipulation check was conducted to find out if the provided conditions were an effective way to manipulate the participants as intended. The intent was to manipulate the participants in the two biospheric conditions in such a way that they would perceive the value of the initiators as more biospheric than egocentric, and vice-versa.

The participants in the biospheric conditions ( $n = 85$ ) estimated that the values of the initiators were significantly more biospheric than egocentric  $t(163) = 5.406, p < 0.001$ . For the participants in the egocentric conditions ( $n = 80$ ) no significant difference could be observed in their estimated values of the initiators  $t(160) = 1.139, p = 0.257$ . It can be concluded that the biospheric manipulation was successful, and the egocentric manipulation was not.

## Results

### Descriptive statistics

After the data was gathered and cleaned up, the data of 165 participants remained to be analysed. As mentioned in the method section, the participants were randomised into 4 different conditions. To give an overview of the numbers of participants that were assigned to the different conditions table 1 is included. Table 1 contains the number of participants per condition. These were the top-down ( $n = 66$ ) or bottom-up condition ( $n = 99$ ), and the biospheric ( $n = 85$ ) or egocentric condition ( $n = 80$ ).

**Table 1**

*Number of Participants per Condition*

	Top-down	Bottom-up
Biospheric	32	53

Egocentric 34 46

To get a clear picture of the main variables and their relation to each other calculations of their correlations were made. This would provide an overview of the direction and strength of their relations. The results can be found in Table 2. Not all correlations are significant. To be exact, the variable perceived eEgocentric value only correlates significantly with the perceived biospheric value variable, and not with the other variables. All other correlations are significant at at least a  $p < .05$  level, and the variable acceptance correlates with perceived biospheric value and perceived endorsement at a  $p < .01$  level, as does perceived biospheric value with perceived egocentric value.

**Table 2**

*Bivariate Pearson Correlations Between All Variables*

	<i>N</i>	<i>M</i>	<i>SD</i>	1	2	3	4
1. Acceptance	165	5.57	.84	1			
2. Perceived Biospheric Value	165	5.53	1.26	.35**	1		
3. Perceived Egocentric Value	162	4.02	.97	-.03	-.24**	1	
4. Perceived Endorsement	164	4.72	.82	.47**	.20*	-.02	1

Note. \*\* =  $p < .01$

Note. \* =  $p < .05$

### Testing of Hypotheses

#### *Effect of Bottom-up or Top-down Initiators on Acceptability*

To test the first hypothesis of the effect of the bottom-up or top-down presented initiators on the acceptability of the initiative, an independent t-test was conducted. First the participants

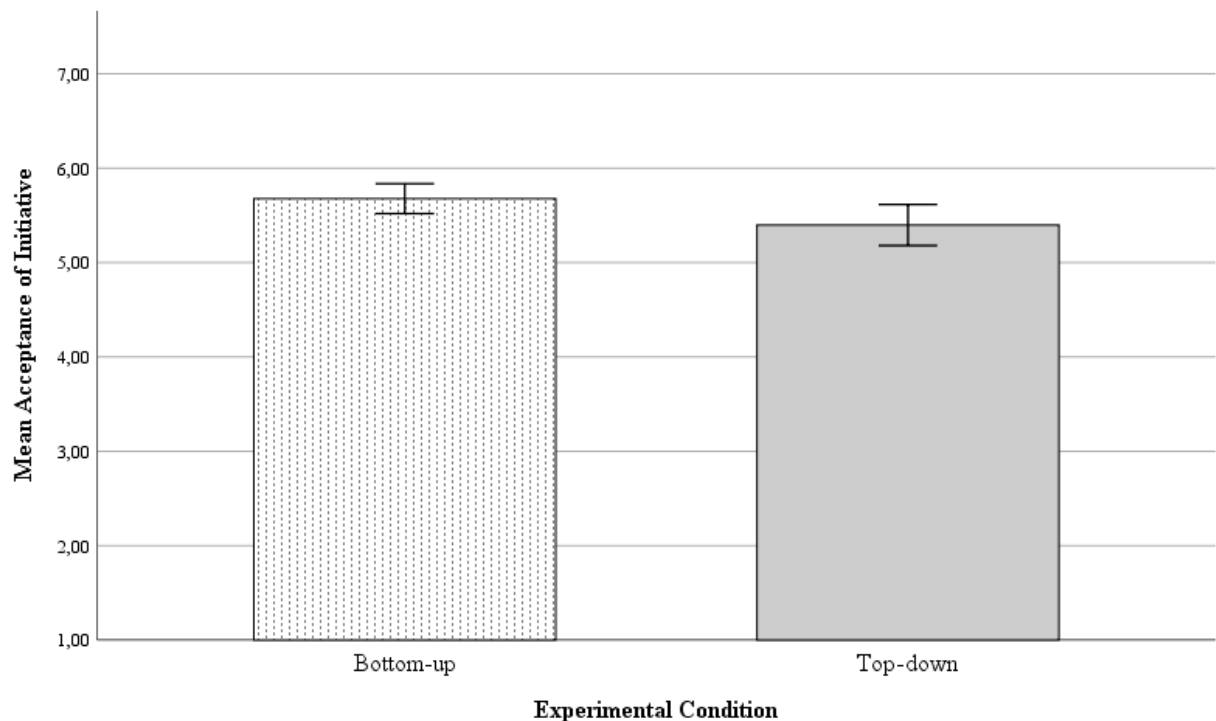


were merged into a new bottom-up/ top-down variable. All the participants who were assigned to one of the bottom-up conditions were merged ( $n = 99$ ). The participants who were assigned to one of the top-down conditions were also merged ( $n = 66$ ). After this the assumptions were checked, none of them were violated. Levene's test established that equal variance could be assumed ( $p = .390$ ).

After conducting the independent t-test participants in the bottom-up condition were found to score significantly higher ( $M = 5.68, SD = .79$ ) on acceptability of the initiative than participants who were assigned to the top-down condition ( $M = 5.40, SD = .88$ ). The independent t-test showed a significant difference between the two groups  $t(163)2.11, p = 0.016$ . These results are made graphical in figure 1. Thus, it can be concluded that hypothesis H1 is supported.

**Figure 1**

*Mean difference in Acceptability of Initiative between Bottom-up and Top-down Conditions*



*Note.* Error bars represent 95% confidence intervals.

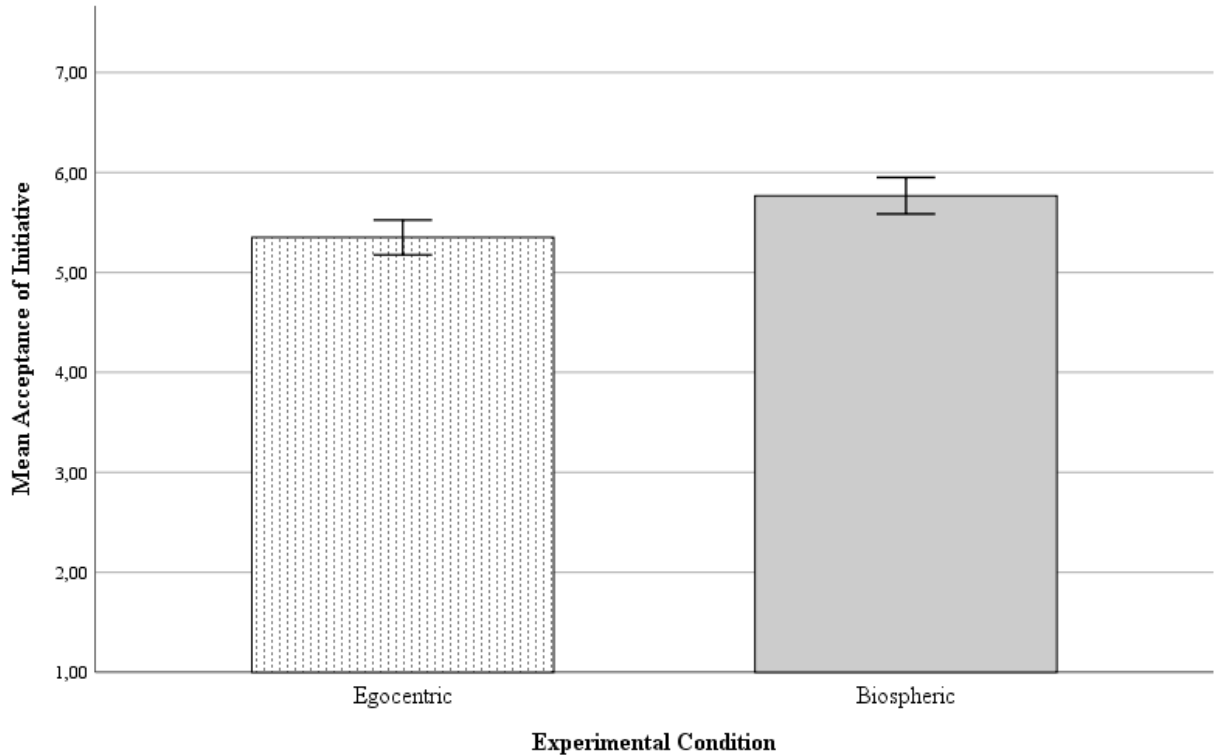
### ***Effect of Biospheric or Egocentric Values on Acceptability***

To test the second hypothesis of what the effect is of presenting the initiative with a biospheric or egocentric value of the initiator on the acceptability of the initiative, the same process was performed. First the participants were merged, now creating a new variable of the presented value (biospheric or egocentric), where the participants of the two biospheric conditions were merged ( $n = 85$ ), and the participants of the two egocentric conditions were merged as well ( $n = 80$ ). After this the assumptions for an independent t-test were checked. Levene's test established that equal variance could be assumed ( $p = .39$ ). Except for the normality, none of the assumptions were violated. Because of the amount of participants robustness could be assumed, and based on this, an independent t-test could be performed.

After conducting the test it was found that participants who were assigned to the biospheric condition were found to score significantly higher on acceptability of the initiative ( $M = 5.77$ ,  $SD = .85$ ) than participants assigned to the egocentric value condition ( $M = 5.35$ ,  $SD = .78$ ). The independent t-test showed a significant difference between the groups  $t(163) = 3.28$ ,  $p < .001$ . It can be concluded that hypothesis H2 is supported by these results. A graphical overview of these results can be found in figure 2.

### **Figure 2**

*Mean difference in Acceptability of Initiative between Egocentric Value and Biospheric Value Conditions*



*Note.* Error bars represent 95% confidence intervals.

