

Explaining the green attitude-behavior gap

A research of sustainable consumption in Løs Market
Costumers in Copenhagen



Master's Thesis Techno-Anthropology, Aalborg University

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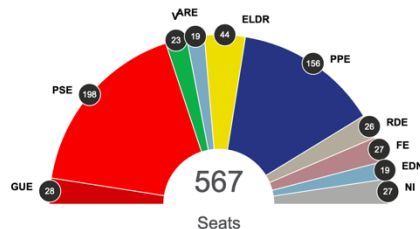
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1. Introduction

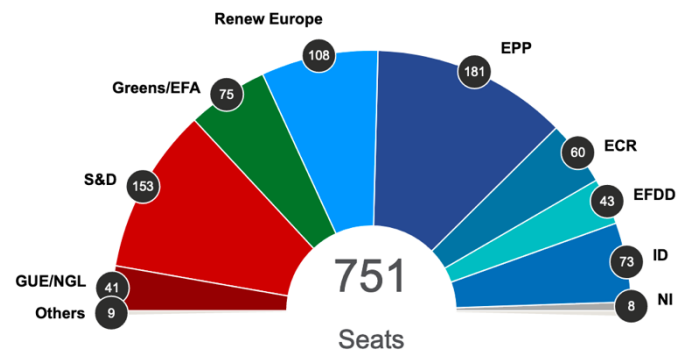
Climate change and environmental issues have been a hot topic for the last few years. With the recent 2019 European Parliament elections, many countries like Germany, France and UK have elected large amounts of MEPs for European Free Alliance (green party) other countries have also contributed MEPs as well. In 2014 there was 52 seats and in 2019 there are 74, this is the greatest increase in green MEPs. Making the 2019 European Parliament the greenest it has ever been (European election result – Comparative tool¹). It is evident that the public is starting to care and become more aware of environmental and climate issues. Climate change and all the indirect consequences on

European Parliament: 1994-1999
Constitutive session



European Parliament: 2019-2024

Provisional results



the environment are on people's minds and clearly some are ready for systemic change. In addition, according to Eurobarometer 95% of Europeans believe the environment is something we must safeguard against (Eurobarometer 2011). Essential products like food and clothing are needed by all humans for life and are to be grown and harvested from the environment. Therefore, for our own sake in order to have reliable food supply we must make sure we take care of the environment. However, it was found that around 40% of the environmental damage is caused by consumer purchasing (Joshi and Rahman 2015). The average consumer has an impact on the environment through their consumption of everyday essential goods. Consumers are seen as both the problem and the solution; their purchase choices will need to change in order to mitigate environmental issues. Many consumers are aware of greener options when buying things, but a very low amount follow through and purchase the green option (Signori and Forno 2016). The majority of consumers (67%) have a positive attitude towards purchases of organic produce but only a small part of them (4%) actually purchase those products (Joshi and Rahman 2015). We see the problem as the people's opinion about sustainable consumption being inconsistent with their behavior. This is the problem of the 'attitude-behavior gap'. That is, they believe they should consume in a more sustainable way, but there is a disconnect between mindset and action.

Throughout our research, we will strive to reveal the mechanisms that accounts for this gap in order to understand what incentivizes sustainable consumptions in order to provide solution to

¹ <https://www.election-results.eu/tools/comparative-tool/>

help narrow this gap. To do so, we investigated a small chain of grocery shops located in Copenhagen called Løs Market. By reaching a part of the population that have made an active choice to reduce their impact on the environment by consuming greener, we intend to reveal the mechanisms producing changes in people's habits towards greener consumption behavior.

The problem formulation for this master's Thesis is: *How can the sustainable consumption attitude-behavior gap be exemplified by studying Løs Market and its customers?*

1.1 Choice of topic

This thesis project was primarily inspired by our previous research on plastic packaging and single-use plastic. As we found out, plastic waste is one of the largest environmental issues we are currently facing. Plastics are very widespread and found in many everyday products. In 2017 9.3 billion tons of plastic was created and only 2.3 billion tons was recycled or reused. Most of the plastic in 2017 was either thrown away or incinerated (National Geographic 2018). Plastic packaging, especially food packaging represents a large amount of plastic waste generated annually. Typically, plastic packaging only lasts around 6 months or less before it's disposed. And plastic packaging is mainly used to protect products from the producers to the retailers. In 2017, single-use plastic packaging represented 39.7% of the plastic demand in Europe among all market sectors. Which is more than each market sector like building and construction (19.8%), automotive (10.1%). Since everyone must consume food products with this packaging, people are forced to also deal with the plastic that comes with it. Solutions like bio-plastics, which are made from plant-based material are no better for the environment than traditional plastics and would mean using farm land for production of plastics. Compostable plastics are also not a great solution because there is no standardization of what a compostable plastic should be. Because of this a recycling center cannot know if the plastic will compost in weeks or years. We concluded in our project last semester that COOP and members of the supply chains should seek to reform their packaging to exclude plastics as much as possible. Many products can be made completely plastic free. Putting a focus on packaging that can be reusable would allow the same piece of packaging to be used more than once. Introduction of glass packaging would mean most packaging can be reused or recycled much more effectively and plastic. We ended our project by stating that this missing piece was understanding and considering the public's perspectives on sustainable consumption, that in the end companies can make a very green product, but if the public does not understand it, then they will not consume it.

