

The Influence of Pledging and Motivational Factors on Environmental Behavior: Evidence from the Plastic Soup Surfer Petition

Author: Titia van Dam
(S1439472)

University of Twente
P.O. Box 217, 7500AE Enschede
The Netherlands

ABSTRACT

The influence of the contextual factors pledging and behavioral cost on the relationship between motivational factors and environmental behavior in the case of online petitions about a sustainability related problem is analyzed. The independent variables include morale and affect, the latter split up into instrumental, symbolic and affective value of money. Environmental behavior is defined as making a donation to the initiative of the petition. The research is executed under signatories of two large online petitions. The assumed moderator role of contextual factors turns out to not be significant, but the data offers space for further research on another role of contextual factors in this theoretical framework.

Graduation Committee members:

Supervisor: Dr. ir. T.A. van den Broek

Second supervisor: Dr. M.L. Ehrenhard

External member: R. Rustema

Keywords

Pledging, behavioral cost, morale, affect, donation, motivational factors, contextual factors, environmental behavior, online petition.

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

10th IBA Bachelor Thesis Conference, November 10th, 2017, Enschede, The Netherlands.

Copyright 2017, University of Twente, The Faculty of Behavioural, Management and Social sciences.

1. INTRODUCTION

1.1 Need for Pro-Environmental Behavior

Sustainability becomes a more urgent topic nowadays, since the consequences are recognized and experienced more widely. The amount of greenhouse gas emissions, production of waste and degree of water pollution need to decrease in order to maintain a livable home for future generations. Many of the problems are due to human behavior (Gardner & Stern, 1996; Vlek & Steg, 2007), so the configuration of pro-environmental behavior, which is defined as behavior that benefits the environment or otherwise harms the environment as little as possible, plays a crucial role.

Though the evidence of environmental impact grows, information does not directly lead to awareness and awareness does not directly lead to action (Demos/Green Alliance, 2003). Information provision is therefore not enough for the establishment of pro-environmental behavior. The translation of information or awareness into behavior becomes interesting here. The challenge of working towards a sustainable future is not only about people's opinion and motivation, but needs actual behavior change established from there.

Many forms of pro-environmental behavior exist; e.g. recycling, energy saving, usage of sustainable resources and prevention of pollution and waste. This wide range of actions would involve an extensive research. For this research, the field of study has narrowed down to a specific environmental behavior: donating to the initiator of an online petition about a sustainability related problem after signing this petition. With these donations, further action can be taken by the initiator of the petition.

1.2 Aim for This Research

The urgent need for pro-environmental behavior leads to this research. Furthermore, the relationship between environmental behavior and its precedents needs further investigation, as noted in previous publications (e.g. Steg & Vlek, 2008). If the theoretical framework about environmental behavior can be strengthened or extended, petitions could be adjusted to the behavior of signatories to stimulate more donations or possibly other environmental behavior. The existing theories about environmental behavior could be strengthened and/or expended, to guide future research, since the position of this field of research is not very strong yet.

1.3 Research Question

The research question that arises and that will guide the rest of the process is defined as follows: *To what extent and how do pledging and behavioral costs influence the relationship between motivation and donations in the Plastic Soup Surfer petition?*

2. THEORY

2.1 Influences on Environmental Behavior

Steg & Vlek (2008) have studied various components of influence on environmental behavior, under which are motivational factors, focused on individual motivations. These individual motivations are described as costs/benefits, morale and affects and will be further explained below. They have a causal relationship with environmental behavior. Another influence on environmental behavior includes contextual factors, about which some research is published lately. The concept of contextual or situational factors is broad and therefore no clear definition is formed yet. We could say that these factors include all influences that enable *more* motivational factors to translate to environmental behavior or enable motivational factors to translate to *more* environmental behavior, sometimes without possibility of direct influence from an individual. The

relationship of these contextual factors with motivational factors and environmental behavior remains unclear. Steg, Bolderdijk, Keizer and Perlaviciute (2014) have divided contextual factors into three categories: Cues signaling that others violate or respect norms, behavioral cost and affection of the prioritization of goals. They will also be described further below. The authors address future research to investigate the influence of contextual and motivational factors on environmental behavior. Where the relationship between motivational factors and environmental behavior is clear, the relationship between contextual factors with these two concepts needed further research. Four possible relationships were proposed and the suggestion was noted to have further research on the effects of contextual factors on environmental behavior and how contextual factors affect the relationship between motivational factors and environmental behavior.

