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Green Consumption and Pro-Environmental Behaviors in Lithuania

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By

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Abstract

The thesis is dedicated to finding out how to encourage an increase in green consumption and pro-environmental behaviors. The analysis was based on both qualitative and quantitative data, collected in Kaunas, Lithuania. The quantitative analysis was based on data collected from 112 surveys; the information gathered from the surveys was used for a logistic regression in order to find predictors of green consumption and for Pearson's chi-square tests to see if the differences between green and conventional consumers were random or could be attributed to group membership. The qualitative analysis was based on 39 semi-structured interviews, which were analyzed using first and second cycle coding. The main theories used to interpret the findings were: general theories on what motivates human behavior (internalist, externalist and mixed), with extra emphasis on theories that explain what motivates seemingly non-selfish behaviors (Attitude-Behavior-Context model). Furthermore, theories on how to achieve and explain behavioral change were used ('Positive spillover' effect, Cognitive Dissonance Theory, Social Learning Theory). The findings of the research indicate that green consumption is best predicted by gender (women), egoistic (health) and biospheric (environmental) concerns. Even though mixed (egoistic and biospheric) concerns were the best predictors in the regression, other findings indicate that it is egoistic concerns that dominate the decision making processes of green consumers. Based on the findings, the best ways of encouraging behavioral change are either by creating a convenient external context − especially infrastructural and financial − or by creating desirable values and attitudes in people, by educating them formally, through social advertising and through social learning.

Keywords: green consumption, pro-environmental behaviors, environmental (biospheric) concerns, health (egoistic) concerns, logistic regression, Pearson's chi-square, first and second cycle coding, mixed methods research.

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1. Introduction

1.1. Motivation for the study

The reason for writing this thesis is one particular problematic situation – namely, that the environmental situation is deteriorating and it is happening on a global scale. This has increasingly negative effect on both the human and the non-human worlds. There are many approaches how this problem could be tackled. The approach that was chosen in this thesis works on an assumption that a reduced negative effect on the environment can be reached by a change in consumption practices.

It is, of course, an oversimplification, but it could be claimed that many of the current environmental problems can be attributed to increasing levels of consumption – a trend that can be observed worldwide. On the one hand, this could be seen as a positive development because it means that more people are being able to get out of poverty – their standard of living (and presumably quality of life) is increasing, they are able to live a life that is less defined by a feeling of constant lack and deprivation. On the other hand, it is not only the increasing levels of standard of living of the poor people that cause this overall increase in consumption levels. A major part of it can be attributed to people, who, even after reaching a convenient and comfortable standard of living, still strive for upwards social mobility, which is often best expressed and reached through increased consumption.

In a simplified way, the continuously increasing levels of consumption can be viewed as 'the root of all evil' when it comes to environmental problems – in a free market economy, an increasing demand means that there will be a strive towards matching that demand with a supply. Providing a supply for an increasing demand of consumer goods would inevitably (bearing in mind the most common resource regimes), in the long run, lead to resource depletion, destruction of habitats, pollution, loss of biodiversity, increased social injustice and other connected problems. As a result, one way of tackling those environmental problems could be by changing consumption patterns in people. Green consumption (even though difficult to define which activities it ought to include and which not) can be seen as one of the potential ways how our consumption patterns could be changed for the better.

I will not discuss in this thesis how beneficial green consumption actually is for the environment. Instead, the aim is to find out how to best encourage the uptake and continuity of this behavior, *if* it is decided that green consumption levels ought to be increased. In order to do that, we would first of all have to find out if current green consumers (people who buy eco-labeled products regularly) differ significantly from conventional consumers in pre-defined areas of interest (for

example their behaviors and attitudes when it comes to eco-labeled products or pro-environmental behaviors).

Secondly, since we are looking at green consumption as an approach to improving the current environmental situation, we have to find out how this kind of consumer behavior relates to pro-environmental behaviors and more general biospheric or altruistic concerns. Finding out what motivates, facilitates and hinders a desired behavior is key to ensuring that people take up and continue performing this behavior.

1.2. Objectives, research questions and their rationale

The **objectives** of this study are thus: (1) to see how people who consume eco-labeled products (ELP) regularly differ from people that rarely or never consume such products; and (2) to see if there is a relationship between green consumption and pro-environmental behaviors (PEB) or concerns. Both of these objectives are set in order to find out how we could sustain or increase the levels of pro-environmental behaviors or green consumption if we wished to achieve that.

In order to achieve these goals, data was gathered that would aim at answering three **research questions**:

1. What are the important differences between the green and conventional consumers?
2. How can egoistic and biospheric concerns, pro-environmental behaviors and socio-economic variables predict green consumption?
3. What are the perceived hindrances and facilitators to both pro-environmental behaviors and green consumption?

The purpose of **research question one** was to see if the groups (green and conventional consumers) differed beyond the fact that one of them used more eco-labeled products than the other. The areas where I was looking for differences to appear included socio-economic variables, habitual consumption behavior, potentially altruistic behaviors, pro-environmental behaviors,[1] opinions about eco-labeled products and opinions about consumption levels in Lithuania in general. I was interested in finding out if the groups differed both with regards to their everyday behaviors and with regards to behaviors that could imply altruistic or biospheric concerns as motivation.

The reason why I was looking at consumption habits, potentially altruistic behaviors and pro-environmental behaviors together was to try and find out if there was any reason to believe that

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[1] The terms green consumption and pro-environmental behaviors are introduced and discussed in sections 3.3.1. and 3.3.2.

these behaviors could influence each other's presence or if they might all stem from the same value basis (also what that value basis might be). Furthermore, it was important to find out if the environmental concerns that appeared from the data were consistent throughout different questions.

The purpose of **research question two** was to find out if there were any variables that could predict green consumption with a high degree of certainty. The variables to be used in the model were predefined before the data collection and were based on the findings of other studies on green consumption and pro-environmental behaviors.

In addition to predictive purposes, data for research questions two was also used to see if environmental concerns were stable and genuine. Such concerns were considered to be stable if they appeared (relatively) consistently throughout different questions and different types of data (qualitative and quantitative); environmental concerns were considered to be genuine if they translated into pro-environmental behaviors.

The main reason why **research question three** was incorporated in the research was that if we wished to encourage a certain kind of behavior in people, we would need to know what hindered that behavior from appearing. The hindering factors would be context – culture, location, and history – specific. Thus it was important to not only know the theory of what generally facilitates and hinders pro-environmental behaviors, but also what the local people, people who were directly connected to these issues, considered or have experienced to be the main hindrances and best facilitators to the behaviors in question.

However, motivations, facilitators and hindrances to a given behavior are often context specific, and since the results of this thesis are based on data gathered from a Lithuanian sample, the observations, generalizations and suggestions that are discussed at the last chapters of this thesis are mainly directed at the Lithuanian population, and are not necessarily applicable to different cultural contexts.

1.3. Structure of the thesis

The paper starts with providing background information about how consumption practices have changed in recent decades in Lithuania and some more general ideas on what might have caused the changes in consumption patterns worldwide in the last half-century (chapter 2). Chapter 3 is dedicated to an overview of the theories that provided a foundation of this thesis; the main theories discussed are about what motivates human behavior and how to change behavior. Chapter 3 also includes a literature review, where main findings of a number of studies researching green consumption and pro-environmental behaviors are presented. This chapter also includes a short

discussion of what green consumption and pro-environmental behaviors is. The theory chapter is followed by methodology (chapter 4) where research instruments as well as epistemological and ontological considerations are introduced and explained. Chapters 5, 6 and 7 include the findings for research questions one, two and three respectively. A discussion of those findings is provided in chapter 8, in which sections 8.1., 8.2., and 8.3. are dedicated for discussing the findings of research questions one, two and three respectively. Finally, chapter 9 provides a conclusion based on the findings and their analysis.

2. Background

2.1. How has consumption patterns changed in the Western world during the last decades?

It is quite clear that our standards of what is a good and comfortable life, what is convenient, what is necessity and even what is to be considered as (acceptably) clean have changed considerably over the last half-century and there are some interesting theories and approaches explaining that change (Shove 2004, Røpke 1999).

Røpke (1999) for example presents several ideas on what could have caused such a change. She looked into the seeming paradox that even though we have become much more efficient in our work during several last decades, we choose to rather work more hours and earn more instead of having more leisure time.

Economic theories claim that a competitive feeling drives us to wish to increase consumption instead of having more leisure time. In addition, working culture in certain countries (like the US) views working long hours and overtime more favorably, often as a sign of loyalty, while wishes for more free time would not be viewed favorably (ibid. 404).

Socio-psychological theories provide several possible explanations for such behavior. For example, it is claimed that 'insatiable wants' can be the driving force for our consumption (while increasing income facilitates it). Douglas and Isherwood (1996), on the other hand, present the idea that first of all one cannot take a person out of his/her social surroundings; furthermore, most societies could be distinguished as hierarchical and there will be different 'classes' constituting these societies. Any such class will be at least partly defined by their 'typical' consumption patterns and currently the 'West' is at least partly characterized by high levels of consumption.

One of many universal human features is that we seek 'positive social identity' (Jackson 2005a). It is often achieved by establishing oneself in a certain social group or 'class' and is often done by discriminating against the 'out group' in order to help identify the 'in group'. Current social norms are more favorable towards social mobility (including upward social mobility) than ever before. And the increasing movements between different social groups can be seen as one of the reasons for the continuously growing consumption we have been observing.

Another approach to explaining our changes of consumption is a historical/socio-technical one. There are several aspects to it: first of all, consumption is increasingly seen as a key part of constructing identity. Secondly, the expansion of welfare policies, increase in income and change in social norms has allowed for a 'decreased interpersonal interdependence' (Røpke 1999). This

means that many segments of society have become able to afford more. We see, for example, that people get their own homes at an increasingly younger age, at the same time it has become easier for women, retired people or single people to obtain and keep accommodation of their own.

What this means in practice is that there is a much higher demand for housing and everything that our society sees as 'necessary' attributes of any accommodation. Thus a lot of our income increase goes to covering our increased 'need' for independence, for example house-buying and home-making. The desire to become and remain independent can be seen as one of the reasons why people strive for steadily (yet continuously) increasing income. This in return shows why people might choose longer working hours instead of more leisure time.

In addition, our opinions of what is a reasonable standard of living, how a home ought to look, how clean and warm it ought to be or how much furniture and technology we ought to own have changed for the more demanding. This of course also results in a constantly growing level of consumption.

To sum up, in the words of Røpke (1999: 415) "the combination of individualization, busyness and effectiveness is a string cocktail contributing to the growth in consumption." This might not be the only explanation, and it certainly cannot explain all of the consumption changes that have appeared in the several last decades, but it contributes significantly, to our understanding of this issue.

2.2. How has consumption patterns changed in Lithuania?

Consumption patterns in Lithuania have been changing differently compared to other parts of the Western world, mainly due to the fact that Lithuania had been, for a period of time, incorporated into the Soviet Union. The economic system in the Soviet Union did not manage to balance supply and demand; in most cases the supply would be short. As a result, even though people had the money to buy the items they wanted, there was very little to buy.

The main characteristic of any shopping trip, whether it would be for bread, butter, beer or shoes, was queuing – hours of it with the uncertain hope of being able to buy something one needs. Further on, there was a very small variety of consumption goods to choose from and a lot of them were of rather poor quality. On one hand, this made people appreciate and value the things they did have much more than people appreciate things now.[2] On the other hand, everyday life was followed by a constant sense of deprivation and the lack of even the most basic things (even toilet paper was a luxury).

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[2] According to the opinions of some of the interview respondents.

After Lithuania managed to leave the Soviet Union, the economic system changed completely and after a short period of chaos, the country became a liberal market economy, with all its benefits and drawbacks.

This meant that people underwent a very drastic change as consumers – from being relatively well off but having nothing to buy, to having a much weaker buying capacity but having a dazzling variety of consumption items to choose from. In addition, the 'West' and the US as the main representative were seen as prime example of the 'good life', which ought to be followed at any cost. As a result, consumption has been increasing ever since, even though some of the circumstances have changed.

When it comes to current consumption patterns in Lithuania, a lot of it can be explained and understood in the context of the theories that were presented in the previous section – people increase their consumption due to competitiveness, social surroundings, as a result of identity construction and because of the wish to be independent. However, the countries' history and change of economic order are also still influencing people's consumption practices – this is a circumstance that needs to be kept in mind while interpreting and analyzing the findings of this research.

2.3. The increase of green consumption in Lithuania

The decision to study green consumption in Lithuania in particular came from the observations that environmental awareness seems to be on the rise there currently. This is first of all noticeable from the fact that the main media platforms are presenting more and more cases connected to environmental issues each year.[3] Furthermore, people are becoming more active in expressing their disapproval to governmental decisions that can harm the environment. Finally, the number of shops offering eco-labeled, organic and natural products has been increasing with each year as well.

Even though eco-products only take up 0.5% of the food market in Lithuania, there has nevertheless been observed a constant increase in the demand and supply of different kinds of eco-labeled products. The highest increase in sales has been observed in the non-food product area (like detergents, personal hygiene products and cosmetics) – the sales of these products have increased around 1.5 times during the past few years. This is especially noticeable in the area of children's products, where the increase in sales has been around 9 times over the last several years. There are, however, fluctuations in the demand and popularity of specific products within each of those categories. [4]

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[3] For example the main news webpage in Lithuania www.delfi.lt has recently launched a permanent sub-section dedicated to environmental issues at http://grynas.delfi.lt/

[4] http://grynas.delfi.lt/gyvenimas/produktai-kuriems-lietuviai-isleidzia-50-milijonu-litu.d?id=64504724

However, the general observations of increased environmental awareness and increased green consumption were rather superficial, thus it was interesting to investigate the topic further – how environmentally concerned are Lithuanians, do their concerns translate into pro-environmental behaviors, who are the people that cause an increase in eco-labeled product sales, what can be said about the green consumers in Lithuania? This research is thus aimed at understanding observed changes in attitudes and consumption patterns better.

3. Theory and literature review

In order for one to be able to participate in the green consumption discussion, it is important to know how 'the discussion' has been going so far, since the topic is not new and there is an extensive amount of scientific papers on it. The purpose of this chapter is just that – to provide theoretical foundations for the green consumption discussion and, as a result, update the reader on what has so far been said in 'the green consumption debate'. Furthermore, parts of the theory chapter also provide justification for methodological choices that will be discussed in the following chapter.

I will start this chapter by (1) introducing the term consumption, the ways we think about it and challenges posed by our ways of thinking. It will then be followed by (2) an overview of the main theories analyzing motivation for human behavior. Further on, I will (3) introduce the terms pro-environmental behaviors and green consumption, theories concerning these subjects and an overview of previous research done in the area; at the end of this section I will provide my own definition of green consumption. Finally, I will (4) introduce the main ideas of what kind of change in our consumption patterns is seen as necessary or desirable in order to improve the current situation.

3.1. What is consumption?

3.1.1. The definition of consumption

Consumption is a very common term in our everyday language; it is also one of the words that seems to have a very clear commonsensical meaning, but is in fact quite challenging to define when needed. This is partly due to all of the different areas the word can be used in, as well as the uncertain difference between the words 'consuming' and 'using'. The most common dictionary definitions are as follows:

Consumption:

-The act or process of consuming *<consumption* of food> *<consumption* of resources>*;*

- The utilization of economic goods in the satisfaction of wants or in the process of production resulting chiefly in their destruction, deterioration or transformation (Merriam-Webster Online Dictionary, 2014).

-The act of consuming or the state of being consumed, esp. by eating, burning etc.;

-Expenditure on goods and services for final personal use (The free online dictionary by Farlex, 2014).

-Consumer behavior can be consumption of things, resources, but it can also be household management decisions and lifestyle choices (Jackson 2005a).

Princen (2002: 30) provides an even wider specter of definitions:

> Consumption, according to *The American Heritage Dictionary of the English Language*, is to expend or use up, to degrade or destroy. Thermodynamically, it is to increase entropy. Biologically, it is capturing usable material and energy to enhance survival and reproduction and, ultimately, to pass on one's genes. Socially, it is using up material and energy to enhance personal standing, group identity, and autonomy.

These definitions illustrate that the most prevailing understandings of consumption in our everyday life are 'consumption as if of food' or 'consumption as if by fire'. These ideas of consumption are, according to Wilk (2004a, 2004b), more persistent in our understanding and discourse of consumption than most of us ever thought.

3.1.2. The metaphors of consumption

This section is provided mainly in order to illustrate that there is no universal way of understanding or using the term consumption. The fact that we find difficulties defining the term in addition to understanding everything it stands for, means we have to be careful with terms like overconsumption and underconsumption as well. This also touches upon terms like sustainable (or green) consumption. Finally, consumption is not just about the consumer side, it is also about production, transport, infrastructure, financial markets, standards of quality and durability and other aspects. However, in this paper I will only focus at the consumer side of the green consumption debate.

Richard Wilk has a background from archeology and anthropology; still, he presents a very comprehensive image of how we think about consumption based on the field of cognitive linguistics.[5]

Cognitive linguistics claim that the categories we use when talking and thinking are not clear and defined, but rather "fuzzy", complex and unclear. When we think about objects or phenomena, what guides our understanding is a certain 'prototype' – "an idealized typical chair [for example]" (Wilk 2004b: 12). All the other objects or phenomena are related to that prototype in a variety of ways, some are closer to the prototype, others further. The more an object is closer to the prototype, the more 'real' it will appear. A chair with four legs and back support is more 'chair like' than a modern bench. A very important point of this theory is that all members of a category are bound

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[5] More on the field of cognitive linguistics can be found in the writings of George Lakoff (1980, 1987)

together *by their relationship to the prototype*, not to one another. Sometimes that relationship to the prototype can be through a metaphor, which is the case with consumption.

The two main metaphors we use when thinking about consumption according to Wilk (2004b) are:

Consumption is Death

Consumption is Fire

Consumption is Eating

The first two metaphors are fairly common in a variety of scientific fields, and in both of the dictionary definitions of consumption provided we saw these two meanings implied – 'consumption by fire', 'consumption as destruction or deterioration of an object'. However, the final one (Consumption is Eating) is the most prevalent in our minds and languages currently, thus I will only focus on it from now on.

To understand the *Consumption is Eating* metaphor, we have to look at the prototypical act of eating. In fact, it is not only the separate act that we look at, but also surrounding actions and emotions; therefore the metaphor includes several stages:

Hunger → finding & preparing → chewing & swallowing → digesting → excreting

Our modern consumption includes all these stages as well. The *hunger* in eating is *desire* in consumption, and desire is seen like hunger – it is a nagging feeling, it demands satisfaction. There is a dilemma here however – hunger is a need, desire is wanting; seeing desire as hunger can make it seem much more like a need (in our minds).[6]

So if we see the process that leads to eating and eating itself like consumption, then hunting or finding is shopping – it is exciting; while desiring something is just as unpleasant as hunger, if unsatisfied. Obtaining the object is (usually) satisfying, while consuming/eating it can be anything from the joyful feeling of self-reward to simple disappointment. Waste products are undesirable, taken out of sight and left for professional handling.

The most important conclusion from this metaphorical understanding of consumption as eating is this: a good meal leaves us satisfied and lazy, in the same way a spree of shopping often provides us with similar feelings and we do not want to do any more shopping for a while. However, no matter how good a meal you do have, eventually you will get hungry again.

This conclusion is vital for consumption research, because it provides and explanation on why people keep on buying things when they seemingly do not need any more; why people continue

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[6] That might explain why so many people claim to be consuming according to their needs, almost no matter their actual consumption levels.

going on larger or smaller shopping trips at certain intervals, independently of the success or scale of the previous trip.

To sum up the cognitive linguistics approach on consumption, the more an act is similar to eating (and leaves the object reduced to waste) the more consumption-like it will appear to us.

3.1.3. Challenges with the metaphors of consumption

However, consumption is in many ways unlike death, fire or eating; we can consume without reducing the object to waste. In some cases, we can share the same item of consumption even at the same time, which is completely unlike eating. Two people cannot eat the same piece of cake at the same time, but they can listen to music, take a bus, or watch TV. Does this mean that we consume an item when we use it, or only when we reduce it to waste?

Because we see and think of consumption through these metaphors, while consumption is in many ways unlike any of these acts, we cannot solve many consumption related challenges. It affects how we see the rich and overindulgence, the poor with their current and potential consumption, and ideas of voluntary simplicity. Also, we do not manage to differ between kinds of consumption and their impacts on nature and resources.

If consumption is eating, then wealth is fat; it is not a kind of evil, but rather weakness and people are "victims of temptation" (Wilk 2004b).

Voluntary simplicity in terms of eating had been viewed differently in previous centuries from now. Abstaining from food then could have been seen as piety, religious dedication or miser, while now, it is simply a mental illness – anorexia. As long as consumption is seen as eating, who in their sane minds would go for the consumer 'anorexia'?

3.2. What motivates behavior?

3.2.1. Why is motivation important?

While answering this question, I would like to take the example of pro-environmental behaviors, since it is relevant for the research I carried out. There is a number of pro-environmental behaviors and actions that can be done, they vary from little things like using energy saving bulbs and sorting waste to big lifestyle decisions like refusing air travel or not owning a car. All of these actions are being done to a varied degree of dedication, frequency and motivation. Some people do these actions because they value the environment and want to protect it; others perhaps because it is fashionable or they feel social pressure to do so. The question arises then, is it important what motivates a 'good deed' or is it enough that a person simply does the deed?

In the context of green consumption, we study motivation for behavior for two main reasons: first of all to understand how to support behavioral change, and secondly to find out if behavior will change when the contextual factors change.

Behavioral change will be touched upon further in the theory section, and I will briefly discuss the issue of continuity of action in this section. Motivation for almost any given pro-environmental behavior will define whether that behavior will continue if the situation changes. Stern (2000) explains this relationship with his *Attitude-Behavior-Context* model – he claims that the relationship between behaviors and attitudes is strongest when the contextual factors are neutral. But if the contextual factors are strongly positive or negative, attitudes would have virtually no effect on the behavior.

For example, if sorting facilities are easily accessible to people, almost everybody would sort their waste, independent of their attitudes towards this behavior; in the same way, if sorting facilities were very difficult to reach, virtually no one would do that. However, it is when the sorting facilities are available, but perhaps not very easy to reach, that the positive or negative attitudes towards waste sorting would influence people's behaviors.

This has some implications, especially on the policy level. What this means for policy makers, who are interested in supporting an increase in pro-environmental actions, is that one has to either facilitate very good external conditions (often infrastructural) and retain a high level of quality of them to ensure that large amounts of the populations participate in the desired activity, or, alternatively, invest into increasing pro-environmental concerns in people.

Being able to facilitate a growth in pro-environmental values in people would be a more secure and long term solution, but at the same time, it is very difficult to achieve. Improvement in external conditions that would help people behave more pro-environmentally would be an easier solution with swifter results, but it would also be resource demanding and could not ensure the continuity of such behavior in the future.

As a result, for someone who is interested in the continuity of pro environmental behaviors, it is important to ensure that people are motivated by the most suitable reasons.

3.2.2. Internalist vs. externalist theories

Having established that motivation for an action does matter, at least in the context of pro-environmental behaviors, I would like to go to the next step and identify the main types of theories that analyze motivation for behavior. The theories here are mainly about human behavior in general, but they are also true for consumer behavior as well as PEBs. There is a variety of ways to

categorize the existing theories on what motivates human behavior and I will be using one provided by Jackson (2005a), who divides the theories into internalist, externalist and mixed.

Internalist theories claim that motivation for behavior comes from inside the person, from his or her beliefs, values, attitudes or rational calculations. Externalist theories claim that what shapes and motivates a person is his/her social surroundings, perceived expectations, communication within and across groups. Mixed theories try to combine both approaches and claim that a person's behavior is influenced both by his/her personal norms, values and attitudes, and by social surroundings, belonging to groups and communication.

It could, of course, be debated, if anything can ever be truly internal. After all, humans are social creatures, who live in groups and are surrounded by people most of their lives. No one can say for sure if a person is ever born with any kind of pre-determined values, or if all values have arrived to us from our external social world and just some of them are so internalized that they feel like personal norms – something that has been with a person all their life.

The theoretical approach we choose to understand what motivates a person's behavior will also influence how desired behavioral change ought to be achieved. According to Jackson (2005a) if one looks from the internalist perspective one has to enlighten and educate people in order to change their attitudes and behavior; from the externalist perspective, suitable conditions have to be created, both cultural and infrastructural. And the mixed approach would of course imply both.

I will now review the main ideas from these tree approaches to behavioral motivation.

3.2.3. Internalist theories

The main idea within the internalist theories about what motivates human behavior is that motivation comes exclusively from the inside – it could be personal norms, beliefs, values, attitudes or calculations. The most prevalent of the internalist theories is the *Rational Choice Theory*.

Rational Choice Theory claims that human action (including consumption) is motivated by the pursuit of personal well-being (or maximal utility). Choices are made based on rational calculations, bearing in mind their costs and benefits, having full information, and no transaction costs apply. Desires fuel our wish for consumption, but this particular theory is not interested in the causes or sources for those desires. It is, however, assumed that desires are limitless and consumer choice is sovereign. The individual is the main unit of analysis (Jackson 2005a, Peattie 2010, Røpke 1999, Vatn 2005).

There is also a way of adapting *Rational Choice Theory* to non-purchase behavior. In such an instance, there is an exchange of certain goods or services (time, attention, gifts etc.), with the expectation that this will benefit one in the longer run. Then the non-financial costs and benefits

(the items of exchange vs. what is expected to be received) play the same role in the model as their regular, financial counterparts would normally do. This adaptation of the *Rational Choice Theory* provides competition to the ideas that pro-environmental behavior is motivated exclusively by altruistic or biospheric concerns. It claims that at least some part of pro-environmental behaviors can be done based on rational choice and motivated by self-interest, but in most cases this will be a small part.

However, if one looks critically at the *Rational Choice Theory*, it will soon become apparent that not all of our action is self-interest driven, it can also be motivated by altruism or other concerns; not all of our actions are deliberated as a cost-benefit analysis, a significant share of them is routine, habits, etc.; also, we can never have full information and transaction costs rarely equal zero. Having challenged all the basic assumptions of the *Rational Choice Theory* makes the theory itself invalid, and requires alternatives to be found.

Simon (1979) introduced a more realistic approach to decision making (that is still connected to the *Rational Choice Theory*), called *Bounded Rationality*. He suggested that "the decision maker transforms complex or intractable decision problems into tractable ones" (Vatn 2005: 118). One of the suggested ways of achieving this was called satisficing – that is deciding in advance how much information (for example) will be enough to make a decision. Rationality was seen as about being 'happy enough' not 'maximizing' or 'optimizing'.

The other major branch of internalist theories concerns itself with personal beliefs, attitudes and values. Schwartz (1977), for example, introduced the *Norm Activation Theory* claiming that personal norms are activated by (1) awareness of the consequences of your actions and (2) assumption of personal responsibility. Norms are then seen as guiding human behaviors.

A more elaborate attempt at an internalist explanation for what motivates behavior has been done by Fishbein & Ajzen (1975) in their *Theory of Reasoned Action*. They claim that: (1) beliefs and evaluations of an outcome lead to an attitude towards behavior; this attitude is one of the two factors that will influence the intention for a given behavior. (2) The second factor is subjective norms that are created on the basis of the beliefs of what others think. (3) The intention will also be dependent on how important those attitudes and norms are to us. The intention will eventually lead to a certain behavior.

The subjective norms mentioned in this theory are not viewed so much as personal norms, they are rather what the person believes others consider as right or wrong. However, in this situation, the argument on whether any norms, values or attitudes can ever be truly internal also applies.[7]

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[7] See page 14.

The *Theory of Planned Behavior* (Ajzen 1991) is a more complex variant of the *Theory of Reasoned Action*. It involves an element of perceived behavior control (PBC) as also influencing the intention for behavior. PBC refers to the person's own opinion about how easy or difficult it will be to perform an action – how successful they would be. Positive attitudes towards own PBC would create positive intentions to act (provided other factors are also pro-acting).

These are only a few of many internalist theories of what motivates human behavior, yet the main idea of them has been transmitted through this small overview. Naturally, there has been criticism to this approach, mainly due to the fact that all of these theories tend to ignore the social aspect of human life. The externalist approach on motivation to human behavior concentrates precisely on that aspect.

3.2.4. Externalist theories

Externalist theories, in opposition to internalist ones, claim that motivation for human behavior comes from outside the individual. It could be cultural and societal norms and values, perceived expectations, belonging to a certain group, or a wish to belong to a certain group.

The foundation theory for most of the externalist theories is *Symbolic Interactionism*. It claims that both the self and the world surrounding us (the way we understand it) are subjective and constructed through interpersonal interaction.

Symbolic interactionism (Blumer 1969: 2-3) distinguishes three aspects about human action:

> The first premise is that human beings act toward things on the basis of the meanings that the things have to them. The second premise is that the meaning of such things is derived from, or arises out of, the social interaction that one has with one's fellows. The third premise is that the meanings are handled in, and modified through, an interpretative process used by the person in dealing with the things he encounters.

The same idea is also expressed by Douglas and Isherwood (1996) – in the context of, for example, consumption; they propose that we need goods not only for their functional purposes, but also the symbolic meaning they carry; we use goods and the symbolic meanings they carry to communicate with others. Furthermore, according to Douglas and Isherwood goods cannot be categorized into 'good' or 'bad' – "goods are neutral, their uses are social; they can be used as fences or bridges" (ibid. xv).

Another idea within externalist theories is that what motivates our behavior (and especially consumption) is identity construction. It is after all becoming more and more common to identify oneself with what one likes and what one consumes instead of what one does. People want to

visually express to others their worldviews, status, preferences and other features that are currently assumed to constitute a person's identity (Campbell 2004).

A part of identity construction is identifying oneself with a certain group, which adds another dimension to the external drive of behavior and consumption. Jackson (2005b: 31) sums up what this means from the consumption perspective:

> We consume in order to identify ourselves with a social group, to position ourselves within that group, to distinguish ourselves with respect to other social groups, to communicate allegiance to certain ideals, and to differentiate ourselves from certain other ideals. We consume in order to communicate.

However, the fact that consumption, identity and belonging to a group can be so tightly interconnected presents additional challenges. For example, there are ideas that our belonging to a certain social class, culture and historical period leaves us 'locked in' certain consumption patterns, a part of which is not even visible (Shove 2004).