### ***Combined Effect of Values and Position on Acceptability***

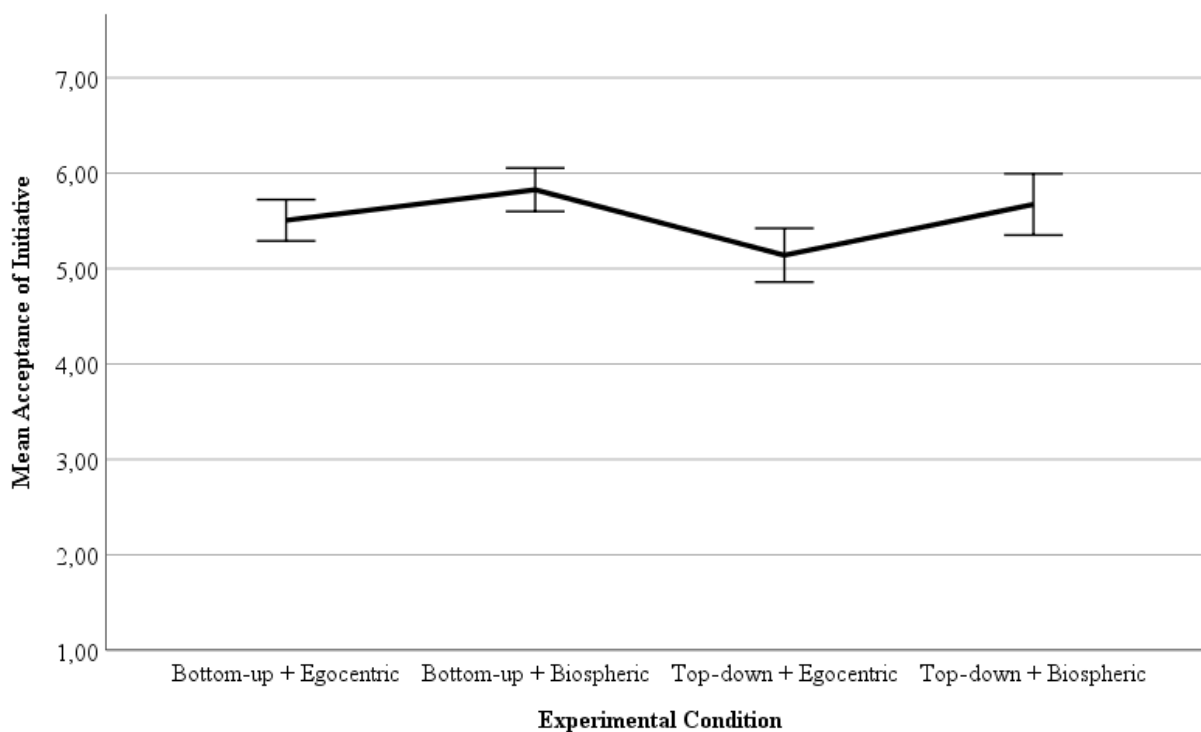
To test the third hypothesis on the effect of all conditions combined on acceptability a one way ANOVA was performed. To do this first the assumptions were checked. None of them were violated. Independent observations were done, there were enough participants to assume normality, and Levene's test established that equal variance could be assumed ( $p = .39$ ). Then the one way ANOVA was performed. A significant effect was found in the results:  $F(3,161) = 5.22$ ,  $p = 0.002$ ,  $\eta^2 = .09$ .

To conclude which of the conditions differed significantly from each other a post hoc analysis had to be performed. To see how many participants were included in every condition table 1 can be consulted above. The Bonferroni method was selected as post hoc analysis, to correct for family-wise error. It was found that the conditions bottom-up + biospheric ( $M = 5.83$ ,

$SD = .83$ ) and top-down + egocentric ( $M = 5.14$ ,  $SD = .81$ ) differed significantly ( $p = 0.001$ ). So did the conditions top-down + biospheric ( $M = 5.67$ ,  $SD = .89$ ) and top-down + egocentric ( $p = 0.05$ ). Other combinations of the four conditions, including the not yet mentioned bottom-up + egocentric condition ( $M = 5.56$ ,  $SD = .73$ ), did not differ significantly from each other. The output of these post hoc tests is included in table E1 in Appendix E. Included in that table are the significance levels of the different comparisons. Thus after analysis, it can be concluded that H3 is not supported. To clarify these results an overview can be found in figure 3. Here the mean differences can be found between the four experimental conditions, with 95% CI included.

**Figure 3**

*Mean difference in Acceptability of Initiative between the Experimental Conditions*



*Note.* Error bars represent 95% confidence intervals.

***Effect of Perceived Endorsement of Others Groupmembers on Acceptability***

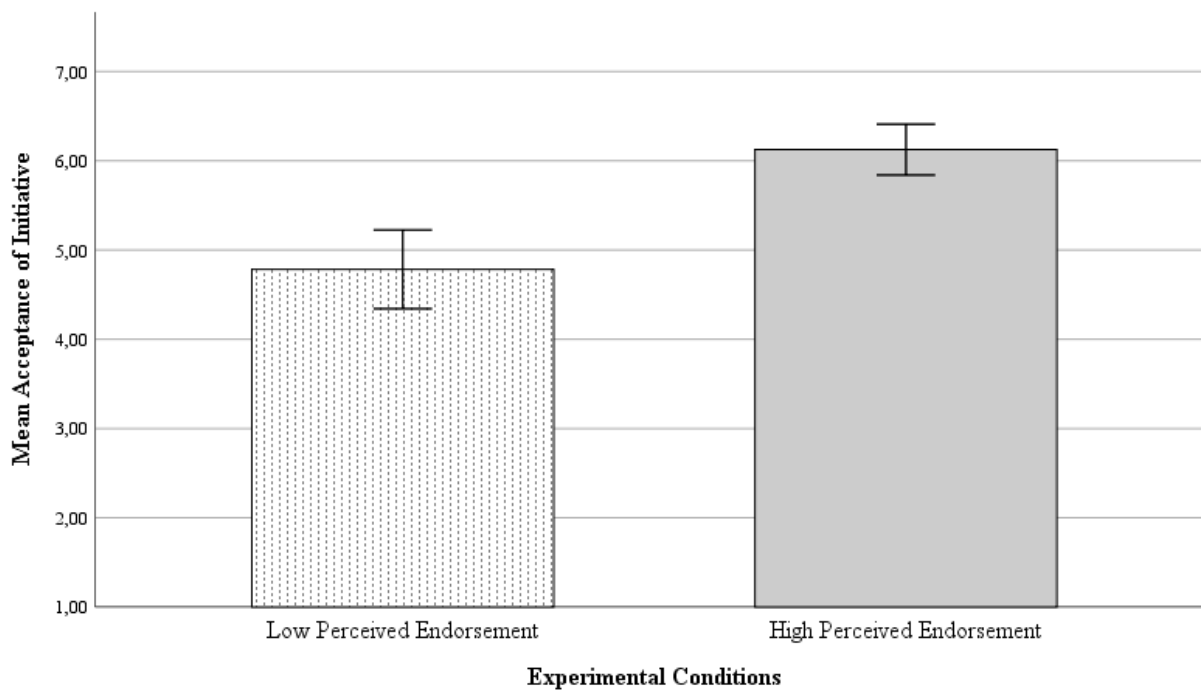
To test the third hypothesis on the effect of a high or low level of perceived endorsement of others on the acceptability of the initiative another independent t-test was performed. First calculations were done to find out what a high or low level of perceived endorsement entailed. The low level of perceived endorsement group consisted of participants scoring one standard deviation below the mean and the high level of perceived endorsement group consisted of participants scoring one standard deviation above the mean. The scores between 0 and 3.90 made up the low level of perceived endorsement ( $n = 22$ ), and the scores between 5.54 and 7 made up the high level ( $n = 20$ ). These were recoded into a different variable called: “Perceived Endorsement Students Low-High”.

After this the assumptions were checked. A test for homogeneity of variances was performed by using a Levene’s test ( $p = .06$ ), which indicates that homogeneity of variance can be assumed. Then an independent t-test was performed. It was found that participants who scored high on perceived endorsement ( $M = 6.13$ ,  $SD = .61$ ) scored significantly higher on acceptability than participants who scored low on perceived endorsement ( $M = 4.78$ ,  $SD = .99$ ),  $t(40) = 5.20$ ,  $p < .01$ . Thus, H4 is supported. For clarification of these results figure 4 is included.

**Figure 4**

*Mean difference in Acceptability of Initiative between the Conditions Low Perceived*

*Endorsement and High Perceived Endorsement of other Students*



*Note.* Error bars represent 95% confidence intervals.

## Discussion

### Interpretations

This research was conducted with the goal of finding out more about the effects of values and the position of initiators on the acceptability of a sustainable initiative. After analysing the collected data it can be concluded that both presented value (egocentric or biospheric) and top-down or bottom-up position of the initiators led to significant outcomes in this research. The participants who read the manipulation texts that described initiatives created by initiators motivated by a biospheric value were rated higher on the acceptability scale than when the participants read about initiators motivated by egocentric values. This is in line with what was expected after reading the research by Bouman et al. (2020) and Nilsson et al. (2004) in which they describe that people are more willing to accept environmental initiatives or policies when they perceive the biospheric value of the initiators. The outcome does differ from the outcomes

from the studies by van Sloot et al. (2021), Bolderdijk et al. (2013) and Schwartz et al. (2015), who found that values did not really matter to participants, only if it was in accordance with their own. With this in mind, it is possible that in the current research mostly students participated who identified with the biospheric value and thus with the biospheric value condition, and who identified less with the egocentric value condition.

Along with this it was found that when the initiators were presented as having a bottom-up position the participants scored significantly higher on acceptability of the initiative than when they were presented with the initiators having a top-down position.

Interestingly enough, when combining the two different variables it was found that only a few of these combinations led to significant results. Participants in the bottom-up + biospheric value condition scored significantly higher on acceptability than the participants in the top-down + egocentric value condition. It was also found that participants in the top-down + biospheric value condition scored significantly higher than participants in the top-down + egocentric value condition. No significant difference was found between the other combinations.

The result seems to be in line with the research done by Jans (2021) in which she demonstrated that both top-down and bottom-up presented initiatives strengthen the participants' pro-environmental identity. No significant difference was found in acceptability between the bottom-up + biospheric value condition and the top-down + biospheric value condition, which means that the conditions both trigger the participants to an almost equal extent.

The result also is in line with the research by van Sloot et al. (2021) in which they found that values might only motivate people who already apply this value to themselves. They suggest that presented value does not seem to matter, if only the presented information can be understood as being in accordance with the participants own values. It is interesting to see that this seems to

be true in the bottom-up conditions of this research, but that for the top-down conditions the presented values did show significant difference on acceptability. It is also interesting to see that there is a significant difference between the bottom up + biospheric value condition and the top-down + egocentric value condition, but not between the top-down + biospheric value condition and the bottom-up + egocentric value condition. It could be that participants have certain expectations of initiators, which could possibly lead to more ambiguous scores when these expectations are not met.

Finally, it was also found that when the participants scored higher on perceived endorsement they also significantly scored higher on the acceptability of the initiative than when the participants scored lower on perceived endorsement. When the participants estimated that other students accepted the initiative, they themselves scored higher on acceptability, than when they felt that other students would not accept the initiative. Lewandowsky et al. (2019) demonstrated the same principle on the importance of perceived endorsement in their study. The current study expanded on this study by demonstrating that the level of acceptance is influenced by the degree of perceived endorsement that participants sensed.

## **Implications**

### ***Theoretical Implications***

This research provides more information on the possible variables that influence people's acceptance towards new initiatives, more specifically sustainable initiatives. It provides more information on the importance of values, and the importance of who the presented initiator is. It builds further on the already available information on values. In addition, it shows the effects of the combination of both the initiators' position and their presented values, which has not been done in a lot of research before. The research brings up the importance of the combination of



these two variables, and shows that it could be possible that for the acceptance of new initiatives it is important to take into account the presented values for different types of initiators.

Another factor that has not been widely researched before but that was found to be significant in this study was perceived endorsement. Research on perceived value endorsement and perceived consensus and their effect on sustainable behaviour and beliefs was performed before, but to the best of my knowledge never performed on the actual perceived endorsement of an initiative. The results of this study provides evidence that perceived endorsement has a significant effect on acceptance of a new initiative. It would be interesting to examine this more in the future.

### ***Practical Implications***

In the current study the importance of initiators and what their position is in relation to the receiver of the initiative was shown, with students. It was hopeful to see that both top-down and bottom-up presented positions led to acceptance. Based on this study, it could be possible that everyone could present an initiative to their group, and people should be able to accept it. Albeit, according to previous studies, the values of the receiver of the initiative should be taken into account, especially when it is presented by people in a top-down position. This study sheds more light on the role of positionality of initiators and the influence this has on acceptability outcomes.

Based on this current research more strategic ways can be thought of to present new initiatives in accordance with the found results. It was found that the presented value was important for the acceptability outcome when the initiators had a top-down position. This is something that top-down initiators could take into account when presenting new initiatives.

The current study provides educational institutions and students very practical information if they would like to implement small initiatives like the one described. The study shows that not only the boards can expect acceptance of their initiatives, the study also provides evidence that students themselves can expect it.

### **Limitations**

A few limitations have to be considered while reading the current study. One of them being the group of participants that was selected for this study. The selected participants were students of the University of Groningen. They had a mean age of 20.4, and almost three quarters of the participants identified themselves as female. The question has to be raised how representative this is of society. The results of this study tell something about the effect of the conditions on university students in Groningen, and not about the effect it can have on a more general population.