2.2 Motivational Factors

Three categories of motivational factors described by Steg & Vlek (2008) have been mentioned briefly; costs/benefits, morale and affect. Respectively, an individual generally chooses the option with the highest benefits or the lowest costs, engages more in pro-environmental behavior if he subscribes to values beyond his immediate own interests and might appeal to material goods instrumentally, symbolically and affectively.

2.2.1 Costs/Benefits

Costs are also defined as contextual factor. It will only be handled there, because the costs (money/time/effort) of pro-environmental behavior depend on the availability of proper resources. The other two factors, morale and affect, are described below and further operationalized in Methods.

2.2.2 Morale

If people feel a higher urgency that something needs to be done about environmental problems, because people have a responsibility to take care of the planet, there will be a higher probability for a decision to make a donation. This leads to the following hypothesis:

H1: Morale will have a positive causal relationship with donations.

2.2.3 Affect

The concept of affect needs some further elaboration. The material goods, which are necessary to establish affect, refer in this research to the money that is donated. This money might be of instrumental, symbolic or affective value, which can make it harder to donate it. Firstly, instrumental value is the main purpose of money: the ability to buy goods. Secondly, symbolic value can be status, by being richer or being able to afford products or services with higher perceived status. Thirdly, affective value refers to personal value, for example by having earned money with very tough work or inherited it from a close family member. The more value a person ascribes to a possessed material good, money, the less likely it will be that he gives it away. Money can get a higher perceived value when a person does not want to waste any, because he likes to be rich, or when it is inherited from a close family member for example. The second hypothesis can then be formulated:

H2: Affect will have a negative causal relationship with donations.

2.3 Environmental Behavior

The donation for the signed petition on sustainability is a way of environmental behavior, because it is a way to help the founders of the petition to work towards their goal, although it is more indirect than for example energy saving. Actual measurement of

other aspects of environmental behavior may not always be feasible, especially because of invalid or unreliable self-report (Steg & Vlek, 2008). Because of self-report bias and privacy concerns (e.g. when asking for energy consumption) only a look is taken at the amount of donations.

2.4 Contextual factors

Three factors are to be distinguished as indirect influences of behavior. Contextual factors were divided into affection of the prioritization of goals, cues signaling that others violate or respect norms and behavioral cost by Steg, Bolderdijk, Keizer and Perlaviciute (2014). Firstly, it is hard to investigate the prioritization of goals, since the challenge to determine how many factors are influencing a person in general to come to a certain prioritization of the person's tasks in life, under which pro-environmental behavior may be one, is incredibly great. Secondly, one aspect that is clearly recognized in online petitions, lies in the cues signaling that others violate/respect norms. If one views the description of the petition, previous signatories are shown underneath, either with name and place of residence or anonymously. Making this public promise is a form of pledging, which will be used further on to describe the public commitment. Next to that and thirdly, behavioral cost of signing the petition is low. Signing itself is almost costless, only a little bit time-consuming, because it takes a couple of minutes to fill in the form and confirm via email. The costs of internet consumption are neglected, since visiting two webpages and receiving one email has no significant increase on the bill nowadays.

2.4.1 Pledging

Several theories and case studies have been researched about pledging or are related to pledging. A few are mentioned here to investigate which effect pledging will probably have on the relationship between motivational factors and environmental behavior.

Slacktivism – the phenomenon that people are less willing to further contribute if they have already contributed, by showing political or social support online publicly which is requiring only little time or involvement – is described by Kristofferson, White & Peloza (2013). This is except when people feel strongly related to the organization. Especially social media is a very easy tool to provide some sign of support (a like-button on Facebook, retweet on Twitter, etc.), which enables many young people to show support for a cause, but neglect any further meaningful engagement (Morozov, 2009). This also applies to petitions, which means that signatories do not feel the urge to contribute any further via donations or making more publicity for the topic because they have already contributed by signing the petition or an article on social media.

One the other hand, people tend to become more confident about the decision they have made to ensure their success. After the commitment, the behavior is adjusted consistently to convince themselves of making the right choice and feel better about it. This consistency of behavior with the commitment after it is made is one of the principles described by Cialdini (2006). Therefore, the investigation of motivational factors should be made before the act of environmental behavior.