On the one hand it can be understood how the wish to maintain certain social status or simply standard of living may leave people feeling 'locked in' (perhaps undesirable) consumption patterns. On the other hand, this is a point of view that alleviates the individual from responsibilities of their own actions – in fact no effort to change consumption patterns is expected if an individual is 'locked in'.

Still, if group-membership and the desire to construct identity can lock us in some kinds of behavior and consumption, it also will rule out certain other kinds of behavior and consumption simply on the grounds of how 'normal behavior' is understood within that group. In addition "typically, [a person] will belong to more than one reference group [and that suggests] that [he/she is] likely to be subject to different – and sometimes competing – social influences" (Jackson 2005a: 82).

To sum up, externalist theories claim that our behavior can be motivated by external factors like constructing ones identity in relation to 'others' or belonging to a certain social group. In addition our current culture, societal norms and values, standards of comfort and convenience, standards of appearance and what the 'good life' is, our historical period and geographical place will all influence heavily our behavior (including consumption).

However, externalist theories relieve singular individuals from most of the personal responsibility for their actions, which I find to be a problematic approach. Secondly, it represents the complete opposite of internalist theories, while I believe both camps have their merits and

weaknesses. I would thus like to present another theoretical approach, which draws on the strengths of both of the previous approaches, namely – mixed theories.

3.2.5. *Mixed theories:*

First of all, it ought to be pointed out, that few theories nowadays are purely internalist or purely externalist, in most cases there would be a stronger emphasis on one kind of motivation (e.g. internalist), but the opposite ideas (e.g. externalist) would not be ruled out either. Still, mixed theories differ from these in a way that they would usually combine the internalist (agency) and externalist (structure) motivations in fairly even 'proportions' – that is both internalist and externalist motivations are considered equally important. Foundations for it were laid by Anthony Giddens (1984) and his *Structuration Theory*.

I will not go into the *Structuration Theory* itself here, but rather mention two behavior models based on it, namely the already mentioned Stern's *Attitude-Behavior-Context* model (2000) and Triandis' *Theory of Interpersonal Behavior* (1977).

The *Attitude-Behavior-Context* model, as mentioned before, explains human behavior as an 'interactive product' of personal attitudes and 'contextual factors'. In this model the contextual factors are external, while attitudes are seen as internal.

In my opinion, the most comprehensive model of human behavior (that can also still be useful in empirical research) is Triandis' *Theory of Interpersonal Behavior* (1977). He claims that:

> Interpersonal behavior is a function of behavioral intentions and habits <…> Behavioral intentions are a function of social factors, affect, and the value to the actor of the perceived consequences of the behavior <…> The consequences of an act serve as feedback, modifying the components that determine behavior. Thus, behavior can change attitudes (ibid. 37-38).

Attitudes are viewed as beliefs about and evaluations of outcomes. Social factors include norms (injunctive norms – what should and should not be done), roles (what is appropriate behavior according to the group one belongs to) and self-concept (ideas by oneself of oneself on what is appropriate and desired to do). Triandis is one of the few scientists that recognize and incorporate the role of emotions in motivating behavior; however, he does claim that this effect usually goes unnoticed by the people in question. Finally, he also mentions the importance of past behavior (habits) and the presence of facilitating (most likely external) conditions.

Plural rationalities approach can also be named as one of the mixed theories. The main idea here is that decision making will depend on the social surroundings and circumstances, on the situation and decision in question. As Vatn (2005: 121) puts it, "the alternative to individual rationality is not foremost irrational behavior. It is instead to recognize that rationality can also be social." Plural rationality means that what is rational to do does not limit to maximizing own utility. Depending on the contextual factors, altruistic behaviors and motivations can be just as rational as egoistic. Motives and rationales can stem both from inside the person and from social surroundings, however it will be the social norms that will decide what kind of rationality is appropriate to use.

Michaelis (2004: 216) notices some of the challenges that people face due to having plural rationalities:

> Part of the difficulty here is that each of our many different value systems are supported by different narratives that seem incommensurate. We hear conflicting voices supporting personal material well-being, community involvement, tradition and conventional practice, social change and environmental sustainability.

Mixed theories have the benefit of drawing on strengths of both internalist and externalist theories. That helps to better understand what could motivate human behavior in different circumstances. However, the gains that we get in understanding have to be evened out with the loss of parsimony. The more we want a behavior model to explain, the more variables it will have to include and the less testable it will become.

3.2.6. Need as part of the mixed theories

The needs theories are often described as internalist, since needs are often seen to be individual and personal. I disagree with that opinion – looking at a given set of needs at any needs theory we will see that they include both personal needs and 'social' ones, like acceptance.

It is common to start the needs theory discussion by Maslow (1970) and his hierarchy of needs, however, I would like to concentrate on Manfred Max-Neef instead and his theory of needs and wants presented in 'Human Scale Development' (1991).

His theory was influenced by his work that was directed at poverty reduction, but the insights are universally applicable to all human beings. Max-Neef, like many others claim that our behavior is motivated and driven by needs and wants. The difference between the two is that we see needs as having more legitimacy than wants; the only problem is that different theories characterize needs in different ways. The needs in Max-Neef's theory, for example, are not considered insatiable, culturally different, hierarchical or person-specific.

Max-Neef identifies nine human needs: (1) subsistence, (2) protection, (3) affection, (4) understanding, (5) participation, (6) idleness, (7) creation, (8) identity, (9) freedom. What he sees as a very common misunderstanding when discussing needs is the confusion between needs and satisfiers. Satisfiers are means, ways in which a need is expressed. Thus food or shelter, for example, are not needs in themselves, they are satisfiers for the need of subsistence.

He also disagrees with the idea that needs are culturally or environmentally embedded. In fact, he claims that needs are universal across all people, cultures and time periods, what differs is the types of satisfiers each culture or historical period prefers. To take it even further, the type of satisfiers chosen in order to attend a certain need is one of the main things defining a culture.

Devinney et al. (2010: 8) expresses a similar idea about how we perceive the drivers of human behavior: "although people seem to behave similarly, their understanding of their own behavior and their rationalization for inaction is quite culturally embedded."

Finally, Max-Neef (1991: 49) dismisses the idea of human needs being hierarchical.

Fundamental human needs must be understood as a system, the dynamic of which do not obey hierarchical linearities. This means that on the one hand, no need is more important per se than any other; and that on the other hand, there is no fixed order of precedence in the actualization of needs. <…> [However] a pre-systematic threshold must be recognized, below which a feeling of deprivation may be so severe that the urge to satisfy the given need may paralyze and overshadow any other impulse or alternative.

That being said, it ought to be pointed out that it is not only the need for subsistence, whose deprivation would cause such an effect. A severe deprivation in any need would give a similar reaction.

Max-Neef comes to one of the paradoxes in modern society – we act and consume (according to the most popular theories) in order to increase our well-being, to maximize our utility; our actions are directed towards increased personal happiness. At the same time, the income levels in the Western world are increasing, as well as consumption levels. Why is it then that our happiness does not in fact increase alongside with our income and the general economic growth? (Max-Neef 1991: 43)

The answer here is that satisfiers can attend to our needs with varying qualities. First of all, satisfiers are not only economic goods; they can also be organizations, norms, social practices and other things.

Secondly, Max-Neef distinguishes at least five different types of satisfiers, namely: destroyers, pseudo satisfiers, inhibiting satisfiers, singular satisfiers and synergic satisfiers. Out of these five categories, only the last two have a positive effect on us – that is actually satisfy our needs.

Destroyers do not satisfy our needs, they can also prohibit the satisfaction of the need in the future and even satisfaction of other needs. An arms race intended to attend the need of protection and freedom could be a good example of a destroyer/satisfier. Pseudo-satisfiers provide a fake sense of needs satisfaction, for example like buying sexual favors while seeking affection. Inhibiting satisfiers over satisfy a given need, for example parents can behave overprotectively towards their children. Singular satisfiers attend to one need at a time, like curative medicine attends the need for subsistence. Synergic satisfiers attend several needs at once, for example a mother breastfeeding attends to the baby's need for subsistence and her own need for affection and perhaps even identity.

The fact that our levels of happiness do not increase together with economic growth and increasing income might be because we do not manage to identify the correct satisfiers for the needs we have. Our current culture in the 'West' seems to promote the idea that economic goods can and should be satisfiers to any needs. Furthermore, they are ends in themselves, instead of means to an end.

The conclusion from Max-Neef (1991: 25) is that we ought to build our economic models with a full understanding of the differences between needs, satisfiers and economic goods. "This is necessary in order to conceive forms of economic organization in which goods empower satisfiers to meet fully and consistently fundamental human needs."

To expand on why I see this theory as a mixed one, I have to point out that even though needs are universal for all people, they may be viewed as coming internally – from within a person; however in order to satisfy many of them we need other people, we need society. In addition, the kind of satisfiers we will choose will be deeply culturally and socially embedded. Thus in the thought process that precedes action not only personal needs and wants will be considered, but also the 'appropriate' and common ways of attending those needs. This in my opinion makes the needs theory by Max-Neef a mixed one, including both structure and agency.

To sum up and conclude, it can be pointed out, that behavior in general can be motivated by a variety of reasons, consumption in particular as well. Consumption can be directed towards different goals or be a goal in itself. Behavior can be conscious and deliberated, or it can be habits and routine action. Some of the above mentioned theories are better at helping understand behavioral choices, others at explaining how to achieve behavioral change. Still, no one theory can explain all human behavior or all consumption and anyone who is trying to apply these theories in

practice will find themselves faced with a difficult task of finding a model that would be parsimonious but would not oversimplify the issues in question.

3.3. Pro-Environmental behavior and green consumption

3.3.1. What is green consumption and pro-environmental behavior?

Green consumption is just one aspect of pro-environmental behaviors; or at least potentially it could be, if it is motivated by environmental concerns. Thus I first of all will introduce the term pro-environmental behaviors.

"**Proenvironmental behaviors (PEBs)**: purchase choice, product use and postuse, household management, collective, and consumer activism behaviors, reflecting some degree of environment-related motivation" (Peattie 2005: 198). Or, as Kollmuss & Agyeman (2002: 240) put it, this kind of behavior ought to *consciously* seek "to minimize the negative impact of one's action on the natural and built world." So PEB is a kind of behavior that is (at least partly) directed towards the improvement of the natural environment, and green consumption can be one of such behaviors.

Green consumption, however, has proved to be more difficult to define. For example, "green consumption is a problematic concept, not least because it is an apparent oxymoron. Green implies the conservation of environmental resources, while consumption generally involves their destruction." (Peattie 2010: 197)

In a strict sense, one could define green consumption as

<…> the practice of using environmentally friendly products that do not cause risk for human health and do not threaten the function of diversity to natural ecosystems. <…> Green consumerism comes from the desire to protect resources for future generations and to increase our quality of life (Articles-junction, 2014)

This is a rather black and white (yet still very common) view of green consumption that does not allow for 'levels of greenness'[8]. In addition, it fails to include the fact that green consumption can imply a wider variety of action, for example reduced consumption or different choice of satisfiers for ones needs and wants.

In general, I could not find a universally agreed upon definition of green consumption and will later on provide my own definition of what I consider green consumption to be ideally and what it is considered to be for the purpose of this research.

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[8] Types of green consumers are discussed in section 3.3.8.

A non-green consumer is, in turn, someone who chooses products that are not in the best interest of the physical environment, when an environmentally friendly option is available and other circumstances (like the financial situation) allow for it (Gleim et al 2013: 45).

Another issue with the term green consumption is that it overlaps with other terms like, sustainable consumption, ethical consumption, socially conscious consumption, responsible consumption, etc. Does green consumption have to only relate to environmental issues, or can it concern itself with social issues as well? Stern & Dietz (1994) make a separation between egoistic, altruistic and biospheric concerns, allowing for the difference to appear between concerns for other people and concerns for the environment. However, in many studies, altruistic concerns are considered as incorporating biospheric ones.

In the end, even though these different types of consumption might orientate more towards different issues, one type concern does not have to exclude the other (but one type concern does not necessarily imply the other either[9]). "Green might be assumed to relate only to environmental issues, but these are subtly intertwined with the social and economic strands of sustainable development" (Peattie 2010: 197).

3.3.2. What makes an action pro-environmental?

As I see it, one of the factors that make green consumption 'green' is the motivation. Green consumption currently is being motivated by a variety of concerns, like those for the environment, for own or family health, fashion or other reasons (as well as a combination of them), but not all of these motivations make green consumption 'green'.

I pointed out at the beginning of this chapter, that green consumption *could* be a pro-environmental behavior, *if* it was motivated by environmental concerns; I believe I ought to explain and expand on my position of what the relationship between green consumption and PEBs is, and what makes green consumption 'green'.

As mentioned above, a pro-environmental behavior is an action that has a positive, or reduced negative effect on the environment. What makes a product or produce 'green' is that the production and use of such items should also have at least reduced negative effects on the environment (even if they are not entirely positive). However, when someone buys and uses such an item, it does not matter if the person did it due to environmental or some other reasons – the effect on the environment will still be the same. So how can I claim that motivation defines what will be a PEB, even though the environmental effect of the action will be the same in all instances?

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[9] I elaborate on this argument in the discussion chapter.

To answer this question, an example came to mind. A person, who is on a bus because their car broke down that day, and a person who is on a bus because s/he does not own a car due to environmental concerns will both have the same reduced negative effect on the environment, but only one of them will actually be doing a pro-environmental behavior.

Research done by Jensen (2008) in Denmark reveals the same kind of attitudes by the respondents there – Jensen inquired into a variety of activities that people did in order to protect the environment, in addition to inquiring into areas where people could have had potential to do such activities. What he found out, was that people were performing a wide variety of pro-environmental behaviors, but not all of them were presented as such. For example, most of the respondents would point out sorting waste as their main pro-environmental activity, even though the actual positive effect on the environment is claimed to be rather symbolic. However, they could also take up activities like having their holiday in the same country, travelling around on bicycles, or only using public transport and not owning a car, but not mention them as their pro-environmental behaviors (even though the reduced negative effect on the environment could be considered greater than from sorting waste) simply because environmental concerns was not the reason why they did it.

It is uncertain why people assume that it is the intention that defines the action, and not necessarily as much the actual effects of it. Why intention or motivation matters in this particular research is, first of all, that only conscious action can be controlled, and thus could be trusted to continue in the future. But also, unconscious (or accidental, circumstances-induced) behavior cannot be used to predict future behavior. That is why it is claimed in this paper that motivation defines if an action is pro-environmental or not, and it is motivation that defines whether green consumption is actually 'green'. These points are the main arguments why it was important in this research to know what motivated each action that was inquired into.

As a result of this debate, what I would ideally consider to be green consumption is – purchase and non-purchase behavior that is at least partly motivated by concerns for the environment. Purchase behavior includes purchases of eco-labeled or organic products, while non-purchase behavior is reduced consumption, non-purchase as protest, and the use of own products and produce that were produced in a way that would have a lesser negative effect on the environment.

However, for the purposes of the research that was carried out, I defined green consumption simply as the frequent purchase of eco-labeled and organic products, no matter the motivation for it. I chose this simple definition of green consumption as the 'working definition' because I wanted to test whether there was in fact a relationship between green consumption (as the purchase of eco-labeled products) and environmental concerns.

3.3.3. What motivates PEBs and green consumption?

All of the theories that have been listed as explaining motivation for human behavior in general are also true for pro-environmental behaviors (including green consumption). Some of the theories are competing, many could be used as complementary to each other, but all of them can explain, at least partly, why people perform PEBs. There are, also, theories that are better suited at explaining what motivates seemingly non-selfish (for example altruistic or pro-environmental) behaviors; an overview of them is presented below.

The most basic theories explaining the motivation for PEBs assume a linear model – the knowledge of environmental issues and their consequences are expected to lead to pro-environmental behaviors. Such models are closely related to the *Norm Activation Theory* by Schwartz (1977); the theory claims (as mentioned before) that norms will influence behavior and they are activated by having awareness of the consequences of one's actions and assuming responsibility for those consequences.

More elaborate models incorporate values and attitudes. Here, again, I could mention Stern & Dietz (1994) and their explanation on what is the value basis for environmental concerns. They claim that there are three types of concerns that manifest in people with different strengths – egoistic, biospheric and altruistic. If the altruistic or biospheric orientations within a person are strong, pro-environmental behavior can be expected.

Pro-social behavior and altruism has been claimed to drive PEB in a variety of articles. However, it is argued that for this statement to be true, some other circumstances have to be right as well. Kollmuss & Agyeman (2002: 244) have found articles hypothesizing that (1) people "with a strong selfish and competitive orientation are less likely to act ecologically"; and that (2) "People who have satisfied their personal needs are more likely to act ecologically because they have more resources (time, money, energy) to care about bigger, less personal social and pro-environmental issues."

An issue with these statements is that they stand on rather different theoretical grounds – the hindrance is seen to be an internal characteristic of a person, while the facilitating factor is based on the *Hierarchy of Needs* by Maslow (1954). Furthermore, there is evidence to the contrary of both of these statements (see Zavestoski 2001 and Max-Neef 1991).

Dunlap and van Liere (1978) claim that the values that are common for our current 'Dominant Social Paradigm' are changing and a New Environmental Paradigm is appearing. The new paradigm puts high value on the environment and preserving the balance and integrity of nature. People who relate strongly to the Dominant Social Paradigm are seen as less likely to hold pro-

environmental attitudes and thus perform less or none PEBs, while people who relate strongly to the New Environmental Paradigm would be more likely to act pro-environmentally.

Zavestoski (2001) has found out that concerns for the environment correlate positively with both altruistic and egoistic value orientations, but concerns for over consumption correlated negatively with egoistic value orientations and positively with the altruistic ones.

These findings contradict the existing research, which claims that egoistic attitudes will hinder pro-environmental behavior while altruistic attitudes will facilitate it. Stern's et al. *Value Belief Norm* (1999) theory is one of such approaches. Research based on this theory have found evidence that altruistic values are most strongly implicated in the activation of pro-environmental norms, while egoistic values tend to be negatively correlated to pro-environmental norms and behavior. This leads to the conclusion that, based on the existing research, the role of altruistic and egoistic values in forming pro-environmental behavior is inconclusive.

Kollmuss and Agyeman (2002) have also presented a mixed theoretical approach[10] on what could motivate PEBs; according to it pro-environmental behavior is seen as a combination of a number of factors and beliefs: environmental attitudes and values, possibilities to act[11], incentives for such behavior, perceived feedback, and knowledge about the environment.

There are, of course, a number of other theories trying to explain what motivates non-selfish behaviors, and the brief overview given in this section has only presented the main 'branches' of such theories. One of the conclusions to be taken from this overview is that one could inconclusively claim that pro-social/altruistic/environmental values and attitudes as well as awareness of environmental problems could (but not necessarily will) motivate PEB. At the same time egoistic attitudes or strongly relating to the 'Dominant Social Paradigm' might, but not necessarily would hinder PEBs.

Another thing that can be concluded upon is that none of these theories can fully explain what motivates PEB. First of all there is the fact that pro-environmental attitudes or awareness of environmental problems do not imply pro-environmental behavior. At the same time, pro-environmental attitudes and behavior are very context dependent – they depend both on the socio-cultural context for the attitudes and the infrastructural/institutional context for the behavior. In addition, values are not stable over time or contexts. All of these factors make it extra challenging to derive accurate, yet still empirically testable theories on what motivates pro-environmental behaviors.

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[10] They introduce it as a sociological approach.
[11] Corresponds to the Perceived Behavior Control variable introduced by Ajzen (1991) that is presented with the other internalist theories.

3.3.4. Predictors of PEB and green consumption

Having had an overview of theories on why and how pro-environmental behaviors might appear, it would be interesting to check how many aspects of those theories and research-based explanations on what motivates non-selfish behaviors appear to be true in research, when testing for predictors of such behaviors.

Kollmuss and Agyeman (2002) provide a variety of factors that have been shown to have an effect on pro-environmental behaviors in different research papers. These are: *demographic factors*, especially gender (women) and years of education (more); *external factors*[12]: institutional (primarily infrastructure), economic (purchase decisions are not always calculated bearing in mind long term perspectives; income levels) and socio-cultural (cultural norms and values); *internal factors*: motivation, attitudes, values (held at home by the family, childhood experiences), environmental knowledge, environmental awareness, emotional involvement, locus of control (does ones actions make a difference), responsibility and priorities.

Demographic factors, especially gender, have often come up as significant in a variety of research. However, even though they are not to be ignored, they are of poor predictive value on their own. In a general sense, I agree to the opinion that sensitivity to social or environmental issues is not predictable by age, gender, income, education, lifestyle or similar variables (Devinney et al 2010). That might be the reason why none of the theories that try to explain what motivates human behavior include demographic factors as possible variables.

When it comes to green consumption, environmental attitudes (in accordance to many theories from sections 3.2. and 3.3.3.) were shown to be good predictors of whether people would be willing to pay a premium price for green products (Peattie 2010: 207). On the other hand, a different research shows that egoistic motives seem to be better predictors for at least the purchase of organic foods compared to altruistic (and presumably biospheric) motives (Magnusson et al 2003: 109).

In general, due to the context-specific nature of much of the research on PEBs the predicting factors discovered ought to be looked upon with some reservations – more like guidelines of what might be important in influencing PEBs rather than definite facts of what will always influence a given pro-environmental behavior.

3.3.5. Hindrances to PEB and green consumption

The hindrances found in literature on pro-environmental behaviors can also be categorized into internal and external based on the division that Jackson (2005a) has provided. In addition, the

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[12] The internal and external factors divide in this paragraph is created by Kollmuss and Agyeman (2002) and does not necessarily match the one made by Jackson (2005a)

perceived hindrances to PEBs, including green consumption, will define the facilitators for such behaviors – thus there usually is (or ought to be) a rather direct relationship between facilitators and hindrances to PEBs.

Hindrances to PEBs can be expected to be group-specific – that is people who already perform some pro-environmental behaviors will potentially be facing different challenges than the ones who do not perform any of such actions. This can be especially visible concerning green consumption; as some research findings presented below indicate – the factors that stop people from consuming *more* eco-labeled products and the factors that stop people from consuming *any* ELP at all will be somewhat different.

One of the general factors that seems to hinder people from taking up pro-environmental behaviors more actively is that most ecological problems simply do not feel immediate; the destruction of environment is slow and gradual, while the systems involved are complex. Furthermore, it is often happening far away or out of sight. All this can provide people with a feeling that most environmental problems are not that urgent and thus the need for action is not that urgent either.

Blake (1999) points out internal reasons like individuality, responsibility and external reasons like practicality as the main barriers to PEBs: this means that factors like being lazy, uninterested, not owning property or not feeling responsible for the property owned; lacking time, facilities or information will all hinder us from acting pro-environmentally.

Jackson (2005a: 56) introduces an opinion how external factors can hinder the effectiveness of internal facilitators to PEBs – "the single biggest factor which appears to interfere with personal norms in the success of pro-environmental behaviors is the existence of external social and institutional constraints."

Looking at singular factors that can hinder green consumption specifically, an article by Gleim et al. (2013) provides a variety of them based on their own research in the US. They have found that (1) economic factors (price), (2) poor calculations (energy saving appliances are expensive), (3) fear of being looked down upon if the green products do not meet the expected standards, (4) attitudes of friends, family and peers, (5) personal norms (that are influenced by societal norms), (6) perceived efficacy and (7) trust in a producer or product, are all factors that can influence peoples green consumption choices.

It is pointed out that these factors could influence green consumption choices, but the direction of the influence is not specified. That is probably because each of these factors, depending on their negative or positive expression, can both facilitate and hinder green consumption. The effect of

these factors would further depend on whether it is green or conventional consumers that we are talking about.

Examining further what precisely hinders people from green consumption Gleim et al (2013) distributed surveys, asking 330 consumers in the US to recall the last time they considered buying a green product, but decided against it and why. The eight most popular answer categories were (1) price, (2) quality, (3) expertise, (4) trust, (5) availability, (6) apathy, (7) brand loyalty and (8) a 'miscellaneous category' (do not believe in climate change or destruction of planet, do not see such products in shops, not enough to choose form in the green category etc.).

These hindering factors illustrate very well the fact, that the people answering these questions were primarily not green consumers, because if they were, points (3), (4), (6), (7) and (8) would not be an issue. Had the surveys been delivered to green consumers, asking them what hinders them from consuming more eco-labeled products, the categories would have been different.

The lack of expertise considering green products combined with their perceived high price and price sensitivity in (most likely conventional) people were seen by Gleim et al. (2013) to be the main barriers to green consumption.

3.3.6. Facilitators to PEB and green consumption

There are many suggestions on what could facilitate PEBs and green consumption; most of them would put either (external) structures like state institutions or (internal) actors like people themselves as the main potential facilitators for such behaviors. Of course, as mentioned in the section above, what will be perceived as a good facilitator will depend heavily on what is seen as the main hindrances to the desired behavior.

Internalist approach proponents would prefer programs of educating and increasing knowledge as the best facilitators to PEBs, while externalism proponents would favor means that would create the right circumstances and opportunities to change behavior.

Jackson (2005a: 128-129) has a set of suggestions on what could facilitate PEBs in general:

> [Facilitating] conditions include the provision of recycling facilities, access to energy efficient lights and appliances, the availability of public transport services and so on. The adequacy of such facilities and services, equality of access to them, and consistency in their standards of operation are all vital ingredients in encouraging pro-environmental choice. Inadequate or unequal access, insufficient information, incompatibilities between different services: all these factors are known to reduce the effectiveness and uptake of pro-environmental behaviors.

Peattie (2010) has provided an overview of factors that could facilitate an increase in green consumption specifically: (1) green labeling (however, it might cause increased levels of consumption); (2) choice editing – offering restricted supply, taking out the most unsustainable variants from the markets and putting realistic price-tags on items by using environmental taxes; (3) social marketing – encouraging people to change with traditional marketing tools in order to achieve pro-social goals; (4) collective action – not all problems can be successfully tackled at an individual level; (5) consulting communities that practice alternative consumption, mainly voluntary simplicity.

On a more general note, there are also a number of strategies that can be used to achieve desired behavioral change. Ophuls (1977), for example, specifies four types of approaches that have been the most common in trying to achieve behavioral change throughout history: (1) government laws, regulations and incentives; (2) programmes of education to change people's attitudes; (3) small group/community management; (4) moral, religious and/or ethical appeals.

The external facilitators (options (1) and (2)) have been the most popular approaches in achieving behavioral change in recent decades; however, they are also according to Campbell (1963) among the least efficient ones.

On the other hand, it has been observed that option (3) – community management – could be the most efficient one, but is at the same time the least used one as well, part of the issue with this approach is that it can only be used for a limited amount of (environmental) problems.

Kaplan (2000: 498) expresses a very similar idea and points out how people like feeling in control of their lives and dislike the feeling of helplessness. This means that they like to understand what is going on, they like to learn and discover new things for themselves and they want to participate and play a role in what is happening around them. For learning and changing behavior this means that it is better to allow people themselves to define what the problem is and find out what they want to do and how, instead of telling or showing what the problem is and how to solve it. However, such a strategy is only feasible on a small scale, attending local issues.

Perhaps one of the most efficient ways of learning is presented by Bandura (1973) in the *Social Learning Theory.* He puts interpersonal relations as factors that can facilitate behavioral change. Bandura claims that we tend to learn by example, and that we learn most effectively from models that are most attractive to us at the time, but we can also learn by counter example or express a protest to a certain behavior. However, this kind of learning process is very difficult to control or influence.

In addition, facilitators can also come from within the person; for example the effect of 'positive spillovers' has been tested by Thøgersen (1999). He was checking if the presence of one

pro-environmental behavior (or attitude) could influence the uptake of another PEB. However, his results were to the contrary – the behavior of, for example, sorting waste not only had no influence on the uptake of other PEBs, in some cases it was even observed to have a 'negative spillover' effect and hinder people from taking up other pro-environmental activities (due to reasons that were impossible to define in the research).

This approach is closely connected to Festinger's *Cognitive Dissonance Theory* (1957). Festinger was researching the relationships between two cognitive elements within humans. Such cognitive elements could be things a person knows about self or others, as well as the person's behaviors. If one cognitive element can flow from another, the person would experience cognitive consonance (a positive feeling); if such a flow does not appear, cognitive dissonance will be experienced (a negative feeling). Since cognitive dissonance is an uncomfortable feeling, the person would be motivated to reduce it and in most cases that is done by removing one of the two cognitive elements.

The implication of this theory for pro-environmental behaviors is that if a person experiences cognitive dissonance because his/her values do not match their behavior (for example the person holds biospheric values but does not sort waste), they would be inclined to change one of the two elements. In an optimistic scenario, the behavior would be changed according to the value thus making cognitive dissonance a potential facilitator to pro-environmental behaviors. Unfortunately, values often require much less effort to be changed compared to behaviors.

In the end, none of the behavioral change or facilitator strategies can be successfully applied to the whole population. "Human motivations are so multi-faceted that about the only thing we can say with absolute certainty is that it is virtually impossible to derive universal causal models with which to construct behavior change policies in different domains" (Jackson 2005a: 6). Potential ways of tackling this particular issue are discussed in section 3.3.8.

The main message is, in any case, the same – strategies for facilitating behavioral change have to be tailored, bearing in mind what kind of group they will be directed at and what is perceived as the main hindrances to desired behaviors.

Finally, I would like to make a comment on how the theories discussed in section 3.2. relate to the findings discussed in this section so far. The overview of predictors, hindrances and facilitators to PEBs in this section has shown that a number of variables (both external and internal) have been proven to be significant in different research papers. But from an overview this large, it becomes difficult to make out tendencies if there are any variables (or types of variables, like internal and external) that associate with a certain behavior more often. What makes it even more difficult to distinguish tendencies between behavior and factors that are likely to influence it is that the studies

presented in this section were very context specific. They were carried out in different geographical locations, which also imply different cultures and historical backgrounds. Furthermore, the studies included different sets of variables and often defined green consumption and pro-environmental behaviors in different ways. The implications of this are not just that it is difficult to judge whether it has been internalist, externalist or mixed theories that were proven to be most accurate in describing what influences human behavior. It is also that we cannot assume that factors which have been found significant in one context will retain their significance in other contexts. Thus all of the findings presented in this chapter have to be looked upon as guidelines and background information, instead of 'hard' facts.