We took this as a point of departure for this research. We started with the basis that some alternatives to plastic packaging exist, but they often remain unknown from the general public. The fact that a significant part of the population is unaware or unable to find greener way to consume, we decided to get to know the other part of the population, the one that know about

the environmental issues and try to mitigate their footprint. This had motivated new research around green behavior consumption with the focus being on collaboration with Løs Market. We were inspired by an article entitled, 'Factors Affecting Green Purchase Behavior and Future Research Directions' (Joshi and Rahman 2015) which defined the issue of the green attitude-behavior gap. The concept is that 67% of consumers are aware of green products and their attitude towards green products is positive (ibid.). They want to try to be more environmentally conscious, but most consumers are not when it comes to acting 'green'. This is the gap between average consumers and environmentally responsible consumers. Through green marketing the average consumer in Denmark is someone who knows that sustainable goods are better for the environment in some way but does not necessarily know how or why sustainable goods benefit the environment. The average consumer might understand buying a bio-plastic bag is better than a normal plastic bag. But not understand what the difference is and why using no bag is the far more environmental option. An environmentally responsible consumer is someone who has been educated (either professionally or self) about environmental consequences of what they consume and triggered to act. They consider the impact of what they are consuming before buying. Through Løs Market we want to examine the environmentally responsible consumers and analyze their attitude-behavior gap when it comes to purchasing sustainable products.

1.2 Why Løs Market?

Why did we choose Løs Market over other businesses? The reason comes from different factors. First of all, during the past semester we had the opportunity to collaborate with COOP. We had an interview with a packaging expert, and we agreed on dedicating our research on how single use plastic packaging can be reduced or improved in order to be sustainable. One of our suggestions to COOP for reducing packaging would be to do a bulk system, where consumers supply their own packaging. Unfortunately, this interview was the first and last contact we had with COOP. After several attempts to reach out to them, we never got any answers back.

From there we did our research on packaging alternatives to see what was possible. We found Løs Market as one of the first results on research engine. We decided to get in touch with them and felt that working with a smaller company structure would mean they are more approachable. We felt that COOP because of its large size and hierarchy would not really be as open to hearing our ideas and being open with us as a smaller business like Løs Market. Finally, we saw that since Løs Market are innovators in sustainable consumption they would be open to working with students also after the same goal.

Since our goal for this thesis is to look at consumers habits of green products, Løs Market is the perfect place to do this. It is a specific and unconventional shop (in opposition to conventional shops or supermarkets), where we expected to stumble upon consumers with a more engaged green behavior consumption. In other words, this local grocery shop can be our front door to enter the field and getting in touch with a specific sample of the population. By getting in contact with these people we wanted to know more about the processes behind green behavior

consumption. Our target was to find consumers which strive to make greener choices in their daily life.

2. Preface

2.1 Løs Market

Facing new environmental issues, some conscious consumers started to seek for greener alternatives when shopping for edible goods, and it can be quite tedious to find your way among all the different products and its labels. Even then, the packaging is designed for a single use and must be thrown away.

In response to the increasing demand of environmentally friendly market scheme some citizens decided to take action like Frederic – the owner of Løs Market. He got inspired by a French initiative consisting in offering a green alternative for those who want to reduce their environmental impact when shopping for food. The role of Løs Market is to push the concept of environmentally friendly food shopping as far as possible within the boundaries of our economic system. According to Frederic, this initiative carries values and can be an inspirational concept to create a green behavior consumption/business dynamic by showing the way. Løs Market provides consumers with an option to consume in an environmentally responsible way if they choose.