This theory of Cialdini (2006) can also be seen in practice, in an experiment done a while ago by Pallak and Cummings (1976). The influence of making a public or private commitment to attempt energy conservation was investigated, both natural gas and electricity. The group with a public agreement showed a lower rate of increase of energy use on utility-meter readings than the private agreements and the control group. Conservation of energy might however be related to the degree of attention

towards energy use levels. This would mean that attention could serve as mediator in the relationship between public commitment and environmental behavior.

Another case shows that it is not about Cialdini's commitment alone. An experiment was done by De Leon and Fuqua (1995), where households were asked to recycle paper. One group had given permission for a public commitment, including their names mentioned in a local newspaper. A second group was given feedback every week about the amount of collected recyclable paper from their group. Another group had a combination these interventions and a control group was determined as well. Results were that the feedback-only group increased 25 percent in the amount of collected paper, the both-interventions group increased by 40 percent, but both the only-commitment and the control group showed no significant increase. The public commitment had a positive effect together with the feedback, but not on itself.

In short, the theory of public commitment supported by Cialdini (2006) might be contradicting with the research about slacktivism (Kristofferson, White & Peloza, 2013) in case that commitment is applied to petitions. Also public commitment might not always have the desired outcome, depending on other factors. If it can be assumed that signing a petition with name and initials is rather slacktivism than a commitment because of the low amount of dedication involved, the following sub-hypotheses can be formulated:

H1a: Pledging will have a negative effect on the relationship between morale and donations.

H2a: Pledging will have a negative effect on the relationship between affect and donations.

In both cases, pledging weakens the urge to donate.

2.4.2 Behavioral costs

To go more into depth about the other contextual factor, a look at the following theory with similar variables is taken. In the Theory of Reasoned Action, Fishbein & Azjen (1975), the importance of intention was introduced. Attitude and norms lead to a certain intention, which is the spill of influences on behavior. With the Theory of Planned Behavior (Ajzen, 1988), this model was a bit extended as is shown in Figure 1.

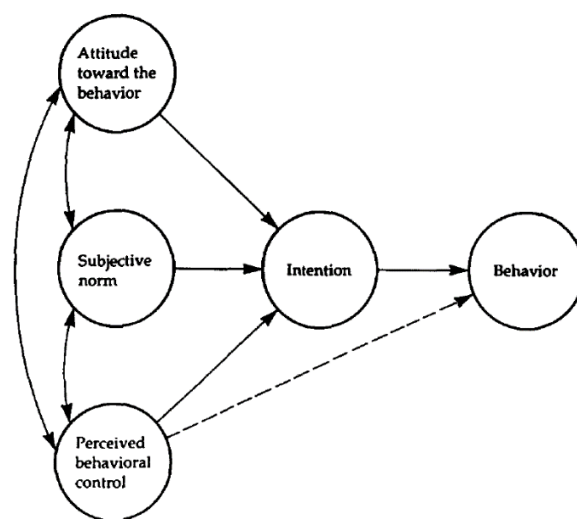


Figure 1. Theory of Planned Behavior (Ajzen, 1988).

The feedback lines of behavior to the other concepts have been withdrawn to enable understanding more easily. Attitude and

norm can be classified as motivational factors and the new concept behavioral control (availability of requisite opportunities and resources; Ajzen, 1991) is clearly a contextual factor, especially *actual* behavioral control, which is also discussed. In this model, the contextual factor also has a moderating function, as well as in Figure 1. However, Ajzen only considers an individual perception of contextual factors and unfortunately, contextual factors are not included in any other theoretical approaches (Steg & Vlek, 2008). *Perceived* behavioral control in the model of Ajzen is furthermore related to behavioral cost, because the more opportunities and resources are available for pro-environmental behavior, the less cost this behavior will bring.

The larger the perceived behavioral costs are, the more a person has to sacrifice to make a donation. Even with a strong morale, a person could argue for himself why not making a donation is a justified decision when the costs are very high. The higher a person has a high appreciation of his money, the less likely he is to make a donation. If this donation has a high perceived cost, for example is perceived as very time consuming, he will be even less likely to make a donation. The following sub-hypotheses can be drawn:

H1b: Behavioral costs will have a negative effect on the relationship between morale and donations.

H2b: Behavioral costs will have a positive effect on the relationship between affect and donations.

2.5 Model

The four sub-hypotheses are formulated in a way that contextual factors have an influence on the relationships between independent and dependent variables. This approach is chosen because of the role of contextual factors. The contingency theory explains there is no best way to behave, but it is dependent on the environment, contextual factors (Morgan, 2006). This means that in different contexts, the same (motivational) factors can have different outcomes (behavior). Therefore contextual factors have the function of moderator in our model, which will look like shown in Figure 2.