3.3.7. The relationship between different PEBs

An idea often occurs in research papers (often as a hypothesis) that the presence of environmental attitudes, values or action in one area could predict that such attitudes values or action exist or could occur in the near future in other areas of behavior as well (the 'positive spillover' effect). However, that is far from being always the case. It seems that green consumption specifically, as a PEB, cannot be seen to predict the existence of other PEBs. Perhaps it is due to the fact that green consumption (especially concerning ecological or organic food) has been proven to be mainly driven my egoistic motives, while other PEBs are more often (even if not exclusively) associated with altruistic and biospheric attitudes and values.

It has already been mentioned that Thøgersen (1999) did not manage to find the 'positive spillover' effect in pro-environmental behaviors he was looking for; a similar trend (or lack of trend) has also been observed by Grankvist (2001). He had found a stronger correlation between actions within the same domain (like the purchase of different eco-labeled foods) than between actions across domains (for example purchase of eco-labeled products and recycling).

Also, there has been research revealing that people can prefer to express their pro-environmental views through consumer action, rather than non-purchase actions or other PEBs (Jensen 2008).

It would thus appear that the existence of one kind of pro-environmental behavior does not have any (positive) effects on the appearance of other pro-environmental behaviors within a person.

3.3.8. Types of consumers

The final issues connected to green consumption I will touch upon in this section is the possible categorizations of green consumers. It often seems that the green consumption research and literature divides all consumers into green and the rest, where green consumers will only be people

that buy a lot of eco-labeled products regularly. However, this kind of perception about consumers is neither helpful nor constructive, concerning both the understanding of green consumers and how to achieve desired behavioral change.

Luckily, there has been an increasing number of studies that would analyze the study sample according to the type and frequency of PEBs that people perform, in addition to other factors, like demographic characteristics and lifestyle features and then create sub-groups within the sample according to the levels of 'performance' within those factors.

For example Götz and Empacher (2004) collected data on general lifestyles of people in Germany and having analyzed it they managed to distinguish 10 different lifestyle types: (1) fully-managed eco-families; (2) childless professionals; (3) self-interested youngsters; (4) everyday life artists; (5) people fed up with consumption; (6) rural traditionalists; (7) underprivileged who can't cope; (8) run-of-the-mill families; (9) active seniors; (10) status-oriented privileged families.

These groups later on were combined into four, according to their consumption types, in order to conduct further analysis and provide PEB encouraging policy advice. The four final groups were: environmentally oriented (1 and 4); people who cannot cope (3, 5 and 7); ambivalent traditionalists (6, 8 and 9); privileged group (2 and 10).

A similar research was carried out and presented by Gilg et al. (2005) where they looked at the 'greenness' of lifestyles. They analyzed PEBs like green purchase, waste sorting and buying local produce in areas of the UK. They divided their sample into four groups eventually, depending on the levels of commitment and 'enthusiasm' connected to the studied action. The four groups distinguished were: (1) committed environmentalists, (2) mainstream environmentalists, (3) occasional environmentalists and (4) non-environmentalists. The first group could be characterized by performing the above mentioned actions most frequently and 'enthusiastically' while the levels of both frequency and 'enthusiasm' would decrease with each further group. A majority of their sample fell into the groups of occasional and mainstream environmentalists.

Gleim et al. (2013) carried out another study, where a number of factors, which were expected to differ among green and non-green consumers, were tested. The factors were chosen according to previous studies and included social norms, willingness to comply with social norms, personal norms, perceived consumer effectiveness (PEC), price sensitivity, value, quality, expertise, awareness, availability, inertia, advertising trust, organizational trust, satisfaction and purchase intentions (all concerning green products) (ibid. 49). After analyzing the results, they managed to divide their sample into four groups as well: green, yellow, orange and red, where green was the most pro-environmental group and red the least.

Clusters red and orange[13] comprised 44.5% of the sample, they had in common two of the lowest purchase intentions for eco-labeled products, also lowest scores in variables considered to be potential drivers to green consumption (personal norms, PEC, value, quality, advertising trust, organizational trust, willingness to comply with social norms). These groups were low on expertise and were price sensitive; they did not consider green products to be good value or quality and did not think their personal green consumption would make a positive impact on the planet.

Clusters yellow and green[14] comprised 55.5% of the sample; they had the highest intentions of purchase and product satisfaction. People in these groups scored high on the variables that are considered to be potential drivers to green consumption, had higher levels of expertise and knowledge. They considered green products to be good quality and value and believed their personal green consumption could have a positive effect on the planet.

I believe that such an organization of one's sample, according to the levels of commitment or frequency of actions, as well as values and world views is very helpful in gaining in-depth understanding about the different clusters and fractions of the sample. Managing to distinguish, describe and understand the different groups within a sample would help to both understand the big picture better and to tailor policies for desired behavioral change aimed at those groups.

To conclude this section, I would like to point out that in spite of all the research that has so far been carried out concerning green consumption and PEBs, it is difficult to find strong evidence in this research area, firstly because results (both quantitative and qualitative) tend to be context specific. Secondly, correlations that have been found should be considered with care, and even causations might be deceptive, since one can rarely be certain about the direction of relationships and there can also be reverse causalities, where behavior influences values.

3.4. What kind of change is desirable?

In this thesis, I work on the assumption that current (Western) consumption levels are harmful for both the environment and people. Consumption patterns ought to be changed in order to improve the situation, but the question is – how exactly should we change them? In addition, I assume that the natural environment is of great value, but in increasing danger of destruction and thus ought to be protected. The question here then is what are we doing in order to improve this situation and what can be done?

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[13] Red would always score lower than orange.
[14] Yellow would always score lower than green.

Concerning change of consumption patterns, two main types of ideas exist – reducing levels of consumption or changing types of consumption. Both are described in the next sections, followed by an overview of other 'green action' that are currently most and least popular.

3.4.1. Reduced consumption

I will first start with ideas of reduced consumption, also called 'voluntary simplicity'. The main thought behind this idea is that we should encourage people to not necessarily spend all the money they earn. To help understand that it is alright to abstain from buying, even though one has the opportunity for it.

There could be different levels of voluntary simplicity, ranging from little actions like abstaining from buying *another* new sweater, to complete lifestyle changes, like living a self-sustainable life in a farm, only buying what is *strictly needed*.

Ideally, it would be best if we all could reduce our current levels of consumption, because according to the laws of neoclassical economics that should reduce the levels of production and, as a result, reduce some of the stress on the natural environment. However, there are certain issues with the implementation of this idea.

First of all, for many people it is impossible to think about reduced consumption without seeing it as a decrease in the standard of living and thus in quality of life (Røpke 1999). Decreased standard of living could be voluntary, but it can also be unwilling, due to external circumstances. When the decrease of standard of living occurs due to external circumstances, it can be very difficult for people to reconcile with such a situation. How does one then convince wider circles of the population that the decrease in standard of living is not necessarily a bad or shameful thing, that it does not have to imply a decrease in quality of life?

Furthermore, proponents of voluntary simplicity usually call upon the past as the best example of a good life, a time when things were simpler and life was easier – when people were happier with having less. However, we cannot bring back the past and life a century ago cannot be taken as an example of how life ought to be now. In any case, if one is looking for good examples of voluntary simplicity in practice, one can also find groups of people nowadays that have to cope with voluntarily reduced standards of living, for example people in religious orders, or even students that move out of home for the first time. These examples, and not the idealized past, are better suited to be studied in order to find new ways of how to make the idea of reduced consumption more attractive.

On the other hand, repeating some ideas from cognitive linguistics and the metaphors of consumption, when we think about consumption in the same ways we think about eating, we

subconsciously turn the idea of voluntary simplicity into anorexia, and such an image is a serious hindrance when trying to promote such an idea.

In addition, the voluntary simplicity debate seems to only have two opposite poles and nothing in between. There is either limitless hedonism and overconsumption, or strict and deprived simplicity. Why do we hear so little calls for moderate consumption – one that can provide a comfortable life, but that is not insatiable?

Finally, there is an issue of defining current levels of consumption in people. Who is consuming moderately, and who is over-consuming? Who has to change and who does not? To enlighten the difficulty of this issue I would like to present one last idea illuminating the difference in how we view ourselves and others. A cross cultural study by Ger and Belk (1996) on perceptions about materialism shows that people in different countries perceive materialism differently, but all of the cultures condemn it. Oddly enough, people in different cultures all tend to combine their critical views of others' materialism and 'overconsumption' with their own aspirations at high consumption levels. In a situation like this, it would be very challenging to map out the parts of population that should be addressed first with the ideas of voluntary simplicity.

3.4.2. Changed type of consumption

The other suggestion on how to change our consumption patterns for the better is consuming differently. So far two kinds of different have been suggested – that is consuming more ecological and/or organic products and consuming more labor intensive (and expensive) products and services.

Consuming more eco products seems beneficial, since such items ought to be produced or grown in a manner that should reduce their negative impact on the environment. However, first of all not all of such items are actually produced in a way that would reduce their impact on the environment. Secondly, buying more eco products might backfire as a strategy, because it can make people feel that this kind of consumption is 'good' and thus it is fine to actually increase the levels of it (Wilk 2004a, 2004b, Røpke 1999).

Røpke (1999: 401) claims that a part of the solution for the consumption problem would be "<…> if the population used income increases to buy labor-intensive goods and services: theater and music performances, courses in new skills, lectures on interesting topics, art objects, high quality clothes and houses made as handicrafts, child care and massage treatments."

Wilk (2004a, 2004b) also is of a similar opinion – wildly expensive music, T-shirts or arts is a good way of taking surplus money out of our pockets, because these items would normally be more labor intensive than resources demanding. As an alternative, we could also consider doing more shopping and less buying. In this instance shopping is meant as looking for an item, choosing it,

trying it out, while buying is the act of purchasing. If we were more demanding consumers, more concerned about the quality and durability of a product – do more shopping and less buying, our consumption levels would reduce automatically.

However, this kind of behavior is mainly concerning itself with the *surplus* money. These kinds of strategies would hardly appeal for people who struggle with money. They are however the main group of people that would buy a lot of cheap, bad quality throw-away items, and they are the group that could feel social pressure to 'keep up' with the wealthy part of the population, at least on the surface. None of these strategies would be appealing for them.

Both of the approaches to change in consumption patterns have their drawbacks – if we make green consumption about the type of products used, we exclude reduced- or non-consumption as a strategy (Jensen 2008: 358). Making green consumption about voluntary simplicity associates it with groups of people that can be seen as moralistic and 'superior' as well as consumerist anorexia; this in turn makes voluntary simplicity a very difficult idea to sell.

3.4.3. Other PEBs

Having discussed some of the challenges with the alternative ways of consumption, it seems necessary to also discuss potential challenges connected to other PEBs. It is important to not only understand why we behave in a certain way (like perform PEBs) but also look into possible patterns of what kinds of PEBs tend to be more popular, why and what kind of implications that has.

PEBs can include behavior such as, for example, sorting and recycling waste, using energy saving light bulbs, turning off the lights in a room that is empty, not using plastic bags, occasionally bicycling to work etc. There can also be PEB inspired lifestyle changes, like not owning a car, refusing air-travel or building a passive house out of environmentally friendly materials. Obviously, some of these behaviors will have a stronger positive (or reduced negative) impact on the environment than others.

For example, green consumption can be a rather two-sided PEB. From the research that Jensen (2008: 358) has done in Denmark, he comes to a conclusion, that "<…>environmental awareness is a luxury you have to be able to afford. In practice, however, being able to afford green products also means you can afford other things, e.g. a car, a larger house, more white hardware, etc., that increases the consumption of energy". In addition, it seems that "environmental awareness is considered as something to be manifested through buying green or labeled products <…> rather than not buying or not using certain products or actions" (ibid.).

In general, the actions that we do most commonly as PEBs (e.g. recycling, using energy saving bulbs etc.) could be called symbolic, because their positive impact on the environment is minimal, but the communicative/symbolic power is strong.

In addition, there is a paradox involved, concerning how differently we evaluate the variety of our actions – people that do the little symbolic pro-environmental actions often tend to consider their car use, temperature at home or air travel "as exceptions to which green values and criteria were not applied." (McDonald et al. 2006 in Peattie 2010: 215; Jensen 2008: 359)

On the other hand, people that do abstain from car travel, keep lower temperatures at home in winter or have holidays in the country of their residence often might not put up these actions as pro-environmental behaviors, simply because environmental concerns was not the reasons for doing it (Jensen 2008).[15]

The different ways that PEBs could be encouraged are also not without challenges. Behavioral change could, for example, appear because a person wants to belong to a certain group, and sometimes, that is what ensures the appearance of green behavior in a person. However, the opposite can also be true – people might refuse pro-environmental behavior simply in order not to be seen as a part of that 'alternative' 'green'' group (Jensen 2008: 359).

Another issue with making green consumption and PEBs about belonging to a group is the way 'that group' tries to recruit or convert new people, as Wilk (2004a: 28) puts it

> My concern is that so far the community working for this thing called sustainable consumption has been almost puritanical in its public voice on issues of the common good and ecological balance. In the contemporary culture of consumption, the vast majority of people (especially the ones that are consuming at the most prodigious rate) are totally oblivious to this kind of schoolmaster's nagging; if anything they resent it. They react badly to what they perceive as a tone of smug superiority and moral certainty.

There has been suggestions that green behaviors can be encouraged and expanded by actually 'toning down' the green message in them (Jensen 2008), but how would such a strategy combine with the by now established fact that motivation for an action matters when we are interested in the continuity of an action?

Green consumption specifically, could also be motivated by protest, doing actions such as not buying GMOs or concentrating on eco products; however, the opposite can also be true – people might refuse to buy a product simply because it would have an eco-label on it.

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[15] See also the debate on the importance of what motivates PEBs, page 23.

In addition, people might not want to change their consumption patterns, because they are at least partly defined by our current culture, historical period and social life – people might be afraid the group we belong to will not accept us any longer if we change our behavior. Still, we realize that "we are neither completely happy with ever increasing consumption, nor merely victims of producer-forced consumption" (Røpke 1999: 403).

What this chapter has shown is that on the one hand there is a lot of research done in the areas of green consumption, PEBs and of course motivation for behavior. On the other hand, the vast amounts of results can be contradictory and are most often context specific, which makes their use somewhat complicated. There are very few things that can be stated definitely in this area of research and correlations or causalities are even more difficult to find or trust. However, this is also something that forces one to keep testing and finding own truths for yet another context specific sample, which in my opinion helps keep the field of studies updated and alive.

4. Methodology: explanation and justification

This research was carried out using both quantitative and qualitative methods. These methods have been combined in numerous research in a variety of ways and for different reasons, aiming at different results. Here I will explain the theoretical as well as practical sides of my decisions on methodology. The theoretical side involves theory of science and the incompatibility of methods debate – is mixed methods possible, feasible and desirable? The practical side involves how exactly the methods were combined and what kind of outcome was desired. Later in this chapter I will present the general decisions about location and sampling strategy, as well as introduce how I used each of the methods separately, including the methods for analysis. I will finish this chapter with an overview of ethical issues.

4.1. General part

4.1.1. The theory of science

There are two main questions one ought to consider when discussing the eligibility of mixed methods research strategy, those are: (1) does the social world have to be studied like the natural world (also, *can* the social world be studied like the natural world); and (2) do research tools imply epistemology and ontology?

Qualitative and quantitative methods are tools for producing and analyzing data. They create different types of data and do so in different ways. Quantitative methods usually produce data that is either numerical or can be coded as such. Most often the data is collected through surveys or document analysis. Qualitative methods use words, phrases and sentences as units of analysis and the information is often collected in interviews, from documents or by observation and/or participation.

Quantitative research has a wide set of qualities attributed to it by its proponents – it is seen as transparent in procedures, thus replicable, also as reliable and more comprehensive. All of this is directed at suggesting that quantitative research is more objective (than qualitative research) (Bryman 2008).

The claim of objectivity and a long standing historical tradition of quantitative research are some of the reasons why there are suggestions to use a quantitative research strategy (previously associated exceptionally with the studies on the natural world) in analyzing the social world.

Critics of this position argue that the social world is very unlike the natural one and thus a different research strategy is necessary in order to obtain valid information. The proposed research

strategy is, in this case, qualitative and its proponents claim that "*quality* is essential to the nature of things" (Lune & Berg 2012: 3) and that quality refers to the "essence and ambience" of things. Qualitative research is able to study areas that "cannot be meaningfully expressed in numbers"; it "refers to the meanings concepts, definitions, characteristics, metaphors, symbols, and description of things." This suggests that qualitative research tools will be better at providing meaning and helping understand the object of studies.

Furthermore, an important difference is claimed between the natural and the social worlds – "social reality has a meaning for human beings [while the natural world is presumed to not have a meaning for the subjects of this world] and therefore human action is meaningful. <…> it is the job of the social scientist to gain access to people's 'common-sense thinking' and hence to interpret their actions and their social world from their point of view" (Bryman 2008: 16).

From this point of view there is no reason why the social world ought to be studied with tools that are most common for studying the natural world; in addition, the qualitative research strategy ought to be preferred over the quantitative one.

However, claiming that quantitative research strategies ought to only be used while studying the natural world and qualitative research strategies ought to only be used to study the social world lead to the idea that the different research tools imply different epistemologies and ontologies. Attributing the two research strategies to different theoretical orientations is often used as an argument why mixed methods research is not feasible or even desirable. I would like to argue that it is not necessarily so.

The main foundational theoretical orientation to study the natural world is positivism, while for the social world it is interpretivism. They are not the only theoretical approaches, but they are the main foundations and departure points for other theoretical approaches to studying both the social and the natural world.

On the one hand, it is often claimed that these two theoretical approaches have their attributed research strategies – quantitative for positivism and qualitative for interpretivism. On the other hand, an opposite relationship can also be claimed – that quantitative research strategy must imply a positivist epistemology while the qualitative research strategy would imply an interpretivist epistemology. However, it is unclear to which degree the different research strategies are actually "suffused with intellectual inclinations" (Bryman 2008: 4). To understand this possible division better, I will look closer at the two above mentioned theoretical approaches.

Positivism and interpretivism are not only schools of thought, they are seen as epistemologies as well. An epistemology relates to "what is (or should be) regarded as acceptable knowledge in a discipline" (Bryman 2008: 13).

Positivism only regards knowledge that can be confirmed by the senses as acceptable; at the same time, only scientific statements are accepted as the 'true domain of the scientist' (in contrast to normative statements). Interpretivism is the main contrasting epistemology to positivism; it is interested in understanding the meaning behind people's behavior, institutions and the interactions between the two; this goal is seen as only being possible to achieve through *interpretation* of the gathered data.

Ontology relates to how we view reality and the world – positivists here would argue that both the social and the natural world exists externally and objectively (independent of the 'observer') and can be studied as such. Interpretivists would argue that at least the social world is constantly constructed and re-constructed by its actors (including the researcher/'observer'), it is thus subjective and internal, while knowledge is 'indeterminate' (Bryman 2008: 19).

Positivism tends to use deductive logic – data is gathered in order to test theories and hypothesis, and, also possibly revise the initial theories afterwards (inductive element); interpretivism is seen to prefer inductive logic – data is gathered in order to generate theories, possibly in areas where little prior research exists. Ideally, both theoretical approaches would rely on an iterative process, where the revision of theory is done constantly with new, data-based results coming in.

When it comes to values (that the researcher might possess) positivists claims that personal values can be separated from the researcher and do not influence the research, while the interpretivist approach claims that it is impossible to have value-free research and it ought not be a goal either. What is important is that the researcher would understand and admit having values s/he cannot necessarily control and that some of them the researcher might not even be aware of; this kind of an approach would help to minimize the effect of personal values in research, but eradication of it is still impossible.

The above mentioned differences between the two approaches and the fact that research influenced by the positivist approach will aim at investigating behavior while research influenced by the interpretivist approach would aim at investigating meaning, lead to the prevailing idea that positivism ought to confide itself with using quantitative methods and interpretivism ought to use qualitative methods.

Epistemology	Positivism	Interpretivism
Ontology	Objective (objectivism)	Subjective (constructionism)
Theory	Deductive	Inductive
Research strategy	Mainly quantitative	Mainly qualitative
Values	Separate	Inevitable integration is understood
Study area	Behavior	Meaning

Table 1. The differences between positivism and interpretivism.

However, there is a difference in thinking that a given theoretical approach has its own preferred research strategy and claiming that research methods have implied epistemology and ontology. As Bryman (2008: 588) puts it "while epistemological and ontological commitments may be associated with certain research methods <…> the connections are not deterministic. <…> [They are] best thought as tendencies rather than as definitive connections."

There is countless research proving that these connections between research strategy and epistemological/ontological considerations are not 'written in stone'. Quantitative research can also be interested in meaning, opinions and attitudes, it can use inductive logics (alone or combined with deductive logics), furthermore, the researcher does not have to come from a position of an objective value-free individual to be able to use quantitative research tools.

At the same time one can see that most of the qualitative research aims at some kind of quantification of its results (using words like 'some', 'many', 'a few'), it can be driven by a deductive logic as well as an inductive (or a combination of them) and it can easily study specific and strictly defined topics as well as loose problem statements.

I personally take a stance for the middle-ground theories that allow the use of different methods and logics, are interested in both observable facts (even though they might not be considered objective) and the meaning behind them; at the same time it admits that the researcher is subjective and has values that s/he might or might not be aware of.

To sum up, I am against the argument that research strategies have embedded epistemologies and ontologies; I agree with the proponents of the '*technical version'* (Bryman 2008: 606), who claim that "quantitative and qualitative research are each connected with distinctive epistemological and ontological assumptions, but the connections are not <…> fixed and ineluctable." This means that mixed methods research is possible, and desirable if the research questions demand it. After all,

as Blumer (1969: 60) puts it we have to "respect the nature of the empirical world and organize a methodological stance to reflect that respect."

4.1.2. Mixed methods design

Methods can be mixed in a variety of ways, for example using different tools on the same chunks of data, or dedicating the methods for specific types of data. Qualitative methods can be used to investigate a situation and develop quantitative instruments; they can also be used after the quantitative instruments in order to understand the results better. The results can be presented separately, or they can be integrated to explain each other – opportunities are many and most mixed methods designs are tailored for each specific research. There can also be a difference in the *rationale* that was used for choosing the mixed methods approach and the results that this approach actually achieved in *practice*. In this section I will explain my own research design.

The rationale for choosing mixed methods was first of all having research questions that required different approaches[16]; also, I hoped that using mixed methods would help to offset the flaws of each of the methods and help presenting a more comprehensive view of the study area. In addition, the sample for qualitative interviews was derived from the quantitative surveys; the surveys also played a key role in developing the qualitative research tools in the field. Triangulation was also one of the rationales for choosing a mixed methods approach.

Another important aspect on why I chose a mixed methods approach is that it was vital to not only gather data about people's behavior and actions, but also the motivation behind them. I have established in the theory chapter that motivation to an action matters for this research in general from a philosophical perspective; furthermore, it matters in particular, because motivation is one of the factors to be tested as a predictor in the regression analysis. However, motivation is not something that can be directly observed, it has to be either inquired into or interpreted, but the latter variant would not be able to provide reliable data. This is one of the reasons why the quantitative survey had qualitative elements – open ended questions inquiring into the reasons behind a given choice.

Presenting it in very broad strokes, I left for the field with a detailed questionnaire draft and only some ideas for the interview questions (the questionnaire and interview questions were the instruments I used for collecting data). I first had some unstructured interviews with eco-shops staff in order to finalize the questionnaire; then quantitative information was collected through surveys; after having looked through around 1/3 of the surveys I developed semi structured questions for the

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[16] RQ1 required data gathered with both methods, RQ2 required quantitative data, RQ3 required qualitative data.

qualitative interviews that were to follow. So my design was an integrated one – I used qualitative methods to finalize quantitative instruments, and quantitative data to produce qualitative instruments.

There was a lot of prior instrumentation in this design, but not all was done in advance – I knew what I was looking for, but at the same time I wanted to leave the door open in case unexpected information came up. That was why the survey was prepared in advance, but the interview questions were only developed once some information was gathered.

The instruments themselves were not textbook quantitative and qualitative – the survey had many open ended questions, while interviews were more variable-oriented instead of the typical case-oriented ones. This approach allowed me to interview more people. Both these decisions provided a good ground for analyzing interrelations and patterns of variables, while single cases were not as important.

4.1.3. Location

I chose to do research on green consumption in Lithuania because it appears that the phenomenon has been gaining popularity recently and also because I am Lithuanian myself and I saw an opportunity to explore issues in my country. This had practical benefits as well, since I needed no translators and was familiar with the culture and infrastructure. In addition, Lithuania is a particularly interesting case because of its past in the Soviet Union and subsequent changes in consumption patterns.

I did the research in Kaunas, the second largest city that has approximately 300 000 inhabitants (roughly the size of Bergen, Norway). The choice of doing the research in an urban setting was made because around $\frac{2}{3}$ of the population lives in urban areas (2011 census) and the supply of eco-labeled products is mainly there. I chose Kaunas in particular, simply because it is my hometown.

4.1.4. Sampling

While trying to analyze and understand green consumers in Lithuania it was important to not only look at them, but also to have a point of reference – what kind of people are they in relation to others? Therefore I decided to establish a control group, which is called conventional consumers in this paper.

The design was to sample them according to their consumption habits – that is green consumers from eco-shops and conventional consumers from regular chain shops. The aim was to collect 50

surveys from each group and the strategy would be purposive and random − aim not at the full population, but at urban consumers and then sample randomly within the groups of green and conventional consumers.

The sample for the interviews would be predefined by the survey sample, since I would contact the people that, in the surveys, had agreed to participate in an interview; the aim was to collect 20 interviews from each group. A more extensive description of the sampling decisions is provided in the quantitative and qualitative sections.

4.1.5. The sites

From the 15-20 existing eco-shops in Kaunas, I chose two after some conversations with the staff and other general consideration. These had the biggest variety of products and seemingly most customers, so the decision was to deliver the 'green group' surveys there. Both of the shops were located in the city center, which might have affected the sample, but on the other hand, most of the eco-shops are located in the city center, so I assume that is where the typical green consumer would go shopping.

I picked out two middle-sized chain shops for delivering the 'conventional group' surveys, but that did not work in practice due to uncooperative shop managers and unwilling customers, so I had to shift to a different strategy. First of all I wanted to try to mimic what should have ideally happened when I went to regular chain shops, so I studied the most recent census of Lithuania (2011) and produced rough guidelines of how my conventional consumer sample ought to look demographically according to gender and economic activity. It was also important that I found people who would have the shopping responsibility at home, so I adjusted the gender balance slightly, to have more women, since they tend to do more shopping[17]. I then sampled according to those guidelines in public sector work places that I had access to. I also sampled at one public university for economically inactive young people and in a garden community for retired people.

Another solution could have been comparing the characteristics of the green consumer sample against a random sample derived from all of the Lithuanian population, but I did not choose this path, since I believed that the actual consumption habits had to be a decisive factor for defining the groups. This was important, because the thesis is concerned with consumption, and finding out if the green consumers do consume differently than the conventional ones, and if they do, how significant the difference actually is.

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[17] The guidelines are presented in appendix 4.

The time dedicated for the research was just over two months: a week for finding and visiting the shops, also arranging the survey deliveries with the staff; one month for collecting 100 surveys and one month for carrying out 40 interviews; divided into working days that meant having to receive 5 surveys a day for the first month and performing 2 interviews a day for the second month.

4.2. Quantitative part

Data for the quantitative analysis was collected through surveys; its final variant consisted of 35 questions. Initially it started out with 36, but after receiving around 10% of the surveys back, I found some comments stating that one of the questions felt repetitive[18], so it was removed from the further surveys.

The final variant of the survey consisted of questions that inquired about consumption habits in general, motivation for certain choices, action that might be important in the green consumption background, action that can be pro-environmental and socio-economic variables. The full survey is provided in appendix 1.

Many of the survey questions were open-ended. This was done in order not to provide leading formulations or guidelines to what is expected in neither questions, nor answer options. I took many actions in order to get as genuine answers as possible. I feared that green consumption, being as fashionable as it is now, would tempt some people to draw a 'nicer' picture of themselves than what it actually is. So I made very conscious choices about the formulations and order of the questions. I arranged the order of the questions in a way, that the most neutral questions came first, and providing the ones with the words *environment* or *ecology* in their formulation at the latest point possible.

There is also some criticism to be made towards the survey in retrospective. First of all, as mentioned before, one question seemed repetitive to some of the people. There was also one that seemed unclear sometimes:

"What kind of [eco] products do you buy most often from the given categories?" The categories provided looked like this:

Food products _____

Cosmetics and hygiene products _____

Detergents _____

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[18] "What do you look for when you investigate ingredients lists of food, hygiene products, cosmetics and detergents?"

The answer I expected and that most of the people provided was listing the products for each category, instead, some people just wrote "quite often" or "not at all" on each line. However, all of the answers were possible to use for their intended purpose, which was to make out how much eco-labeled products each respondent consumed.

The main flaw of the survey is the format of the multiple choice options for a question of what was important for people when they choose food, cosmetic/hygiene products and detergents. People could choose from such a list

a)product appearance; b) availability; c) brand name; d) quality; e) the production process did not include animal testing; f) the effect of the production process and product consumption to the environment; g) products' effect on personal health; h) need for that product; i) price; j) packaging; k) none of the above; l) do not know; m) other (please note)_____

The issue here is that with this type of presentation, it is difficult to get an overview of all the options and people might not have marked everything that was relevant to them. I still received a variety of answers, but they might have been different with a better presentation. Also, the option 'do not know' should come last.

Despite the above mentioned flaws of the survey, the data was still of acceptable quality and was coded for further statistical analysis, which will be described in the section on methods of analysis.

The surveys were handed out to people personally in eco-shops, or other places for the conventional group; bearing in mind that people are often not willing to sacrifice time for a nine-page survey I also provided ready-to-send envelopes next to them if desired. This decision increased the amount of respondents significantly, since this is how I collected around 60% of the green consumer surveys.

This issue was usually not present with the conventional surveys, because I both handed them out and collected them myself at the dedicated places[19].

I continued to hand out the green group surveys until I have received 50 of them back, but due to the time overlap, some of them continued to come in after I stopped delivering them. This way I collected 68 surveys from eco-shops, while again, the conventional group, due to the different sampling allowed for collecting precisely 50 surveys.