A limitation that had to be dealt with in this current study was the lack of participants successfully filling out the attention check. A little over a third of the total participants had to be removed based on this. This had consequences for the power of this research. This means that the found results have a bigger chance of being produced by error. Especially for the last two variables that were measured, group identification and perceived endorsement, the sample size became very small after creating the high and low ranking of the scales.

In the current study the choice was made to present the initiative with the help of a written article accompanied by a poster. After the manipulation check was performed it was concluded that the manipulation was not significant for the participants in the egocentric condition. It could be possible that different effects would have been found if other means of presentation were chosen.

This research did not contain a control group. In this research a no value manipulation and a none positioned initiator manipulation were not included. This means that the effect of a manipulation text without values could not be measured against the two used values. Nor could the effect of a text with no positioned initiators could be measured against the now used positions of the initiators. Incorporating this could provide more information about the effects of these variables against a control group, and not only compared to another group. This could give a more nuanced portrayal of reality.

### **Recommendations**

To improve the limitations of the current research, measures can be instated. To help with the problem of power more participants are needed. Another measure that could be instituted to help with this is trying to create stronger manipulations that help participants better remember the condition they were in. If this can be done successfully more participants will hopefully be able to fill in the attention check successfully, which leads to less participants having to be removed from the experiment. A few ways to achieve this could be providing participants with more information on the initiators and initiatives, or including more or stronger imagery. For instance photographs or commercials of initiators could be provided. This could simultaneously help solve the issue with the unsuccessful manipulation of the participants in the egocentric condition. It would be interesting to see if different forms of presentation of the conditions would lead to different effects.

To achieve a more thorough understanding of the role that positionality of the initiators and their presented values play, it would be beneficial for future researchers to include a control condition in their research. By including this more can be found out about whether values and positionality actually benefit acceptance of initiatives, or if a more neutral way of presenting new

initiatives yields equivalent results. Including a control condition could also provide a better representation of real life, as it is probably more often the case that a group of people thinks of an initiative based on their own values, instead of someone thinking of an initiative and deciding their values and who should present it after. With the information that a control condition could provide, a better understanding can be formed on when to provide information on the initiators' values, and when it would be better for the initiative to not do this.

It would be interesting for future researchers to focus more on the participants' own values compared to the values of the presented initiators. Sloot et al. (2021) suggest that once the initiative seems in line with the values of the participant they will likely agree more with it. It would be interesting to see if this effect can be found in research. This could have consequences for the way in which initiatives are presented, as personalization might help with acceptability. This is a topic that should be explored with caution, as this also could very well lead to cases of manipulation by initiators of initiatives to achieve their goals.

Something that builds onto this is that the current research suggests that participants might expect a certain value of certain initiators. This was suggested by the significant difference between the bottom up + biospheric value condition and the top-down + egocentric value condition, and the not significant difference between the top-down + biospheric value condition and the bottom-up + egocentric value condition. This expected value for initiators is something that would be interesting to take into account in future research to find out the best ways certain initiators should present themselves based on expectancy.

A last recommendation is that more research on this topic should be conducted to get a broader perspective on the different factors that affect people's acceptance of initiatives like the one presented here. It is recommended to include different groups of participants, and not

exclusively students. It would be compelling to see what people who are part of the described top-down group themselves would rate on acceptability of a described initiative.

Given the eta-square ( $\eta^2$ ) of .09 that was calculated for the one-way anova into consideration, only 9% of the current explored model which included the initiators' values and initiators' position is explained by variance. It would be interesting to look for other causes that influence the acceptance of the in this study presented initiative. One of those factors could be perceived endorsement, but more research on this is needed since not a lot is known about it yet.

### **Conclusion**

The current research shows the ways in which top-down or bottom up positionality in combination with presented values results in different effects on the acceptability of a new initiative among students. It also provides evidence that a high perceived endorsement for other group members results in a significantly higher effect of acceptability of the initiative than when they are low.

The current study provides initiators of (green) initiatives with different aspects they can consider while presenting it. Values are found to be important to take into consideration while presenting an initiative. As these are not something initiators might take into consideration to change about themselves while presenting their initiative, this research does provide more information about what the effect can be, taking the initiators positionality into consideration. The research showed that both top-down and bottom-up initiators can expect a certain degree of acceptance when they present their initiative to reduce the usage of disposable cups, which provides hope for the future of green initiatives. In the end, it can be concluded that the future of green initiatives is everybody's cup of tea.

## References

- Bolderdijk, J. W., Steg, L., Geller, E. S., Lehman, P. K., & Postmes, T. (2013). Comparing the effectiveness of monetary versus moral motives in environmental campaigning. *Nature Climate Change*, 3(4), 413-416. <https://doi.org/10.1038/nclimate1767>
- Bouman, T., & Steg, L. (2022). A spiral of (in)action: empowering people to translate their values in climate action. *One Earth*, 5(9), 975–978. <https://doi.org/10.1016/j.oneear.2022.08.009>
- Bouman, T., Steg, L., & Johnson-Zawadzki, S. (2020). The value of what others value: when perceived biospheric group values influence individuals' pro-environmental engagement. *Journal of Environmental Psychology*, 71.
- European Commission. (n.d.). *Single-use plastics*. Retrieved June 8, 2023, from [https://environment.ec.europa.eu/topics/plastics/single-use-plastics\\_en](https://environment.ec.europa.eu/topics/plastics/single-use-plastics_en)
- Global Canopy. (2023, February 28). *2023: A watershed year for action on deforestation*. Forest 500. <https://forest500.org/publications/2023-watershed-year-action-deforestation>
- Flores, H., Motlagh, N. H., Zuniga, A., Liyanage, M., Passananti, M., Tarkoma, S., Youssef, M., & Nurmi, P. (2021). Toward large-scale autonomous marine pollution monitoring. *Ieee Internet of Things Magazine*, 4(1). <https://doi.org/10.1109/IOTM.0011.2000057>
- Jans, L. (2021). Changing environmental behaviour from the bottom up: the formation of pro-environmental social identities. *Journal of Environmental Psychology*, 73. <https://doi.org/10.1016/j.jenvp.2020.101531>

- Judge, M., de Hoog, O., Perlaviciute, G., Contzen, N., & Steg, L. (2021). From toilet to table: value-tailored messages influence emotional responses to wastewater products. *Biotechnology for Biofuels*, *14*, 1-12. <https://doi.org/10.1186/s13068-021-01931-z>
- Lewandowsky, S., Cook, J., Fay, N., & Gignac, G. E. (2019). Science by social media: attitudes towards climate change are mediated by perceived social consensus. *Memory & Cognition*, *47*(8), 1445–1456. <https://doi.org/10.3758/s13421-019-00948-y>
- Middlemiss, L., & Parrish, B. D. (2010). Building capacity for low-carbon communities: the role of grassroots initiatives. *Energy Policy*, *38*(12), 7559–7566. <https://doi.org/10.1016/j.enpol.2009.07.003>
- Nilsson, A., von Borgstede, C., & Biel, A. (2004). Willingness to accept climate change strategies: the effect of values and norms. *Journal of Environmental Psychology*, *24*(3), 267–277. <https://doi.org/10.1016/j.jenvp.2004.06.002>
- Perlaviciute, G., Steg, L., & Hoekstra, E. J. (2016). Is gas perceived as sustainable? Insights from value-driven evaluations in the Netherlands. *Energy research & social science*, *20*, 55-62. <https://doi.org/10.1016/j.erss.2016.06.002>
- Raad van State. (2019, May 29). *PAS mag niet als toestemmingsbasis voor activiteiten worden gebruikt*. <https://www.raadvanstate.nl/actueel/nieuws/%40115651/pas-mag/>
- Seyfang, G., & Haxeltine, A. (2012). Growing grassroots innovations: Exploring the role of community-based initiatives in governing sustainable energy transitions. *Environment and Planning C: Government and Policy*, *30*(3), 381-400. <https://doi.org/10.1068/c10222>
- Schwartz, D., Bruine de Bruin, W., Fischhoff, B., & Lave, L. (2015). Advertising energy saving programs: The potential environmental cost of emphasizing monetary savings. *Journal*

*of Experimental Psychology: Applied*, 21(2), 158-166.

<https://doi.org/10.1037/xap0000042>

Steg, L., Perlaviciute, G., Van der Werff, E., & Lurvink, J. (2014). The significance of hedonic values for environmentally relevant attitudes, preferences, and actions. *Environment and behavior*, 46(2), 163-192. <https://doi.org/10.1177/001391651245>

United Nations. (2019, March 28). *Only 11 years left to prevent irreversible damage from climate change, speakers warn during General Assembly high-level meeting*. <https://press.un.org/en/2019/ga12131.doc.htm>

WHO & Craggs, A. ( 2021, October 30,). *Climate change and health*. World Health Organization (WHO). Retrieved March 13, 2023, from <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

WHO & Shimizu. (n.d.). *Climate change*. World Health Organization (WHO). Retrieved March 13, 2023, from [https://www.who.int/health-topics/climate-change#tab=tab\\_1](https://www.who.int/health-topics/climate-change#tab=tab_1)



## Appendix A: Manipulation Texts and Posts

Here the different conditions of the research can be found. These include a poster and a fabricated article. After each condition an explanation is given of what was changed to make it differ from the other conditions.

### Figure A1

*Top-down initiator + biospheric value condition written and designed by thesis group*



You read the following article in the U-krant:

### **University of Groningen launches sustainability initiative with coffee cups**

The executive board of the University of Groningen is drawing attention to the impact of disposable products on the environment. Through a sustainability initiative, the executive board wants to ensure that fewer disposable cups will be used at the university. They explain: "Making and recycling the disposable cups that are currently used at the university costs a lot of water and energy. In addition, they contain plastic. The cups are often used only once, and then disposed of incorrectly, making recycling difficult."

The executive board is asking RUG students to bring their own mug or cup to the university starting next

week. The executive board will draw attention to the issue with the help of posters at coffee machines spread across the various faculties of the RUG. On top of that, a newsletter with additional information will be distributed via email. The executive board continues: "By asking students to bring their own mug or travel cup from home, it is hoped that the use of disposable cups at the university will be reduced, thus allowing the university to make a positive impact on the environment."

The top-down part of this condition was made salient by providing quotes from the initiators in a corporate style that makes an appeal to the distance that the readers feel related to the initiators. The biospheric motive was corroborated by the quotes on the environmental impact that the initiative could have. On the poster the top-down condition was made clear by the use of the university's logo, and the biospheric condition was confirmed by the use of imagery that appealed to the feeling of environmental friendliness, such as leaves and hands holding the earth.