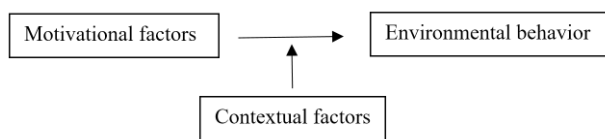


Figure 2. Theoretic model of relationship between independent variables, dependent variable and moderators.

3. METHODS

3.1 The Case

The biggest online petition in this sustainability segment is about packaging deposit money on small plastic bottles to reduce roaming plastic. In February, this online petition with almost 60,000 signatures was offered to the Dutch Parliament (Petities.nl, 2017). It was set up by the so-called Plastic Soup Surfer, Merijn Tinga, who fights against roaming plastic in the sea (Tinga, 2017). He is part of the Plastic Free Sea Foundation. The online petition was aimed for the introduction of packaging deposit money on small plastic bottles in the Netherlands, to make people hand in all plastic bottles instead of throwing them away in the environment. The ambition of the Plastic Soup Surfer is to achieve behavioral change with simple ‘calls to action’, such as the online petition about packaging deposit money for small plastic bottles.

For this research, another sustainability related petition about plastic packaging in supermarkets (De Jager, 2017) is used to approach respondents. This online petition gathered over 50,000 signatories.

3.2 Type of Study

Because of the large amount of data necessary to come to a representative result (382 participants; Raosoft, 2017), qualitative data gathering will be very time-consuming. It will go in more depth however with regard to motivational and contextual factors, but this is not specifically necessary if the various factors are well-defined. Therefore only quantitative data gathering will be used.

3.3 Selection of Respondents

Both online petitions together have 12,043 signatories willing to receive email updates about the petition they have signed. In consideration with the initiators, the questionnaire will be included in one of these emails. Only people that have signed one or both of the petitions have the possibility to fill in the questionnaire.

3.4 Measurement

Respondents were asked to indicate their signatory behavior in terms of anonymousness, choice to donate and if yes, amount of donation. Also the precise moment of signing was asked to link the data to already existing data. Various independent variables were then tested by statements with possibilities to agree or disagree on a 5 point Likert scale (morale towards sustainability problems; instrumental, symbolic and affective value of money and donations). Furthermore, behavioral cost was asked about with a multiple choice question. The questionnaire ended with some demographic questions and the option to give any extra comments.

3.4.1 Dependent variable

Respondents were asked whether they had made a donation and if so, they could indicate the magnitude of it. The amount of donated money was registered in various categories. The respondents that did not make a donation, were assigned to category zero.

3.4.2 Independent variables

Firstly, morale was tested by the responsibility to environmental factors beyond the immediate own interest. Abrahamse, Steg, Gifford and Vlek (2008) developed scales for the perception of environmental problems caused by car use. Two of these have been translated to environmental problems caused by use of plastic; “I feel personally responsible for the pollution resulting from use of plastic” and “My use of plastic constitutes no problem to society” (recoded positively).

Secondly, affect is divided into three subcategories. The *instrumental* aspect of money was tested by the financial room for donating, retrieved from Sargeant, Ford and West (2000): “I cannot afford to offer my support to charity.” The *symbolic* value of material goods was treated in the same paper, which was replaced here with money: “Money is a sign of success.” Furthermore, Leiserowitz (2006) wrote about perceptions of climate change and used scales to investigate any feelings about the topic. Applied to donating, the questions are “Do you have any negative feelings about donating?” (recoded negatively) and “Do you have any positive feelings about donating?” These two scales of the affective aspect of money initially included first a yes/no answer possibility and if yes, a 5-point Likert scale to what extent. For this research, the very precise level of negative or positive feelings is not necessary, so the two answer parts have been replaced by one 5-point Likert scale, ranging from totally not (1) to very much (5).

3.4.3 Moderators

One question about pledging was included in the beginning of the questionnaire; whether the signatory had signed with name/initials or anonymously.

Finally, the contextual factor of behavioral cost was included. This concept has been tested by Hunecke, Blöbaum, Matthies and Höger (2001). They propose two scales about behavioral cost in the choice from car to subway, which are translated to the choice of making a donation; “Donating to the initiative of the petition would be (easy/difficult) for me” and “My freedom of choice in donating to the initiative of the petition is (little/complete)” (recoded negatively). These scales obviously have a multiple-choice answer and are then followed by a possibility to elaborate on the answer. The both items turned out to be not very consistent with a Cronbach’s alpha of 0.269. Also splitting the data according to the two petitions did not make any difference for the sufficiency.