All in all, there were some unexpected difficulties encountered, and they posed a threat of either not collecting the required data or jeopardizing reliability due to different sampling

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[19] The list of places conventional surveys were delivered is in appendix 4.

approaches. In the end, however, all participants in each environment were chosen randomly, and later on, new groups were assigned to them according to their actual declared consumption (and not where they were recruited) so the challenge was neutralized.

4.3. Qualitative part

The qualitative part of the study was, as mentioned before, semi-structured interviews. I initially started out with 17 questions[20], but already after the first interview it became clear that this was excessive and four of them were removed. The decisions which ones to remove were based on my assumptions on how useful the information gathered from them could be and how willing people would be to answer them.

The interviews inquired about topics like: opinions about eco products and reasons for buying them; opinions about consumption in general; trust in eco-certification, knowledge and value issues; social surroundings of respondents, etc.

Since I interviewed people from both groups, it could be defined as multiple case sampling, which is said to add confidence to findings by providing an opportunity to look at a variety of similar and contrasting cases and thus help understand each case (or group) better. (Miles & Huberman 2014: 33)

The interviews were held at public places, where respondents were offered refreshment. They were not audio recorded, instead I decided in advance to be taking notes during the conversations. On one hand it could be criticized, because it decreases the amount of information collected and increases researcher bias, since I could not write down absolutely everything and had to decide and interpret what was most important. On the other hand, the majority of my respondents would not have participated in interviews if they were recorded – even though the topic is not sensitive, people seemed to feel uncomfortable about being recorded. Many of them asked in advance, before agreeing to participate in the interview, if it would be recorded, pointing out that they would not participate if it was. In the end, taking notes was the only way of recording information from the interviews.

Taking notes had meant that I would be doing some coding from the very beginning, since I would have to only write down key points and quotes, but it decreased the amount of raw data and saved the transcribing time. In addition, I had dedicated time after each interview to write down most of the information that I missed during the interviews as well as my own impressions and opinions while they were still fresh.

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[20] The initial question list can be found in appendix 2.

It was beneficial having a structure of questions before the interviews, because it allowed to not stray from the topic and helped avoid overflow of information. Still there was a challenge when some people were very enthusiastic and would expand extensively on each topic of the interview and other related (or not) topics. An opposite problem was also true. A part of the interviewees treated the interviews as if they were surveys – only answering with yes/no options and not giving into probing.

In the end, 39 interviews were carried out (20 people from the conventional group met up for interviews, while several from the green group could not find the time and thus only 19 from that group were interviewed). This was every single person that had agreed on interviews and found time for them. As a result, no additional sampling strategy was necessary to choose participants for interviews.

More information about the coding and analysis of the interview material is presented in the section on methods of analysis.

4.4. Methods of analysis

The quantitative data that was gathered in surveys was numerically coded and used for statistical analysis and redefinition of groups.

It was clear from the very beginning, that I would find people in the green group that are not green consumers, but perhaps were in the shop at the point when I was delivering surveys accidentally and that there would be people in the conventional group that are green consumers and bought eco-products regularly. For the statistical tests, it was important to have a green group that would only constitute of green consumers[21] and a conventional group that would not buy green or do so very rarely. So, after the surveys were collected and the interviews were carried out, new green and conventional groups were assigned to each case depending on their declared consumption of eco-labeled products.

As a result, 68 green consumers and 50 conventional consumers according to sampling had turned into 46 green consumer and 66 conventional consumers according to actual consumption. 6 observations were impossible to assign due to lack of information.

It would have been better to divide the sample into more groups according to their *level* of green consumption[22], to provide a more nuanced image. However, after running a regression model

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[21] As mentioned in the theory chapter, green consumers (for the purpose of this research) were people that bought eco-labeled products on a frequent basis.
[22] As described in section 3.3.8.

with a split in four groups, it became clear that it is not feasible due to lack of information from some of the observations and I returned to dividing the sample into two groups.

I used descriptive statistics to see how the sample was distributed socio-economically; chi-square tests to check if other distributions were random or if they could be attributed to a person belonging to a certain group; and logistic regression to find out if there are any variables that could predict a person's belonging to the green consumer group.

While analyzing the data collected from the interviews, I did first and second cycle coding, besides the unintended coding while taking notes during interviews. The first cycle coding was a way of both summarizing data and discovering things not noticed before (Miles & Huberman 2014: 73). I did simultaneous coding – descriptive to summarize key points of the interview, and in vivo, quoting the respondents, this way giving them a 'voice' as well.

Second cycle coding involved more analysis, where the already summarized data was grouped further, looking for recurring ideas, phrases, thoughts. I also used a coding more common for the first cycle – value coding. I searched for recurring or exceptional value statements in the already summarized data. The point of this analysis was not to go in depth into singular cases, but see if variables were similar or differ between the groups.

The methods of analysis are expanded on in the chapters that present each of the research questions using those methods.

4.5. Validity and reliability

Another issue worth discussing that is connected to the quality of the data collected and analysis carried out is validity – do the measurements actually measure what they set out to measure (Field 2013)? First of all then it is important to clarify what 'the measurement' is. The two main measurements used in the statistical analysis were indexes for (1) motivation for habitual consumption behavior and (2) pro-environmental behavior.

As it is mentioned in the discussion chapter, the validity of the motivation indexe might have been jeopardized due to the fact that the indexes were comprised of both open-ended and multiple-choice questions. Increased validity in the measurement could be achieved if all of the questions comprising the index would be open-ended, however, the findings of those questions did not contradict the ones found in other studies, and thus there is still reason to believe that the motivation index is a (relatively) valid measurement.

The pro-environmental behavior index was the sum of predefined pro-environmental actions that a person did driven by environmental concerns. To ensure the validity of this indexes, each

question about action that comprised the index was accompanied by a question about motivation for that action. Of course this is only reveals stated concerns, which could differ from people's behavior in reality, but since there was no way of checking if the statements matched behaviors, they had to be trusted.

What concerns reliability, I did not have the chance to test the survey and more specifically the indexes with other samples or at different points of time, so no definitive claims can be made here.

4.6. Ethics

Talking about ethical concerns, there are several aspects to be discussed. On a general note, it is important that people participating in the interview do so freely and understand what is happening – informed consent has to be ensured – in addition confidentiality, privacy and anonymity have to be guaranteed if required. In this research, even if some people were not anonymous in the surveys due to leaving contact information, all of the participants became anonymous after coding the data and no names will be mentioned in this paper.

In the survey, consent was implied, since people could refuse to fill it out. In addition, on top of each survey there was a paragraph introducing myself and the research, also stating that people are free to not fill out the survey or leave questions unanswered. As for the interviews, consent was also implied, since I only contacted people that agreed on being interviewed in the survey.

An area of some dishonesty from my side was that I introduced the survey being about general consumption and not green consumption in particular. I did that in order not to lead people into any particular mindset and get more genuine answers. My excuse is that consumption is not a politically sensitive topic and that the difference between the two is (linguistically) not extreme.

A potential conflict of interest arises due to the fact that I collected conventional group surveys from work, study and other places I had access to, which meant I would know some of the people working there. I tried to reduce the risk of being subjective by always collecting several surveys at a time (surveys are anonymous unless people wish to participate in an interview and leave their contact; in addition, everyone is anonymous in the analysis), so that I do not know who they belong to.

An important part of any research is that both parties would benefit from it. In this situation I was the part that benefited more, since I gained important experience as well as information, while my respondents sacrificed their time and insight.

In this particular situation, the main benefit that the respondents gained was a chance to be reflective (for both groups) and discuss a topic they are interested in (for the green group). A great

deal of the people I met for the interviews pointed out that after filling out the surveys they had become more observant about their choices and more often started asking themselves what was the motivation behind their consumption choices. In the interviews, some of them also suddenly realized they had opinions about issues they have not considered before.

There is a final issue of how the results can be used – how can they be beneficial and can they be used harmfully? In this particular case the findings could be very interesting for marketing purposes, since people discuss issues like what could increase their or others' consumption of eco-labeled products. Using the results of this research for marketing reasons would be a prime example of harmful data usage.

When it comes to benefits, I believe that, among other areas, it could be beneficial for developing state based green initiatives or for fuelling public and private discussions about issues of consumption, environment protection, and community.

5. Describing the green and conventional consumers of the sample

This part of the paper is dedicated to providing a description of the sample as a whole and the green and conventional groups separately in order to give an impression of what kind of people and society we are talking about and provide background for further analysis.

Originally, there were 118 surveys collected, 68 in eco-shops and 50 in other places, after analyzing their declared consumption, the people were reorganized into new green and conventional groups, the first having 46 people and the second 66; 6 people were impossible to assign a group and the final sample size ended up being 112.

Information about the similarities and differences between the groups was gathered both from the surveys and the interviews. As a result, the differences found in the surveys will usually be based on a larger sample size (maximum N=112) than the ones found from interviews (maximum N=39), of course, in all of the cases there were a number of respondents that did not answer all of the questions.

5.1. Demographics

I will first present the socio-economic characteristics of the sample, presenting data for both the full sample and each of the groups separately. There will also be information included on how many cases are missing for each question.

	Green group (N=46)	Conventional group (N=66)	Full sample (N=112)
Age	Mean 43	Mean 45	Mean 44
	Mode 45	Mode 56	Mode 56
	Std. deviation 12.8	Std. Deviation 16.7	Std. Deviation 15.2
	Missing 1	Missing 3	Missing 4
Gender	Male 2.2%	Male 28.5%	Male 18.6%
	Female 97.8%	Female 74.2%	Female 81.4%
	Missing 0	Missing 0	Missing 0

	Green group (N=46)	Conventional group (N=66)	Full sample (N=112)
Occupation (most popular)	Paid employment 63%	Paid employment 68.2%	Paid employment 66.1%
	Private business 10.9%	Retired 9.1%	Retired 5.9%
	Other 6.5%	Mixed activities 6.1%	Private business 5.1%
	Studying 4.3%	Studying 4.5%	Studying 5.1%
	Missing 2	Missing 1	Missing 3
Marital status	Not married 13%	Not married 30.3%	Not married 23.7%
	Married 69.6%	Married 43.9%	Married 54.2%
	Divorced 8.7%	Divorced 12.1%	Divorced 10.2%
	Missing 0	Missing 4	Missing 4
Education (most popular)	Bachelor's 30.4%	Higher 19.7%	Higher 14.4%
	Master's 45.7%	Bachelor's 28.8%	Bachelor's 31.4%
	Other university education 10.9%	Master's 30.3%	Master's 34.7%
	Missing 2	Missing 6	Missing 9
Income[23] (most common)	801-1600 30.4%	1-800 10.6%	1-800 9.3%
	1601-2400 21.7%	801-1600 45.5%	801-1600 38.1%
	2401-3200 13%	1601-2400 16.7%	1601-2400 18.6%
	Missing 8	Missing 14	Missing 25

Table 2. Socio-economic characteristics of the sample.

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[23] Presented income is an average monthly income per family member living in the same household; it is presented in the Lithuanian currency – litas. 1 Lt = 2.2 NOK

None of the differences between groups that are presented in this table are statistically significant apart from gender, so it could be said that socio-economically both of the groups are very similar. However, I will point out the minor differences that might help understand the groups better.

For example, there is not a single retired person in the green group, while they make up 9% of the conventional group. At the same time, there are very few people having a private business in the conventional group, while in the green group, 11% of the people do so.

There tends to be more people going for higher levels of education in the green group compared to the conventional one.

Concerning marital status, the data shows that people from the green group tend to be married more often than people from the conventional group (70% and 44% respectively), but also that people from the conventional group tend to be not married more often than people from the conventional group (30% and 13% respectively).

Gender was the only socio-economic variable that was in later tests proved to be significantly different between the groups – there was but one man in the green group, while in the conventional group there were 18. This poses the question of whether women are more inclined to buy green products, if they simply do more shopping than men or if there are other reasons that can explain this difference.

To sum up, people in the green group tended to be younger, more often married, slightly more educated, with slightly higher income, and were more often in private business than people in the conventional group. However, after running chi-square tests on these variables, it became clear that none of these differences were statistically significant and could be attributed to the respondents' type of consumption.

5.2. Statistically significant differences between groups

In this section I will present statistically significant differences in habitual consumption behaviors, pro-environmental and potentially altruistic behaviors that emerged from the surveys. The variables were tested using the Pearson's chi-square test.[24] First, all of the differences are presented in a table, and then some further analysis is provided.

In the table the Pearson's chi-square sig. shows how significant the result is (only results with the significance of up to 0.05 were presented), while Cramer's V shows the strength of the association, where 0 is no association and 1 is perfect association. The column labeled 'meaning'

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[24] The test is used in order to check the relationship between a number of categorical variables; in this case, the see whether the distribution regarding the given variables was random between the groups or not.

provides a short explanation of what the results actually mean concerning group division. The sample size (N) is 112, where 66 people belong to the conventional group and 46 to the green group; however, some questions were left blank by some participants, and thus the sample size for each question varies. To tackle this issue, I provide the sample size for each group per question (C-conventional; G-green).

Behavior	Valid cases (N)	Pearson chi-square sig.	Cramer's V value	Meaning
Food bought in chain shops	C 65 G 44	0.044	0.272	People from the conventional group (57%)* buy food in chain shops more often than the ones from the green group (29%)*
Food bought in specialized shops[25]	C 62 G 43	0.001	0.416	People from the green group (14%)* buy food in specialized shops more often than people from the conventional group (1.6%)*
Hygiene and cosmetics products bought in chain shops	C 60 G 32	0.001	0.452	People from the conventional group (33%)* buy their hygiene and cosmetics products in chain shops more often than people from the green group (16%)*
Detergents bought in chain shops	C 61 G 38	0.000	0.519	People from the conventional group (61%)* buy their detergents in chain shops more often than the ones from the green group (26%)*
Materially supporting charitable organizations and causes	C 66 G 46	0.017	0.227	More people from the green group (61%) support charitable causes than from the conventional group (38%)
Giving away things that are no longer needed	C 63 G 45	0.019	0.226	Almost everyone from the green group (89%) gives away the things they do not need, while in the conventional group the proportion is 70%
Inspecting ingredients list of the food bought	C 66 G 46	0.015	0.333	More common for the green group (63%)* to inspect the ingredients lists of food products than for the conventional one (48%)*

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[25] Specialized shops include both eco-shops and shops that specialize in for example milk, meat, or country/diet specific products.

Behavior	Valid cases (N)	Pearson's chi-square sig.	Cramer's V	Meaning
Inspecting ingredients list of hygiene and cosmetics products bought	C 66 G 46	0.005	0.367	More common for the green group (54%)* to inspect the ingredients lists than for the conventional group (27%)*
Inspecting ingredients list of detergents bought	C 66 G 45	0.000	0.472	More common for the green group (47%)* to inspect the ingredients lists of detergents than for the conventional group (18%)*
Looking up additional information about ingredients	C 54 G 40	0.000	0.413	More people from the green group (17%)* does this action than from the conventional group (4%)*
Sorting waste	C 66 G 46	0.033	0.201	There are more people sorting waste (in general) in the green group (87%)* than in the conventional group (70%)*
Sorting organic waste	C 60 G 42	0.007	0.371	More people in the green group (45%)* sort organic waste than in the conventional one (18%)*
Eco-labeled products bought most often	C 49 G 46	0.030	0.307	More people in the green group (85%) bought all types of ELP products than in the conventional group (57%)
Gender	C 66 G 46	0.001	0.316	There were more men in the conventional group (26%) than in the green one (2%)
Environmental reasons for saving water and/or electricity	C 47 G 36	0.011	0.279	From the people that saved water and electricity, more people in the green group (33%) did it (at least partly) for environmental reasons than in the conventional group (11%)

Table 3. Behaviors that differed significantly between the groups.

*Percentage of people within the group performing the action 'very often'.

5.2.1. A brief analysis of the chi-square tests

One of the first things that became clear is that people in the conventional group prefer to do their shopping in chain stores, for almost any kind of products, while the only significant results found for the green group indicates that they buy food products in specialized shops more often than people from the conventional group. Still, the fact that only 14% of the green sample does this action very often indicates that we do not know *where else* the rest of them buy their food since it is neither in specialized shops (which include, but are not limited to eco-shops), nor in chain shops[26].

Another observation on consumption patterns is that, obviously, people from the green group buy larger amounts and wider variety of eco-labeled products compared to the conventional group.

What becomes clear further on is that people in the green group are more interested in the ingredients of all of the products they use and are more willing to look up additional information about them. The interest in ingredients presented by the green group has some of the strongest association values from the whole table. In particular the interest in the ingredients of detergents[27] and willingness to look up additional information about the ingredients[28] are important, they are also significant predictors to a person being a green consumer (based on a logistic regression analysis, where each of these variables was the only predictor in the model). The presence of any one of these factors increases the odds of a person being a green consumer around three times.

The green group is also noticed to do more potentially altruistic actions: they give to charity more often, concerning both money and things. Furthermore, green consumers perform more PEBs – they sort general waste a bit more actively than the conventional group and they sort organic waste more actively.

Saving water and electricity is very common for both groups, but people from the green group would do it for (at least partly) environmental reasons more often than people from the conventional group. However, in both groups, a majority of the people would perform these actions for non-environmental reasons like saving money, being practical or simply habit.[29]

Gender comes out as a significant variable – there are fewer men buying eco-labeled products than there are women.

Whether or not a family had their children living with them came close to being a significant variable (sig. 0.059). However, due to the fact that there was a relatively weak association between a person's group and their children living with them (Cramer's V = 0.223) in addition to it not

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[26] Chain shops also offer a selection of eco-labeled products (even if a limited one) so there is no reason to assume that people from the green group avoid chain shops simply because they do not find what they want.
[27] Sig. 0.017
[28] Sig. 0.015
[29] The other listed reasons for saving electricity and water are based on survey data that is not presented in any tables.

satisfying the necessary significance margin, it was not presented in the table. Still, this information at least partly supports the idea presented by some respondents that families turn to eco-labeled products after having children.

The data that has been presented so far has been gathered from the surveys; now, I will present data gathered during the interviews, including some personal interpretations and explanations. The questions that will be presented inquired into what people thought about eco-labeled products in general; if they trusted certification of eco products; what they thought about own and other's consumption; what they thought about the current use of time and money in our society; and, if green consumption associated with any kind of values to them.

5.3. The qualitative picture

5.3.1. Opinions about eco-labeled products

Original interview question (Q): What do you think about eco-products in general?

Most of the opinions about eco-products fell into four main categories: price, quality, the environment and bio-spherical restrictions. Before presenting those categories I have to point out one controversy that became clear from the interviews.

The concept of 'ecology'[30] and ecological products is a rather synthetic one in Lithuania and people do not see ecological products and 'natural/good' products as comparable in quality. On the one hand, no one, making a conscious choice, would choose a clearly 'bad' product over a clearly 'good' product, but on the other hand, ecological products are not necessarily seen as 'good' products by a part of the Lithuanian population.

The issue here is that good products for most Lithuanians are the ones you grow yourself, or grown by your family, neighbors, other people you know and trust. A product will only be 'good' if it is grown *for* and *by* yourself, because only then will you put all your effort into it and not go to any kind of 'shortcuts' to increase growth, kill parasites etc. There is even a popular saying – 'make it like it was for yourself'. These kinds of products are highly valued, no one doubts their benefits, quality or taste and people are willing to pay a premium price for them.

Ecological products are not seen as 'good', since, in most cases, they are not grown or made for oneself. Ironically enough, during the interviews some people mockingly referred to their own fruit and vegetables as 'ecological' even if they used fertilizers or pesticides. In a way it shows that they acknowledge the fact that ecological products are expected to be viewed as 'good', but such items

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[30] Not as a science or even as a synonym to protecting the environment, but as word (adjective or noun) describing items.

simply cannot compare to own produce. Almost no matter how people actually grew their own produce, it would be seen as much higher quality and trustworthiness than the ecological ones.

Furthermore, some people had a prevailing image that one cannot find good quality products in shops, the best quality products are bought from people, face-to-face. As it happens, most ecological products are sold in shops in Lithuania, and not by 'real' people that actually grew or produced them.

These are just some of the symbols and ideas that influence the seemingly controversial opinions about eco-labeled products and their trustworthiness. These symbols and ideas are barriers that would have to be tackled and overcome, if green consumption is to increase in Lithuania.

To complicate matters even more, there seems to be no clear understanding or distinctions between ecological, own-grown and Lithuanian production in most of the peoples answers. In the end, however, one can still make out a vague hierarchy concerning perceived trust and value of products, where own-grown produce and homemade products are on top, followed by Lithuanian production and then eco-labeled items. This hierarchy is not necessarily based on facts about the actual quality of products and produce.

This is what makes some people appear controversial – they care about, for example, their health and they want to eat good quality natural products, but they are absolutely against eco-labeled products. From their point of view, however, there is no contradiction, simply because eco-labeled products are not seen as 'good'.

Having presented this apparent controversy and provided some background to people's opinions, I will now present the main kinds of opinions about eco-labeled products. In general, there were few people that were either completely positive or completely negative towards eco-labeled products, and, as a rule the positive ones would be from the green group, while the negative ones would be from the conventional group. A majority of the people had good and bad things to say about ELP, but the tendency was that the green group would see them slightly more positively than the conventional one.

Price

A majority of the people from both groups commented on the price and most of them saw the prices of ELP as high or too high. More people from the conventional group would consider the prices of such products to be *too* high; in fact, some of the people from the conventional group said they would have liked to buy eco-labeled products if they had the chance, but they simply could not afford them.

Only a part of the respondents said that they understood why the prices were high and that it was to be expected, since there is normally a lesser yield per unit of land than in conventional agriculture.[31]

On the other hand, there were also people doubting the grounds for high eco-product prices; one of them, for example, said:

They [eco-labeled products] *are pricier, but I don't understand why. After all they* [farmers] *don't use fertilizers, so it should actually be cheaper*. (GC, woman, 29)

Green consumers mainly thought that the price was worth paying, even though it tended to be higher than that of regular products, *if* the products were actually ecological, but unfortunately this could not always be ensured and the price did not always match the actual quality. Since they could never be sure about the actual quality, manufacturing or origins of a product, paying a premium price for ELP was a choice based on *trust* and not on *certainty*.

It's a fashion now and many people misuse it; prices do not always match the quality. Perhaps I feel better psychologically using eco products. (GC, woman, 29)

I get more pleasure from buying eco. (GC, woman, 28)

Quality

There were two main opinions about the quality of ELP – one that it was all in all good, or better than regular products, if produced honestly, and generally such products were seen as beneficial for one's health. However, there were only a few people that were unconditionally happy with the quality of ELP in Lithuania and they were, of course, without exception from the green group. Generally, the green group had more positive evaluations of the quality of ELP, but there were also people with critical views within that group as well.

The second opinion about the quality of eco-labeled products was either generally or partly negative. One or another kind of concern was expressed by the majority of the respondents. Here I present the most common concerns about the quality of ELP that were present in both groups:

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[31] The opinions about the quality and value of eco-products varied not only among people, but also within singular interviews of some people – due to all the controversy in those opinions it is difficult to establish what people actually thought about the quality and value of eco-products.

- The quality often decreases once the product has established itself in the market;
- Eco-products often do not look as attractive as their 'regular' counterparts;
- It is unclear whether a product or produce that has an eco-label is actually produced in an ecological manner;
- Respondents cannot empirically test the quality of such items themselves, while virtually all institutions/organizations that test products can be bribed;
- Lack of standards in Lithuania on what can qualify as an eco-product;
- Lack of regulations to ensure quality control of eco-products.

The list provided above delivers one main message – Lithuanians, no matter if they are green consumers or not, are very skeptical towards authority and transparency of institutions/organizations. Sometimes it is with good reason, sometimes it is not, but this general skepticism and distrust is visible in many other areas of life, not only the consumption related ones.

Maybe these [ELP] *are a bit healthier products, but I don't think the regular ones are so polluted either. I am a bit skeptical, who can guarantee anything unless you grow it yourself?* (CC, man, 56)

I think it's only a slogan to increase price, because it is not even agreed on what ecology is. You can't grow anything without fertilization, but we do have quite a clean soil so far, so it is easier to grow things. And what is an ecological product anyway? (CC, man, 74)

Environment

Only two people from the whole sample commented on the environmental effects of such products – namely that ELP ought to have a lesser negative effect on the environment and that we need to take care of the environment. Surprisingly, both of these people were from the conventional group.

Biospheric restrictions

One of the main arguments from the conventional consumers that did not sympathize with the green consumer culture, was as follows: we have one planet, one environment and one atmosphere, it is the same everywhere and it is polluted. No farm or piece of land is protected from the pollution in the air, water and soil and thus there can never really be ecological products.

The actual environmental situation of our planet might not necessarily be quite as hopeless, however this kind of perception is a strong (often self-built) internal barrier to green consumption that is difficult to refute due to its abstractness and dramatic appeal.

We live in a synthetic world anyway – it's impossible to get away from it. (CC, woman, age not provided)

5.3.2. Trust in eco-certification

Q: Do you trust the existing certification systems for ecological products?

Four main types of answers appeared after analyzing the interview data on this question: clear yes, clear no, mixed yes and no, and people that answered something completely different. The answers varied extremely in the underlying explanations and it seemed that none of the respondents actually knew about the existing systems of eco-certification, so all of the answers were based on subjective opinions and not knowledge.

All in all 11 people trusted the certification, 15 distrusted, 7 had mixed opinions and 5 answered something else. If we look at the distributions within the groups, 8 people from the green group trusted eco-certification, while 3 did not; conventional consumers had 12 people that did not trust eco-certification and 3 that did. Other opinions were distributed more or less evenly between the groups. As a result we can conclude that people in the green group had more trust in the eco-certification system, even if it was rarely a complete trust.

The distrustful people from the conventional group tended to have very strong opinions on the topic and often presented them as if they were facts. As a result several controversial and inconsistent things have been claimed about the existing eco-certification systems in Lithuania. For example, (1) there are no institutions[32] that check eco-farms and products; (2) there are no standards according which to check such farms and products; and, that (3) it is impossible to check if a product is ecological any way. Furthermore, there were respondents claiming (4) they know how the quality-control institutions work, or know people working in the institutions and they are by no means transparent or fair. Finally, (5) the institutions are interested in giving out eco-certificates to people and thus almost anyone can get them.

Needless to say, there is a system of how one can obtain an eco-certificate for a variety of products and activities. In addition, it is in accordance with the eco-certification system of the EU.

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[32] Institutions as organizations.

However, no certain claims can be made about the transparency of the institutions that issue eco-certificates or perform quality control on eco-farms, produce and products.

A more general trend was possible to make out among the distrustful people, namely that they were unsure about the human element in this system – people could be bribed and producers could be tempted to cheat. It is, again, seen as the heritage of the Soviet Union. People with mixed feelings had the same reasons for their partial distrust.

This is possibly the reason why there was a difference in trust concerning eco-certification that was issued in Lithuania and certification from abroad (not post-sovietic countries) – several people made the distinction that they trusted the certification from abroad, but not the local one. People who were generally critical about the eco-certification tended to only provide examples from Lithuania in order to illustrate their point, which points to the idea that they only had the Lithuanian system in mind.

Form the green group, a major part of the people were trusting eco-certification up to a certain degree. They relied on the idea that if a product has a certificate, there is a higher chance that it is in fact ecological, or at least the company or farm is taking steps in the right direction. I will repeat myself and say again, that people who did buy eco-labeled products were not naïve – they realized that certainty about the quality of ELP (including trust in certification) is almost impossible to achieve; the decision to buy ELP and trust it to be the proclaimed quality was a choice, an exercise in trust, and not necessarily a calculation based on facts.

I do trust it – I'd rather be deceived once than distrustful all my life. (GC, woman, 29)

I trust the selection at eco shops. (GC, woman, 35)

To sum up, there were relatively high levels of distrust among both conventional and green consumers concerning eco-certification of products. It was caused by a combination of factors, including the lack of actual knowledge, soviet-inherited work culture and morale within state institutions, and general pessimistic opinions about the people working in such institutions or practicing ecological agriculture. Not all of this distrust is groundless and this is certainly an issue to be taken into consideration if green consumption to be increase.

5.3.3. Opinions about consumption
Q: What do you think about current consumption patterns in Lithuania?
Q: What do you think about your personal consumption patterns and levels?

Before going into more detail about what the respondents thought about consumption patterns in Lithuania in general and their own personal consumption, I would like to present some general trends that many of the respondents pointed out as important in shaping the consumption habits of Lithuanians. The first of them is the historical period of being occupied by the Soviet Union and the change of political and economic regimes in 1991.

While Lithuania was a part of the Soviet Union, consumption was completely different – people had the money, but supply was short. One of the results of such a situation was that people needed to queue for hours for almost any kind of consumption item, but at the same time, items were appreciated more than they are now.

Before, people kept things longer, took better care of them, now everything turns faster; before, you had no other choice, now you get bored of things faster. I am a person of old creed, I consume modestly, even though I can afford more. I want to fix old things – you get attached to them. (CC, man, 63)

Experiencing a change into a completely different economic, political and mental system might have been one of the reasons behind this great 'eagerness' to catch up with the 'West' in terms of standard of living (which is seen as best illustrated by consumption) that one can observe in Lithuanian society now.

Up to very recently, high levels of consumption were only viewed positively – as a sign of prosperity, as something that ought to be showed off. Currently, however, ethical issues are beginning to be discussed and people start noticing the 'dark side' of consumerism; the main problem seems to be not the environmental or financial effects of it, but the fact that this consumerist mentality 'enslaves' people – they do not think anymore, do not use their consciousness, simply obey commercials, sales and supermarkets.

Another trend that is considered to influence consumption patterns in Lithuania is the seeming decrease of time – for many of the respondents, the tempo of life feels to be faster than ever before and time seems to 'narrow down' and become incredibly precious, and for some reason, that seems to fuel people's consumerism even more.

Several of the respondents I talked to in the interviews observed this phenomenon with themselves and thought that the relationship was fairly direct – one has too little time to spend evaluating different options and choosing the best one, also, one does not have the time to examine what one already has:

When I work a lot, I buy a lot of things; during holidays however, I have more time, I get to see what I actually have and my wardrobe is full of clothing, some still with the labels, not having been worn even once. The consumption is due to all of the hurrying – you work to buy tons of nonsenses. (GC, woman, 28)

You can't just watch a movie, you have to read a magazine and check Facebook at the same time, then of course you don't know what the movie was about, but everyone feels like time is too precious to only do one thing at a time. (CC, woman, 33)

Other's consumption

Describing the consumption patterns of Lithuanians in general made most of the people from both groups rather upset and emotional. They saw the masses of consumers as 'brainless sheep' – not managing to think for themselves or resist the sales and commercials, most of the terminology describing them was very moralistic and only a few people were not judgmental.