In Løs Market, there is only unpackaged, organic and as local as possible produce. And this is not only limited to the vegetables, fruits and dry goods but it also includes soap, oil, wine and vinegar. They do not claim to sell everything you can find in a conventional supermarket, products like milk and meat are not sold in Løs Market. But it is a first step towards greener consumption. When shopping at Løs Market, customers must bring their own packaging or buy the reusable packaging they have in the store. This can be something like a glass, metal, or plastic container. Items like rice, grain, and beans are in bulk dispenser machines. Customers fill their containers up with what they need and its weight at checkout. For other items like fruits and vegetables those are just provided in an unpackaged format and are meant to be put in a bag or brought home 'loose'. They provide products like eggs in a bulk format as well. Liquids like wine, cider, and oil are sold also (see A2 - Løs Market Bulk Dispensers for Liquid Goods). Customers can fill up bottles with the liquids and they are weighed at checkout like the bulk products. Products like milk are not available because of the sanity requirements needed to sell it in bulk format.

Løs Market has two locations, one in Nørrebro and one in Vesterbro. The location in Vesterbro was their first store. It's a smaller location but they manage to fit many products inside. The building seemed to be an old office they converted into a grocery store. There is not much room around some of the bulk machines and only one person could be using a row of machines at a time (see A1 - Løs Market Bulk Dispensers for Dry Goods). The location in Nørrebro is newer and

was just opened. It has much bigger more open space that give people plenty of room to use the bulk dispensers.

2.2 Sustainable Consumption as Technology

Sustainable consumption is a term that is used throughout this thesis and plays a large role as the technology we are using. We will now define how we understand sustainable consumption and how it is a technology. Consumption is simply defined as the process of using a resource or item. It usually implies that the resource item is finite in some way. Sustainability on the other hand has a longer definition. In this thesis it is defined as maintaining a state of perpetual existence with the rate at which we use resources in nature for humanity's own purposes. Since we are focusing on environmental sustainability, it includes maintaining things like air, soil, and water quality as well as biodiversity among plants and animals (EPA 2009). These things should be maintained in order to ensure our ability to grow and produce the foods we need can go on indefinitely. Sustainability is a balancing act between taking what we need and leaving enough for future generations. This can be accomplished via sustainable development, which is a way of advancement without over using resources. It is a way of planning to ensure sustainability is upheld. The World Commission on Environment and Development states sustainable development is:

'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.' (United Nations Report 1987)

This means taking care not to pollute the environment, replacing resources we use, and maintaining biotic (living organism) systems (ibid). A term used commonly when describing sustainable development is 'environmentally friendly', which is used commonly to refer to something in general that is benefiting the environment through sustainable behaviors. The term 'climate' is also used when discussing environmental friendliness or sustainability. This term is dealing exclusively with the effect's sustainability has on the earth's weather. The most common example of this is talking about Carbon Dioxide (CO₂) emissions having an impact on the climate through global warming.

In this research we are using the term sustainable consumption, we understand as usage of resources in a manner that will not rapidly deplete them and will ensure the resource can be replenished for future use. The topic of this research is about the consumers of Løs Market and their consumption behaviors when it comes to sustainable consumption. Our problem formulation is about the consumer's and drawing conclusions through data collected from them. However, it is still rooted in technology which we understand as sustainable consumption.

Sustainable consumption is not a tangible technology that someone could hold in their hand, but rather a methodological technology. It is a technology that is defined by the methods used. In Sustainable consumption there are many ways an item could be sustainable, like being grown in

a certain way, amount of water used to grow the item, type of transportation and packaging. These are all technologies that contribute to making the item sustainable or not. Sustainable consumption is the different technological methods surrounding a product that make it sustainable.

3. Methodology

In this chapter we will define and explain the methods used to collect data that will be used in the analysis. We used several methods for gather data from informants, them being: in-depth, open-ended interviews, semi-structured interviews, ethnographic surveys and participant observation. Each one bringing a unique set of data to the project. We will also explain Action Research which we have used as a 'meta-methodology' through the process of this thesis.

3.1 Action Research

This research will be using the framework of Action Research as a methodology to guide our planning and actions. We understand it as the 'meta-methodology' that all our theories, methodologies and actions taken this semester can fit under. From the start we knew we wanted to collaborate with an organization on this problem. Action Research fit our approach because we do not claim to be experts nor capable of making many of the changes we propose. Instead we have the role of being assistants with a 'fresh pair of eyes' to help those who can make the changes. We felt action research is best suited this topic because we want our findings and insights to be directly relayed to those who can make changes. We also want to iterate on our ideas and analysis of Løs Market's customers and by working with Frederic directly we can do that.