4. RESULTS

The respondent group consists entirely of signatories of two large online petitions about topics related to sustainability. 9180 people of one petition and 2863 people of the other petition agreed to receive emails from the initiator of the petition. They were all approached by email with an online questionnaire. 449 responses were recorded, which gives an overall response rate of 3.7%. The results might not be very representative for the population, because only 29% of the respondents was male. This is hard to determine, because there is no demographic information about the population of signatories. It might be the case that the majority of the signatories is indeed female.

The average age is around 45 years and the average monthly gross income is about € 1,600. The answers have been given in categories, so it is not possible to determine a specific number. The petition about plastic packaging in supermarkets is way more represented than the petition about packaging deposit money on small plastic bottles (80 to 20 percent).

The data provided from *petities.nl* shows that from 57,682 signatories of the Plastic Soup Surfer petition about packaging deposit money, 1.94% has donated to the petition. The gathered data shows a donation rate of 57% with $N = 61$. The petition about plastic packaging in supermarkets had a 0.90% donation rate with 25,951 signatories in May 2017. With $N = 358$, 13% of the signatories in the gathered data made a donation.

The descriptive statistics of donations, morale, affect, pledging and behavioral cost are given in Table 1. The correlations for the same variables are noted in Table 2.

4.1 Independent variables

The both items of Morale turned out to be not very consistent with a Cronbach’s Alpha of 0.187, so only the first item was used for further analysis. Also splitting the data according to the two petitions did not make any difference for the significance.

Both at the choice to donate ($\beta = .505, p < .012$) and at the donated amount of money ($\beta = .108, t(291) = 2.659, p < .008$), morale has a significant positive influence.

The variable of affect is distinguished in three factors. Firstly, the instrumental value of money (financial room to make a donation) has the highest significance, with a negative relationship at the choice to donate ($\beta = -.445, p < .009$) and at the donated amount of money ($\beta = -.121, t(291) = -3.283, p < .001$).

Table 1. Descriptive statistics of dependent variable, independent variables and moderators.

	N	Min	Max	Mean	Std. Deviation
Donation	447	0	1	,19	,393
Donation amount	447	0	6	,47	,833
Morale	447	1	5	3,93	,993
Instrumental	447	1	5	2,53	1,282
Symbolic	447	1	5	2,23	1,059
Affection	306	1	5	3,14	,511
Pledging	427	0	1	,93	,248
Behavioral Cost	447	1	2	1,32	,469
Valid N (listwise)	291				

Secondly, the symbolic value of money also has a negative relationship with $\beta = -.343, p < .013$ at the choice to donate and $\beta = -.106, t(427) = -3.065, p < .002$ at the donated amount of money. This is of course with a smaller number of cases. Thirdly, a mean is taken from both affection items of affect for further analysis, after the Cronbach’s alpha was measured as 0.702. This mean could not generate a significant relationship with donations, but if only one item is taken, a positive relationship can be distinguished (choice to donate: $\beta = .551, p < .001$ and amount of donated money: $\beta = .112, t(427) = 2.736, p < .006$). This item revealed positive feelings about making a donation and should be recoded negatively to be coherent with the other two factors of affect, since those items described attachments to money in different ways. The affection with money should be higher if people have less positive feelings about making a donation.

4.2 Moderators

In a direct relationship with donations, pledging only had a slightly significant negative relationship in the petition of plastic packaging in supermarkets when a regression was done on the amount of donated money: $\beta = -.280, t(341) = -1.637, p < .095$. Pledging was also combined with all independent variables to check out the moderating functions. However, no relationship in any case turned out to be significant.

The both items of behavioral cost turned out to be not very consistent with a Cronbach’s alpha of 0.269. Also splitting the data according to the two petitions did not make any difference for the significance. One of the items was used for further analysis. This item showed a high significance in the choice to donate ($\beta = -2.007, p < .0003$) and in the donated amount of money ($\beta = -.214, t(427) = -2.238, p < .026$). Likewise pledging, behavioral cost does not show any significant relationship combined with the independent variables.