The moralistic answers describing other people's consumption were aimed at criticizing major parts of the current society and included terms like 'lower class', 'sick', 'victims of commercials', 'not thinking', 'no consciousness', 'low cultural level', 'egoistic', 'lazy' and 'buying junk'. The consumption was being described as 'horrible', 'tragic', 'not normal', 'unhealthy', 'intemperate', 'perverse', 'degrading', 'uncontrolled', 'sickly' and 'boundless'.

Only a few people tried being more neutral or positive, saying that the current levels of consumption were either good generally, or that people consumed according to their needs and opportunities; that consumption was 'good if it makes you happy', that it 'can always be improved' or that we should not really judge others

Consumption is neither good nor bad; it is the way it is. Different generations consume differently, you have to let children choose for themselves, but also by showing an example. (GC, woman, 56)

I don't like judging other people, I don't look at others and in my age you don't need new things anymore. (CC, man, 77)

Own consumption

When talking about own consumption tables had turned completely – a majority of the people from both groups used positive expressions indicating need, recent improvement, generally good consumption habits, while only a few admitted being too consumerist. The people that spoke positively of themselves used phrases like 'consume modestly', 'improved dramatically', 'buy according to need' or 'consume sensibly'. Only a few of the people that claimed to have reasonable, needs based or moderate consumption could provide actual examples of what it was precisely they were doing or not doing to claim such consumption:

I give myself an eight out of ten, should probably save more water and electricity. Generally I try to buy clothes that are perhaps more expensive, but last long. I try to give them away afterwards, because I take good care of them. (GC, woman, 29)

I keep writing down what I have bought for quite some time now and 'analyze' it; I 'scold' myself if food goes bad, don't throw away bad clothing, try to fill the trash can no sooner than in two weeks. (GC, woman, 51)

People that were critical towards their own consumption were usually also critical towards the overall consumption in the society. They talked about the 'need to limit own consumption as well' but that it was difficult to do, difficult to stay determined and resist the temptation.

It's a great challenge for me, since I am a bit careless in consumption; I try to constrain myself, but sometimes you're in a bad mood or the weather is bad…If a person is happy from it then why not? It promotes joy of sharing, protects from stinginess. (CC, woman, 56)

However, the people that were happy with their own levels of consumption were still critical towards the consumption levels of others. In fact, very few people were consistent in their opinions about the consumption patterns of others and one's own consumption.

5.3.4. Consumption of time and money

Q: In this question, I presented an opinion of one scholar and asked what people thought about it. The opinion was from Røpke (1999)[33] that people in the last several decades have become more

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[33] This idea is expanded upon in the background chapter.

efficient at their work, and, as a result of that efficiency, they often rather choose to work and earn more rather than to have more free time. Also, when it comes to spending the money, people often prefer 'materially intensive' (resource demining) things rather than investing into knowledge, skills or activities (labor intensive).

To start summing up the answers, most people agreed to this statement, independent of group, but some tried looking at the reasons for it – explanations of choices, while others simply agreed without further discussions.

The first quite common explanation was again the soviet heritage – previously people had no opportunities to be consumerist, so they had no need to work extra, because no matter how much money one earned, one would not have anywhere to spend it any way.

People work more because they want a more luxurious life and then some decide to invest 'on' themselves [appearance, visible items]*, while others 'into' themselves* [knowledge, skills]*. Some time ago, there was no supply, people had the money, but there was nothing to buy. Now you need to earn more to spend more, you need to work much more than in soviet times.* (CC, woman, 40)

This is a reasonable explanation on why people choose to work more now, than, for example, 25 years ago, but on the other hand, there is also the aspect of choosing between various options of how to spend ones money – why do people tend to prefer the material-intensive items over the labor-intensive? When answering this question, the respondents tended to either divide people into 'higher' and 'lower' status, or talk about needs.

Concerning needs, several of the participants mentioned Maslow's hierarchy of needs or other indications of needs priorities. Generally, it was pointed out by some of the respondents that if a person was 'on the first step' of Maslow's pyramid, s/he would not bother themselves with spiritual improvement. And even if a person has satisfied the 'basic' physical needs, still, priorities might lie elsewhere – in buying real-estate for a young family or providing more for children rather than going to the theater. Finally, not everyone is interested in arts, sports or other ways of improving oneself.

Many of the participants noticed, that, of course, not all people are materialist consumers – there were also people that invested in their own improvement. Here, a certain division became very clear, of the 'good' and 'bad' people – the holders of a 'higher' (perceived) social status and a 'lower' one.

People that were said to invest their money into art, music, active free time, courses or other similar things were referred to as 'intelligent', 'perfect', 'conscious', 'thinking', 'educated' and, very importantly, always having the income to afford all those goods. Sometimes they were described with respect and admiration, other times with a grain of envy or resignation; still, they embodied the 'higher status people' – modern 'aristocrats' and middle class. In addition to the social division, it was also in most cases implied that they have all of their other needs satisfied fully and thus could afford to invest the *surplus* money into education and activities.

One of the reasons why it might be seen easier for this particular kind of people to spend their money on self-improvement is that they use their *surplus* money in opposition to people of lower income, who have to sacrifice something they consider important in order to have the money for expensive labor-intensive items.

The (perceived) 'lower' status people – the ones that did not invest in self-improvement – were depicted with negative words: they had 'materialistic values' were 'mediocrities' and they did not live, they 'merely existed'.

Based on these answers, it seems that there still exists a subconscious class divide in Lithuanian society – higher class has the money, energy and wish to educate and improve themselves, while the lower working class has not got the time, money, wish or capacity to do so. One is lower class because of those features and one has those features because one is lower class – it is a vicious circle and there is no breaking out of it.

Interestingly, most of the people I talked to in the interviews did not put themselves into this lower class no matter their financial situation or type of employment; still that does not mean all of the respondents belonged to this alleged middle or upper class. However most of them also agreed that almost everyone gave too little to the 'soul' and that it actually ought to be 'nourished' more.

Another reason mentioned behind people's choice of buying materially intensive things was the visual aspect. People were seen as concerned about what other people would say or think about them, so it was important to show off all the best one had. Internal things like knowledge, skills or other activities are quite difficult to show off, whereas a car, for example, is perfect – it will stand there day in, day out, reminding others of one's achievements and status. However, if we are to condemn showing off behavior in people, we also have to remember that different people will want to show off different things and that showing off one's art collection, extensive use of international academic vocabulary or 'only green consumption' is not much better.

Finally, one person pointed out something I have never seen connected to consumption issues before – that we have poor quality rest and relaxation; the kind of relaxation that is commercialized most frequently and is easy to reach does not do what it is supposed to – it does not help us relax

and rest. This might also result in the feeling of constant hurrying, lack of time, and then increased consumption.

All in all, people from both groups seemed to be unhappy with their personal balance of work and leisure time. However, they saw potential benefits, if the current value system would be changed and more people 'dared' having more free time instead of laboring to earn more. But none of them could see a way of how that could be achieved apart from having higher income, which, ironically, implies more laboring and less free time.

5.3.5. Values connected to green consumption

Q: Does green consumption associate with any kind of values or ideas to you?

After analyzing the answers to this question, it became apparent that most them fell into three categories: health and family; environment; and personal benefit.

Health and family

Green consumption was often seen as something being good for one's health, a sign of taking care of oneself, one's well-being. At the same time it was a benefit not only for the self, but also for the family. It associated with a 'smart' thinking family, taking care of one's family, especially children, since, as I have mentioned before, it had been observed by some respondents that families often turn to eco products after having children. The health and family values were common for both of the groups when thinking about green consumption.

Environment

Talking about what values and ideas associated with green consumption was one of the few areas where the respondents listed environmental concerns. For some of the people a nice and clean environment connected directly to green consumption and such opinions were similar for both groups. It was also observed in other questions by many of the interviewed people that a certain 'after me – the deluge' approach seemed to be guiding a great deal of people's actions. In response then, green consumption was seen as a statement of 'after me – not the deluge' that the person cared about the environment and felt a responsibility for future generations. It was a statement of respect, care, protection and wish to live in harmony with the environment.

You leave the earth cleaner, don't pollute. By buying it [eco-products] to someone else you try to protect them; you have a clean consciousness when selling such products. (GC, woman, 23)

Personal benefit

Most of the people, however, associated green consumption first and foremost with a strong personal benefit. Such consumption was seen as resulting in a person being happy, 'not harming oneself', 'encouraging oneself', 'doing the right thing', the 'energy and quality of a person', 'lifestyle', 'feeling better', 'higher satisfaction', 'consciousness' and 'femininity'.

[Green consumption associates] *with health, is grown with love and you get that good energy; you no longer are this urbanized person, not a box that anyone can put anything into, it gives quality of life.* (GC, woman, 35)

There was one answer that was completely different from others talking about what kind of values and ideas connected to green consumption. This might be the only person interviewed that looked at green production as a pre-condition to green consumption and had some practical information about the challenges concerning green produce. It goes as follows:

[Green consumption associates with] *honesty and work input – you need to put a lot into such a plant to get the result you want.* (CC, woman, 45)

All in all people from the green group provided longer answers, listing a bigger variety of associations than people from the conventional group, from which several people had no associations at all. Also, egoistic values dominated in both groups. Green consumption was first of all associated with benefits for self and family, especially health, but also happiness, confidence, satisfaction. It was seen mainly as done for those reasons by both groups, while biospheric values like the environment were secondary.

To sum up the differences between the groups that become clear from the interviews, the trend that firstly catches the eye is that the differences are not very strong; they appear in only a few of the questions. The green group viewed eco-labeled products more positively, they had more trust in the certification of such products and they found more and various associations with green consumption compared to the conventional consumer group. But when it came to issues of general consumption or the use of time and money in our society opinions were quite similar in both groups.

5.4. Summary

The green group

People in the green group viewed eco-labeled products more positively and were more inclined to trust eco-certification. Of course, they also bought more in amount and variety of such products. They would present a strong interest in the ingredients of the products they used, aiming for the ones that were best for them, their families and sometimes even for the environment. They would in addition do slightly more of certain kinds of pro-environmental and potentially altruistic actions than people in the conventional group. Finally, there were almost only women in this group.

The conventional group

People from the conventional group preferred to do all of their shopping in major chain shops and were less interested in the content of the products they consumed. They were generally more skeptical both towards the quality of ELP and the certification of such products, even though their skepticism was not always consistent. They would still buy eco-labeled products occasionally, they would perform some PEBs and potentially altruistic behaviors, but they would do so less frequently than people from the green group.

Both groups

A lot of the behavior, attitudes, opinions and other characteristics were quite similar for both groups. They both agreed on opinions about general consumption levels and tendencies in the Lithuanian society. Both groups would have very similar associations to green consumption, namely associating it first with egoistic attitudes and benefits and only secondly with environmental attitudes. They would differ only slightly in how much pro-environmental behaviors they performed and how often they did so. Socio-economically the groups were also similar, apart from the already mentioned gender aspect.

6. Predictors of green consumption

Analyzing my sample, I first used both the quantitative and the qualitative data to characterize people in both groups and to define the similarities and differences between them. It was also important to find out if any of the differences could be attributed to the person's group membership. Since it has been by now established that green consumption can be a pro-environmental behavior, and an improvement in the current environmental situation is desirable, it was important to find out how continuity (or increase) of this behavior could be reached. In order to do that, one first of all needed to find out if there were any factors that could predict that a person would be a green consumer. Thus, based on previous research, I had decided to test the relationship between green consumption and factors like egoistic (health) and biospheric (environment) concerns[34] for purchase decisions, pro-environmental behaviors and socio-economic characteristics, to see if any of these factors (or a combination of them) could predict if a person will be a green consumer.

6.1. The green consumption function

The list of variables that would be checked as potential predictors for green consumption was decided upon in advance, based on previous research (Magnuson et al. 2003, Gilg et al. 2005, Gleim et al. 2013) and my own considerations. The nine initial potential predictors were three motivation indexes, one pro-environmental behavior index and five socio-economic characteristics. Their predictive values were to be tested using logistic regression.

Green consumption is thus seen as a function of motivation, pro-environmental behavior and demographical variables. The actions that comprise the motivation and pro-environmental behavior indexes are listed below the green consumption function.

Green Consumption = f (motivation + action + demographics)

Motivation can be: a) environmental (E); b) health (H); c) environmental + health (EH). Decisions can also be neither health nor environment motivated, but this option would be meaningless to use in a regression where one is trying to find out whether health or environmental concerns can predict green consumption.

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[34] Motivation for purchases and concerns when purchasing are used synonymously and interchangeably in this thesis.

Another comment on the motivation index is that each person could only have *one kind* of motivation per given question – that is one was motivated either by health, environment, or both of them (or neither). The mixed motivation index was *not* derived by combining separate motivations of health and environment, but only if a person explicitly stated both concerns while answering a question. Finally, the given choice did not have to be motivated exclusively by health or environmental concerns – it was enough if such a concern was just one among several others that were taken into consideration when making a given choice.

In the end, motivation index was a score from 0 to 7 (a maximum score of 1 per question of motivation) and was derived from the following questions:

1. Motivation when choosing grain products (MC);[35]
2. Motivation when choosing hygiene products (MC);
3. Motivation when choosing detergents (MC);
4. Motivation when choosing eco-labeled products (OE);[36]
5. Motivation for chosen means of transportation (OE);
6. Concerns when deciding what kind of food to make (OE);
7. Concerns when choosing holiday destinations (OE).

Action that was to be considered suitable for the pro-environmental behavior index had to have at least partial environmental motivation behind it. Thus, after each question comprising this index, there was an open-ended sub-question asking why people performed the given action. A person could score from 0 to 6 in this index. It was derived from the following questions about potentially pro-environmental behaviors:

1. Materially supporting environmental causes;
2. Participating in environmental organizations;
3. Sorting waste;
4. Reducing the amount of waste created at home;
5. Other actions taken in order to protect the environment;
6. Saving water and/or electricity for environmental reasons.

The following questions were originally included in the action index, but later removed, because it was impossible to tell from the surveys whether the motivation for them was environmental or not.

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[35] Multiple-choice question
[36] Open-ended question

7.   Having the average indoors temperature of 20°C or less in winter;

8.   Giving away unnecessary things instead of throwing them away;

Socio-economic variables included:

1.   Age;

2.   Education;

3.   Income;

4.   Gender;

5.   The respondent's children living at home with them.

6.2. How to choose the best statistical model?

Having a set of variables and indexes that were to be tested using binary logistic regression, it was important to find out how many and which variables (or their combinations) to choose, so that the model would have good predictive powers but would still be parsimonious. In addition, it was important to make sure that the results were trustworthy and the data was not corrupted. Field (2013) offers a way of how to make such a decision.

Figure 1. Choosing a model for the logistic regression.
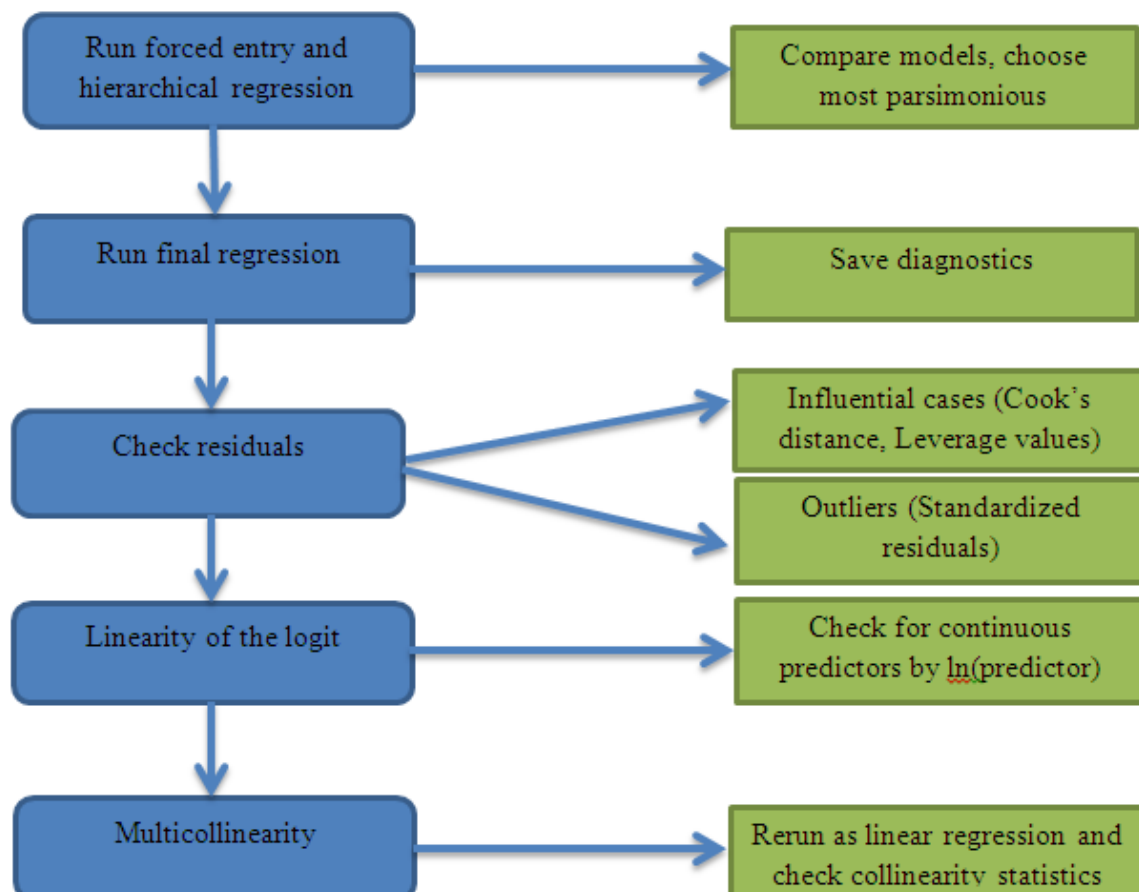
6.2.1. Potential models and justification for the model of final choice

According to Field (2013), the most parsimonious model is the one that only includes significant variables which would all contribute to the explanatory powers of the model; however, I was looking at several other aspects as well. First of all, my sample was not equally proportioned (uneven number of respondents in the groups) and there were cases when participants left questions unanswered. SPSS tends to leave out cases with lacking data when running regressions, so an important factor for me was that (1) as many cases as possible would be included. Following that, I looked at (2) the percentage of correct prediction of membership to a group and (3) the R statistics (binary logistic regression does not have the typical R^2, but uses the equivalents by Cox & Snell and Nagelkerke). Finally, the above mentioned principle of (4) significant predictors was also taken into consideration. Table 4. provides an overview of the models that were tested.

The first thing that becomes noticeable from the table is that complicated models exclude many cases, sometimes even close to a half of them. Conclusions based on such models could only describe that half of the sample that they include, which is unacceptable when the sample already is quite small.

The models also differ in how well they predict the belonging to each group. It is interesting, that in general more complicated models predicted membership to the green group better and simpler ones predicted membership to the conventional group better, but still, the *most* complicated model (1) predicted membership for the conventional group best.

The most complicated model (1) managed to put 6% more of the sample into correct groups compared to the simplest model (5), yet the complicated model was based on a lesser number of cases, which puts the results of it into question. How much should we be willing to trade off between correct predictions and included cases?

Another thing noticeable from the table is that 3 out of 5 models have an equally good fit (R statistic), even though the variables of the models differ; the three variables that are in all of the models (motivation H and EH, also gender) make up the core of them and explain why nearly all models fit equally well. However, gender only becomes a significant predictor when the models become simpler. So in fact the only predictor that is constantly significant in all models is a combined motivation of health and environment.

Model	Cases included	Predicted correct	R	Significant variables*
(1) Motivation E; H and EH; Action, Gender, Education, Income, Children at home, Age	29 Conventional 25 Green	83% total 86% conventional 80% green	0.5 0.7	Motivation H (.024) Motivation EH (.027) Action (.033)
(2) Motivation H and EH, Action, Gender, Age, Education, Children at home	35 Conventional 30 Green	81.5% total 77% conventional 86% green	0.4 0.5	Motivation EH (.006)
(3) Motivation H and EH, Action, Gender, Age, Education	58 Conventional 43 Green	73% total 74% conventional 72% green	0.3 0.4	Motivation EH (.001) Motivation H (.007) Gender (.028)
(4) Motivation H and EH, Action, Gender	66 Conventional 46 Green	70.5% total 73% conventional 67% green	0.3 0.4	Motivation EH (.000) Motivation H (.003) Gender (.016)
(5) Motivation H and EH, Gender	66 Conventional 46 Green	72% total 68% conventional 78% green	0.3 0.4	Motivation EH (.000) Motivation H (.003) Gender (.019)

Table 4. Models tested with the logistic regression.

*Variables were considered significant if they fit into the 0.05 margin

Having in mind all of the considerations – cases included, correct predictions, goodness of fit and significant variables – the simplest model (5) was chosen as the most optimal *and* parsimonious one. A regression table (table 6) for it will be presented in the following section, following a short discussion of its results.

However, since the most complicated model (1) is shown to have the best fit for the data and the highest level of correct predictions, in addition to it being the initial full theoretical model, the regression table (table 6) for it will also be presented and the results of it briefly discussed, explaining why, in the end, it was not chosen as the best model for the data.

6.3. Models and interpretation of their results

In this section regression tables for both the full theoretical model (1) and for the chosen, simplest model (5) will be presented. In the tables, each model is presented in comparison to the constant – that is running a regression with no predictors included, assuming everyone belongs to one group. This is done in order to see if the model of choice is significantly better than no model at all in its predictive powers.

The models are also double checked by performing a bootstrap – SPSS running the regression on a 1000 random sub-samples from the original sample – to see if the results remain stable.

The significant variables of both models are underlined[37] and the inflated standard errors are shown in **bold**. Gender (1) indicates that this is the results for males, education coding is (1) school education; (2) other post-secondary higher education; (3) bachelor's degree; (4) master's degree. Income coding is (1) 1-800 Lt on per person in the household a month; (2) 801- 1600 Lt; (3) 1601-2400 Lt; (4) 2401-3200 Lt.[38]

6.3.1. The full theoretical model

Looking at table 5, that presents the results for model (1), one of the first things that stand out in it is that there are a lot of inflated standard errors, which indicates incomplete information. Furthermore, after having analyzed the residuals, it became clear that there was more than twice the amount of cases that had Cook's distance value greater than 1 compared to the model of final choice (5). In addition, more than half of the leverage values were above the accepted value[39], when

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[37] For the full theoretical model a variable with the significance of 0.066 was also included, even though normally in this paper the acceptable barrier for significance is set at 5%. This was done since it was still very close to the 5% margin, while other variables were very far from being significant.
[38] 1Lt ~ 2.2 NOK
[39] Expected leverage is calculated by having the number of predictors + 1 divided by the sample size. One should avoid having values greater than two or three times the average calculated leverage.

only 5% of such cases should be acceptable (Field 2013). This indicates that there are many cases in the data sample that 'exert undue influence' on the model.

Bootstrap values varied considerably from the original model in some statistics and, in addition, a lot of confidence intervals for the odds ratio crossed the value of 1, which gives controversial information about the directions of those relationships. However, there were no issues with multicollinearity between the variables and the assumption of the linearity of the logit was also fulfilled. In addition, the standardized residuals were also in check, which shows that there were virtually no points where the model fit poorly.

All in all, even though the model predicts membership to both groups quite well and is shown to be a good fit by the R statistics, it has a lot of controversial and incomplete information and thus most of the results of the model should not be trusted.

The only predictors that stand analytical scrutiny in this model are mixed motivation, health motivation and pro-environmental behavior – having a high score in health concerns increases the odds of a person being a green consumer by around 7, while having mixed motivation increases this chance by around 5. Having a high score in pro-environmental behaviors increases the odds for a person to be a green consumer by around 7 as well. However, even these variables have to be treated with caution, since their standard errors also become more inflated once a bootstrap is performed while their significance and the odds ratio value differ depending on which other variables are in the model.

As for the rest of the variables, even if we ignored the inflated standard error values and decided to use them, the confidence intervals of the odds ratio for all of them cross the value of 1, which makes it impossible to point out the direction of the relationship and that, in turn, makes those predictors useless.

6.3.2. The most parsimonious model

To start with the reliability of the model, after having checking the residuals for this model, it became apparent that the number of cases with Cook's distance values greater than 1 was within acceptable limits. In addition, only 5% of the cases had leverage values higher than is normally agreed upon, which, again, fits with the acceptable amount (Field 2013). This shows that the number of cases that might have too strong influence on the model is still acceptable. The standardized residuals with absolute values of 1.96 did not surpass the limit of 5% of the sample size, which shows that there are only very few points where the model fit poorly. Furthermore, there were no issues with multicollinearity of the variables and the assumption of the linearity of the logit was fulfilled.

It is also visible that none of the standard error values were inflated and the confidence intervals for the odds ratio values did not cross the value of 1 for any of the variables, which means that we can at least be certain about the direction of the relationship between variables.

Having examined the models more in depth, the initial conclusion was confirmed – all of the information points to the direction that the findings of the full theoretical model (1) were not reliable, but the ones from the most parsimonious model (5) can be trusted, even if one ought to be cautious with the interpretations of those findings.

There are several things concerning the results of this model that catch the eye. First of all, gender, in opposition to the full theoretical model, suddenly became a significant variable. Initially, around 10% of the people who returned their surveys from the eco-shops were men; the conventional group had around 25% men in it. After looking through the surveys and interviews, and assigning new green and conventional groups according to people's actual consumption, there was only one man left in the green group, while the conventional group had 17. In such a situation, gender would inevitably become a significant predictor in the regression model.

However, this finding was also confirmed by the chi-square test, showing that this distribution was not random (sig. 0.001) with the Cramer's V value of 0.316 indicating a medium association between the two variables. The main source of uncertainty is whether the significance of this variable would be different if the sample was larger, allowing for more men to appear in the green group. On the other hand, it is not given that the proportion of men in the green group would actually increase if the sample was larger.

What the regression table shows is that being a woman does not necessarily imply that she will also be a green consumer, but being a man decreases the odds of being a green consumer by 0.076 – even if only purely statistically, since, as mentioned before, using gender as the only predictor for green consumption is fruitless.

Concerns for health and environment or only health seem to be the best and most stable predictors (from the full list of predictors and variety of models that was tested) of a person being a green consumer. Having a high score in the mixed health and environmental motivation index would increase the odds of a person being a green consumer by almost 4. A high score in purely health motivation increases the odds of a person being a green consumer by around 2.

There might be different reasoning for choosing one or another model as being the most optimal, however, it is noticeable, that from the models tested, the most consistently significant predictors were mixed concerns, health concerns and gender (in decreasing number of appearances). This could be interpreted as yet another sign of the model's reliability, also indicating that most of the remaining predictors are more like unnecessary ballast concerning this particular sample.
Other predictor combinations were also tested, but the five given models had the characteristics best suited for presenting and discussing.

				95% CI for Odds Ratio					
Model	B	Std. Error (bootstrap)	Sig. (bootstrap)	Lower	Odds Ratio	Upper	Percentage correct	R	Significance of the model
Constant	-.148	.273 (.273)	.587 (.587)	-	.862	-	53.7%	-	-
Motivation E	22.4	**28309** (321.82)	.999 (.276)	.000	5.60	-			
Motivation H	2.03	.902 (227.28)	.024 (.014)	1.3	7.61	44.57			
Motivation EH	1.63	.735 (140.20)	.027(.006)	1.2	5.11	21.57			
Action	2.0	.937 (232.94)	.033 (.010)	1.17	7.34	46.03			
Gender (1)	-33.1	**13485** (404.63)	.998 (.234)	.000	.000	-			
Age	-.061	.058 (15.2)	.145 (.029)	.820	.920	1.03			
Children living with the parents	1.8	1.95 (385.74)	.362 (.124)	.130	5.90	266.0		Cox & Snell	
Education (1)	0.4	3.94 (603.00)	.921 (.139)	.001	1.48	3301	81.5%	0.55	.000
Education (2)	3.42	2.60 (514.62)	.182 (.013)	.203	30.60	4614		Nagelkerke	
Education (3)	2.74	2.89 (577.23)	.342 (.094)	.054	15.54	4457		0.73	
Education (4)	2.16	3.15 (762.54)	.255 (.066)	.075	36.30	17578			
Income (1)	-23.7	**8966** (734.43)	.998 (.218)	.000	.000	-			
Income (2)	-23.0	**8966** (838.18)	.998 (.243)	.000	.000	-			
Income (3)	-22.0	**8966** (711.84)	.998 (.225)	.000	.000	-			
Income (4)	-24.2	**8966** (791.32)	.998 (.198)	.000	.000	-			

Table 5. Logistic regression results for the full theoretical model (1).

Model	B	Std. Error (bootstrap)	Sig. (bootstrap)	95% CI for Odds Ratio			Percentage correct	R	Significance of the model
				Lower	Odds Ratio	Upper			
Constant	-.361	.192 (.20)	.060 (.081)	-	.697	-	59%	-	-
Motivation EH	1.29	.296 (.307)	.000 (.001)	2.02	3.61	6.45	72%	Cox & Snell 0.313 Nagelkerke 0.422	.000
Motivation H	0.79	.262 (.283)	.003 (.001)	1.32	2.2	3.68			
Gender (1)	-2.58	1.10 (8.9)	.019 (.007)	0.009	0.076	0.65			

Table 6. Logistic regression results for model (5).

6.3.3. Green consumption and pro-environmental behavior

Green consumption is often related to pro-environmental behaviors in scientific literature (Jensen 2008, Magnusson et al. 2003, Kollmuss & Agyeman 2002, Gleim et al. 2013, Gilg et al. 2005 etc.); finding such a relationship was also an expectation in this paper, however, the relationship between these two variables in most models was not significant.

It was only in the full theoretical model (1) that the PEB index was a significant predictor, however, there were many indicators showing that the results from this model are not necessarily reliable. On the other hand, chi-square tests revealed that there were several of the actions which comprised the pro-environmental behavior index (sorting waste and saving water/electricity) that were significantly related to a person's group membership.