Action Research is a method by which research can be linked to an action in order to create the desired outcome. The research is performed while the action is taking place. In this way feedback can be generated while the action is taking place through reflection and reflectivity (Maxwell 2003). Through action research, researchers can be involved in the outcome of what is being studied. It is also suited to our topic of sustainability of consumer goods because action for these is needed urgently. By getting involved as researchers we can directly affect the outcome in order to make a positive strive towards improving sustainability.

As action researchers it is important to be ready for whatever happens during the process. Brydon-Miller and Aragón (2018) state, the action researcher should be ready to go in any direction needed and fill any role to carry out the research. They also mention how an action researcher should be someone who can wear '500 hats', which can be understood to mean be ready for any role and change dynamically if needed. Brydon-Miller and Aragón talk about how action researchers are 'knowledge weavers' and need to navigate between two or more worlds.

It is mediation between academic and expert, the idea is to bridge the two worlds and present one 'core perspective' that can be used to influence actions.

3.1.1 Our Roles

Throughout this semester was always changing as action researchers. We continuously found new hats to wear through this semester. Through ongoing reflection during this project, we have had to change our approach to this problem and consider it from many angles. We are both environmental advocates and we want what is the best solution for the environment. Consumers should take responsibility and seek our sustainable options. We are also consumer advocates and understand the struggles of the average consumer in society. Many people do not have time or money to spend on researching and seeking out the most sustainable options. As action researchers we had the role of trying to find the best options that support both.

We had the role of solution finders and we tried to come up with suggestions that are made for consumers and therefore their input is needed. They are the ones who we are designing the changes for and without their input the changes could never be made to suit them fully. The consumer's interactions with the solutions will determine their success (Lewin 1947).

3.1.2 The Lewin Model of Action Research

Kurt Lewin was one of the pioneers of action research in the 50's and 60's. He wrote an article in 1947 called, 'Group Decision and Social Change' where he proposed a 3-step model for action research. Through action research there are two sides one side is the researcher which are purposing and refining ideas for change and the side that will receive the changes. The researcher side is called the change agent and the side that can make the changes is called the client. There are 3 main steps for Action Research which are Unfreezing, Changing and Refreezing, also called Input, transformation and output respectively (Lewin 1947).

The first step is unfreezing. This is where the field is first opened by the researchers. Lewin calls it unfreezing because the researcher is finding a problem that needs to be addressed. Often it means breaking (melting) down a social norm that people take for granted that only a researcher could see around. Sometimes the problem can be uncovered after some time spent in the field. This is the input for what the problem that needs to be changed is. During this step the researchers are collecting data about the problem, research the topic, and plan action for how to make changes.

The middle step is changing. This is where the action and plans of action should take place by the client with help from the change agent. Two things can result from this step, either moving on to the final step or looping back to the first step. This is what Lewin calls feedback loops and they are critical to the Action Research process. Every time an action is performed it is assessed and looked back on to see the result. The feedback from past actions dictate future actions. This type of reflectivity allows error correction and adaption to be integral parts of action research. It also means that the researchers can get feedback at every step and consider the client's feedback.

This means that in action research this middle step is often where most of the time is spent since several loops are being iterated over.

The final step is refreezing where the results of the changes are finalized and reflected upon. During the step the changes have already been made and feedback is gathered from the changes. Like the middle step, this final step has two outcomes. Either another feedback loop back to the middle step is made to see if anything further should be done. Or another feedback loop is made all the way back to the unfreezing step, where the process starts over with the knowledge gained. This is another final level of reflectivity and it is there to make sure the actions taken were desirable and if anything could be improved in the future.

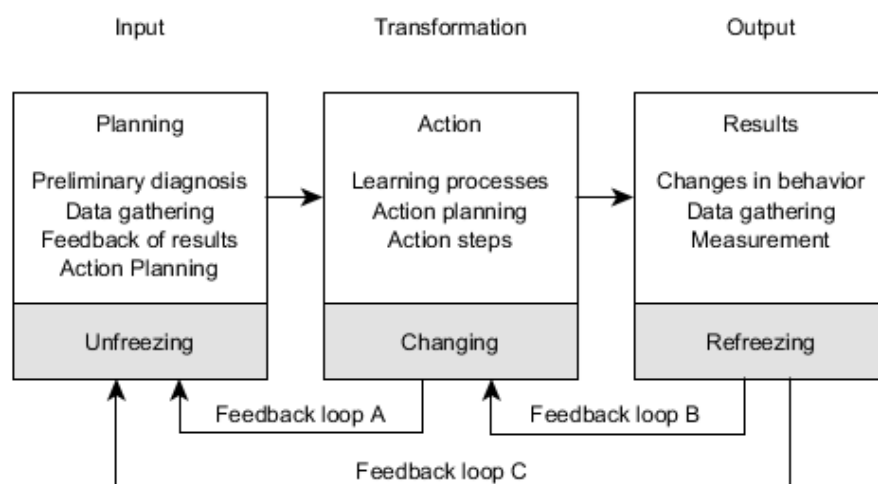


Figure 1 Lewin's 3 steps visualized. (Wikimedia Commons)