4.3 Other Regressions

Another possible role for the contextual factors is the one of mediator. Motivational factors keep their independent variable status, because such opinions about environmental problems and money are not easily affected by a certain contextual factor of an online petition. A short look is taken at this approach, because it might give a better insight in the relation between the variables.

Table 2. Correlation matrix of dependent variable, independent variables and moderators.

		Donation	Donation amount	Morale	Instrumental	Symbolic	Affection	Pledging	Behavioral Control
Donation	Pearson	1	,498***	,092	-,241***	-,063	,018	-,043	-,275***
	Sig (2-tailed)		,000	,051	,000	,180	,751	,381	,000
Donation amount	Pearson	,498***	1	,063	-,228***	-,021	,032	-,076	-,217***
	Sig (2-tailed)	,000		,185	,000	,655	,579	,117	,000
Morale	Pearson	,092	,063	1	-,070	-,008	-,092	-,048	-,085
	Sig (2-tailed)	,051	,185		,137	,873	,108	,324	,073
Instrumental	Pearson	-,241***	-,228***	-,070	1	,048	-,101	,095**	,459***
	Sig (2-tailed)	,000	,000	,137		,315	,076	,049	,000
Symbolic	Pearson	-,063	-,021	-,008	,048	1	-,154***	-,003	,010
	Sig (2-tailed)	,180	,655	,873	,315		,007	,954	,829
Affection	Pearson	,018	,032	-,092	-,101	-,154***	1	,103	-,113**
	Sig (2-tailed)	,751	,579	,108	,076	,007		,078	,049
Pledging	Pearson	-,043	-,076	-,048	,095**	-,003	,103	1	,023
	Sig (2-tailed)	,381	,117	,324	,049	,954	,078		,643
Behavioral Cost	Pearson	-,275***	-,217***	-,085	,459***	,010	-,113**	,023	1
	Sig (2-tailed)	,000	,000	,073	,000	,829	,049	,643	

***. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

If a regression is done on pledging with the four independent variables, only affection turns out to be significant with $\beta = 1.496, p < .034$. On behavioral cost, instrumental is highly significant with $\beta = .895, p < .0000$ and affection again with $\beta = -.832, p < .012$.

The regression from contextual factors to environmental behavior is described above in 4.2 Moderators.

5. DISCUSSION

5.1 Conclusion

In this research, the aim was to support initiators of online petitions with a sustainability related topic in their actions by revealing the optimal situation for signatories to contribute to the petition. If more support for these initiatives could be generated, sustainability problems could be tackled more effectively. The research was executed at two large petitions; one of the Plastic Soup Surfer (Merijn Tinga) about the introduction of packaging deposit money on small plastic bottles and one about plastic packaging in supermarkets, both with 50,000-60,000 signatures. A quantitative research was done with 450 respondents to collect data in order to answer the following question: *To what extent and how do pledging and behavioral costs influence the relationship between motivation and donations in the Plastic Soup Surfer petition?*

5.2 Results of the Hypotheses

To answer this research question, two main hypotheses have been formulated. They are reviewed according to the Results.

H1: Morale will have a positive causal relationship with donations.

This positive relationship is described in the Results. It can clearly be recognized in the data that people feeling a higher urgency to do something about sustainability problems, are also more likely to make a donation to a sustainability related topic in an online petition.

H2: Affect will have a negative causal relationship with donations.

Two factors (instrumental and symbolic) have a negative relationship with the environmental behavior. If someone does not have much financial space to contribute to a charity and therefore values money high in an instrumental way, he is less likely to make a donation. Also if this person sees money as a status symbol and therefore values money high in a symbolic way, he is less likely to donate. The third factor, affection, was asked about donations instead of money on itself. This means it has to be interpreted the other way around. A positive relationship was shown, which indicated a higher likeliness to donate if someone ascribed positive feelings to making a donation. The affection with money is then low, because it is easy to give away. To conclude, three corresponding relationships are seen between the three aspects of affect with money and donating as environmental behavior. Therefore this hypothesis can also be accepted.

H1a: Pledging will have a negative effect on the relationship between morale and donations.

H1b: Behavioral costs will have a negative effect on the relationship between morale and donations.

H2a: Pledging will have a negative effect on the relationship between affect and donations.

H2b: Behavioral costs will have a positive effect on the relationship between affect and donations.

At all these four sub-hypotheses, no significant relationship can be distinguished. The different independent variables and assumed moderators do however correlate with each other, so they are probably not totally independent. The moderator role is only not the right approach for these contextual factors. The mediator role has been lightly touched upon, which offers some perspective for further research.