The findings for other actions that constitute the pro-environmental index (reducing the amount of waste created at home, doing other actions, which were not mentioned in the survey, in order to protect the environment, donating or participating in environmental organizations) revealed that both groups displayed very similar results.

In order to establish the true importance of pro-environmental behaviors in predicting green consumption, I decided to run a model, where the only predictor would be the PEB index (table 7). The results from the regression analysis show that, on the one hand, both the model and the predictor are significant, and the confidence interval for the odds ratio gives a clear indication about the direction of the relationship – that is having a high score in the PEB index will increase the odds of a person being a green consumer by around one and a half times. On the other hand, the R statistic shows that the model is, in fact, a rather poor fit for the data, and the proportion of correct predictions is also low, especially for the green group.

As a result, having a high score in the PEB index – that is performing a relatively high number of pro-environmental behaviors – is only common for half of the green group. The other half of that group would not perform a significantly different amount of PEBs in comparison to the conventional group.

This finding can help understand why in many of the other models the PEB index did not appear as a significant variable or why the CI for the odds ratio was crossing the value of 1. It is because the green group is not homogenous, especially when it comes to pro-environmental behaviors – as a result, consistent findings about whether pro-environmental behaviors can predict green consumption or not are difficult to reach from the data collected from this sample.

Model	B	Std. Error	Sig.	95% CI for Odds Ratio			Percentage correct	R	Significance of the model
				Lower	Odds Ratio	Upper			
Constant	-.361	.192	.060	-	.697	-	59%	-	-
PEB	.473 (-1.4)	.179 (.508)	.008 (.012)	1.13 (.13)	1.6	2.3 (.90)	C 70% G 50% T 62%	Cox & Snell .066 Nagelkerke .090	.006

Table 7. Logistic regression results for the pro-environmental behavior index.

*The values in brackets are from after performing a bootstrapping on the model.

6.3.4. The typical green consumer in Lithuania

The typical green consumer in Lithuania is more likely to be a woman concerned with health and environment, or just health. The environmental concerns of this consumer will most likely not translate into action further than sorting waste or saving water and electricity. She will also do other actions that can be seen as benefiting the environment, but will often do them for other reasons, like habit, finances or practicality. She will also show a strong interest in the ingredients of products that she buys.[40] Nothing definite can be said about her education, marital status or the average family income.

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[40] Referring to the findings on interest in ingredients of products presented in chapter 5.

7. Facilitators and hindrances to green consumption and pro-environmental behaviors

In the theory chapter, I had provided an overview of some of the most common ideas in scholarly circles about what was seen as hindrances to green consumption as well as potential facilitators for such behavior. Doing my own research, I was interested in finding out what the respondents themselves, both the green and conventional ones, thought about the facilitators and hindrances to green consumption[41] *in Lithuania*. Furthermore, I also inquired into what people saw as the main hindrances to pro-environmental behaviors and what could facilitate an increase in such behaviors.

The data presented here was collected through four interview questions[42], however, I was sometimes selective on which questions to ask which people – if the respondents were from the conventional group and had established a very negative view towards eco-labeled products at the beginning of the interview I would not ask them how they would facilitate an increase in green consumption, since I did not believe they would see such an increase as desirable and I did not wish to start an interview by asking something they would consider ridiculous.

The opinions and suggestions presented by the respondents often did not show detectable group differences, so the information provided below, unless noted otherwise, is based on the full sample of interviewed participants (N=39).

A visual representation of all the data gathered for each of the questions is provided in appendix 3.

7.1. Hindrances to green consumption

When talking about hindrances to green consumption, the conventional group appeared to talk more in general terms – they had the general Lithuanian population in mind, also assuming they themselves could be a part of that general population they were talking about. The green group, on the other hand, mainly talked about what hindered 'others' from green consumption, which also implied that there was nothing hindering them from consuming more ELP, or that their consumption patterns did not need improvement. The latter implication could explain why the green group sometimes appeared judgmental when talking about these hindrances – one might assume to have a right to criticize others if own behavior is seen as superior.

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[41] Green consumption was defined as the regular consumption of eco-labeled products in this instance.
[42] The interview questions are provided in appendix 2, and are marked with (RQ3).

Most of the opinions about the hindrances to green consumption fell into three main categories: (1) hindrances from the state level; (2) hindrances from the shops; and (3) hindrances from individuals and society.

7.1.1. State level

The main way the state was observed to hinder an increase in green consumption was by its *lack* of facilitation and intervention. It was speculated by many of the respondents from both groups that if the state would take an active role in consumer choice editing (for example increasing prices for not healthy products or even banning some products or types of ingredients) it could encourage an increase in the consumption of healthier products. Even better results would be achieved if this strategy would be combined with subsidies for ecological or organic farming and other price regulating mechanisms that would reduce the price of eco-labeled products.

It was also observed by one of the respondents (from the green group) that the existing health care system in Lithuania was creating conditions, where people did not take the responsibility for their own health and thus did not put an effort in preserving or taking care of it. According to this opinion, people pushed the responsibility of their personal health onto physicians and the health care system. At the same time, physicians were seen to encourage sickness, since "*we pay for diseases and not for health*" (GC, woman, 57). This kind of mentality was then seen as hindering people from taking an active role in preserving their health and from buying more (healthy) eco-labeled products.

7.1.2. Shops

Only people from the conventional group saw shops (also sometimes implying producers) that sell eco-labeled products (mainly small shops that specialize in them) as providing hindrances to green consumption. The listed hindrances were usually practical: the location of such shops was criticized – it was claimed that it was difficult to find them. Furthermore, most people considered eco-labeled products to be too expensive, either in relation to their income or the value/quality of the product. A part of the green group also considered ELP to be expensive, but only in relation to income levels. For many of the respondents in the conventional group there was a lack of variety of products in such shops and some even considered the labels of such products to be so unattractive, that it hindered them from buying these products.

7.1.3. Individuals and society

The largest amount and variety in hindrances to green consumption was provided in the category of 'individuals and society'. There, the hindrances could be further categorized into external and internal, each of them also having sub-categories of answers that were either judgmental or neutral.

To start with the internal hindrances that were presented neutrally, there were opinions that people, who do not buy eco-labeled products regularly or at all, do not feel the need to use such products; it was also speculated that this could be because they do not have any health issues.

Something has to happen to a person so that they would change. Like health: it's natural until you get sick. (GC, woman, 29)

It was also considered that a part of the people who do not buy ELP simply do not think about eco-labeled products at all. In fact, when asked whether they had any people in their surroundings that were using eco-labeled products regularly, most conventional consumers could not answer, because green consumption was never a topic that came up in their everyday conversations.[43]

It was also thought that one of the main reasons for not buying eco-labeled products was the lack of beliefs – people would not believe that anything would change if they started using ELP, they would not believe in the benefits of ELP or would not appreciate the difference between regular products and eco-labeled ones.

I personally can afford to buy eco, but I don't see the difference. I have the information, but I don't believe in it. I believe in the food combining diet, but not eco-products. (CC, woman, 56)

Others aren't interested in that ecology thing at all. I am interested but I don't believe in it. (CC, woman, 56)

Some other listed hindrances to green consumption were distrust in the quality of eco-labeled products (mainly pointed out by conventional consumers), not buying ELP as a principle (pointed out by several green consumers), or lacking information about the benefits of such products (both groups). Finally, only very few people mentioned habit as a hindrance to green consumption, even

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[43] On a side note, many of the respondents, when asked if there were any people regularly using ELP in their surroundings, would answer by listing all the vegetarians, vegans, non-drinkers etc. that they know, which indicates a degree of confusion and lack of clarity connected to how people understand what green consumption is.

though several of the respondents admitted during the interviews that only after having filled out the survey did they start wondering why they were choosing one or another type and brand of product over another. This indicates that a lot of the everyday consumption behavior is guided by habit, but very few people actually realize it is like that.

There was also a part of the internal hindrances to green consumption that was presented with a rather judgmental tone and in a majority of the cases this was done by the green consumers. In these instances the people that did not buy eco-labeled products regularly by choice were described with phrases like "they don't love themselves", "they don't care about themselves" or that "they lack consciousness". Such people were also viewed as ignorant and not being interested in anything at all.

If you can help yourself, then why not do that? (CC, woman, 50)

People think more about their cars than themselves. (GC, woman, 57)

When it comes to external hindrances, they were presented in relatively neutral terms by both groups. It was pointed out by several of the respondents that they felt the society to be critical towards green consumption – that this kind of behavior was not fashionable and not popular. Surprisingly, there were also people from the green group that saw this as a hindrance to green consumption. Several member of young families from both groups speculated that perhaps having other obligations (especially financial) could hinder people from buying ELP regularly. A small part of the green group also pointed out the fact that not having anyone who buys ELP regularly and that could give advice in such products in ones surroundings could also work as a hindering factor.

Having analyzed the data from all of the interview questions, it also became clear that green consumption is often connected to quality of life, but there are two opposing opinions about what kind of connection it is.[44] Many people from the green group claimed that their quality of life has increased after they started using ELP regularly – they felt better both physically and mentally. However, several people from the conventional group had the complete opposite argument – they saw green consumption as an unnecessary hassle, and connected ecological or organic products to tasteless, boring, typical 'health fanatic things' (this was especially connected to food products). Green consumption for them implied a certain deprivation, unnecessary sacrifice, and thus a

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[44] This was not an observation that any of the respondents made, but a conclusion I drew from the gathered data.

decrease in quality of life. Obviously, seeing green consumption as a potential cause of decreased life quality will be a hindrance to such behavior.

You try not to live long but to live well. (CC, man, 56)

To sum up, comparing the overall answers presented by both groups, we can conclude that, first of all, in many cases they did not differ considerably – both groups presented a very similar array of internal and external hindrances. Still, two main differences could be pointed out: (1) people from the conventional group concentrated more on external hindrances; when pointing out internal hindrances, they tended to do so in a relatively neutral manner, often presenting them as a personal choice. In many cases it could be interpreted that they were listing out hindrances not only for the general population, but for themselves personally as well. (2) The green group, on the other hand, concentrated on internal hindrances and very often presented them in a judgmental manner; they were always talking about 'others', implying their own consumption patterns (or sometimes lifestyles) to be superior. All in all, there were more internal hindrances listed than external.

If we put this in the perspective of data presented in chapter 5, we could see that the conventional consumers were often critical towards ELP in general, but more neutral and moderate while discussing the hindrances to green consumption – as if they were trying to explain or excuse their choice of consumption. At the same time the green group was positive about ELP in general, but presented critical and judgmental opinions about hindrances to green consumption – which shows disapproval of non-green consumption patterns.

7.2. Facilitators to green consumption

Having analyzed all of the interview data concerning facilitators to green consumption, it became clear that the same three actors that created hindrances to green consumption were expected to facilitate an increase in it as well – that is (1) the state; (2) shops that sell eco-labeled products; and (3) individuals. The actors with the potential to influence green consumption can be categorized into external (the state and shops) and internal (individuals themselves), while the facilitating actions that each of these actors could perform were both internalist and externalist.

The accumulated opinions within each group were very similar concerning facilitators to green consumption, apart from the case of facilitators by shops, which were mainly listed out by people from the conventional group. Unless it is pointed out otherwise, the results presented are thus similar for both groups.

7.2.1. State level

The main ways the state was seen to be able to facilitate green consumption was through financial assistance or education. Financial assistance was a general external facilitating tool that both groups wanted to see being used actively by the state. To be more precise, people offered to improve and increase the subsidies for eco-farming; this should not only decrease the price of eco-labeled products but also increase the number of farmers and producers that would be willing to take up green farming and production (which again would result in more supply and competition and thus a decrease in prices).

We need more producers – more land will be cultivated, there would be more supply and prices would decrease. (CC, woman, 40)

In addition, a different kind of price regulating mechanism was offered to be introduced, for example a compensation system that would aim either at reducing ELP prices in general, or at helping the most financially struggling groups of society to be able to buy such products. Finally, another way of tackling the issue of incompatibility between prices of eco-labeled products and average income levels in Lithuania would be if the government increased the minimum wage levels.

The state was also expected to take an active role in educating people about green consumption; this opinion was very common, but only expressed by the people who thought green consumption was beneficial.

Educating people (or providing them with necessary information) is generally considered to be an internalist strategy (Jackson 2005a); according to this approach, the desired behavior will appear once the personal has all the necessary information and assumes responsibility for his/her own action (Schwartz 1977). However, in most cases the education process has to be performed by an external agent, which makes it difficult to make a clear distinction of whether educating people is an internalist or externalist strategy.

There were several different ways offered concerning how the state could equip people with the necessary information. Most people from both groups thought that there should be more and better commercials or other kind of social advertising explaining the benefits of eco-labeled products and the dangers of using unhealthy ones. It was hoped that this would increase the consciousness in people and enlighten the importance of the topic.

You need to say what is done wrong, why it is wrong and what to do right. (CC, woman, 50)

In addition, due to the existing distrust in eco-certification and the uncertainty in the quality of some eco-labeled products, several people expressed the wish that the state would both enforce stricter quality control of products and would educate people on how they themselves could judge the quality of a product.

7.2.2. Shops

A majority of the conventional consumers had suggestions on how the eco-shops ought to facilitate an increase in green consumption. There were a lot of practical aspects that were seen as needing improvement: the shops should be placed at more convenient locations, they should be small in size, and have staff that would be knowledgeable, friendly, welcoming and easy to communicate with. These were desired features because they are in stark contrast to how staff is in regular chain shops. Furthermore, the respondents expressed a wish that the shops could ensure the quality of the products and produce they sell, and, of course, have more reasonable prices.

An interesting observation is that all of the practical factors that were listed by conventional consumers as potential facilitators for increased green consumption were listed as the *main benefits* of the *existing* eco-shops by the green consumers. So in fact, most eco-shops already fulfill these requirements for improvement – only the conventional group would not know that if they had never visited such shops.

Another area where the eco-shops could improve was also connected to education. People from both the green and conventional groups pointed out that an increased level of expertise would help consumers to buy more ELP, thus such products ought to have more easily accessible and understandable information on their labels, especially concerning the benefits of those products. Furthermore, what would provide an increase in the consumption levels of eco-labeled products is more attractive commercials.

Finally, farmers and producers of eco-items were considered to be able to facilitate an increase in green consumption if they provided a wider variety of products, and, again, decrease the prices.

7.2.3. Individuals

There were very few things listed that individuals themselves could do to facilitate green consumption. On the one hand there were a couple of practical suggestions, for example having more time, or even, surprisingly, having health issues, that were seen as potential facilitators.

Having more time on ones hands was needed, since eco-labeled products usually cost more than regular ones, and in order to be willing to pay a premium price, people would want to be certain about the benefits of such products. In order to be competent in which products are worth

the premium price and will deliver the desired effect, one has to invest time in educating oneself on this topic.

Considering health issues as a facilitator for green consumption was just a practical observation by some of the respondents (from both groups). Just as some of the respondents pointed out that they have noticed a general tendency for people to start buying eco-labeled products after having children, the same way other respondents have observed that people tend to go for ELPs once they encounter serious health issues. However, this is probably the only listed facilitator to green consumption that is not helpful in trying to derive strategies for increased green consumption.

Finally, there were some people, who were of the opinion that an increase in consciousness and awareness about the benefits of green consumption as well as stronger convictions about it would be good facilitators for green consumption. However, these suggestions are perhaps less facilitators themselves, and more of an actual goal that could be reached if all of the other listed facilitators would have a positive effect on people.

7.2.4. Other potential facilitators to green consumption

One of the factors that I considered to be a potential facilitator (or hindrance) for green consumption was having people in one's environment, who would be either strongly pro- or against green consumption. In addition, I assumed that people from the green group would have more pro green consumption individuals in their surroundings while people from the conventional group would have more skeptics in their surroundings. This assumption was proven wrong during the interviews.

There were some cases that confirmed the assumption, but such cases were too few. Around 20% of the respondents from the green group did in fact have several of their friends, family or co-workers interested in green consumption as well, but many more were the only ones in their social circle that cultivated such an interest. The same could be observed within the conventional group as well – around 15% of the sample would be very skeptical towards green consumption themselves and have skeptics in their environment, but the majority of the conventional sample had no skeptical people in their surroundings that they knew of. As mentioned before, most of the people from the conventional group could not say what people in their social surroundings thought about green consumption since they had never discussed this topic with anyone.

I had observed one unexpected phenomenon about the respondents who, in their surroundings, had people holding similar opinions to green consumption as they did. The skeptical people showed more reassurance and drew more confidence in having other skeptics in their environment – as if that added strength to their disapproval of eco-labeled products. People from the green group, on

the other hand, did not appear to have the need for other pro-green consumption individuals in their surroundings, trying to indicate that their conviction was strong enough to survive without a wider social approval.

I was expecting a contrary tendency, where green consumers would express the need to have like-minded people in their surroundings. This opinion of mine was also shared by a small number of green consumers (as illustrated in the citation below), but the majority of the green sample was of the opposite opinion.

You have to be strong inside, know what's best for you. We are two and we don't care what others think about us, but for other people it may be more difficult [to keep using eco products without close support]. (GC, woman, 29)

One of the first things that became apparent when comparing the hindrances and facilitators of green consumption lists was that in the hindrance list, respondents concentrated more on internal hindrances, depicted either neutrally or negatively, while in the facilitators list, people tended to point out external factors as the main areas where and how improvement could be made.

On the one hand, the internal personal hindrances were various – the green group presented them more like ignorance or lack of care for oneself, while the conventional group showed it as a calculated choice – a consumption choice like any other, which strictly speaking cannot even be qualified as a hindrance. The green group made a clear group-membership distinction, always indicating that it was 'they' that were ignorant and it was 'they' that did not love themselves, posing an opposition between themselves and the non-green consumers. At the same time the conventional group was talking in more general terms, indicating that the hindrances they were listing out were possible for both the wider population and them personally. Still, on the other hand, both of the groups found most hindrances to green consumption stemming from within a person – internally.

The opposite tendency was observed with the facilitators to green consumption – even though the groups concentrated on slightly different potential facilitators, the majority of them were still external, implying that it should be other, external, actors, and not the individuals, that have to take responsibility and action for the increase of green consumption.

In general, both groups agreed that the state had the largest role to play, especially in the areas of financial regulations and educating people. The conventional group wished for more practical facilitation from the eco-shops, and both groups wanted to receive more information on the packaging of products, in order to make the choice of products easier and increase their levels of expertise. Very few people pointed out internal personal facilitators for green consumption, and the

ones that were listed could be categorized more like goals (for example increased consciousness or convictions) that would be reached after other facilitating tools would have worked successfully.

The list of facilitators to green consumption corresponded to the list of hindrances for such behavior, apart from one aspect – people had pointed out several hindrances to green consumption from the society, yet no suggestions were made on how society could help facilitate an increase in green consumption. Otherwise, the fact that the two overall lists correspond so well indicates that people think systematically about the issue of green consumption; it is only the ideas on who has to take responsibility to induce change that fluctuate.

7.3. Hindrances to pro-environmental behavior

During the interviews, the respondents were asked why, in their opinion, some Lithuanians showed so little care and consideration for the natural environment, while there were others that took actions in order to improve the environmental situation; in other words – what hindered people from behaving pro-environmentally. In the end, the main hindering actors could, again, be categorized into (1) the state; (2) individuals and society. Both of the groups presented strikingly similar opinions, and, unless noted otherwise, the opinions presented are common for both of them.

7.3.1. State level

Similarly to when discussing the hindrances to green consumption, the state was seen to hinder an increase in pro-environmental behaviors by not providing enough facilitation for them. The respondents presented opinions that many aspects of state infrastructure needed improving, the state was not educating its citizens enough, and there was an observed lack of financial facilitation.

To start with the criticism towards infrastructure, the respondents were most displeased with the waste disposal system. People that lived in different parts of the city were all agreeing that there was a lack of garbage bins for sorted waste. In addition, waste from such bins was usually not taken out as often as it ought to be (in opposition to regular garbage bins, which are taken out regularly). This was especially problematic, because most of the sorted waste bins are in neighborhoods where blocks-of-flats is the main kind of housing; this indicates a high inhabitant density and usually a lot of waste. Not emptying sorted waste bins in time in such areas means that the bins are often overfilled, causing sanitary issues and being esthetically displeasing.

In addition, many of the respondents observed that there was a lack of waste disposal facilities in common areas, especially popular nature spots, where large amounts of people would gather in

the summer season or during weekends. This resulted in a situation, where the most popular natural areas were turning increasingly polluted by both household-type and bulky waste.

Such a lack of infrastructural convenience was seen to be hindering many undecided people from performing more PEBs, especially sorting and recycling waste.

We lack convenience, not consciousness. (GC, woman, 32)

There was also one financial hindrance pointed out concerning the adoption of one pro-environmental behavior. Several of the respondents (mainly from the conventional group) pointed out that the main factor that hinders people from sorting their waste was the lack of financial benefits – if people received financial benefits from sorting waste, many more would start performing this activity.

Another area of infrastructure that was seen as needing improvement was the public transport system. Kaunas is a relatively large, yet compact urbanized city with many suburban areas attached to it and most people live and work in the same city. Many of the respondents had observed that the number of cars on the streets has been growing in the past decades; they have also observed the drawbacks of such an increase – namely air pollution, traffic jams and problems with car parking. As a result of these observations, there were many of the respondents from both groups, who claimed that they would stop using their cars if the public transport system was better. However, there was an impression that the new and improved public transport system would have to provide almost the same convenience as having a car (concerning distances to walk and frequency of the transport) if people were to exchange driving their cars for taking a bus or train.

The state was also seen as not doing enough in the area of educating people about the necessity of pro-environmental behaviors. First of all, there were no educational programs for children (neither in kindergarten, nor at school) that would teach them about the importance of the natural environment, the challenges it faces currently and what regular people could and should do in order to improve the current environmental situation. Secondly, the same kind of education was lacking for adults as well – most of them got their education while Lithuania was incorporated in the Soviet Union and in the Soviet Union, the official policy was that there were no environmental problems. Thus, it is felt by a part of the respondents, that the state is currently not doing enough promotion for encouraging pro-environmental behaviors, neither through media channels, nor by policies.

7.3.2. Individuals and society

There were three main types of hindrances created at individual or society levels – (1) the characteristics of Lithuanian society in general, (2) internal characteristics of individuals, and (3) interpersonal educational life experiences.

Concerning the general characteristics of Lithuanian society, the soviet heritage was again mentioned by many of the respondents. It was believed by these respondents that a large part of the habitual behavior of current adults that are over 30 years of age has been formed during the soviet period and has not changed significantly since then. Such habitual behavior includes littering in public places, in both urban and natural areas, disposing of bulky waste in inappropriate places, leaving hazardous waste out in nature, depleting natural resources without any considerations for their renewal in the future, etc. Since habitual behavior is difficult to change (increasingly so with age) having such environmentally damaging behaviors was, of course, seen as a hindrance to pro-environmental behaviors.

A natural conclusion that came to some of the respondents after this observation was that a generation has to change if we wish to see an improvement in the environmental situation in Lithuania, because the current adults are simply seen as beyond hope, when it comes to changing behavior towards it being more pro-environmental.

A generation has to change; now the mentality is more like 'after me – the deluge'.[45] (CC, man, 56)

There was also one attempt to attribute the current lack of pro-environmental behaviors to the perceived general characteristics of Lithuanians:

It's not that Lithuanians don't care about the environment, but they are a grubby nation; this is especially noticeable in the countryside. (CC, woman, age not provided)

When it comes to education, respondents from both groups were very active in pointing out how individuals and society in general hinder people from performing more PEBs. It was observed that the best ways of learning for people (especially young ones) is by example – by observing others behavior and own social surroundings. However, we have established that a lot of that behavior and examples are guided by habitual behavior that had formed during the soviet period

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[45] 'After me – the deluge' was the most common idiom used by the respondents when describing the rationale of people that did not perform pro-environmental behaviors.

and which are often not environmentally friendly at all. As a result, the examples and behaviors that are being observed and learned are bad ones, and this hinders the adoption of environmentally friendly behaviors.

There was also one opinion that there was no effort put into developing an understanding and appreciation of beauty and esthetics in people, which leads to people not having a need for a beautiful clean environment and surroundings, which, in turn, also hindered the adoption of PEBs.

The majority of the hindrances to pro-environmental behaviors fell into the category of individual characteristics of people and was mainly presented negatively. Virtually every respondent in each group had a contribution to this list.

To summarize the answers, what seemed to hinder most people from performing pro-environmental behaviors was "their lack of morals", "their lack of willpower", "their lack of principles", lack of motivation, environmental awareness or consciousness, lack of convictions or skills. The hindrances could also be attributed to a deterioration of sociality in people, in them not caring about the future; being of (perceived) lower social status, or simply of poor mentality. It could also be due to a person not having any inclination to learn or improve. What is common to all of these hindrances is that they are all in the reach of what the individual can change him or herself; they are all negative personal characteristics; and they are all presented as what 'others' do.

There were a handful of respondents (mainly from the conventional group) that provided more neutral hindrances to PEBs that were connected to societal changes. It was observed that community culture has been deteriorating in Lithuania in the past decades, which leads to inaction when it comes to taking care of, for example, common areas. That was especially noticeable through the decrease of 'dugnad' culture, which has, as its primary purpose, the gathering of small communities in order to take care of common areas through voluntary labor. In many cases a 'dugnad' can be qualified as a PEB, because people gather in order to take care of their environments, even if they are only very immediate environments. Furthermore, there are many larger scale events (like collecting waste in forests and beaches in spring) that are based on the principle of 'dugnad' and thus deterioration in its popularity can often be a direct hindrance to pro-environmental behaviors.

To sum up, it is first of all visible that a similar tendency as when discussing hindrances to green consumption emerges. People find more internal hindrances than external, and the internal ones would often be presented in a negative light. What differs from the answers about hindrances to green consumption is that in this case, people from *both* groups presented the internal individual hindrances of 'others', automatically excluding themselves from that group. Secondly, another thing that was common for both groups and pointed out as a significant hindrance to pro-environmental

behaviors was the lack of education – both formal education, and education by a good example, or positive learning experiences that would arise in environmentally aware social surroundings. All in all, both groups provided very similar ideas when answering this question, even compared to the previously presented questions about facilitators and hindrances to green consumption, – virtually no differences between the groups could be detected.

7.4. Facilitators to pro-environmental behavior

All of the facilitators for green consumption that were listed by the respondents could be categorized into facilitation that ought to be done by (1) the state and facilitation that ought to be done by (2) individuals and society. These categories match the ones of hindrances to PEBs perfectly, and a lot of the potential facilitators are just positive expressions of the hindrances listed before. The answers were, again, very similar for both groups, and, unless pointed out otherwise the given answers represent opinions from both groups.

7.4.1. State level

The areas where the state was expected to provide facilitation (since the state's lack of facilitation is seen as a hindrance) were: (1) infrastructure; (2) education; (3) financial support; and (4) ideological/policy level.

The kind of facilitation that was desired on the infrastructural level matched the infrastructural hindrances precisely – the respondents wanted a better waste disposal system and a better public transport system.

Concerning the waste disposal, it was pointed out that if there were enough garbage bins for different types of recycled waste in all of the neighborhoods and if those bins would be emptied in time, this would increase the number of people who sort their waste considerably. In addition, if we wished to see the popular common nature areas in better shape, we first of all would have to make sure that there was enough waste disposal facilities in those areas.

When it comes to the public transport system, it was only pointed out in general, that it ought to be improved, by having better routes and more convenient schedules. Achieving this would contribute to a number of people choosing public transportation instead of own cars, according to the respondents.

There were a couple of the respondents that mentioned experiences and impressions gained abroad as a facilitator, which would encourage people to demand a better infrastructural system at home. It was observed by these respondents, that the waste disposal and public transport systems

are more comfortable in, for example, the Scandinavian countries. This made them realize, that having a comfortable context (infrastructural system) makes it easier to act pro-environmentally, when the pro-environmental values are not very strong in a person. Thus these respondents expressed a wish to see the infrastructural system in Lithuania more 'like abroad'.

The state was also expected to take an active role in educating the people about the severity of environmental problems, the necessity to act upon those problems, and the ways in which individuals could contribute in order to improve this situation. It was first of all suggested that the state could control what kind of commercials are allowed on television, and, for example, show commercials about eco-labeled products instead of those about alcohol. Secondly, it was felt that environmental issues did not get enough publicity in the main media platforms, so the state ought to facilitate an increase in that. Furthermore, it was pointed out that such publicity (in the form of social advertising for example) would have the best effect if it was delivered by strong, popular personalities.

Finally, since the government is responsible for formulating the curriculum for schools, it has the ability to include education about environmental issues and their solutions into the schools' educational programs. If the government would ensure that children were taught about these issues at school and kindergarten, they would facilitate and increase in pro-environmental behaviors in the future, by bringing up whole new generations of environmentally aware people.

There were also a number of the respondents, who believed that financial incentives or punishments would bring more people to performing certain pro-environmental behaviors. For example, if people that did not sort their waste would have to face increased waste disposal costs while people that did sort their waste would receive other kinds of financial benefits (or a decrease in financial costs), this would certainly lead to an increase in the number of people that sort their waste.

The majority of the ideas of how the state could facilitate an increase in PEBs on the ideological/policy level were presented by the people from the conventional group. Here it was suggested by several of the respondents that the state should take up a more general 'punishment and incentive' approach concerning pro-environmental behaviors. In addition, there was one respondent that presented an opinion that the state ought to have as a primary goal of its policies, to take care of the health of its citizens. Furthermore, there was one practical suggestion that the state could employ homeless people, having an arrangement where the homeless people would receive food and shelter in return for them cleaning public spaces from litter.

7.4.2. Individuals and society

When talking about the facilitators for pro-environmental behaviors that were in the influence zone of individuals and society, several trends could be made out. First of all, there could be observed a kind of 'start with yourself' philosophy in a lot of the answers. Since in the hindrance to PEBs list many of the respondents pointed out that the social surroundings and the examples observed there were hindering people from adopting pro-environmental behaviors, it was an obvious conclusion then that one has to create environmentally aware social surroundings, where people would teach others by their own responsible behavior and good examples. Thus starting with oneself and showing others an example of how to act pro-environmentally was seen as a facilitator to PEBs that individuals could create.