3.1.3 The Spiral Model

Another model for working with Action Research is the Spiral Model. It was first introduced by Kemmis and McTaggart in 1998 (Maxwell 2003). Like the Lewin model there are 3 main steps: Plan, Act & Observe, and Reflect. Similar to the Lewin model (ibid). However, after the reflection step, a revised plan step is taken before acting again. The main difference in the Spiral Model is that there are no feedback loops between steps. This means there are fewer opportunities during the process for reflection. Instead at the end there is a whole reflection step which is then used to influence a revised plan. The spiral also represents a temporal element into the process, since the flow of progress is moving downwards as each cycle completes. This model is much simpler than Lewin's model, which at every step allows of reflectivity (feedback loops), which can make it hard to keep track of changes and progression. In the spiral model you must complete an action then reflect. This gives a better sense of progression because there should be a clear sense of new insight gained.

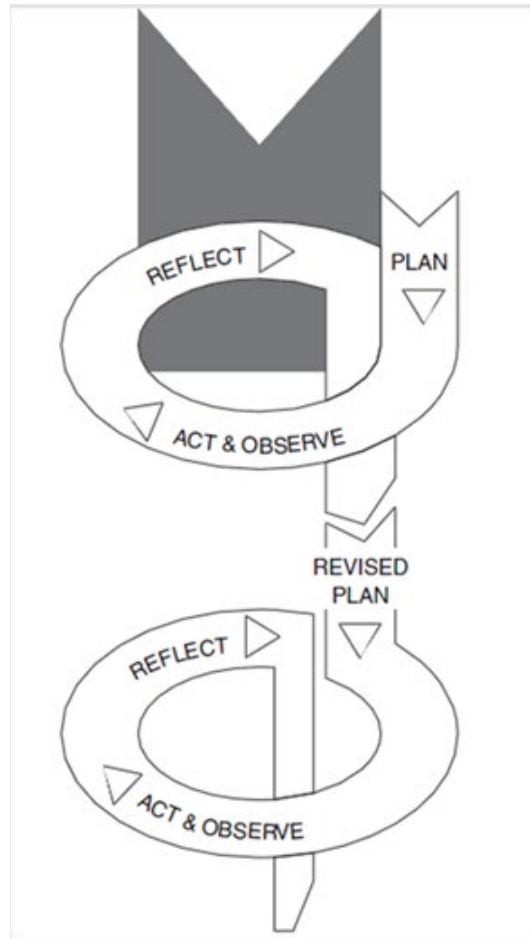


Figure 2 Spiral Model of Action Research (Maxwell 2003)

3.2 Action Research in Practice

Our thesis started as a continuation of the problem we researched last semester, which was sustainable packaging. Last time we only looked at corporations and their role in sustainable consumption. We unfroze the problem by going back and reflecting on last semester we defined the problem as single use packaging, especially the single use plastics. We decided that it would be a good course of action for supermarkets to stop using as much plastic and find alternatives. The one thing we did not do last semester is incorporate the consumer's perspective into our research and final report. We wanted to pick up where we left off and understand how consumers would use different types of sustainable packaging. If any changes are to work in the long term the consumers need to use whatever solutions come along. Any new solutions for packaging should be designed by taking consumer's thoughts and input into consideration.

We discovered Løs Market last semester and based many of our ideas for COOP off what they are already doing. This semester we wanted to work with them directly for gathering information on consumers. We contacted them and heard if they would be interested in meeting with us for an interview. The results of the interview changed our outlook on the problem. We discovered

that, despite the name of the store, other things are more important than sustainable packaging. Sustainable consumption is about many things not just doing one thing like using no packaging. Organic foods are just as important as packaging material because of the impact non-organic farming can have on the environment. This made us realize that the plastic packaging is a piece of the larger puzzle and that our research should encompass consumers and sustainable consumption. We wanted to ask a lot of questions about the customers of Løs Market to Frederic, the owner. However, when we tried to ask him a question about what he thinks his customer's motivations are for shopping at Løs Market, he gave us the answer: 'I don't know, please tell me.' To us this was a big discovery in the project, because he was asking us for help to solve a problem. After the interview we wanted to read and understand more about what the most environmentally damaging aspects of consumption are. Alongside we decided that our plan would be to get information from Løs Market's customers by surveys and interviews. We developed surveys based on our knowledge gain thus far and what we wanted to find out. Before making the surveys public, we presented it back to Frederic who approved of it. He allowed us to put business cards for the survey in his shops. He also allowed us to be present in his shops and hand out the survey cards to customers.