5.2.1 Research Question

The extent to which pledging and behavioral costs influence the relationship between motivation and donations in the petitions is not very high. Nevertheless, they do influence donations and also correlates with motivation, so the contextual factors could possibly be framed into another relationship with motivational factors and environmental behavior.

5.3 Scientific Implications

The moderator role of contextual factors (especially pledging and behavioral cost) on the relationship between motivational factors and environmental behavior should be excluded in the case of online petitions about a sustainability related topic. Other possible roles of contextual factors are still open for further research.

The likeliness to donate more with a high morale, low affect with money and low behavioral costs (Steg & Vlek, 2008) might seem obvious, but it is good to underline these theories. The role of pledging was already described in the field of slacktivism followed by lower contribution (Kristofferson, White & Pelozo, 2013), but was also seen as a public commitment which would cause a higher contribution (Cialdini, 2006). The support for the first approach has grown with this research.

5.4 Practical Implications

Contextual factors as pledging and behavioral cost do not directly enable or retard people to turn their motivation into environmental behavior. The variables do however correlate a lot and more importantly, they all have a relationship with the choice to make a donation or the amount of money donated. People with a high morale, a low affect with money (whether it is instrumentally, symbolically or affectively), an anonymous signature and low behavioral costs are likely to donate more.

5.5 Limitations

This research knew several limitations. Firstly, more respondents were gathered at another petition than the one of the Plastic Soup Surfer, despite his petition functioning as target group. Secondly, only the most motivated people have contributed to the research, which has probably biased the data. This was seen at the difference in donation rates. Furthermore, the self-reporting questions might not generate accurate answers for the actual behavior of respondents. The data of *petities.nl* has also not been used totally, because it was hard to link it with the respondents.

Also not all the questions were very clear to the respondents. The questions were taken from papers with different subjects, which might therefore cause that they were not always suitable for this research. Besides, the consistency of items for the same concept was often not high. Moreover, the chosen variables might not be representative for motivational factors, contextual factors and environmental behavior.

Finally, the results might not be applicable to other environmental movements or other online petitions, since a very specific case is investigated.

5.6 Future Research

Various aspects are accessible for further research. Firstly, other possible roles of contextual factors in the relationship with motivational factors and environmental behavior should be investigated, e.g. the mediator role. Also the field of environmental behavior could be broadened to areas of saving, recycling, reusing, cleaning, etc. Furthermore, different contexts should be examined to create an overall theoretical framework. Whenever possible, actual behavior should be studied because of self-reporting bias and the respondents being the most ambitious ones.

5.7 Last Remark

As the need for environmental action grows, environmental awareness under citizens and in literature slowly follows. If we want to preserve the world we live in, our behavior has to be altered incredibly.

6. ACKNOWLEDGEMENTS

A large contribution was done by my supervisor dr. T.A. van den Broek. I would like to thank him for the feedback and suggestions on the progress and framing of the whole research track.

The cooperation with R. Rustema from *petities.nl* was very helpful for contacts, data and suggestions. The initiators of the both petitions, Merijn Tinga and Femke de Jager, played a crucial role in the gathering of data by contacting the signatories.

The support and feedback of my boyfriend, family, friends and fellow students was very valuable.