Furthermore, what concerned education, it was observed that teaching with humor and irony about the importance of PEBs would reach better results than being didactical and coming from a supposed morally superior position.

In opposition to the opinion on how the state ought to take responsibility for the health of its citizens, there were a number of respondents who though that people themselves should take responsibility of their own health, which would eventually lead the people to realizing that one can only be healthy in a clean environment and as a result would make those people more pro-active in taking care of the environment they live in. It was expected that an increase in the responsibility that people feel for their own health could be an especially efficient facilitator to PEBs, since it was observed by the respondents that egoistic motives worked better on people than altruistic ones.

In addition, several of the respondents had realized that common problems like environmental issues are best tackled by groups of people, and not individuals. Thus an increase in sociality of people could be a potential facilitator that would help tackle environmental problems.

Finally, there was one opinion, by a woman from the conventional group, that widening ones horizons abroad is already facilitating a change in people's behavior, including some pro-environmental behaviors. This opinion corresponds somewhat to the one presented earlier in this section, where some respondents wished to see waste disposal and public transport infrastructure 'like abroad'. According to this opinion, when people get to spend some time abroad and experience themselves how nice it could be to live in an environment, where there is no trash in the streets, or it is comfortable to sort waste, they bring these good practices with them back home, and in such a way, slowly change the attitudes and behaviors concerning the environment.

It's [pro-environmental behavior in Lithuanians] *a small part of a big bubble. People travel more now, they see how it is in other countries, have something to compare with, they become more educated and cultured, choose their entertainment accordingly, perhaps litter less*. (CC, woman, 33)

To sum up the facilitators to pro-environmental behaviors, one of the first things that catch the eye is that, as with the facilitators and hindrances to green consumption, people from both groups tended to concentrate on hindrances that were *internal and individual*, while most facilitators for both behaviors were listed for *external* actors.

What appeared to be viewed as the key to increased pro-environmental behavior was a combination of a good infrastructural system (especially waste disposal and public transport) and increased levels of education about environmental problems and their solutions. For the education to work best, it ought to be provided at several levels – including formal education, social advertising and informal interpersonal learning.

Secondly, it became apparent that what first and foremost counted as a pro environmental behavior for the respondents was issues connected to waste, like not littering in public areas and sorting ones waste. Occasionally, choice of transport would also be associated with pro-environmental behaviors, but no other behavior was mentioned.

What was exceptional for the facilitators of PEBs list was that it corresponded almost perfectly to the hindrance list – all of the hindering actors and areas that were mentioned in the previous section were provided with suggestions how they could facilitate an increase in PEB. In fact even some more general suggestions have been made that did not appear as hindrances of the previous section.

All in all, both groups again presented very similar opinions about what could facilitate an increase in pro-environmental behaviors in Lithuania, with the minor exception of some respondents from the conventional group that provided some rather drastic suggestions concerning the ideological direction the state ought to take.

Having analyzed the data concerning facilitators and hindrances to both pro-environmental behaviors in general and green consumption in particular, several trends became visible. First of all, people from both groups presented strikingly similar opinions and ideas. The only areas where the opinions between groups were detectably different concerned hindrances to green consumption – the green group concentrated more on internal individual hindrances that they presented in a negative light. By doing that they also emphasized a different group membership – it was 'others'

that possessed these negative internal hindrances to green consumption, while the green group, by implication, was depicted as either not having such hindrances or not having anywhere to improve their consumption further. The conventional group, on the other hand, tended to present more neutral hindrances (often depicting them as a simple consumption choice) and did not provide a contraposition of group membership – the hindrances they provided could have been true for both a larger general population and themselves personally.

However, the trend that could be observed on the green group concerning hindrances to green consumption was present for both groups when it came to hindrances to pro-environmental behaviors. There people had pointed out many internal individual hindrances to such behaviors and also, most often depicted these hindrances in a negative light. Furthermore, such hindrances were always characteristics of hypothetical 'others', a group that none of the respondents could relate to.

Another observed trend was that people from both groups found more hindrances that were internal to the individual, yet more facilitator that were external, or would have to be implemented by external actors like the state or eco-shops.

Furthermore, the main types of facilitation that was desired in both areas, included improved practical conditions and infrastructure, and increased levels of awareness about the given issues, which ought to be achieved by educating people of all age groups and by a variety of means.

Finally, the fact that the only area where the opinions between the groups varied somewhat was green consumption, and not pro-environmental behaviors shows that one does not have to be a green consumer to care about the environment. Furthermore, not being a green consumer *does not hinder* one from being aware and interested in environmental issues.

8. Discussion

The discussion chapter is organized according to the research questions – in the first section the results concerning the differences between the groups are discussed, in the second section the findings of the binominal regression are analyzed, while in the final section, the results concerning facilitators and hindrances to green consumption and pro-environmental behaviors are discussed. In each of the sections there are also remarks made concerning how the findings may be interpreted within a broader context of all of the data that was collected for this research.

8.1. What are the important differences between the groups?

8.1.1. Socio-economic characteristics

After having analyzed the data on the demographic characteristic of both groups, it became clear that only one characteristic – gender – was significantly different between the groups. The other characteristics were different, but not enough to be statistically significant. Gender has been proven to be a significant predictor for green consumption or pro-environmental behaviors in many studies (Kollmuss & Agyeman 2010; Devinney et al. 2010; Gilg et al. 2005; Peattie 2010), so this finding corresponds to a lot of the research done on the topic. However, most of those papers had also found other demographic characteristics, like age, income or education, to be important when predicting green consumption or PEBs, while they ended up being not significant in this research. As a result, I would like to provide a short discussion and interpretation of the statistical significance of the other demographic characteristics.

The insignificant findings

As mentioned earlier, age, income and education levels can be expected to be significantly different between the groups based on previous research on green consumption, yet these variables were not found to be significantly different for the Lithuania sample. In addition, marital status and having ones children still living at home were not significant either.

There are several possible explanations why these variables were not significant. First of all, many of the studies I had looked at had much larger sample sizes, which make it easier for differences among segments of society to appear. Secondly, the set level of 5% for significant findings might have had a direct effect on which variables could be interpreted as significant. However, lowering the barrier to10% would only have allowed for including one more variable as significantly different between the groups – namely, having the respondent's children still living at

home with them (Pearson's chi-square sig. 0.059 and Cramer's V 0.223). The rest of the variables would still have remained insignificant.

Another explanation might be that the lack of significant differences can be attributed to context specific features of the country. For example, Lithuania has relatively high educational levels, even compared to other European countries. What concerns income levels, one of the reasons why there was a contradiction between statistical findings and respondent's opinions (the income differences were not statistically significant, yet many of the respondents, especially from the conventional group, claimed price sensitivity) might be because the Pearson's chi-square test cannot take into account the balance between average incomes, currency values and prices of commodities. Thus the differences, put into a real life context might be important, yet when they are viewed purely numerically, they might not be statistically significant.

Thus, even though the groups did not appear as different socio-economically, it can still be beneficial to keep these considerations in mind when analyzing and interpreting other data.

Gender

The socio-economic characteristics discussed above had been shown to have significance in a number of other studies, but did not prove to be significant in this research. Gender, however, was show to be a significant variable in all of the studies concerned with green consumption and pro-environmental behaviors that I looked at *and* it was found to be significant in this research as well. Furthermore, two different statistical tests used in this research ended up singling out gender as significant in relation to green consumption. On the one hand, gender is useless as a predictor to the discussed behaviors on its own, but the fact that it appears as a significant variable so often makes one wonder why it is like that.

From my personal point of view, I find two most plausible explanations for this phenomenon: (1) women have been shown to be more compassionate and empathic than men, as a result they care more about the people that are close to them, (and, possibly the larger environment) *and* they take an active role in behaving according to those concerns; (2) women still have more shopping responsibilities at home, so naturally, there would be more of them in any consumer sample.[46]

These are, of course, just speculations, there could be other reasons behind this trend; however, it is clear that the role of gender in green consumption and pro-environmental behaviors is not yet fully understood and needs more examination.

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[46] There have been cases in my sample, where it was a man that received the survey for filling out, but he would bring it home for his wife/girlfriend/mother to fill out, since 'they' would 'know better' what to answer, because they do the majority of consumption decisions at home.

What the analysis of the socio-economic characteristics of the groups has also helped to reveal is that there is a reason why these variables are rarely included in models or theories of what motivates human behavior, yet they tend to come up as relevant in a number of studies. Demographic characteristics can say very little about how sensitive a person will be to social or environmental issues, however, they have the possibility to create facilitating conditions or positive foundations for the appearance of, for example green consumption or pro-environmental behaviors.

8.1.2. Habitual consumption and potential pro-environmental behaviors

The data analysis has shown that the groups differed significantly in their habitual consumption behavior – they chose different places for their daily shopping (conventional consumers displayed a preference for chain shops, while green consumers displayed more diversified preferences).[47] Furthermore, they behaved differently while shopping – the green consumers were much more likely to choose the products they buy based on their ingredients lists and they were more likely to dedicate time for finding information about the harms and benefits of different ingredients. In fact the green consumers' interest in ingredients of products has also been proven to be significant by two different statistical tests, thus increasing its trustworthiness.

This finding can imply at least two things: (1) it shows a level of dedication and genuine interest in green consumption, since gathering information about the benefits and harms of ingredients is a time consuming activity; (2) it indicates a level of expertise concerning green products, which has been shown by Gleim et al. (2013) to be an important factor influencing the hindrance or uptake of green consumption.

It is important to note that the analysis cannot clarify whether the interest in ingredients of the products used is primarily driven by concerns for the environment or for personal health. Since the concern behind these actions was impossible to distinguish based on the data gathered in the surveys, it was moreover not possible to use this interest in ingredients as one of the behaviors to be included in the pro-environmental behavior index.

A trend that also became visible from the chi-square tests was that the green group did, in fact, consume more eco-labeled products. It might seem unnecessary to state this observation, since the groups were formed on the basis on how much ELP they consumed. On the other hand, the sample was only divided into groups of people that used *more* ELP and the ones that used *less* or none. What the test had established was that the differences in how much ELP the two groups consumed

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[47] The choice of place for shopping could also be viewed as an indirect indication of price sensitivity and brand loyalty – chain shops offer more sales that smaller independent shops, but the small specialized shops often offer brands that cannot be found elsewhere.

were not minor, in fact they were significantly different – the green group consumed *more types* of ELPs and a *wider variety* of products *within each type* of the given ELP categories (food products, detergents, cosmetics and hygiene products) than people from the conventional group. This could also be an indicator that the overall increase in the consumption of ELPs in Lithuania is not caused by a majority of people consuming little amounts of ELPs, but by an increasingly larger group of people consuming a wide variety of such products regularly.

8.1.3. Potentially pro-social and pro-environmental behaviors
Potentially altruistic behaviors

Altruistic attitudes, values and behaviors are often associated with green consumption and pro-environmental behaviors. The results from my study support this – people from the green group donated to charitable causes significantly more often than people from the conventional group. They also gave away the things they no longer found necessary (instead of throwing them away) more often than people from the conventional group. However, there are reasons why one should not jump to conclusions about the relationship between altruistic behaviors, altruistic attitudes and green consumption.

There are several theories that try to explain the presence of several seemingly non-selfish behaviors or attitudes in a person – this could be due to, for example, a 'positive spillover' effect (Thøgersen 1999), or due to a person trying to achieve cognitive consonance (Festinger 1957).

Both of the theories have similar application in this situation: that is, for example, if a person finds him/herself performing a certain altruistic behavior, they would have cause to think that this is because they hold general altruistic (or biospheric) values. Then, if a person believes that s/he has general altruistic or biospheric values, this means that those values ought to also guide their behavior in other areas of life – thus causing a 'positive spillover' of values/behaviors. Or this sequence could be done in order to reduce cognitive dissonance and increase cognitive consonance.

However, the problem with this kind of thinking is that, first of all, cognitive dissonance can be reduced by eliminating one of the two elements – behavior or value; often, removing the value requires less effort than changing the behavior. Secondly, Thøgersen (1999) has found that there were virtually no positive spillover effects among the different pro-environmental behaviors he had analyzed. In fact, he found out the existence of some PEBs (like sorting waste) could block the uptake of other general pro-environmental behaviors; reasons for this phenomenon were unclear.

As a result of this, even though the green group performed more potentially altruistic behaviors, it is impossible to define whether green consumption and altruistic behaviors stem from the same values/attitudes, whether one of them is a 'positive spillover' form the other or a way to reduce

cognitive dissonance, or, whether these two kinds of behaviors stem from completely separate values and rationales. That is to say, the data shows a connection between green consumption and potentially altruistic behaviors, however, if we cannot prove that it was altruistic concerns that were driving the (potentially) altruistic behaviors, we cannot make a connection between green consumption and altruistic attitudes. Furthermore, the data provided no reason to believe that there is a connection between altruistic and pro-environmental behaviors.

What I was trying to show with this argument is that we cannot assume a relationship between various actions that might seem non-selfish at first glimpse, just because they appear in a person simultaneously.

The sorting of organic waste

Sorting waste and sorting organic waste were also significantly different between the groups – there were a larger proportion of people within the green group that performed these actions. I would like to first of all discuss the sorting of organic waste.

Even though the difference in how actively the two groups sorted organic waste was significant, there is reason to not trust this finding due to the current waste sorting infrastructure in Lithuania. The issue is that the state does not provide facilities for sorting organic waste – it is only people that own private houses and some land that have the ability to sort and handle organic waste. Thus the sorting of such waste is primarily connected not to types of consumption, but with types of accommodation, and, automatically, income levels, since private houses are in most cases more expensive than apartments (in Lithuania currently).

What is interesting is that the sorting of organic waste manages to create a connection between green consumption, type of accommodation, income levels, and, of course, types of waste being sorted. A similar trend has been found by Gilg et al. (2005: 491) – they managed to distinguish a relationship between type of consumption and: how actively different types of waste were sorted; types of accommodation; income levels, etc. They have shown that green consumers[48], even though they had smaller household sizes, tended to own their homes, live in semi-detached houses, and sort waste, especially organic, more actively than other groups.

The reason why we cannot claim for certain that there is a connection between green consumption and sorting of organic waste is that not all respondents had equal access to such sorting facilities. As a result, we cannot know how the conventional consumers would behave if they had the opportunity to sort organic waste on a daily basis.

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[48] In Gilg et al, they are called committed or mainstream environmentalists, but their environmentalism is largely defined by purchase and non-purchase behaviors.

The relationship might instead be between sorting organic waste and type of accommodation or levels of income, without having anything to do with types of consumption. This assumption is confirmed by some informal conversations I had with a number of the respondents (from both groups) – many of them owned summer houses in large garden communities, where they also had land around the house which they used for various types of recreation. Absolutely everyone (irrespective of group) that owned such summer houses composted their organic waste while they were there, some even would bring sorted organic waste that they would have gathered throughout the week at their apartments in the city. However, none of them did it for environmental reasons; instead, they explained that this was the only reasonable and practical thing to do with organic waste.[49]

Sorting other types of waste

Another pro-environmental behavior that was significantly different between the groups was the overall sorting of waste. However, the strength of association between group membership and waste sorting was rather weak.

There was also other data collected concerning the sorting of waste, and it provides controversial suggestions about the connection between green consumption and waste sorting, as well as the potential common value basis for these two behaviors.

On the one hand, the information that the respondents provided concerning facilitators and hindrances to pro-environmental behaviors has shown that people put a lot of importance in a good waste sorting infrastructure. For example, there were people from both groups that admitted to only have started sorting their waste once the bins for such waste were placed close to their place of residence. At the same time, a number of people admitted having stopped sorting their waste once the bins that were close to their place of residence got moved somewhere further.

Interpreting these findings with regards to Stern's *Attitude-Behavior-Context* model (2000) we could conclude that attitudes played a minor role in influencing the uptake or quitting of waste sorting behaviors. Their behavior might have been influenced more by a positive context than biospheric concerns. On the other hand, the logistic regression has shown that, at least for the green group, parts of their behavior were guided by biospheric concerns.

As a result of the findings discussed so far, we can associate green consumption with waste sorting behavior, but again, as in the case of potentially altruistic behaviors, we cannot be certain if

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[49] The waste would be composted and later used as fertilizer.

both of these behaviors stem from the same value basis (for example biospheric concerns), or if they are guided by separate rationales.

Saving water and/or electricity

Regarding behavior related to water and electricity use, there were some problems with the data that made it difficult to interpret the findings. The information was gathered from two questions – first respondents were asked if they performed this behavior, and second, they were asked the reasons for performing it. This was done because I had anticipated that many of the respondents would be saving water and/or electricity, yet I was uncertain how many did this due to biospheric concerns. As expected, from all of the (potentially) pro-environmental behaviors that were tested, this behavior was performed most often – virtually every respondent did this. However, only a small fraction of the respondents (mainly green consumers) were saving their water/electricity due to at least partial environmental concerns.

The fact that this was such a common behavior in Lithuania caused doubt on whether the people who claimed to do it for environmental reasons had a genuine environmental concern, or if it was only proclaimed. From the data it was impossible to find out if the biospheric concerns *preceded* the behavior, or *followed* it – if people changed their behavior or their values to achieve cognitive consonance. This consideration does not change the fact that many green consumers claimed to save water and electricity for environmental reasons, but it helps to add nuance and understanding to the finding.

To sum up the statistical findings presented so far, several tendencies can be pointed out. First of all, when looking at relationships between group membership and a number of variables, the strongest levels of association were found for variables that defined habitual shopping behaviors, which show neither egoistic nor biospheric attitudes. The weakest levels of association, on the other hand, were for variables that were expected to define the value orientation differences between the groups (like potentially altruistic or pro-environmental behaviors). Secondly, green consumption can be associated with pro-environmental and potentially altruistic behaviors, but the data provided no foundation to assume that these behaviors could stem from the same value basis, or that any of these behaviors could have influenced the presence of each other. Finally, the groups did not differ significantly in their socio-economic characteristics apart from gender.

8.1.4. Perceptions about eco-labeled products

As expected, perceptions about eco-labeled products varied between the groups – the green group presented more positive evaluations of it, while the conventional group had more skeptical opinions.

The way in which the groups differed corresponds to the findings of Gleim et al. (2013): the green consumers were generally more positive towards such products – they believed it was a good value and quality, that it was beneficial for them, they trusted the producers and shops to be honest more than the conventional consumers, they had more trust in the certification of such products and they appeared to be less price sensitive. In addition, most green consumer had higher levels of expertise about such products (assumed from their interest in ingredients of ELP).

The only finding that was rather surprising about the green consumers was that even though they trusted the certification of eco-labeled products more than the people from the conventional group, they still displayed rather high levels of distrust towards it, for being people that regularly buy ELP. This however, was most likely caused by the history that Lithuania had within the Soviet Union and the current levels of corruption in many of the state institutions. What makes it easier for the green consumers to still buy ELP with their existing levels of distrust in the certification of such products, is that production from abroad was generally considered more trustworthy than the one from Lithuania, and most of the supply in eco-shops was from foreign producers.

The conventional consumers had less positive or sometimes negative evaluations of ELP – they often doubted the quality of such products and would not think the quality matched the price. Furthermore, they did not believe in the proclaimed benefits of such products for human health and did not trust the certification of such products, partly because they saw it to be impossible to produce anything ecological in a planet as polluted as ours. Finally, this group appeared to be more price sensitive.

These differences between the groups are natural and understandable – after all, the groups were formed based on the people's consumption of ELP levels, and there has to be a reason why some people consume more of such products than others. Here, I would like to expand on the possible reasons why the conventional group was using less ELP than the green one.

First of all, the conventional group showed more price sensitivity concerning ELP during interviews, but then again, the income differences were not significantly different between the groups. This could indicate that not consuming ELP was more a matter of preferences, and not of income constraints. On the other hand, as I had discussed in the first section of this chapter, even though the income differences might not be significantly different in a statistical test, they might

still be an important factor in real life if we took into consideration currency values and average price of commodities.

A majority of the conventional sample appeared to be principally against ELP. However, from all of the conventional consumers that were principally against eco-labeled products, only two pointed out that they had the means to buy such products, but still chose to not buy them, because they did not believe in the benefits of them. The negative attitudes that the conventional consumers presented towards eco-labeled products could be viewed as an expression of cognitive consonance – they did not believe that eco-labeled products were good and thus did not buy them. But again, we cannot be sure if the behavior or the value came first in this situation. It is important to know if the negative attitudes towards ELP were the cause or the effect of low levels of green consumption – this would help to distinguish if conventional consumers used little or no ELPs as a result of choice, or constraint.

In the end, the case of green consumers is clear – they have positive opinions about eco-labeled products and they consume them regularly. However, it is unclear why conventional consumers have negative opinions about such products and why they do not consume them on a regular basis.

Materialism

When the respondents were answering the questions on what they thought about general consumption patterns in Lithuania, their own levels of consumption and the way Lithuanians choose to use their time and money, they reinforced a lot of the main opinions within consumption literature.

To start with, since the respondents were first asked what they thought about general consumption patterns in Lithuania, they immediately jumped to seeing consumption as consumerism and materialism (in most cases negatively). However, when they were talking about their own levels of consumption, they did not talk of it as consumerism or materialism; in most cases, it was actually depicted in generally positive tones.

This partly matches the findings of Ger & Belk (1996) from their multicultural study on the perceptions of materialism – people condemn materialism in others, but they never see their own consumption levels as materialism (no matter the actual levels of consumption). In fact, people always found what they considered to be reasonable explanations of their consumption practices.

The same was observed in the sample from Lithuania – people generally condemned others' consumption and found explanations for their own. What was interesting in this case was that people were very passionate when talking about the consumption patterns in society in general; they appeared genuinely upset over the effect that consumption and consumerism had on people – it was

seen as enslaving them and making them unhappy. However, the main reason why consumerism was criticized so much was due to the negative effects it was seen to have on the *consumers* themselves – not a single respondent mentioned the negative effects consumerism has on the environment or other people (like sweatshop workers).

Zavestoski (2001: 184-185) has suggested an explanation regarding how people might end up not connecting their own consumption patterns to broader problems it may be causing, even if those people had general environmental concerns. He claimed that that holding both self-transcendence (altruistic) and self-enhancement (egoistic) values might result in people having environmental concerns that stem from an egoistic basis. This might result in the inability for people to connect their own consumption habits with the well-being of other people or the environment. Even though the green sample in this research has been show to hold egoistic and biospheric concerns (instead of egoistic and altruistic), the observation of Zavestoski might still be helpful in understanding how the respondents could claim to have environmental concerns, yet not connect their consumption practices to environmental problems.

On the other hand, when the respondents were talking about their own consumption patterns, they used positive expressions, often making an indication of needs or other 'rational' reasons for the different purchases made. Interestingly though, the respondents did not manage to make a distinction between needs and satisfiers when talking about their own consumption – cf. Max-Neef (1991) - and often presented the consumption goods as needs – goals in themselves. However, when talking about consumption practices of others, many of the respondents managed to make a distinction not only between needs and satisfiers, but also distinguish the potential quality of different satisfiers. They would make comments, indicating that it was not consumption goods that brought happiness, harmony or relaxation to people – consumers might be seeking these goals, but they seek them with the wrong means, too often would these consumers assume that the means (consumption goods) are the goals in themselves.

One of the reasons why I inquired into the respondents opinions about consumption patterns in Lithuania was because I wanted to create conditions for people to talk about voluntary simplicity (voluntarily reduced consumption levels). I expected that some respondents might take this opportunity to suggest voluntary simplicity as a solution to the problems that current levels of consumerism cause, or that perhaps I would be able to find out whether there were any people within the sample that practiced this approach to consumption. However, there was no one that proposed voluntary simplicity as a potential solution to the issues caused by consumerism, and only a few respondents listed out some singular moments in their life where they had made consumption

decisions based on the ideas behind the voluntary simplicity philosophy. This shows that the ideas of voluntary simplicity are not yet very deeply rooted in the minds of the respondents.

Preferences when spending time and money

When talking about the way people chose to spend their time and money, several different trends were observed by the respondents. On the one hand, most of the respondents generally agreed that people nowadays spend too much time working, leaving too little time for leisure and spend their money on material-intensive items instead of labor intensive ones, but many of the respondents also tried to provide explanations why, in their opinion, it might be like that.

Many of the respondents assumed that the reason why people choose to spend so much time at work was partly because of working culture, but also because people wanted to be able to buy consumption goods. It was speculated by some that this exceptional eagerness to consume (called materialism by some) was caused by the decades of deprivation that people had experienced during the soviet times, and a wish to finally catch up with the more affluent 'West' in regards of quality of life (which for many is directly proportionate to consumption levels). Ger & Belk (1996) have also presented an opinion that the relatively high levels of observed materialism in the post-sovietic countries might be due to the historical experiences from when the countries were occupied by the Soviet Union.

Most of the opinions on why people so often chose to spend their money on material- and not labor-intensive goods could be summarized into the themes of 'conspicuous consumption' (Veblen 1899) and 'consumption as positioning' (Hirsch 1977/1995) – the respondents assumed that material goods were chosen because of their symbolic powers: such goods were usually visual and conveyed a message of well-being and identity. They were seen as, in most cases, used in order to 'position' oneself in society and the consumption was then viewed as 'conspicuous'.

If this observation is true, it implies that consumption levels will only increase in Lithuania in the future. I came to this conclusion because, first of all, social class mobility is permitted and relatively easy in Lithuania, furthermore, upwards social mobility is desired by a major part of the people there. This means that the people who wish to change their social group or class, will attempt to consume more positional goods, and in order to do that, they would have to spend even more time at work. Thus, in the end, people would continue having increasingly less free time and would continue increasing their levels of consumption.

There was, however, also a contradiction in the way people presented what they saw as constituting the perceived 'upper' class. Even though many of the respondent assumed that being able to buy larger amounts of positional, material-intensive goods would help people to move to

higher social circles, the actual 'upper' class was often characterized by consuming less materialistic, and more labor-intensive goods, like improving their skills, learning new things or appreciating arts.

Associations to green consumption

Since I had assumed from the outset of this thesis that there would be a strong connection between green consumption and pro-environmental behaviors or concerns, I had several places in the survey and interviews where I would try to uncover this connection, preferably without letting the respondents know what kind of answer I was looking for with the formulation of the question. This potential connection was inquired about in several places of the data collection instruments because I wanted to see if the proclaimed environmental concerns would remain stable.

One of the questions that were dedicated for this purpose was inquiring into what kind of associations people had to green consumption (or consumption of eco-labeled products). What the answers had shown was that for most of the respondents, green consumption mainly associated with egoistic behaviors and values, but sometimes also potentially altruistic or biospheric ones.

The answers that were categorized as egoistic were associating green consumption with benefits either to the consumer's physical health, or emotional well-being. There were also a number of answers that associated it with the health and well-being of the family, however, I consider them to be only potentially altruistic associations, because in such situations it is almost impossible to draw the line between where altruistic concerns end and egoistic ones begin.

Finally, there were some people associating green consumption with a 'nice and clean environment'. But this again was only a potentially biospheric concern – as Zavestoski (2001: 178) put it: "<...> very few individuals have highly developed values specifically related to the quality of the environment", but many have general attitudes valuing a clean and beautiful environment. However, these associations have an egoistic quality to them – it has to be a clean and beautiful environment *for the person to be in or to observe*. Thus in the end, all of the associations to green consumption that were mentioned, had a direct or indirect egoistic basis to them.

An interesting observation is that it was only the conventional consumers that managed to generalize the ideas of what associated to green consumption for them into a broader category of egoistic behaviors and concerns. Respondents from the green group were also listing mainly egoistic associations, but they were never able or willing to abstract them into the general category of egoistic concerns.

What I have been trying to show with the discussion in this last section is that even though connections were found between green consumption and pro-environmental behaviors, it was impossible to define if these behaviors stem from the same motivations and concerns or not. The data gathered about what kind of associations people had to green consumption indicated egoistic concerns and associations. Thus if we assume (or know for certain) that pro-environmental behaviors stem from biospheric concerns, based on the data discussed so far we could claim that there is a different value basis guiding the behaviors of green consumption and pro-environmental activities.

8.2. Predictors of green consumption

While testing for predictors of green consumption, an initial set of nine variables was tested, these variables were: (1) age, (2) gender, (3) education, (4) income, (5) having children of the respondent still living at home, (6) environmental motivation index (for a predefined set of actions), (7) health motivation index, (8) mixed environmental and health motivation index, and, (9) pro-environmental behavior index.

The purpose of running the regression was to find out how green consumption relates to altruistic and biospheric concerns, including control variables into the analysis. Can any of these variables (or a combination of them) predict, with a high level of certainty, that a person would be a green consumer? What needs to be discussed here is: (1) how consistent and trustworthy the data is; (2) what can we say from the fact that significant variables, correct predictions and confidence intervals for the odds ratio were fluctuating so much between the models; and, (3) how do the findings of the regression analysis relate to other findings of this research.

8.2.1. The consistency and trustworthiness of the data

What the regression analysis has shown is that the only predictor that has remained significant in all of the models is the index of mixed environmental and health concerns. This would indicate that green consumption in Lithuania is guided by both egoistic and biospheric concerns. However, the second most common significant predictor in the models tested was the health motivation index. In addition, the model that was chosen as the most optimal and parsimonious for the regression analysis included both of these indexes as predictors. Finally, one has to remember that the mixed motivation index includes both environmental *and health* concerns.

This indicates that even though it is the mixed motivation index that is the best and most consistent singular predictor to green consumption, the health concerns within that mixed motivation might be stronger than the environmental ones. However, what the regression also shows is that motivations for human behavior are complex, and no singular factors can explain what drives behavior well enough – this leads to the conclusion that *plural rationalities* (or plural concerns/motivations) are the best at explaining and predicting green consumption.

It could even be speculated that even though green consumption is driven by a mix of concerns, these concerns might be expressed with different strengths for the consumption of different types of eco-labeled products. For example the consumption of eco-labeled food might be driven more by egoistic than biospheric concerns, since for many people food is seen as having the most direct effect on ones well-being and health (which are egoistic concerns), while the consumption of eco-labeled detergents might be driven more by biospheric concerns than egoistic ones.

One factor that brings doubt to the trustworthiness of the mixed motivation index is that it consisted of both multiple-choice and open-ended questions. The answers where environmental concerns were expressed came almost entirely from the multiple-choice questions, while only one of the open-ended ones received such answers. However, this open-ended question inquired into the reasons for buying eco-labeled products – it had an environmental cue to it.