### Figure A2

*Top-Down initiator + egocentric value condition written and designed by thesis group*



You read the following article in the U-krant:

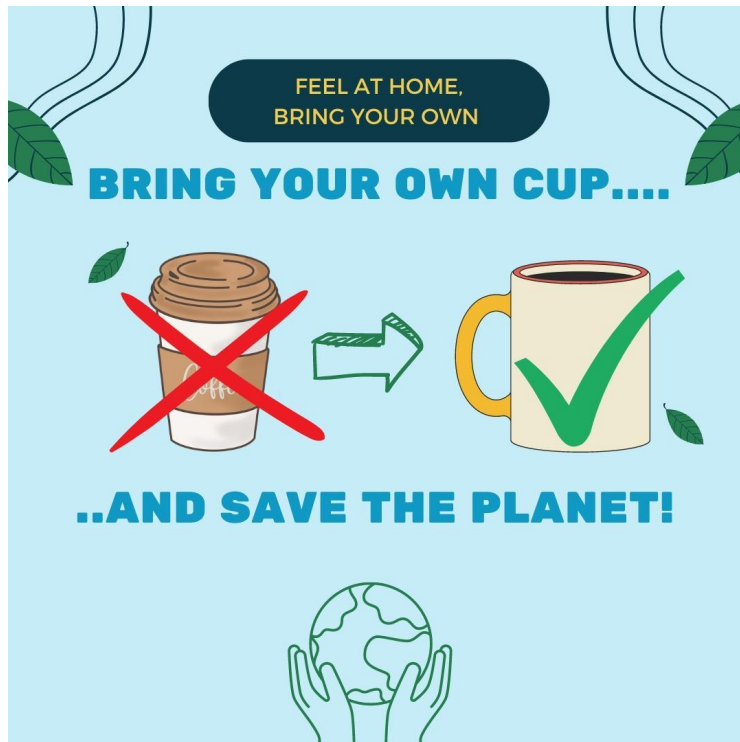
### **University of Groningen launches coffee cup initiative to save money**

The executive board of the University of Groningen wants to start saving money at the different faculties. Through an initiative, the university's executive board wants to ensure that fewer disposable cups will be used at the university. They explain: "The cups that are currently used at the university are expensive. As disposable cups are thrown away after use, new cups have to be purchased continuously. These are unnecessary costs. It would be more sensible if this budget could be spent differently. The university could use the budget freed up by the initiative for other purposes." The executive board is asking RUG students to bring their own mug or cup to the university from next week on. The executive board will draw attention to the issue with the help of posters at coffee machines spread across the various faculties of the RUG. On top of that, a newsletter with additional information will be distributed via email. The executive board continues: "By asking students to bring their own mug or travel cup from home, it is hoped that the use of disposable cups at the university will be reduced, thus saving the university money."

The top-down part of the condition is made clear by the portrayal of the Executive Board as initiators, the more corporate language, and the use of the university's logo on the poster. The egocentric condition was made saillant by the use of a monetary motive as reasoning for the initiative. This was also included in the poster, by including a picture of money.

### **Figure A3**

*Bottom-up initiators + biospheric value condition written and designed by thesis group*



You read the following article in the U-krant:

### **Students launch sustainability initiative with coffee cups**

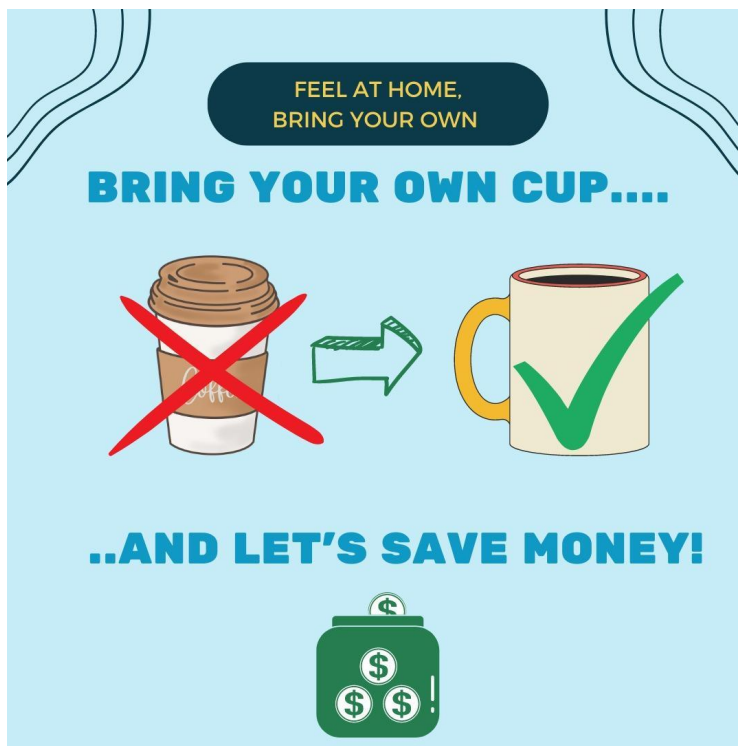
Five students from the University of Groningen want to draw attention to the impact that disposable products have on the environment. Maria (21), Thomas (23), Julia (22), Jayden (21) and Sven (20) have launched a sustainability initiative themselves to ensure that fewer disposable cups are used at the university. Jayden explains: "A few weeks ago, a few fellow students and I went to study at our faculty, and you know how it is, we got some coffee and refills. Then we noticed how many of those cups we used just in a few hours. When we threw away the cups, we also noticed how many of them ended up in the wrong bins. We started asking students from other faculties about this, and then did some research afterwards." Julia adds: "Making and recycling the disposable cups that are currently used at the university costs a lot of water and energy. In addition, they also contain plastic. The cups are often only used once, and then usually not even recycled." The group is asking fellow students to bring their own mug or cup to the university starting next week. They will raise awareness by hanging up posters at coffee vending machines scattered across the various faculties at the RUG. During the first few days, the

students themselves will also be present at various coffee corners and canteens to draw attention to the issue. "By bringing your own mug or travel cup from home, we think we can reduce the use of disposable cups at the university and by doing this we hope to lend a helping hand to the environment." explains Thomas.

The bottom-up condition was made more salient by the use of casual language usage in the quotes and providing some more context on the day-to-day life of these students, which could appeal to the identification of the reader with the presented initiators. The logo of the university was removed from the poster, to strengthen the appeal to the reader's connection with the bottom-up condition. The biospheric condition was made salient by providing quotes on the environmental impact of the initiative and by the use of icons on the poster that appeal to environmental friendliness.

#### Figure A4

*Bottom-up initiators + egocentric value condition written and designed by thesis group*



You read the following article in the U-krant:

**Students launch coffee cup initiative to save money**

Five students from the University of Groningen would like to save money within the university in order to organize more activities. Maria (21), Thomas (23), Julia (22), Jayden (21) and Sven (20) launched a campaign themselves to ensure that fewer disposable cups will be used at the university. Jayden explains: "A few weeks ago, a few fellow students and I went to study at our faculty, and you know how it is, we got some coffee and refills. Then we noticed how many of those cups we used just in a few hours. We started asking students from other faculties about this, and then did some research afterwards." Julia adds: "The cups currently in use at the university cost quite a bit of money. Because everyone throws away their cups after only one use, new cups have to be purchased all the time. This is an unnecessary cost. We think this could be better spent elsewhere. By saving on coffee cups, some savings can be built up that could be used for other things." The group is asking fellow students to bring their own mug or cup to university from next week on. They will raise awareness by hanging posters at coffee vending machines scattered across the various faculties at the RUG. During the first few days, the students themselves will also be present at various coffee corners and canteens to draw attention to the issue. "By bringing your own cup or travel cup from home, we think we can reduce the use of disposable cups at the university and by doing this we hope to save money." explains Thomas.

The bottom-up part of the condition was made salient by the casual language that was used in the quotes, and the inclusion of information about the students life. This was done so the readers could more easily identify themselves with the initiators. The university's logo was removed from the poster, to strengthen the appeal to the reader's connection with the bottom-up condition. The egocentric condition was made salient with the use of the provided quotes, these were presented in such a way that the monetary values of the initiators became clear. The poster contained imagery of money and a wallet, to appeal to the readers association with finances.

## Appendix B: English Questionnaire

**Thank you for participating in our study.**

This study will take about 10 minutes to complete, and you will receive 0.3 SONA credits after finishing it. First, you will read an article from the U-krant about a new initiative. After that, you are asked to fill out several questions.

### **Why do I receive this information?**

You are asked to participate in a study about your opinion on replacing disposable cups by bringing your own cup or mug. This study will help find more insights about how students evaluate this initiative. On the basis of a checklist developed by the EC-BSS at the university of Groningen, the study was exempt from full ethical review. The study is conducted by Wytse Gorter (principal investigator), Rozemarijn Ekkel, Sanne de Leeuw, Ruben van Zanten, Anne-Roos Smeets en Julia Vorenkamp. Rozemarijn Ekkel is your contact in case you have questions about this study (mail: [r.h.ekkel@student.rug.nl](mailto:r.h.ekkel@student.rug.nl)).

### **Do I have to participate in this study?**

Participation in this study is voluntary, but we need your permission to participate in this study. If you decide not to participate, you do not have to provide an explanation and there will be no consequences. During this study you can always decide to withdraw or stop if you do not want to continue.

### **What is asked from you during this study?**

First you will be asked to provide permission for participation in this study. Then you will read information about the initiative and after that you will have to answer some questions about your opinion of the initiative. Some demographic information will be collected like gender, age and country of origin. The study will take about 10 minutes in total.

### **What are the consequences of your participation?**

Your participation contributes to more knowledge about this topic. There are no risks involved in this study, but if you experience any discomfort as a result of the study, please inform Wytse Gorter directly or send him an email ([w.a.gorter@rug.nl](mailto:w.a.gorter@rug.nl)).

### **How is your data handled?**

Your answers will be kept in a secured network of the university, that can only be accessed by the principal investigator. The general results of this study will be reported in a research report, and they can be made public via presentations and scientific publications. The data can be openly shared for research, but that solely happens in a way that the identity of the participants cannot be traced. Be aware that your data cannot be removed from the analysis if your data has been submitted. This is because all your answers will be made anonymous, this means that there is no possibility to trace your answers back to you. If you wish to receive a notification when the study is published, please send an email to Wytse Gorter ([w.a.gorter@rug.nl](mailto:w.a.gorter@rug.nl)).

### **What else should you know?**

You can always ask questions before, during and after the study. If you have any questions about your rights as a participant, you can contact the Ethical Committee of the Psychology department from the University of Groningen ([ecp@rug.nl](mailto:ecp@rug.nl)). If you have any questions about your privacy and how your data will be managed, you can contact the Functionary of Data protection from the University of Groningen ([privacy@rug.nl](mailto:privacy@rug.nl)). If you do not want to participate in the study, you can stop now. If you do want to participate, please fill out the following bullet-point.

- o **Yes, I give permission to participate in this study. (1)**

- No, I don't give permission to participate in this study. With this, I will go to the end of the questionnaire. I will not receive any SONA-credits because of this. (2)**

**What else should you know?**

You can always ask questions by email before, during and after the study.

**Permission for data usage**

The collected data can be valuable for future research, like for a comparison with other cultures. Do we have your permission to use your data for future research?

- Yes, I give permission that my data may be used in the future for comparable research questions (1)**
- No (2)**

This questionnaire includes questions about personal information, like age and country of origin. This data is used to get more insight into the perspectives of different populations (for example young versus older participants). Do we have your permission to process your personal data?

- Yes, I give permission that my personal data may be processed (1)**
- No (2)**

This study consists solely of participants with the age of 18 or more. Please confirm that you are 18 years old or older.

- Yes, I am 18 years old or older (1)**

I am a student at the University of Groningen.

- Yes (1)**
- No (2)**

**[Here one of the following four conditions was randomly presented to the participants]**

**[Condition 1: Top-down initiator + biospheric value**



You read the following article in the U-krant:



### University of Groningen launches sustainability initiative with coffee cups

The executive board of the University of Groningen is drawing attention to the impact of disposable products on the environment. Through a sustainability initiative, the executive board wants to ensure that fewer disposable cups will be used at the university. They explain: "Making and recycling the disposable cups that are currently used at the university costs a lot of water and energy. In addition, they contain plastic. The cups are often used only once, and then disposed of incorrectly, making recycling difficult." The executive board is asking RUG students to bring their own mug or cup to the university starting next week. The executive board will draw attention to the issue with the help of posters at coffee machines spread across the various faculties of the RUG. On top of that, a newsletter with additional information will be distributed via email. The executive board continues: "By

asking students to bring their own mug or travel cup from home, it is hoped that the use of disposable cups at the university will be reduced, thus allowing the university to make a positive impact on the environment."]