3.3 In-Depth, Open-Ended Interviews

We wanted to start collecting data by exploring the topic of sustainable consumption. As social scientists we felt the best way to go about this was to interview and explore what experts in this field can tell us. Individuals or organizations who have been working with sustainable products for some time. We wanted to use these 'exploratory interviews' to give us new directions or domains that we were not previously aware of. This could shape the direction our project heads in or reveal new informants.

In order to accomplish this, we took the approach of making what Schensul, Schensul and LeCompte (1999) call "In-Depth, Open-Ended Interviews". In-depth referring to the part that we as interviewers want to know more about a subject from an expert. Open-ended referring to that all responses an informant gives are valid. The openness is important because we do not want to shape the informant's responses with trying to take the interview in one direction or another. The direction the informant takes the interview says something about how they position themselves in the controversy. It is also beneficial to use as it will allow the informant the flexibility to expand into new topics, we might not be aware of.

During an in-depth open-ended interview, we do not create a detailed interview guide. Rather we prepare topics and general questions the bring up to the informant. During the interview we must be constantly monitoring the informant to make sure they do not stray too far away from the topic on hand, but at the same time not too strictly as to limit their responses. Schensul, Schensul, and LeCompte outline that an interviewer should be aware and ready to reintroduce the topic if the informant gets too off track. 'Probing' or following up with what an informant

says is necessary to guide them in the right direction and to clarify anything that might not be made explicit by the informant.

It's important to seek out knowledgeable members of the community to interview because of the 'exploratory' nature. The informant must be able to answer and be informed on a wide range of topics. It is not necessary to interview many informants with this technique because if the interview goes well a large amount of data can be collected from one informant. If a good key informant is found, then it can help to discover new information and give direction.

3.3.1 Guidelines for In-Depth, Open-Ended Interviews

As mentioned previously, an in-depth open-ended interview does not require a well formatted and structured guide with multiple questions and follow up questions. It does require preparation on the interviewer's part to make sure they are informed enough on the topic to know what to ask. Preparation is key to making the interview work, and general open-ended questions about the topic or controversies that need to be prepared. The 'looseness' of an open-ended interview is guided by information prepared beforehand. As Schensul, Schensul and LeCompte (1999) put it, this type of interview should be unstructured, but not unplanned.

The interview should be carried by the informant's responses to general questions asked. Probing is a way to keep the interview going by using what the informant has answered to ask new questions or elicit more. Probing can be done in several ways. The most subtle and smooth way is to insert a neutral agreement or acknowledgement while the informant is talking. For example, 'I see', 'yes', or 'um-hmm'. In this way the informant gets the signal that they can keep talking about what and that you understand what they say. However, this should not be overused as it may makes the informant feel rushed or not being listened to. An interviewer can also repeat what the informant has said back to them, but phrase it as a question. For example, 'You protested the building of the new highway?'. Or even asking for more information about something they said, 'Could you tell me what made you protested the building of the new highway?' Another method is to ask for clarification in what the informant has said if there are inconsistencies or their statements do not have an explicit meaning. Finally, the informant can be asked their opinion about something they just said (ibid).

All probing and interaction with the informant during the interview should be done as neutral as possible. This is done not to influence what the informant's responses to questions might be. Some discipline is required on the interviewer's part during an interview. The interviewer should not inject their own opinions or agree or disagree with anything the informant says. The informant should not be 'helped' to answer questions or to put their responses in the interviewer's own words. In addition, the interviewer should never complete sentences for an informant or rephrase what they have said.

Informant: 'We try not to eat meat very often.'

Interviewer: 'So, it's safe to say you would consider yourself as a vegetarian?'

Informant: 'Yes, I guess I would.'

In this example, the interviewer rephrasing what an informant says to try to get them to answer a specific question they have. This is wrong and the informant is likely just saying yes to avoid conflict. In this case then this is not truly the informant's opinion. A better way to handle this is would be:

Informant: 'We try not to eat meat very often.'

Interviewer: 'Can you tell me why that is?'

Informant: 'Well, we've always not eaten much meat in my family growing up...'