7. REFERENCES

- Abrahamse, W.; Steg, L.; Gifford, R. & Vlek, C. (2008). Factors influencing car use for commuting and the intention to reduce it: A question of self-interest or morality? *Transportation Research Part F 12* (2009), 317–324.
- Ajzen, I. (1988). Attitudes, personality, and behavior. Chicago: Dorsey Press.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes* 50(1991), 179-211.
- Bekkers, R. & Wiepking, P. (2006). To Give or Not to Give, That Is the Question: How Methodology Is Destiny in Dutch Giving Data. *Nonprofit and Voluntary Sector Quarterly*, vol. 35, no. 3 (September 2006), 533-540.
- Bekkers, R. & Wiepking, P. (2010). Accuracy of self-reports on donations to charitable organizations. *Springer Science+Business Media B.V.* (2010).
- Cialdini, R. (2006). Influence: The Psychology of Persuasion.
- De Leon, I.G. & Fuqua, R.W. (1995). The Effects of Public Commitment and Group Feedback on Curbside Recycling. *Environment & Behavior* 03, vol. 27, no. 1 (1995), 233-250.
- Demos/Green Alliance (2003). Carrots, sticks and sermons: influencing public behaviour for environmental goals. A Demos/Green Alliance Report for Defra.
- Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, MA: Addison-Wesley.
- Gardner, G.T. & Stern, P.C. (1996). Environmental problems and human behavior. Needham Heights, MA, US: Allyn & Bacon
- Hunecke, M.; Blöbaum, A.; Matthies, E. & Höger, R. (2001). Responsibility and Environment: Ecological Norm Orientation and External Factors in the Domain of Travel Mode Choice Behavior. *Environment and Behavior*, 33(6), 830-852.
- Jager, F., de (2017). Petitie tegen onnodige plastic verpakkingsmaterialen in de supermarkt. Retrieved September 20, 2017, from <http://www.zensible.nl/petitie-tegen-onnodige-plastic-verpakkingsmaterialen-in-de-supermarkt/>.
- Kristofferson, K.; White, K., & Pelozo, J. (2013). The Nature of Slacktivism: How the Social Observability of an Initial Act of Token Support Affects Subsequent Prosocial Action. *Journal of Consumer Research*, Inc. 40(2014).
- Leiserowitz, A. (2006). Climate Change Risk Perception and Policy Preferences: The Role of Affect, Imagery, and Values. *Climatic Change*, 77 (2006), 45–72.
- Morgan, G. (2006). Images of organization. *Updated edition*, Thousand Oaks, CA.

- Morozov, E. (2009). From Slacktivism to Activism. *Foreign Policy Blogs*, September 5 (2009).
- Pallak, M.S., Cummings, W. (1976). Commitment and Voluntary Energy Conservation. *Personality and Social Psychology Bulletin 01, vol. 2, no. 1* (1976), 27-30.
- Petities.nl (2017). Uitbreiding van statiegeld op kleine PET-flesjes. Retrieved on 14-04-2017 from <https://petities.nl/petitions/uitbreiding-van-statiegeld-op-kleine-pet-flesjes?locale=en>.
- Sargeant, A.; Ford, J. & West, D.C. (2000). Widening the appeal of charity. *International Journal of Nonprofit and Voluntary Sector Marketing*, 5(4), 318–332.
- Steg, L., & Vlek, C. (2008). Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology* 29(2009), 309–317.
- Steg, L., Bolderdijk, J.W., Keizer, K. & Perlaviciute, P. (2014). An Integrated Framework for Encouraging Pro-environmental Behaviour: The role of values, situational factors and goals. *Journal of Environmental Psychology* 38(2014), 104-115.
- Tinga, M. (2017). About Plastic Soup Surfer: Plastic Free Seas. Retrieved on 14-04-2017 from <http://plasticsoupsurfer.org/en/about/>.
- Vlek, C., & Steg, L. (2007). Human behavior and environmental sustainability: problems, driving forces and research topics. *Journal of Social Issues*, 63(1), 1–19.

8. APPENDIX

8.1 Questionnaire (Dutch)

Environmental behavior

1. Heeft u gedoneerd of heeft u interesse om aan een van beide petities te doneren? *
2. Hoeveel heeft u gedoneerd of zou u doneren?
3. Op welke manier heeft u de petitie ondertekend? *
4. Wanneer (datum en tijd) heeft u de petitie ondertekend?

Morale

5. Ik voel me persoonlijk verantwoordelijk voor de milieuvuiling die ontstaat door plasticgebruik.
6. Mijn gebruik van plastic is geen probleem voor de maatschappij.

Instrumental

7. Ik kan het me niet veroorloven om aan goede doelen te doneren.

Symbolic

8. Geld is een teken van succes.

Affective

9. Heeft u een negatief gevoel bij het doen van een donatie?
10. Heeft u een positief gevoel bij het doen van een donatie?

Behavioral cost

11. Doneren aan het initiatief van de petitie zou voor mij (eenvoudig zijn. / ingewikkeld zijn.)
12. Kunt u uw laatste antwoord toelichten?
13. De mate waarin ik zelf kan beslissen of ik doneer aan het initiatief van de petitie is (klein. / groot.)
14. Kunt u uw laatste antwoord toelichten?

Control variables

15. Wat is uw leeftijd? *
16. Wat is uw geslacht? *
17. Wat is uw hoogst afgeronde opleiding? *
18. In welke categorie bevindt uw maandelijks bruto inkomen zich? *
19. Hebt u nog opmerkingen over iets in de vragenlijst?

Update on research

20. Uw e-mailadres