#### [Condition 2: Top-Down initiator + Egocentric value

You read the following article in the U-krant:



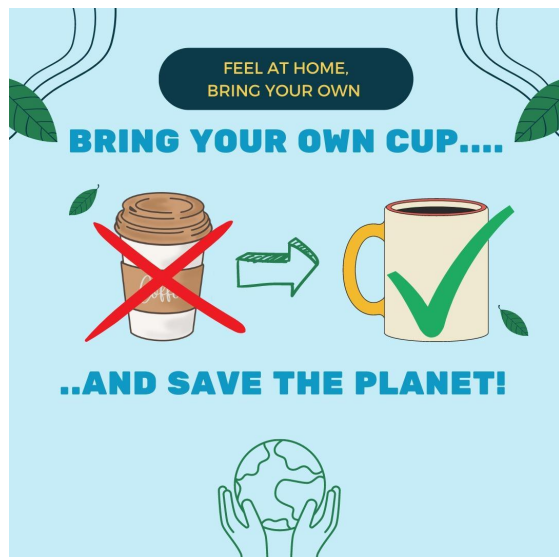
### University of Groningen launches coffee cup initiative to save money

The executive board of the University of Groningen wants to start saving money at the different faculties. Through an initiative, the university's executive board wants to ensure that fewer disposable cups will be used at the university. They explain: "The cups that are currently used at the university are expensive. As disposable cups are thrown away after use, new cups have to be purchased continuously. These are unnecessary costs. It would be more sensible if this budget could be spent differently. The university could use the budget freed up by the initiative for other purposes." The executive board is asking RUG students to bring their own mug or cup to the university from next week on. The executive board will draw attention to the issue with the help of posters at coffee machines spread across the various faculties of the RUG. On top of that, a newsletter with additional information will be

distributed via email. The executive board continues: "By asking students to bring their own mug or travel cup from home, it is hoped that the use of disposable cups at the university will be reduced, thus saving the university money."]

#### [Condition 3: Bottom-up initiators + biospheric value

You read the following article in the U-krant:



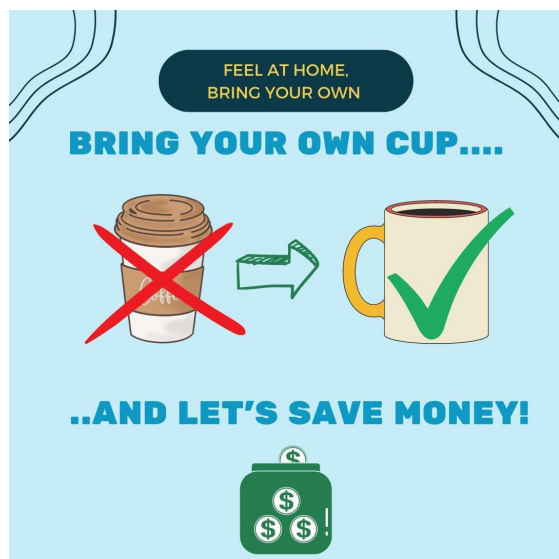
#### Students launch sustainability initiative with coffee cups

Five students from the University of Groningen want to draw attention to the impact that disposable products have on the environment. Maria (21), Thomas (23), Julia (22), Jayden (21) and Sven (20) have launched a sustainability initiative themselves to ensure that fewer disposable cups are used at the university. Jayden explains: "A few weeks ago, a few fellow students and I went to study at our faculty, and you know how it is, we got some coffee and refills. Then we noticed how many of those cups we used just in a few hours. When we threw away the cups, we also noticed how many of them ended up in the wrong bins. We started asking students from other faculties about this, and then did some research afterwards." Julia adds: "Making and recycling the disposable cups that are currently used at the university costs a lot of water and energy. In addition, they also contain plastic. The cups are often only used once, and then usually not even recycled." The group is asking fellow students to bring their

own mug or cup to the university starting next week. They will raise awareness by hanging up posters at coffee vending machines scattered across the various faculties at the RUG. During the first few days, the students themselves will also be present at various coffee corners and canteens to draw attention to the issue. "By bringing your own mug or travel cup from home, we think we can reduce the use of disposable cups at the university and by doing this we hope to lend a helping hand to the environment." explains Thomas.]

#### [Condition 4: Bottom-up initiators + Egocentric value

You read the following article in the U-krant:



#### Students launch coffee cup initiative to save money

Five students from the University of Groningen would like to save money within the university in order to organize more activities. Maria (21), Thomas (23), Julia (22), Jayden (21) and Sven (20) launched a campaign themselves to ensure that fewer disposable cups will be used at the university. Jayden explains: "A few weeks ago, a few fellow students and I went to study at our faculty, and you know how it is, we got some coffee and refills. Then we noticed how many of those cups we used just in a few hours. We started asking students from other faculties about this, and then did some research afterwards." Julia adds: "The cups currently in use at the university cost quite a bit of money. Because everyone throws away their cups after only one use, new cups have to be purchased all the time. This is an unnecessary cost. We think this could be better spent elsewhere. By saving on coffee cups, some savings can be built up that could be used for other things." The group is asking fellow students to bring their own

mug or cup to university from next week on. They will raise awareness by hanging posters at coffee vending machines scattered across the various faculties at the RUG. During the first few days, the students themselves will

also be present at various coffee corners and canteens to draw attention to the issue. "By bringing your own cup or travel cup from home, we think we can reduce the use of disposable cups at the university and by doing this we hope to save money." explains Thomas.]

**[After this part the participants received the same questionnaire questions again]**

We want to ask you how you would evaluate the initiative that was just introduced. Indicate per characteristic what you think of it.

**I think the initiative is...**

- Very negative (1)
- Negative (2)
- Somewhat negative (3)
- Neutral (4)
- Somewhat positive (5)
- Positive (6)
- Very positive (7)

**I think the initiative is...**

- Very unacceptable (1)
- Unacceptable (2)
- Somewhat unacceptable (3)
- Neutral (4)
- Somewhat acceptable (5)
- Acceptable (6)
- Very acceptable (7)

**I think the initiative is...**

- Very unsustainable (1)
- Unsustainable (2)
- Somewhat unsustainable (3)
- Neutral (4)
- Somewhat sustainable (5)
- Sustainable (6)
- Very sustainable (7)

**I think the initiative is...**

- Very inessential (1)
- Inessential (2)
- Somewhat inessential (3)
- Neutral (4)
- Somewhat essential (5)
- Essential (6)
- Very essential (7)

**I think the initiative is...**

- Very unnecessary (1)
- Unnecessary (2)
- Somewhat unnecessary (3)
- Neutral (4)
- Somewhat necessary (5)
- Necessary (6)
- Very necessary (7)

**To what extent are you willing to bring your own mug to the university as a replacement for a disposable cup?  
I am...**

- Very unwilling (1)
- Unwilling (2)
- Somewhat unwilling (3)
- Neutral (4)
- Somewhat willing (5)
- Willing (6)
- Very willing (7)

**Which cup do you prefer, the disposable cup or your own mug/cup? I have a...**

- Strong preference for the disposable cup (1)
- Preference for the disposable cup (2)
- Slight preference for the disposable cup (3)
- No preference (4)
- Slight preference for my own mug/cup (5)
- Preference for my own mug/cup (6)
- Strong preference for my own mug/cup (7)

**Would you encourage other students to bring their own mug or cup?**

- Absolutely not (1)
- No (2)
- Probably not (3)
- Neutral (4)
- Probably yes (5)
- Yes (6)
- Absolutely (7)

**To what extent do you agree with the following statement: As a student from the University of Groningen, I am willing to bring my own cup.**

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither disagree nor agree (4)



<b>Preventing pollution</b> (protecting natural resources) (7)	0	0	0	0	0	0	0
<b>Being ambitious</b> (hardworking, ambitious, striving) (8)	0	0	0	0	0	0	0

We want to ask you what you think the **initiators' personal values** are. Beneath this there are eight values presented. Behind every value a short explanation is provided about the meaning of the value. Indicate for each value to what extent you think it is important **for the initiators in proposing this initiative**.

Your scores can vary from “Goes against their principles” to “Very important”. The further on the scale, the more important the value is for the initiators as guidance for their initiative proposal. When answering, **try to differentiate as much as possible** in the importance you perceive the initiators to have for the different values.

**Take note: This question is about the values of the initiators, not your own.**

	Opposed to their principles (1)	Not important (2)	Somewhat important (3)	Reasonably important (4)	Important (5)	Very important (6)	Extremely important (7)
<b>Respecting the earth</b> (living in harmony with other living beings) (1)	0	0	0	0	0	0	0
<b>Power</b> (control over other people, dominance) (2)	0	0	0	0	0	0	0
<b>Unity with nature</b> (feeling connected with nature) (3)	0	0	0	0	0	0	0
<b>Protecting the environment</b> (preservation of environmental quality and nature) (4)	0	0	0	0	0	0	0
<b>Being influential</b> (the	0	0	0	0	0	0	0

right to direct or command) (5)								
<b>Wealth</b> (material possessions, money) (6)	0	0	0	0	0	0	0	0
<b>Preventing pollution</b> (protecting natural resources) (7)	0	0	0	0	0	0	0	0
<b>Being ambitious</b> (hardworking, ambitious, striving) (8)	0	0	0	0	0	0	0	0

We want to ask you about how connected you feel to the university. To what extent do you agree with the following statements?

	Completely disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Completely agree (7)
I feel connected to the University of Groningen (1)	0	0	0	0	0	0	0
I have confidence in the University of Groningen (2)	0	0	0	0	0	0	0
I have confidence in the policies of the University of Groningen (3)	0	0	0	0	0	0	0
I have confidence in the choices of the University of Groningen (4)	0	0	0	0	0	0	0

I am happy that I can study at the University of Groningen (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am proud to be part of the University of Groningen (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

We want to ask you to make an estimate about what **the following groups** think of the initiative. Several statements will follow. Try to fill them in as accurately as possible, on the basis of **your estimates**.

**The initiators from the aforementioned initiative are typical members of their group.**

- Completely disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Completely agree (7)

**Most students from the University of Groningen would ... with the aforementioned initiative.**

- Completely disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Completely agree (7)

**Most members of the Executive Board from the University of Groningen would ... with the aforementioned initiative.**

- Completely disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Completely agree (7)

**An average student from the University of Groningen would ... the aforementioned initiative.**

- Completely oppose (1)
- Oppose (2)



- Somewhat oppose (3)
- Neither oppose nor support (4)
- Somewhat support (5)
- Support (6)
- Completely support (7)

**An average member of the Executive Board from the University of Groningen would ... the aforementioned initiative.**

- Completely oppose (1)
- Oppose (2)
- Slightly oppose (3)
- Neither oppose nor support (4)
- Slightly support (5)
- Support (6)
- Completely support (7)

**Most students from the University of Groningen will ... their own cup or mug after reading the aforementioned initiative.**

- Never bring (1)
- Almost never bring (2)
- Not often bring (3)
- Half of the time bring (4)
- Sometimes bring (5)
- Almost always bring (6)
- Always bring (7)

**An average member of the Executive Board from the University of Groningen would ... the aforementioned initiative.**

- Completely oppose (1)
- Oppose (2)
- Slightly oppose (3)
- Neither oppose nor support (4)
- Slightly support (5)
- Support (6)
- Completely support (7)

**To what extent would an average student from the University of Groningen be willing to bring their own cup or mug to the faculty building?**

- Completely unwilling (1)
- Unwilling (2)
- Somewhat unwilling (3)
- Neutral (4)
- Somewhat willing (5)
- Willing (6)
- Completely willing (7)

We want to ask you to indicate to what extent you agree with the following statements. Your scores can vary from "Completely disagree" to "Completely agree".

**To what extent do you agree with the following statements?**

	Completely disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither disagree nor agree (4)	Somewhat agree (5)	Agree (6)	Completely agree (7)
I identify with students from the University of Groningen (1)	0	0	0	0	0	0	0
I have a lot in common with the average student at the University of Groningen (2)	0	0	0	0	0	0	0
I feel committed to students from the University of Groningen (3)	0	0	0	0	0	0	0
I am proud to be a student at the University of Groningen (4)	0	0	0	0	0	0	0
I am glad to be a student at the University of Groningen (5)	0	0	0	0	0	0	0

The fact that I am a student at the University of Groningen is an important part of my identity (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being a student at the University of Groningen is an important part of how I see myself (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am similar to the average student at the University of Groningen (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I identify with the Executive Board of the University of Groningen (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel committed to the Executive Board of the University of Groningen (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a lot in common with the average member of the Executive Board (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

We want to ask you about some basic personal, demographic information.