The interview requires a reciprocal relationship between the interview and informant. This relationship is not that much different from how a normal conversation would be carried out and should follow the norms the informant expects from a normal conversation. This is different from culture to culture and even organization to organization. However, generally in the West it is accepted to let someone speak without being interrupted and be an active listener (ibid).

3.3.2 Conducting Our In-Depth, Open-Ended Interview

We interviewed two informants using this type of interview style. Both are expert informants and we choose them because they were knowledgeable and established professionally in their field. The first informant Frederic is the owner and operator of two packaging free grocery stores in Copenhagen called Løs Market. The second informant Julie is a workshop teacher, performer and speaker for environmental issues, she has collaborated with Frederic before. We prepared an interview guide for both individuals which we followed as conversation starters. We adjusted the interview guide to each informant's background in order to make sure the questions were as relevant as possible for their backgrounds. Frederic recommended Julie to us as someone to interview, it was explained to us that she was working first hand with sustainable consumption and 'hands on' workshops with consumers. The interviews were both conducted in settings that were comfortable for the informants. Their private office and apartment respectively. This was an important detail for the interviews because we wanted to make sure the informant was able to speak their mind and not get distracted by other people or unfamiliar surroundings. Overall both interviews went very well and both informants were talkative and replied to our questions in a way that we found useful and insightful.

3.3.3 Data Handling for In-Depth, Open-Ended Interview

We recorded both interviews on a laptop, which gave us a digital audio file. We listened to the audio file after the interviews and transcribed the contents in a Word document. We transcribed the full content of what the Informant said. We also included certain actions the informant would take if it was relevant, for example at one-point Frederic slammed his hands down on the table to make a point. We developed our own color-coding system for the different types of content in the interview. We tried to track certain threads the interview was taking with different themes.

For example, green would be used to highlight anything about the environment. While orange would be used to highlight anything about consumers. Because this was an open-ended interview there were many different directions the interview went in. Between the two interviews we had to use different color-coding systems because the nature of the interviews was different. Frederic talked more about Løs Market and Julie talked about involvement with customers.

3.4 Semi-structured Interviews

Because we are looking at the attitude-behavior gap in Løs Market customers, we felt it was necessary to collect data from them. Our first method for doing this is by interviewing customers about their behaviors, habits and opinions on their experience at Løs Market. To do this, we used an interview method called *semi-structured interviewing*. It is a way to elicit information from informants through the combination of unstructured open-ended interviewing with stricter guidelines for questioning. The end goal is to produce repeatable interviews between informants which can produce qualitative data (Schensul, Schensul, and LeCompte 1999). The questions are planned by the interviewer and should be used as a guide through the interview. The questions are open ended, but the direction of the interview is not. If the informant gets too far away from the question or starts talking about something not relevant to the interview, then the interviewer must guide them back on topic. Because In-Depth, Open-Ended Interviews were conducted before semi-structured Interviews, the topic is not being explored anymore and a problem to research has already been found and decided on. It is this problem that data is being collected for.

Like In-Depth, Open-Ended Interviews probes should be used to further elicit information from an informant, although fewer probes should be used because most of the questions should be already planned. Probes can also be used if an informant gives too short of an answer or as a way to bring them back on track if they change the subject. Informants may believe they will just have a casual chat, and while this is good because the informant will be relaxed, the interview should not be conducted the same as a casual chat. One of the biggest challenges is to control the conversation during the interview. Depending on the informant, some like to take the floor and run away with the conversation. It is up to the interviewer to interrupt sometimes in order to resume the questions. This goes against most people's polite nature when holding a conversation and takes discipline to carry out during the interview (ibid).

In the end, semi-structured interviews should help outline the central issues and factors in what is being researched. And provide a basis for comparable qualitative data from multiple individuals which can be used to form a hypothesis for the problem being researched.

3.4.1 Guidelines for Semi-structured Interviews

Overall the guidelines for semi-structured interviews are largely the same as they are for in-depth open-ended interviews. The interview must have a set list of questions ready for the informant. Simple yes or no questions should be avoided, the informant should reply with a detailed

response. The questions should be understandable to the informants and should not need to be explained in the interviewer's own words. It is important to use phrases and terms the informant is familiar with and to also match their level of education when formulating questions. Questions that lead the informant to respond with bias should be avoided. For example, it would be incorrect to ask, *'Can you tell me what you think is wrong with conventional supermarkets?'* This leads the informant on to think there is something wrong with conventional supermarkets. It would be better to phrase the question like: *'Can you tell me what your opinion is on conventional supermarkets?'* The informant's answer can be followed up with a probing question like, *'Why do you think it's bad?'* It's important not to plant the idea that conventional supermarkets should be thought of in anyway until the informant says so (Schensul, Schensul, and LeCompte 1999).