On the one hand, the trustworthiness of this index (and the biospheric concerns in the green consumers) would be increased if all of the questions comprising the motivational index were open-ended. On the other hand, the questions that did not receive a single answer expressing environmental considerations were inquiring into areas like means of transportation, holiday destinations and meals. Research carried out by Jensen (2008) and McDonald et al. (2006) has shown that people who considered themselves to be environmentally friendly (or perform some pro-environmental behaviors) often did not apply their environmental values to decisions concerning choice of transportation or holiday destinations. Thus the lack of environmental concerns in the discussed areas is not uncommon (even among people who perform some PEBs otherwise).

In the end, however, in spite of the effort put into receiving as genuine answers as possible, we still cannot claim with certainty that the biospheric concerns presented in the multiple choice question are genuine – we cannot be certain if they would translate into pro-environmental behaviors, or not, because the PEB index was not a significant predictor in any of the (trustworthy) models. However, investigating the PEB index separately provided new insights into what the relationship between such behaviors and green consumption could be. These insights are discussed in the following section.

It also ought to be mentioned that the groups were based on their consumption practices, and not on whether they were genuine environmentalists, however, since I was assuming at the outset of this paper that there might be a connection between green consumption, environmental concerns and pro-environmental behaviors, I had to check if such a connection actually existed.

There are two conclusions that could be made from the observations in this section: first of all, it is not singular rationalities or concerns that guide the behavior of green consumers in Lithuania, it is not either health or environmental concerns; behaviors are guided by mixed – plural – rationalities, even if the components of those rationalities might manifest with different strengths within a person. Secondly, we can assume that if a person is concerned with health and the environment, s/he is likely to also be buying eco-labeled products. However, the fact that a person is buying such products can only indicate partial environmental concerns but not that the person would perform pro-environmental behaviors. Further argumentation for the second conclusion is presented in the following section.

8.2.2. *The fluctuation of results in different models*

There were four main areas where the results fluctuated between the different statistical models that were tested: (1) which predictors were significant; (2) how many cases were included; (3) how many cases were predicted a correct membership; and (4) the confidence intervals (CI) for the odds ratio. The fluctuation in the last two areas could be connected.

First of all, the significant predictors for each model fluctuated very little – mixed motivation was always a significant predictor, health motivation was significant in 4 cases out of 5 and gender was significant in 3 cases out of 5 (which also confirm the findings from the chi-square test concerning this variable). The stability of these predictors over different models indicates the reliability of those predictors and perhaps even that having additional predictors in a model might be unnecessarily superfluous.

The models differed in how many cases from the sample they included – the most complicated models would exclude up to almost a half of the cases from each group, and this could mainly be attributed to the socio-economic variables. Cases were excluded if the variables that were to be tested lacked observations, and that was most often the case with the socio-economic ones, especially income. As a result, we cannot be certain that socio-economic variables are insignificant in relation to green consumption as the regression shows, but rather that their significance (or lack of it) could not be established due to lack of information concerning some of them. The same conclusion can also be applied to the lack of significant socio-economic differences between the groups in the chi-square test discussed in the previous section.

A more careful analysis of the fluctuation in correct predictions and the CI for the odds ratio has revealed two things: the green group is not homogenous when it comes to PEBs, and the conventional group can mainly be defined by a *lack* of certain characteristics that are common for the green group.

Being interested in the relationship between green consumption and pro-environmental behaviors, I decided to run a regression, where the PEB index would be the only predictor in the model. Both the model and the predictor were significant (even though this predictor turns insignificant once put in a model with other predictors), but it only managed to place 50% of the green sample correctly, while the percentage of correct predictions for the conventional group was 80%.

This sheds new light on the overall findings from the logistic regression – we know that the green group can be characterized well by two separate motivational indexes (one of only health and one of mixed health and environmental concerns); in addition, we know that only a part of the green sample performs PEBs actively. There is a connection that can be made between these two findings, even if it just an intuitive one – there is a likelihood that the part of the green consumers which is better defined by mixed concerns is the same part that performs PEBs more actively. At the same time, the part of green consumers that can be better defined by purely health concerns might be the part that performs PEBs less actively (or not at all).[50]

This kind of divide within the green group might also imply an attitude-behavior consistency – if it is true that the same half of the green group can be characterized both by mixed concerns and performing PEBs, then there is reason to believe that both these behaviors may share (partial) common value basis. At the same time, if it is true that the same half of the green group that does not perform PEBs actively is more motivated by health concerns when they buy their eco-labeled products, we could assume that they would first of all not feel any cognitive dissonance for not performing pro-environmental behaviors, and, secondly, that the PEBs they would perform might not necessarily share the same value basis as their green consumption.

This lack of homogeneity within the green group might also explain why in many of the models, the CI for the odds ratio of the PEB index was crossing the value of 1 – making it impossible to establish the direction of the relationship between predictor and outcome. The conventional group, on the other hand, could be characterized as being rather homogenous in the sense of pro-environmental behaviors – most people from that group performed very little or none PEBs.

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[50] This is an assumption, it has not been statistically tested.

Thus what we can conclude about the relationship between green consumption, biospheric concerns and PEBs is that having environmental (and health) concerns can increase the odds that the person would also buy eco-labeled products, but the fact that someone is consuming ELP regularly, does not necessarily imply that they would also perform pro-environmental behaviors. Furthermore, what became clear is that green consumers in Lithuania are not a homogenous group, at least when it comes to how actively they perform pro-environmental behaviors.

8.2.3. How the findings of research questions one and two relate

The findings of research questions one and two support each other in relation to socio-economic characteristics – both tests find gender to be the only significantly different variable between the groups. However, the regression analysis provided reason to assume that the lack of significant differences between the groups might be due to missing observations.

When it came to attitudes and concerns that were guiding the respondents' behavior, egoistic concerns came up more consistently in relation to green consumption (both from the qualitative and qualitative data). However, biospheric concerns were also present in influencing behavior of the green consumers. Furthermore, based on the observation that the green group was not a homogenous one, we could make an assumption that to a certain degree, the biospheric concerns of green consumers also translated into pro-environmental behaviors.

8.3. Facilitators and hindrances to green consumption and pro-environmental behaviors

In this section, I will discuss three main trends concerning the hindrances and facilitators to green consumption and PEBs: (1) the hindrances that were expressed for both behaviors were mainly internalist in their nature and depicted negatively, while the facilitators listed were mainly externalist,[51] furthermore, there were implications to group membership when talking about these issues; (2) the overall lists of hindrances usually matched the suggested facilitators, opinions were generally similar for both group apart from the case of hindrances to green consumption; (3) the most common facilitators pointed out were concerning the infrastructure and education, while pro-environmental behaviors were connected almost exclusively to waste management.

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[51] Based on how Jackson (2005a) classifies the theories (and factors) about what motivates human behavior into externalist and internalist. For an in-depth explanation see the theory chapter.

8.3.1. Internal hindrances and external facilitators

After having collected and categorized the data on hindrances and facilitators to green consumption and PEBs, it became apparent that the respondents were mainly listing hindrances to an action that were psychological and thus internal to an individual, but when it came to facilitators, it was external actors that received the longest lists concerning areas of potential facilitation.

Having a closer look at the information, it became apparent, that when talking about these issues, in both the cases of facilitators and of hindrances, the respondents were talking about 'others'. In the case of hindrances to an action, the answers were given as if describing hypothetical individuals – 'others' – that expressed a lack of care and interest in their own well-being or the environment. In the case of facilitators to an action, the 'others' that were being talked about changed, now the 'others' that ought to provide facilitation for an increase in the behaviors were external, abstract actors like the state or eco-shops.

It was as if the respondents were distancing themselves from this issue – the lack of green consumption and pro-environmental behaviors was a problem *of* 'others' (individuals) that ought to be solved *by* 'others' (the state, producers or eco-shops).

The respondents themselves, however, only very rarely entered this equation as active participants, either in the hindrance part, or in the facilitation one. It is uncertain if this was because they did not see themselves as a part of the problem or solution, because they assumed they already did enough for their well-being and the environment, or because they simply did not care about such issues.

There was one tendency in the findings that at first glance would not fit this interpretation – namely that when the conventional consumers were discussing hindrances to green consumption, they did not present the hindrances as only applicable to 'others'; the hindrances they pointed out could also be applied to themselves. Also, most of the internal hindrances they listed out were not negative, but presented rather as a calculated choice. However, this observation does not actually contradict the opinion presented above. In this instance the hindrances are not presented as negative, they are not seen as problems that need solving, actually, they are not seen as problems at all. When an issue is not seen as problematic by the person, there is no need to distance oneself from it.

To sum up, it can be claimed that a majority of the respondents saw the lack of green consumption and PEBs as a problematic situation, this problem was seen as caused by 'others' (individuals) and ought to be solved by 'others' (state and eco-shops); the respondents were not viewing themselves a part of the problem, only a few would provide suggestions where they would have to take an active role in finding a solution. Naturally, when the respondents do not see themselves as a part of a problem, they do not seek solutions where they would have to take an

active part either. This view, however, does not necessarily imply that the respondents are actually very active green consumers or perform a lot of pro-environmental behaviors.

8.3.2. Group membership, opinions and compatibility of the facilitators-hindrances lists

In general, the groups provided very similar answers when it came to hindrances and facilitators to PEBs. The opinions between groups varied somewhat concerning the hindrances and facilitators to green consumption, but this is natural, since the groups were formed on the basis of how much ELP they consumed and high levels of ELP consumption must imply positive attitudes towards such products. Low (or non-existent) levels of ELP consumption then implies not as positive (or negative) attitudes towards such products. However, as discussed earlier in this chapter, one cannot say for certain whether the negative attitudes preceded or followed the low levels of ELP consumption.

The image that appeared from the overall data gathered through the interviews was that people from the conventional group seemed to wish to explain and excuse their choice to not use eco-labeled products. They would first of all present more negatives views about ELP – distrust in quality, doubt in value and certification – then provide hindrances to green consumption that were not depicted negatively, but rather as a calculated choice, combined with a lack of convenience (the criticism towards eco-shops); presenting the situation like this is providing a 'rational' (or cognitively balanced) explanation why someone would not be using products that are claimed to be good for ones well-being.

A potential reason why the conventional consumers would want to provide this explanation or excuse for their choice to not buy ELPs is the way the green group talked about green consumption. Green consumers tended to present consumption of ELPs as the only 'right' way of consumption. For example eco-labeled food was often used as a synonym to 'healthy' food, as if all the other food was unhealthy. Furthermore, when discussing facilitators and hindrances to green consumption, these respondents were taking a rather judgmental position, depicting the people who do not consume ELP regularly in a negative light, thus automatically presenting themselves as 'better'.

When it comes to the compatibility of the hindrances and facilitators that the respondents provided, from a general point of view one could say that nearly each hindrance to a behavior that was pointed out could have been matched with a facilitator suggestion. However, the overall lists of hindrances and facilitators were derived from all of the answers of all the respondents. If we look more in detail into how the actual suggestions within the categories of facilitators and hindrances are distributed, we would notice that (as mentioned earlier in this section) there were more

hindrances that could be categorized as internal to the individual and more facilitators that are external.

The issue is that these opinions are contradictory. It is inconsistent to think that hindrances to a given behavior lie within the individual (his or her worldviews, beliefs or choices), yet assume that external actors and external facilitation could make these individuals change their behavior. Form all of the external facilitators that the respondents have listed out, only education has the potential capacity to change internal beliefs and convictions. However, the success of this strategy in changing human behavior can be debated (Ophuls 1977, Gardner & Stern 1996).

8.3.3. The most common facilitators

The facilitators for pro-environmental behaviors and green consumption that were listed most often were either the improvement of infrastructure, or better education.

Improved infrastructure was most often pointed out as a facilitator to PEBs (especially waste sorting and public transport); these suggestions correspond to the ones made by Jackson (2005a), where he pointed out that the best facilitation for pro-environmental behaviors is creating a convenient context (including infrastructure, access, etc.).

Educating people on the topic of environmental problems and the benefits of green consumption was another facilitating strategy that was mentioned very often by the respondents. According to Ophuls (1977) this has been one of the most popular approaches to changing human behavior throughout history, but it has also been one of the less efficient ones in achieving actual behavioral change.

However, many of the respondents claimed that in order for education to be effective in changing people's behaviors it has to work on several levels. It was often pointed out that it was not the formal education that would reach the best results in changing human behavior, but informal interpersonal learning. Many of these opinions reflected Bandura's *Social Learning Theory* (1973) – people thought that the best way for a person to learn something or take up a new kind of behavior was by observing the behaviors of other people in their social surroundings. Unfortunately this kind of learning was observed to work equally well when both 'good' and 'bad' behaviors were observed.

An interesting trend to observe was that pro-environmental behaviors mainly associated with waste management to the respondents; when the respondents were asked this question, it was formulated in a neutral way – what in their opinion could facilitate (or hinder) pro-environmental behaviors. While answering the question, most of the respondents preferred to talk about some specific behaviors and not PEBs in general, and in most of the cases those specific behaviors were

connected to waste management. Furthermore, even when answering in the surveys about which other, additional, behavior they performed in order to protect the environment, most of the respondents pointed out that they either did not litter in public, or disciplined others that did littler in public – again, behaviors that are connected to waste.

As a result, one can claim that for most of the respondents environmental problems were first of all connected to waste management problems, and thus an improvement in the way waste was managed and sorted would help solve them. What this, in turn, indicates, is that environmental concerns are fairly new to the Lithuanian respondents, and that commitment towards pro-environmental behaviors is not very strong yet, while the understanding of environmental problems and their solutions is somewhat superficial.

Another behavior that was used as an example when talking about PEBs was, surprisingly, choice of means of transportation. People were aware of the environmental problems that the increasing numbers of cars on the streets were causing and assumed that a decrease in car users could be reached if the public transport system was improved. The reason why this answer was unexpected is that, in the surveys, not a single respondent pointed out environmental concerns when choosing means of transportation (even though a part of them were using public transport or bicycles regularly) but in the interviews, it appeared as the second most common PEB example.

This might be due to the fact that environmental concerns did not, in fact, motivate the choice of means of transportation for any of the respondents. This would still not stop them from assuming that choice of transportation is important with regards to the environmental situation. However, the difference in answers could also be attributed to the fact that in the surveys, the question about transportation was presented in a neutral context, without any mentions of the environment, while in the interviews, it was clear for all of the respondents that the topic of interest is eco-labeled products and environmental problems. This knowledge might have triggered associations and assumptions about what the interviewer might want to hear, or what is the 'right' thing to say.

9. Conclusions

At the beginning of this paper it was stated that the main goal of this thesis was to find out how an increase in green consumption and pro-environmental behaviors could be achieved. The research was dedicated to showing that in order to achieve behavioral change, we would have to first examine the current situation (what can be said about the green and conventional consumers, what kind of challenges they face) and then choose a strategy for achieving behavioral change. The analysis of the data from research questions one and two helped us to gain insight into the differences between green and conventional consumers, while analyzing data for research questions two and three helped to distinguish what could be the best strategies for achieving behavioral change.

Characterizing the green and conventional consumers

To start with, there were more women green consumers than men. These women could be characterized by having either both health (egoistic) and environmental (biospheric) concerns, or just health concerns. However, only a part of these women were performing pro-environmental behaviors regularly. It was speculated in the discussion that there might be a common (partial) value basis for both green consumption and pro-environmental behaviors, if it were true that the women whose green consumption was motivated by mixed health and environmental concerns were the same women who performed pro-environmental behaviors regularly.

The comparison of qualitative and quantitative data has shown that even though mixed concerns were a better and more stable predictor in the regression analysis, it was the egoistic (health) concerns that came up more consistently in association to green consumption. As a result, we can claim that in the decision making process of green consumers, plural (health and environment) rationalities are influential; however, the egoistic concerns are dominating over the biospheric ones.

Interest in the content of the products used is another characteristic of green consumers; this feature shows a level of dedication to such behavior as well as expertise, however, it was impossible to distinguish from the data collected if this interest was primarily driven by health or environmental concerns.

Furthermore, green consumers were performing more behaviors that could be potentially altruistic in comparison to conventional consumers. But again, due to the fact that it was impossible

to be certain about the motivation for these potentially altruistic actions, we can only make a connection between green consumption and altruistic behaviors, but not altruistic concerns.

Finally, green consumers differed from conventional consumers in their habitual shopping behaviors and opinions about eco-labeled products. The data collected has shown that green consumers were buying significantly more eco-labeled products concerning regularity, amounts and variety. Furthermore, they had more positive opinions about such products and, as a result, provided different ideas to what hinders and could facilitate an increase in green consumption in Lithuania.

The features that defined conventional consumers best were a *lack* of environmental or health concerns when making consumption decisions and lower levels of both pro-environmental and potentially altruistic behaviors. Furthermore, they had more negative evaluations of eco-labeled products, and, naturally, consumed less of them. However, it was impossible to distinguish if the negative attitudes were the cause or effect of low levels of green consumption. As a result, conventional consumers had different suggestions to what were the main hindrances to increased green consumption in Lithuania and how it could be facilitated.

Both groups had very similar ideas to what was hindering Lithuanians from performing more pro-environmental behaviors and how to facilitate an increase in them. In addition, both groups presented very similar opinions on the topics of consumption practices of Lithuanians in general, which were mainly viewed negatively, and their personal consumption practices, which were mainly viewed positively.

Suggested strategies for achieving behavioral change

Based on the data, it can be concluded that there were two main approaches suggested by the respondents as the best ways of achieving behavioral change – either creating external conditions for the desired behavior to appear, or to make sure that people hold the 'correct' internal values and attitudes.

The suggested external condition improvements were mainly better infrastructure and financial benefits. The best ways for creating desired internal values and attitudes was seen to be through education – formal, social advertising and social learning. However, the best results would be reached if both these approaches were combined. This conclusion gives tribute to mixed theories: it has been shown, that in order to understand what motivates human behavior and how to change it, both internal and external factors are important.

Additional remarks

When we wish to achieve behavioral change, we also need to keep in mind that societies are not homogenous, and different segments of them would face different challenges concerning the uptake of green consumption and pro-environmental behaviors. As a result, strategies for achieving behavioral change have to be created based on the challenges that the different segments of society would be facing.

For example, when we try to encourage an increase in green consumption, we need to be conscious about whether it should be presented as simply a different kind of consumption, or as a behavior that has implications for lifestyle and attitudes. Depending on whether we choose to present green consumption as beneficial for the individual, environment or both, it would attract or stop different kinds of people from taking up this behavior.

When we try to encourage an increase in pro-environmental behaviors, the same considerations apply. But also, we need to remember that, one of the general hindrances to pro-environmental behaviors which were pointed out in the theory chapter was that environmental problems did not seem urgent. In addition, the respondents provided answers which indicated how they were distancing themselves from both environmental problems and their solutions. As a result, the first step in achieving behavioral change concerning pro-environmental behaviors should be to help people understand that environmental problems *are* urgent, and that we all are part of the problem, thus we should all take an active role in finding a solution for it.

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11. Appendices

11.1. Appendix 1 – The survey

Hello! My name is *Viktorija Viciunaite* and I am doing research for my master's thesis about the consumption habits of people in Kaunas. I would be grateful if you dedicated some time to fill out this survey. The information you provide here will only be used for scientific research; You have the right to not fill out this survey or skip the questions you do not wish to answer. If you have any questions or comments you can reach my by email v.viciunaite@gmail.com

ID

1. What do you think of food prices in Lithuania the last few months?_____

    _____

    _____

    _____

    _____

2. Where do you buy your food products most often?

	Very often	Often	Sometimes	Rarely	Never
Shops of the big chain stores					
Market					
Specialized food shops (e.g. butchery, dairy shops, eco-shops etc.)					
Small local stores not belonging to the big chains					
Other (please note): _____					

2.1. Where do you buy your cosmetics and/or personal hygiene products most often?

	Very often	Often	Sometimes	Rarely	Never
Shops of the big chain stores					
Market					
Specialized shops					
Small local stores not belonging to the big chains					
Other (please note): _____					

2.2. Where do you buy your detergents most often?

	Very often	Often	Sometimes	Rarely	Never
Shops of the big chain stores					
Market					
Specialized shops					
Small local stores not belonging to the big chains					
Other (please note): _____					

3. For which products or circumstances would you make trips to a specialized shop? _____

_____

_____

_____

_____

_____

4. Which product characteristics are most important to you when choosing **cereals** or **legumes**? Mark as many answers as you choose.

a) product appearance; b) availability; c) brand name; d) quality; e) taste; f) the effect of the production process to the environment; g) products' effect on personal health; h) need for that product; i) price; j) packaging; k) none of the above; l) do not know; m) other (please note) _____

_____

_____

5. Which product characteristics are most important when choosing **shampoo** or **shaving products**? Mark as many answers as you choose.

a) product appearance; b) availability; c) brand name; d) quality; e) the production process did not include animal testing; f) the effect of the production process and product consumption to the environment; g) products' effect on personal health; h) need for that product; i) price; j) packaging; k) none of the above; l) do not know; m) other (please note) _____

_____

_____

6. Which product characteristics are most important when choosing a **dish washing** detergent or a **universal cleaning** detergent? Mark as many answers as you choose.

a) product appearance; b) availability; c) brand name; d) quality; e) the production process did not include animal testing; f) the effect of the production process and product consumption to the environment; g) products' effect on personal health; h) need for that product; i) price; j) packaging; k) none of the above; l) do not know; m) other (please note) _____

_____

_____

7. Which means of transportation do you use most often?

	Very often	Often	Sometimes	Rarely	Never
Public transport					
Personal car					
On foot					
Bicycle					
Other (please note) _____					

Why do you prefer/choose these particular means of transportation? _____

_____

_____

8. Do you materially support any charitable or idealistic organizations and goals?

Yes*   No

*If you answered yes: which organizations/goals do you support? _____

_____

How often do you support the above mentioned organizations/goals? _____

_____

9. Do you participate/work/ volunteer in any charitable or idealistic organization?

Yes*   No

*If you answered yes: which organization do you participate in and what is your activity there?

_____

_____

10. Do you do anything to save electricity or water at home?

Yes*   No

*If you answered yes: what do your saving activities include? _____

_____

_____

_____

11. What is the temperature you try to maintain indoors during winter? _____

12. What are the main factors considered when deciding upon the family's menu? Why? _____

_____

_____

_____

_____

13. What are the main factors considered while planning the family holidays? Why are those factors important to you?_____

_____

_____

_____

_____

14. What do you do with things (e.g. clothing, furniture, appliances), you no longer need?

_____

_____

_____

15. How often do you read ingredients lists of the product you buy?

	Always	Often	Sometimes	Rarely	Never
Food products					
Cosmetics and personal hygiene products					
Detergents					

16. Are you equally interested in all types of products' ingredients lists?

Yes   No*

*If you answered no: which products' ingredients lists are you interested in most and why?

_____

_____

_____

17. What do you pay the most attention to when reading ingredients lists of products*?

(*Skip questions 17 and 18 if you are not interested in ingredients or you think that you already provided such information)

Food products-_____

_____

Cosmetics and hygiene products-_____

_____

Detergents-_____

_____

18. How often do you look up **additional** information about items on the ingredients list? _____

_____

_____

_____

19. Do you do anything to reduce the amount of waste at home?

Yes*   No   Sometimes*

*If you answered yes/sometimes: what is it that you do? _____

_____

_____

20. Do you sort waste?

Yes*   No   Sometimes*

*If you answered yes/sometimes: what types of waste and how often do you sort?

	Always	Often	Sometimes	Rarely	Never
Paper					
Plastic					
Glass					
Metal					
Organic waste					
Other (please note) _____					

21. Have you ever purchased *ecologically labelled products* (ELP)?

Yes   No*

*If you answered no, proceed to questions 23. and 26 - 35

22. When was the last time you purchased an ELP? What was your purchase and why did you decide to get it? _____

_____

_____

_____

23. When was the last time you considered getting an ELP but decided against it? What was the item of consideration and why did you decide against it? _____

_____

_____

_____

24. What kind of ELP do you buy most often from the given categories?

Food products-_____

_____

Cosmetics and hygiene-_____

_____

Detergents-_____

_____

Other (please note)-_____

_____

25. What are the main reasons you choose to buy ELP? _____

_____

_____

25. Which product characteristics are most important for you when choosing ecological:

Food products_____

_____

Cosmetics/hygiene products-_____

_____

Detergents-_____

_____

26. Do you do anything else (not mentioned in this survey) in order to protect the environment?

Yes*   No

*If you answered yes: what do you do to protect the environment? _____

_____

27. Your gender

Female   Male

28. Your age (in years) _____

29. Marital status _____

30. Do you have children?   Yes*   No

*If you answered yes: What are the ages of your children? _____

_____

Do your children live with you?_____

31. In your current accommodation, how many people are you living together?_____

_____

32. Your education:

a) primary;   b) secondary;   c) unfinished secondary;   d) higher;   e) vocational;   f) unfinished higher or vocational;   g) Bachelor's degree;   h) Master's degree;   i) unfinished university _____degree;   j) PhD;   k) other (please note)_____;

l) do not wish to answer.

33. What is the average monthly income for one member of your family (in Lt)?

a) 1-400; b) 401-800; c) 801-1200; d) 1201-1600; e) 1601-2000; f) 2001-2400; g) 2401-2800;

h) 2801-3200; i) 3201-3600; j) more than 3600; k) do not wish to answer.

34. What is your occupation? _____

_____

35. Would you agree to participate in a personal interview on the topics mentioned in this survey?

Yes*   No

*If you answered yes, please provide your name, telephone number and a time when it would be convenient to make contact with you _____

_____

11.2. Appendix 2 – The interview questions

1. When did you start or increased the buying of eco-labeled products? What influenced your decision to start buying ELP?

1.1. What do you think about ELP? (RQ1)

2. From all the food products, detergents, cosmetics and hygiene products that you use, what proportion would be eco-labeled products?

3. In your social surroundings, do you have any people that are pro- or skeptical towards ELP? How do such people influence your opinion about ELP? (RQ3)

4. What would help you personally or people in general to use more ELP? What hinders from such behaviors? What in your opinion would help you personally or people in general to take better care of the environment? Why do you think hinders Lithuanians from taking better care of their natural environment? (RQ3)

5. Has anything changed in your life (opinions, habits, lifestyle etc.) once you started using ELP?

6. Do you notice a positive effect of ELP?

7. What do you think about the certification of ELP? (RQ1)

8. What do you think about green consumers?

9. Do you feel that you know enough about ELP? Do you think that the PEBs you perform make a difference on a larger scale?

10. Does green consumption associate with any ideas or values to you? (RQ1)

11. From several ELPs of the same type, how would you choose which one you will buy?

12. What do you think about consumption practices in contemporary Lithuania? What do you think about your own consumption practices? (RQ1)

13. (If the respondent mentioned voluntarily reduced consumption) Do you feel that your needs are satisfied? Do you feel that you are sacrificing something important?

14. Describe what a good, comfortable life is to you.

15. Presenting the ideas of Røpke (1999),[52] asking the respondent's opinions on them. (RQ1)

16. How does green consumption relate to your personal values?

17. Why do you think some people buy ELP, and others do not (when they have the same opportunities)? Why do some people take care of the environment and others do not? (RQ3)

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[52] Presented in the background chapter.

11.3. Appendix 3 – Summary of the data for research question three

	Facilitating/hindering actors	Categories of facilitators and hindrances	Internal hindrances and facilitators	External hindrances and facilitators	Mixed hindrances and facilitators
Hindrances to green consumption	State	Information		Lack of banning of unhealthy products, lack of promotion of ELP; Lack of subsidies for eco-farming and ELP, lack of compensations for ELP;	
		Financial			
	Shops	Practical		Poor location, product variety, unattractive labels; expensive; cannot guarantee quality;	Uninviting staff;
		Financial			
		Interpersonal			
	Individuals and society	Internal	Consumption choice, lack of care for self, GC viewed as reducing quality of life;		
Facilitators to green consumption	State	Education		Commercials, social advertising, subsidies;	
		Financial			
	Shops	Practical		Better locations, product variety, lower prices, more information about benefits of products;	Nice, inviting, communicative and friendly staff;
		Financial			
		Information			
		Interpersonal			
	Individuals	Practical	Increased consciousness and convictions about ELP;	Wish for more time; health issues;	
		Internal			

Table number. Facilitators and hindrances to green consumption

	Facilitating/hindering actors	Categories of facilitators and hindrances	Internal hindrances and facilitators	External hindrances and facilitators	Mixed hindrances and facilitators
Hindrances to pro-environmental behavior	State	Infrastructure Education Financial		Poor waste disposal facilities, poor public transport system, lack of education, lack of financial incentives;	
	Individuals and society	Characteristics of society Characteristics of individuals Education	Lack of consciousness, no care for the future, no wish to improve;	Lack of good examples to follow;	Habits formed by historical past; general characteristics of the nation; unsuitable social conditions;
Facilitators to pro-environmental behavior	State	Infrastructure Education Financial Ideological		Improved waste disposal and public transport; formal education; financial incentives for performing PEBs; a general 'punishment and incentive' ideology in policies;	
	Individuals and society	Education External Internal	Take active responsibility for the environment and own health;	Teach by example;	Work on community connections and increase sociality;

Table number. Facilitators and hindrances to pro-environmental behaviors.

11.4. Appendix 4 – Guidelines for sampling non-green consumers and places where they were sampled

The non-green consumer sample was recruited with the aim to collect surveys from 34 women and 16 men; for the women, 20 were intended to be economically active and 15 economically inactive. From the economically active women, 18 had to be working and 2 retired but still working. Form the economically inactive women, 10 had to be retired and 5 'other' (studying, receiving welfare benefits, being a stay-at-home parent). For the men, 9 had to be economically active and 7 inactive. From the economically active ones, 8 had to be working and one retired but working. From the economically inactive ones, 5 had to be retired and 2 'other'.

These proportions were based on the 2011 census in Lithuania, only with a slightly adjusted gender balance, since the aim was to reach people that would have shopping responsibilities at home. Surveys for the non-green consumers were delivered in the following places:

- Juozas Gruodis Musical Conservatory in Kaunas;
- The Musical Theatre in Kaunas;
- The municipality-owned funeral service company "Kapinių Priežiūra" in Kaunas;
- Vytautas Magnus University in Kaunas;
- Garden community of "Gervėnupis", a suburb of Kaunas.