**What is your gender identity?**

- Male (1)

- Female (2)
- Other, namely... (3) \_\_\_\_\_
- I would rather not say (4)

**Are you from The Netherlands?**

- Yes (1)
- No, I am from Germany (2)
- No, I am from a different EU-country (3)
- No, I am from a country outside of the EU (4)

**How old are you?**

\_\_\_\_\_

Lastly, we want to ask you to fill out these final questions.

**To what extent do you agree with the following statement: I believe that eliminating disposable cups is an improvement regarding environmental sustainability.**

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither disagree nor agree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

**To what extent do you agree with the following statement: I believe that eliminating disposable cups is an improvement regarding money saving.**

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither disagree nor agree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

**What did you read about in the article of the U-krant?**

- I read about a group of students from the University of Groningen that wants to encourage people to bring their own cup or mug to save money. (1)
- I read about a group of students from the University of Groningen that wants to encourage people to bring their own cup or mug to help the environment. (2)
- I read about the Executive Board of the University of Groningen that wants to encourage people to bring their own cup or mug to save money. (3)
- I read about the Executive Board of the University of Groningen that wants to encourage people to bring their own cup or mug to help the environment. (4)

Thank you for completing our study.

This study consisted of four conditions, in which we manipulated the text of the article you read and the posters we showed. The initiative you have read about does not exist. The different conditions included either the Executive Board or a group of students from the University of Groningen that came up with the initiative and included either an environmental or financial motive behind the initiative. We used these manipulations to be able to investigate the influence of presenting an initiative in a top-down versus a bottom-up way. Also, we wanted to see what influence the perceived values of the initiators would have on your willingness and acceptability towards the initiative, for which we used financial/egoistic and environmental values.

We want to ask you to not talk about this study and specifically about the manipulation in this study with your fellow students, because this might influence the results.

Question possibility If you have any questions or comments about this study, please don't hesitate to leave them here.

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Please click on "Next page" in order to receive your Sona-credits.

## Appendix C: Dutch Questionnaire

### Bedankt voor het deelnemen aan ons onderzoek.

Dit onderzoek zal ongeveer 10 minuten duren om te voltooien en je zal 0.3 SONA credits ontvangen na voltooiing. Als eerst zal je een artikel uit de U-krant lezen over een nieuw initiatief. Daarna vragen we je om een aantal vragen in te vullen.

Klik op "Volgende" om te beginnen.

### Waarom ontvang ik deze informatie?

We vragen je om deel te nemen aan een onderzoek naar jouw mening over het vervangen van wegwerpbekertjes door het zelf meenemen van een beker naar de faculteit. Dit onderzoek zal helpen om meer inzichten te krijgen over hoe studenten dit initiatief evalueren. Op basis van een door de EC-BSS van de Universiteit van Groningen ontwikkelde checklist, werd het onderzoek vrijgesteld van volledige ethische toetsing. Het onderzoek wordt verricht door Wytse Gorter (hoofdonderzoeker), Rozemarijn Ekkel, Sanne de Leeuw, Ruben van Zanten, Anne-Roos Smeets en Julia Vorenkamp. Rozemarijn Ekkel is de contactpersoon in het geval dat je vragen hebt over dit onderzoek (mail: [r.h.ekkel@student.rug.nl](mailto:r.h.ekkel@student.rug.nl)).

### Moet ik deelnemen aan dit onderzoek?

Deelname aan dit onderzoek is vrijwillig, maar jouw toestemming is nodig om mee te doen aan dit onderzoek. Als je besluit om niet deel te nemen, hoef je geen uitleg te geven en zullen er geen consequenties zijn. Tijdens het onderzoek mag je ook altijd besluiten te stoppen als je niet verder wilt. Wat wordt er van je gevraagd tijdens dit onderzoek? Eerst word je gevraagd om toestemming te geven voor het deelnemen aan dit onderzoek. Je zult informatie te lezen krijgen over het initiatief en daar zal vervolgens jouw mening over gevraagd worden. Er zal wat demografische informatie van je gevraagd worden zoals geslacht, leeftijd en land van afkomst. Het onderzoek duurt in totaal ongeveer 10 minuten. Wat zijn de consequenties van jouw deelname? Jouw deelname draagt bij aan meer kennis over dit onderwerp. Er zijn geen risico's betrokken bij dit onderzoek, maar mocht je toch ongemak ervaren als gevolg van dit onderzoek, informeer dan alsjeblieft Wytse Gorter of stuur hem een email ([w.a.gorter@rug.nl](mailto:w.a.gorter@rug.nl)).

### Hoe wordt jouw data behandeld?

Jouw antwoorden zullen bewaard worden op een beveiligd netwerk van de universiteit, dat enkel toegankelijk is voor de hoofdonderzoeker. De algemene resultaten van dit onderzoek zullen in een onderzoeksrapport komen te staan, en kunnen publiekelijk gemaakt worden via presentaties en wetenschappelijke publicaties. De data kan openlijk gedeeld worden voor onderzoek, maar dat gebeurt alleen als de identiteit van deelnemers niet achterhaald kan worden. Wees je ervan bewust dat jouw data niet uit de analyse gehaald kan worden als jouw data is ingeleverd. Dit komt doordat al je antwoorden anoniem worden gemaakt en er geen mogelijkheid meer is om de antwoorden aan jou te verbinden. Stuur een mail naar Wytse ([w.a.gorter@rug.nl](mailto:w.a.gorter@rug.nl)) als je graag een notificatie wil ontvangen wanneer het onderzoek is gepubliceerd.

### Wat moet je nog meer weten?

Je kunt altijd voor, tijdens en na het onderzoek vragen stellen. Als je vragen hebt over jouw rechten als deelnemer, dan kan je contact opnemen met de Ethische Commissie van de psychologieafdeling van de Rijksuniversiteit Groningen ([ecp@rug.nl](mailto:ecp@rug.nl)). Als je vragen hebt over jouw privacy en hoe jouw data wordt onderhouden, kan je contact opnemen met de Functionaris voor Gegevensbescherming van de Rijksuniversiteit Groningen ([privacy@rug.nl](mailto:privacy@rug.nl)). Als je niet wil deelnemen aan het onderzoek, dan kan je nu stoppen. Als je wel wil deelnemen, vul alstublieft de onderstaande bullet-point in.

- Ja, ik geef toestemming om deel te nemen aan dit onderzoek. (1)**

- Nee, ik geef geen toestemming om deel te nemen aan dit onderzoek. Hiermee ga ik naar het einde van de vragenlijst. Ik ontvang hierdoor ook geen SONA-punten. (2)**

**Toestemming voor datagebruik**

De verkregen data kan waardevol zijn voor toekomstig onderzoek, zoals een vergelijking met andere culturen. Hebben we toestemming om jouw data voor toekomstig onderzoek te gebruiken?

- Ja, ik geef toestemming dat mijn data in de toekomst gebruikt mag worden voor vergelijkbare onderzoeksvragen (1)**
- Nee (2)**

Deze vragenlijst bevat vragen over persoonlijke informatie, zoals leeftijd en land van afkomst. Deze data wordt gebruikt om meer inzicht te krijgen over perspectieven van verschillende populatiegroepen (bijvoorbeeld jonge versus oudere deelnemers). Hebben we toestemming om jouw persoonlijke data te verwerken?

- Ja, ik geef toestemming dat mijn persoonlijke data verwerkt mag worden (1)**
- Nee (2)**

Dit onderzoek bevat alleen deelnemers van 18 jaar of ouder. Bevestig alsjeblieft dat je 18 jaar of ouder bent.

- Ja, ik ben 18 jaar of ouder (1)**

Ik ben een student aan de Rijksuniversiteit Groningen.

- Ja (1)**
- Nee (2)**

**[Hier wordt een van de vier condities random weergegeven aan de participanten]**

**[Conditie 1: Top-down initiator + Biosferische waarde**

Je leest het volgende artikel in de U-Krant:



### Universiteit Groningen lanceert duurzaamheidsinitiatief met koffiebekers

Het college van bestuur van de Rijksuniversiteit Groningen vraagt aandacht voor de impact van wegwerpproducten op het milieu. Het college van bestuur van de universiteit wil door middel van een duurzaamheidsinitiatief ervoor zorgen dat er op de universiteit minder wegwerpbekers gebruikt zullen worden. Het bestuur vertelt: “Het maken en recyclen van de wegwerpbekers die nu op de universiteit gebruikt worden, kosten veel water en energie. Daarnaast bevatten ze plastic. De bekertjes worden vaak maar één keer gebruikt, en vervolgens verkeerd weggegooid waardoor recycling lastig wordt.” Het college van bestuur van de universiteit vraagt studenten van de RUG om vanaf volgende week een eigen mok of beker mee te nemen naar de universiteit. Met behulp van posters bij koffieautomaten verspreid over de verschillende faculteiten van de RUG zal aandacht gevraagd

worden voor het onderwerp. Daarnaast zal er via de mail een nieuwsbrief met aanvullende informatie verspreid worden. Het college van bestuur vervolgt: “Door studenten te vragen om hun eigen beker of travel-cup van huis mee te nemen, wordt gehoopt dat het gebruik van wegwerpbekertjes op de universiteit wordt beperkt, waardoor de universiteit een positieve impact kan maken op het milieu.”]

### [Condition 2: Top-Down initiator + egocentrische waarde

Je leest het volgende artikel in de U-Krant:



### Universiteit Groningen lanceert koffiebekertjes initiatief om geld te besparen

Het college van bestuur van de Rijksuniversiteit Groningen wil geld gaan besparen met behulp van een initiatief. Het college van bestuur van de universiteit wil met behulp van de actie ervoor zorgen dat er op de universiteit minder wegwerpbekers gebruikt zullen worden. Het college van bestuur vertelt: "De bekercs die momenteel op de universiteit gebruikt worden, zijn kostbaar. Doordat de wegwerpbekers na gebruik worden weggegooid, moeten er continu nieuwe bekercs ingekocht worden. Dit zijn onnodige kosten. Het zou zinnvoller zijn als dit budget anders besteed zou kunnen worden. Het door de actie vrijgemaakte budget kan voor andere doeleinden worden ingezet." Het college van bestuur van de universiteit vraagt studenten van de RUG om vanaf volgende week een eigen mok of beker mee te nemen naar de universiteit. Met behulp van posters bij koffieautomaten verspreid over de verschillende faculteiten van de RUG zal

aandacht gevraagd worden voor het onderwerp. Daarnaast zal er via de mail een nieuwsbrief met aanvullende informatie verspreid worden. Het college van bestuur vervolgt: “Door studenten te vragen hun eigen beker of travel-cup van huis mee te nemen, wordt gehoopt dat het gebruik van wegwerpbekertjes op de universiteit wordt beperkt, waardoor de universiteit geld kan besparen.”]



**[Conditie 3: Bottom-up initiators + Biosferische waarde**

Je leest het volgende artikel in de U-Krant:



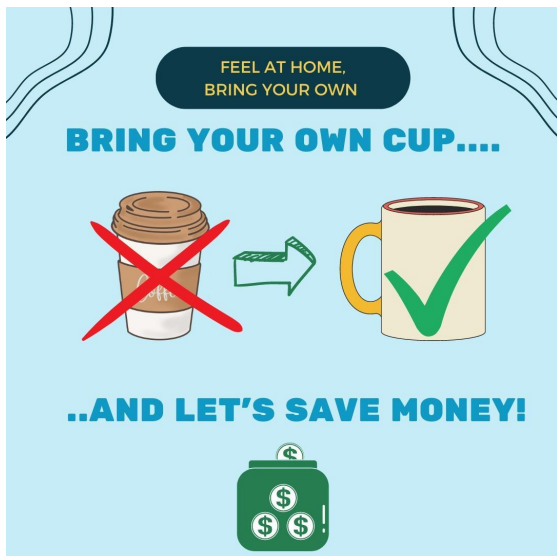
**Studenten lanceren duurzaamheidsinitiatief met koffiebekers**

Vijf studenten van de Rijksuniversiteit Groningen vragen aandacht voor de impact van wegwerpproducten op het milieu. Maria (21), Thomas (23), Julia (22), Jayden (21) en Sven (20) willen door middel van een zelf-gelanceerd duurzaamheidsinitiatief ervoor zorgen dat er op de universiteit minder wegwerpbekers gebruikt zullen worden. Jayden vertelt: “Een paar weken geleden gingen een paar studiegenoten en ik op onze faculteit studeren, en je weet hoe dat gaat, met de nodige koffie en de bijbehorende refills. Toen viel het ons op hoeveel van die bekertjes er alleen al bij ons doorheen gingen. Toen we de bekens weggooiden zagen we ook hoeveel van die bekens in de verkeerde prullenbakken belandden. We zijn navraag gaan doen bij studenten van andere faculteiten, en hebben vervolgens wat onderzoek gedaan.” Julia vervolgt: “Het maken en recyclen van de wegwerpbekers die nu op de

universiteit gebruikt worden, kosten veel water en energie. Daarnaast bevatten ze ook nog eens plastic. De bekertjes worden vaak maar één keer gebruikt, en daarna meestal niet eens gerecycled.” De studenten vragen aan hun medestudenten om vanaf volgende week een eigen mok of beker mee te nemen naar de universiteit. Ze zullen dit gaan doen door posters op te hangen bij koffieautomaten verspreid over de verschillende faculteiten op de RUG. Ook zullen ze de eerste dagen zelf bij diverse koffiecorners en kantines gaan staan om aandacht te vragen voor het onderwerp. “Door een eigen beker of travel-cup van huis mee te nemen denken wij het gebruik van wegwerpbekertjes op de universiteit te kunnen beperken en hopen wij zo het milieu een handje te helpen.” legt Thomas uit. ]

**[Conditie 4: Bottom-up initiators + egocentrische waarde**

Je leest het volgende artikel in de U-krant:



### Studenten lanceren koffiebekertjes initiatief om geld te besparen

Vijf studenten aan de Rijksuniversiteit Groningen willen graag geld besparen binnen de universiteit. Maria (21), Thomas (23), Julia (22), Jayden (21) en Sven (20) willen met behulp van een zelf gelanceerde actie ervoor zorgen dat er op de universiteit minder wegwerpbekers gebruikt zullen worden. Jayden vertelt: “Een paar weken geleden gingen een paar studiegenoten en ik op onze faculteit zitten studeren, en je weet hoe dat gaat, met de nodige koffie en de bijbehorende refills. Toen viel het ons op hoeveel van die bekertjes er alleen al bij ons doorheen gingen. We zijn navraag gaan doen bij studenten van andere faculteiten, en hebben vervolgens wat onderzoek gedaan.” Julia vervolgt: “De bekertjes die momenteel op de universiteit gebruikt worden kosten best wat geld. Omdat iedereen zijn bekertjes weggooit na gebruik, moeten er de hele tijd nieuwe bekertjes ingekocht worden. Dit zijn onnodige kosten. Wij denken dat

dit beter ergens anders aan besteed zou kunnen worden. Door te besparen op koffiebekers kan er een mooi potje opgebouwd worden waar andere dingen mee gedaan kunnen worden.” De studenten vragen aan hun medestudenten om vanaf volgende week een eigen mok of beker mee te nemen naar de universiteit. Ze zullen dit gaan doen door posters op te hangen bij koffieautomaten verspreid over de verschillende faculteiten op de RUG. Ook zullen ze de eerste dagen zelf bij diverse koffiecorners en kantines gaan staan om aandacht te vragen voor het onderwerp. “Door een eigen beker of travel-cup van huis mee te nemen denken wij het gebruik van wegwerpbekertjes op de universiteit te kunnen beperken en hopen wij zo geld te besparen” legt Thomas uit. ]

### [Na de manipulatie gelezen te hebben, krijgen alle participanten de volgende vragen]

We willen je vragen hoe je het zojuist geïntroduceerde initiatief zou beoordelen. Geef per kenmerk aan wat je ervan vindt.

#### Ik vind het initiatief ...

- Heel erg negatief (1)
- Negatief (2)
- Enigszins negatief (3)
- Neutraal (4)
- Enigszins positief (5)
- Positief (6)
- Heel erg positief (7)

#### Ik vind het initiatief ...

- Heel erg onacceptabel (1)
- Onacceptabel (2)
- Enigszins onacceptabel (3)
- Neutraal (4)

- Enigszins acceptabel (5)
- Acceptabel (6)
- Heel erg acceptabel (7)

**Ik vind het initiatief ...**

- Heel erg niet-duurzaam (1)
- Niet-duurzaam (2)
- Enigszins niet-duurzaam (3)
- Neutraal (4)
- Enigszins duurzaam (5)
- Duurzaam (6)
- Heel erg duurzaam (7)

**Ik vind het initiatief ...**

- Heel erg onnodig (1)
- Onnodig (2)
- Enigszins onnodig (3)
- Neutraal (4)
- Enigszins nodig (5)
- Nodig (6)
- Heel erg nodig (7)

**Ik vind het initiatief ...**

- Heel erg niet noodzakelijk (1)
- Niet noodzakelijk (2)
- Enigszins niet noodzakelijk (3)
- Neutraal (4)
- Enigszins noodzakelijk (5)
- Noodzakelijk (6)
- Heel erg noodzakelijk (7)

**In hoeverre ben je bereid je eigen beker mee te nemen naar de universiteit ter vervanging van een wegwerpbeker? Ik ben...**

- Heel erg niet bereid (1)
- Niet bereid (2)
- Enigszins niet bereid (3)
- Neutraal (4)
- Enigszins bereid (5)
- Bereid (6)
- Heel erg bereid (7)

**Welke beker heeft jouw voorkeur, de wegwerpbeker of je eigen meegenomen beker? Ik heb een...**

- Sterke voorkeur voor de wegwerpbeker (1)

- Voorkeur voor de wegwerp beker (2)
- Enigszins voorkeur voor de wegwerp beker (3)
- Geen voorkeur (4)
- Enigszins voorkeur voor mijn eigen beker (5)
- Voorkeur voor mijn eigen beker (6)
- Sterke voorkeur voor mijn eigen beker (7)

**Zou jij andere studenten aanraden om hun eigen beker mee te nemen?**

- Absoluut niet (1)
- Nee (2)
- Waarschijnlijk niet (3)
- Neutraal (4)
- Waarschijnlijk wel (5)
- Ja (6)
- Absoluut wel (7)

**In hoeverre ben je het eens met de volgende stelling: Als student aan de Rijksuniversiteit Groningen, ben ik bereid om mijn eigen beker mee te nemen.**

- Heel erg oneens (1)
- Oneens (2)
- Enigszins oneens (3)
- Niet eens of oneens (4)
- Enigszins eens (5)
- Eens (6)
- Heel erg eens (7)

Wij willen vragen wat jij **in het algemeen** belangrijk vindt in het leven. Hieronder staan acht waarden. Achter elke waarde wordt een korte toelichting gegeven over de betekenis van de waarde. Geef voor iedere waarde aan hoe belangrijk deze is **als leidraad in jouw leven**.

Jouw scores kunnen variëren van "Gaaf tegen mijn principes" tot "Uiterst belangrijk". Hoe verder op de schaal, hoe belangrijker de waarde is als leidraad in jouw leven. **Probeer tijdens het antwoorden zo veel mogelijk onderscheid te maken in het belang dat jij hebt voor de verschillende waarden.**

	Gaat tegen mijn principes (1)	Niet belangrijk (2)	Enigszins belangrijk (3)	Redelijk belangrijk (4)	Belangrijk (5)	Zeer belangrijk (6)	Uiterst belangrijk (7)
<b>Respect voor de aarde</b> (in harmonie leven met andere soorten) (1)	o	o	o	o	o	o	o

<b>Macht</b> (controle over andere mensen, dominantie) (2)	0	0	0	0	0	0	0
<b>Eenheid met de natuur</b> (je verbonden voelen met de natuur) (3)	0	0	0	0	0	0	0
<b>Bescherming van het milieu</b> (behoud van milieukwaliteit en de natuur) (4)	0	0	0	0	0	0	0
<b>Invloed</b> (invloed hebben op mensen en gebeurtenissen) (5)	0	0	0	0	0	0	0
Rijkdom (materiële bezittingen, geld) (6)	0	0	0	0	0	0	0
<b>Milieuvervuiling voorkomen</b> (natuurlijke hulpbronnen beschermen) (7)	0	0	0	0	0	0	0
<b>Ambitie</b> (hardwerkend, eerzuchtig, strevend) (8)	0	0	0	0	0	0	0

Wij willen vragen wat jij denkt dat de **persoonlijke waarden zijn van de initiatiefnemers**. Hieronder staan acht waarden. Achter elke waarde wordt een korte toelichting gegeven over de betekenis van de waarde. Geef voor iedere waarde aan hoe belangrijk deze waarde is geweest **voor de initiatiefnemers bij het bedenken van dit initiatief**.

Jouw scores kunnen variëren van "Gaaf tegen hun principes" tot "Uiterst belangrijk". Hoe verder op de schaal, hoe belangrijker de waarde is voor de initiatiefnemers. Probeer tijdens het antwoorden zoveel mogelijk onderscheid te maken in het belang dat jij waarneemt dat de initiatiefnemers hebben voor de verschillende waarden.

**Let op: Deze vraag gaat over de waarden van de initiatiefnemers en niet jouw eigen waarden.**

Gaat tegen diens principes (1)	Niet belangrijk (2)	Enigszins belangrijk (3)	Redelijk belangrijk (4)	Belangrijk (5)	Zeer belangrijk (6)	Uiterst belangrijk (7)
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<b>Respect voor de aarde</b> (in harmonie leven met andere soorten) (1)	0	0	0	0	0	0	0
<b>Macht</b> (controle over andere mensen, dominantie) (2)	0	0	0	0	0	0	0
<b>Eenheid met de natuur</b> (je verbonden voelen met de natuur) (3)	0	0	0	0	0	0	0
<b>Bescherming van het milieu</b> (behoud van milieukwaliteit en de natuur) (4)	0	0	0	0	0	0	0
<b>Invloed</b> (invloed hebben op mensen en gebeurtenissen) (5)	0	0	0	0	0	0	0
Rijkdom (materiële bezittingen, geld) (6)	0	0	0	0	0	0	0
<b>Milieuvervuiling voorkomen</b> (natuurlijke hulpbronnen beschermen) (7)	0	0	0	0	0	0	0
<b>Ambitie</b> (hardwerkend, eerzuchtig, strevend) (8)	0	0	0	0	0	0	0

We willen je nog wat vragen stellen over hoe jij je verbonden voelt met de universiteit. In hoeverre ben jij het eens met de volgende stellingen?

	Helemaal oneens (1)	Oneens (2)	Enigszins oneens (3)	Niet eens of oneens (4)	Enigszins eens (5)	Eens (6)	Helemaal eens (7)
Ik voel mij verbonden met de Rijksuniversiteit Groningen (1)	0	0	0	0	0	0	0

Ik heb vertrouwen in de Rijksuniversiteit Groningen (2)	0	0	0	0	0	0	0
Ik heb vertrouwen in het beleid van de Rijksuniversiteit Groningen (3)	0	0	0	0	0	0	0
Ik heb vertrouwen in de keuzes van de Rijksuniversiteit Groningen (4)	0	0	0	0	0	0	0
Ik ben blij dat ik aan de Rijksuniversiteit Groningen kan studeren (5)	0	0	0	0	0	0	0
Ik ben trots dat ik onderdeel uitmaak van de Rijksuniversiteit Groningen (6)	0	0	0	0	0	0	0

Wij willen je nu vragen een schatting te maken over **hoe de volgende groepen** over het initiatief denken. Er volgen een aantal stellingen. Probeer deze zo nauwkeurig mogelijk in te vullen, aan de hand van **jouw inschattingen**.

**De initiatiefnemers van het zojuist genoemde initiatief zijn typische leden van hun groep.**

- Helemaal oneens (1)
- Oneens (2)
- Enigszins oneens (3)
- Niet eens of oneens (4)
- Enigszins eens (5)
- Eens (6)
- Helemaal eens (7)

**De meeste RUG-studenten zullen het met het zojuist genoemde initiatief ... zijn.**

- Helemaal oneens (1)
- Oneens (2)
- Enigszins oneens (3)
- Niet eens of oneens (4)
- Enigszins eens (5)
- Eens (6)
- Helemaal eens (7)

**De meeste leden van het College van Bestuur van de Rijksuniversiteit Groningen zullen het met het zojuist genoemde initiatief ... zijn.**

- Helemaal oneens (1)
- Oneens (2)
- Enigszins oneens (3)
- Niet eens of oneens (4)
- Enigszins eens (5)
- Eens (6)
- Helemaal eens (7)

**Een gemiddelde RUG-student zou het zojuist genoemde initiatief ...**

- Helemaal tegenwerken (1)
- Tegenwerken (2)
- Enigszins tegenwerken (3)
- Niet steunen en niet tegenwerken (4)
- Enigszins steunen (5)
- Steunen (6)
- Helemaal steunen (7)

**Een gemiddeld lid van de raad van bestuur van de RUG zou het zojuist genoemde initiatief ...**

- Helemaal tegenwerken (1)
- Tegenwerken (2)
- Enigszins tegenwerken (3)
- Niet steunen en niet tegenwerken (4)
- Enigszins steunen (5)
- Steunen (6)
- Helemaal steunen (7)

**De meeste RUG-studenten zullen na het lezen van het initiatief een eigen beker waarschijnlijk ...**

- Nooit meenemen (1)
- Bijna nooit meenemen (2)
- Niet vaak meenemen (3)
- De helft van de tijd meenemen (4)
- Soms meenemen (5)
- Bijna altijd meenemen (6)
- Altijd meenemen (7)

**In hoeverre zou een gemiddelde RUG-student bereid zijn om een eigen beker mee te nemen naar de faculteit?**

- Helemaal niet bereid (1)
- Niet bereid (2)
- Enigszins niet bereid (3)
- Neutraal (4)
- Enigszins bereid (5)
- Bereid (6)
- Heel erg bereid (7)



Wij willen je vragen aan te geven in hoeverre je het eens bent met de volgende stellingen. Je scores kunnen variëren van "Heel erg oneens" tot "Heel erg eens".

**In hoeverre ben je het eens met de volgende stellingen?**

	Heel erg oneens (1)	Oneens (2)	Enigszins oneens (3)	Niet eens of oneens (4)	Enigszins eens (5)	Eens (6)	Heel erg eens (7)
Ik identificeer mij met studenten van de Rijksuniversiteit Groningen (1)	0	0	0	0	0	0	0
Ik heb veel gemeen met de gemiddelde student van de Rijksuniversiteit Groningen (2)	0	0	0	0	0	0	0
Ik voel me toegewijd aan studenten van de Rijksuniversiteit Groningen (3)	0	0	0	0	0	0	0
Ik ben er trots op een student van de Rijksuniversiteit Groningen te zijn (4)	0	0	0	0	0	0	0
Ik ben blij dat ik een student van de Rijksuniversiteit Groningen ben (5)	0	0	0	0	0	0	0
Het feit dat ik een student van de Rijksuniversiteit Groningen ben, is belangrijk voor mijn identiteit (6)	0	0	0	0	0	0	0
Student zijn aan de Rijksuniversiteit Groningen is een belangrijk onderdeel van hoe ik mezelf zie (7)	0	0	0	0	0	0	0
Ik ben vergelijkbaar met de gemiddelde student van de Rijksuniversiteit Groningen (8)	0	0	0	0	0	0	0

Ik identificeer mij met het College van Bestuur van de Rijksuniversiteit Groningen (9)	0	0	0	0	0	0	0
Ik voel me toegewijd aan het College van Bestuur van de Rijksuniversiteit Groningen (10)	0	0	0	0	0	0	0
Ik heb veel gemeen met het gemiddelde lid van het College van Bestuur van de Rijksuniversiteit Groningen (11)	0	0	0	0	0	0	0

We willen je vragen naar enkele persoonlijke, demografische gegevens.

### Wat is jouw genderidentiteit?

- Man (1)
- Vrouw (2)
- Anders, namelijk... (3) \_\_\_\_\_
- Wil ik niet zeggen (4)

### Ben je afkomstig uit Nederland?

- Ja (1)
- Nee, ik ben afkomstig uit Duitsland (2)
- Nee, ik ben afkomstig uit een ander EU-land (3)
- Nee, ik ben afkomstig uit een niet EU-land (4)

### Hoe oud ben je?

\_\_\_\_\_

Ten slotte willen we je vragen om deze laatste vragen in te vullen.

**In hoeverre ben jij het eens met de volgende stelling: Ik geloof dat het vervangen van wegwerpbekertjes een verbetering is op het gebied van duurzaamheid.**

- Heel erg oneens (1)
- Oneens (2)
- Enigszins oneens (3)
- Niet eens of oneens (4)
- Enigszins eens (5)

- Eens (6)
- Heel erg eens (7)

**In hoeverre ben jij het eens met de volgende stelling: Ik geloof dat het vervangen van wegwerpbekertjes een verbetering is op het gebied van geldbesparing.**

- Heel erg oneens (1)
- Oneens (2)
- Enigszins oneens (3)
- Niet eens of oneens (4)
- Enigszins eens (5)
- Eens (6)
- Heel erg eens (7)

**Waar heb jij over gelezen in het artikel van de U-krant?**

- Ik heb gelezen over een groep studenten van de Rijksuniversiteit Groningen die mensen willen aansporen om zelf hun beker mee te nemen om geld te besparen. (1)
- Ik heb gelezen over een groep studenten van de Rijksuniversiteit Groningen die mensen willen aansporen om zelf hun beker mee te nemen om het milieu te helpen. (2)
- Ik heb gelezen over het College van Bestuur van de Rijksuniversiteit Groningen die mensen willen aansporen om zelf hun beker mee te nemen om geld te besparen. (3)
- Ik heb gelezen over het College van Bestuur van de Rijksuniversiteit Groningen die mensen willen aansporen om zelf hun beker mee te nemen om het milieu te helpen. (4)

**Dankjewel voor het voltooien van ons onderzoek.**

Dit onderzoek bestond uit vier condities, waarin we de tekst van het artikel gemanipuleerd hebben. Het initiatief waarover je hebt gelezen is niet bestaand. De verschillende condities bestonden uit het College van Bestuur of een groep studenten van de Rijksuniversiteit Groningen als initiatiefnemers en milieu-vriendelijke of financiële waarden die de initiatiefnemers motiveerden in het bedenken van het initiatief. We hebben deze manipulaties gebruikt om te onderzoeken wat de invloed van een top-down versus een bottom-up benadering van een initiatief is. We wilden daarnaast zien wat de invloed van de waargenomen waarden van de initiatiefnemers hadden op de bereidheid en acceptatie van het initiatief. Hiervoor hebben we financiële/egoïstische en milieuvriendelijke waarden gebruikt.

We willen je vragen om niet over dit onderzoek en de manipulatie van dit onderzoek te praten met je medestudenten, omdat dit de resultaten zou kunnen beïnvloeden.

Als je nog vragen of opmerkingen hebt over dit onderzoek, laat ze hier dan alsjeblieft achter.

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Klik alsjeblieft op "Volgende pagina" om je Sona-credits te ontvangen.

## Appendix D: Descriptive Statistics and Reliability of Scales and Items

**Table D1**

*Descriptive Statistics and Reliability of Acceptability of the Initiative Scale and its Included Items*

<b>Scale</b>	<b>M Scale</b>	<b>SD Scale</b>	<b>Cronbach's Alpha</b>
Acceptability of the Initiative	5.57	.55	.84
<b>Included Items</b>	<b>M Items</b>	<b>SD Items</b>	
Valence: I think the initiative is... (1 = very negative, 7 = very positive)	6.02	.87	
Acceptability: I think the initiative is... (1 = very unacceptable, 7 = very positive)	6.05	.92	
Essentialism: I think the initiative is... (1 = very inessential, 7 = very essential)	5.21	1.08	
Necessity: I think the initiative is... (1 = very unnecessary, 7 = very necessary)	4.98	1.19	

**Table D2**

*Descriptive Statistics and Reliability of Perceived Biospheric Value of Initiators Scale and its Included Items*

<b>Scale</b>	<b>M Scale</b>	<b>SD Scale</b>	<b>Cronbach's Alpha</b>
Perceived Biospheric Value Initiators	5.53	.35	.93
<b>Included Items</b>	<b>M Items</b>	<b>SD Items</b>	
<b>To what extent do you think ... is a guiding principle in the initiators' lives</b> (1 = opposed to their principles, 7 = extremely important)			
Respecting the earth (living in harmony with other living beings)	5.58	1.34	
Unity with nature (feeling connected with nature	5.04	1.45	

Protecting the environment (preservation of environmental quality and nature)	5.83	1.36
Preventing pollution (protecting natural resources)	5.68	1.43

**Table D3**

*Descriptive Statistics and Reliability of Perceived Egocentric Value of Initiators Scale and its Included Items*

Scale	<i>M</i> Scale	<i>SD</i> Scale	Cronbach's Alpha
Perceived Egocentric Value Initiators	4.02	.81	.59
Included Items	<i>M</i> Items	<i>SD</i> Items	
<b>To what extent do you think ... is a guiding principle in the initiators' lives</b> ( <i>1 = opposed to their principles, 7 = extremely important</i> )			
Power (control over other people, dominance)	3.15	1.37	
Being influential (the right to direct or command)	4.29	1.49	
Wealth (material possessions, money)	3.61	1.68	
Being ambitious (hardworking, ambitious, striving)	5.01	1.23	

**Table D4**

*Descriptive Statistics and Reliability of Perceived Student Endorsement Scale and its Included Items*

Scale	<i>M</i> Scale	<i>SD</i> Scale	Cronbach's Alpha
Perceived Student Endorsement	4.72	.38	.79
Included Items	<i>M</i> Items	<i>SD</i> Items	
Most students from the University of Groningen would ... with the aforementioned initiative ( <i>1 = completely disagree, 7 = completely agree</i> )	4.95	1.08	

An average student from the University of Groningen would ... the aforementioned initiative ( <i>1 = completely oppose, 7 = completely support</i> )	4.98	.96
Most students from the University of Groningen will ... their own cup or mug after reading the aforementioned initiative ( <i>1 = never bring, 7 = always bring</i> )	4.16	1.15
To what extent would an average student from the University of Groningen be willing to bring their own cup or mug to the faculty building? ( <i>1 = completely unwilling, 7 = completely willing</i> )	4.78	1.00

### Appendix E: Post Hoc Tests ANOVA

**Table E1**

*Multiple Comparisons: Post Hoc Tests using the Bonferroni Method with Acceptance of Initiative as Dependent Variable*

(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig.
Bottom-up/Egocentric	Bottom-up/Biospheric	-.32	.16	.31
	Top-down/Egocentric	.36	.18	.28
	Top-down/Biospheric	-.16	.18	1.00
Bottom-up/Biospheric	Bottom-up/Egocentric	.32	.16	.31
	Top-down/Egocentric	.68	.17	.001
	Top-down/Biospheric	.15	.18	1.00
Top-down/Egocentric	Bottom-up/Egocentric	-.36	.18	.28
	Bottom-up/Biospheric	-.68	.17	.001
	Top-down/Biospheric	-.53	.19	.05
Top-down/Biospheric	Bottom-up/Egocentric	.16	.18	1.00
	Bottom-up/Biospheric	-.15	.18	1.00
	Top-down/Egocentric	.53	.19	.05