3.4.2 Conducting Semi-structured Interviews

We recruited informants by putting a call to action as the final step in our ethnographic survey. This step asks the informant if they wanted to sit down and have an interview with us and if so, write your email. This step was of course optional, and the informants did not have to write anything if they did not want to. In this way, we could make sure to get informants for semi-structured interviews that met the following criteria: they are customers at Løs Market, and they are willing to give their opinion.

These interviews were used to support the answer provided by the informant in the survey. And they were conducted with the help of a concise interview guide. The interview average time was approximately 40 minutes and they have been carried out in local cafés. An interesting point is that almost all the interviews took place on weekday during the conventional working hours. Which lead us to ask some questions about their type of employment and how much spare time do they estimate to have per week.

One of the reasons why these interviews have been conducted is first and foremost because a face to face interview gives the possibility to get more qualitative data and to engage a more comprehensive understanding of the informants.

Throughout the interviews we looked at the way they started to take action on their way of living and at the different obstacles that the informants could have had when trying to consume more sustainably. In addition to this, we tried to find out the type of knowledge they have and how they use it. These topics has been inspired by our exploratory research and the theories that we use to understand our fieldwork. Therefore, the time constraints, the physical and organizational obstacles encountered as well as the type of knowledge and lifestyle that the informants have will help us to know more about what sustainable consumption means.

3.4.3 Data Handling for Semi-Structured Interviews

We handled the data for the semi-structured interviews in a similar way to the open-ended interviews. Again, we recorded the interviews on a laptop, and this gave us a digital audio file we could transcribe. We listened to the recording afterwards and transcribed what the informants said. We do not want to use the informant's real names because it would violate their privacy

and we informed them that their real names would not be published in our research. We will use names we have made up for the informants instead. The first informant being Jacob and the second informant being: Marie. We also color-coded phrases from the informant with certain colors given the content. Instead of giving each informant their own color system, we used the same colors for both informants. This allowed us to compare what each informant was saying about each topic during interview. For example, Informant one had much more to say about their sustainable behaviors and informant two did not have very much to say about hers. The color coding made it very easy to compare which informant was talking about which subject the most. We knew these interviews would be a primary source of data for the analysis so we picked out the phrases we thought would be most useful to make our point.

3.5 Ethnographic Surveys

An ethnography tries to understand phenomena in social and cultural terms. The informants should be understood in their social setting because this contextualized the information and data being collected. Similar to an open-ended interview allows the informant to speak their mind on overall on a topic. Then the researcher can use this data to uncover hidden angles they did not see before. Ethnographic surveys are meant to compliment these newly discovered angle and focus deepening the knowledge through qualitative data. An ethnographer can find an insight through an open-ended interview, developed a hypothesis and then back it up using data from ethnographic surveys. As such, the data must be collected after open-ended interviews. The surveys must be structured as to be consistent for all informants.

Amongst groups of similarly minded individuals there is still difference in attitudes, knowledge, beliefs and behavior (Pelto and Pelto 1978). Fields affecting daily living and general society people have highly variable opinions on. Even groups of people who all agree on the cause of a conflict might disagree about how to solve it or where it comes from. This is where ethnographic surveys can be useful. They provide a way to test hypothesis about certain groups of people through collection of qualitative data. This is not unlike a conventional survey, but the key difference is that an ethnographic survey draws on the knowledge of the ethnographer to mold the questions of the survey. The ethnographer has conducted interviews with informants and experts and analyzed this data accordingly. Thus, this knowledge informs the ethnographer on what to base their questions on. Or as Schensul, Schensul and LeCompte (1999) state, 'non-ethnographic qualitative research often is generated a priori on the basis of the researcher's experience'. In ethnographic surveys rather than relying on one's own experiences, experiences from informants is relied on. Informants and their experiences are what define the field being studied.

Schensul, Schensul and LeCompte (1999) outline a few guidelines for how to conduct ethnographic surveys. As previously stated, they must be built on previous open-ended interviews and semi-structured interviews. The questions in the survey should keep in mind all the knowledge collected about the target group. The surveys should not standalone as a data

source but should be combined with other sources to form a more complete picture of the field and conflict being studied. The data collective from the survey should provoke more questions or help answer questions during the analysis. The data can lead to more questions with further explanations.

Ethnographic surveys can also share similar methods to traditional surveys by being conducted face to face or self-administered. Face to face involves the researcher interacting and being present with the informant while self-administered means the informant does the survey by themselves. Ethnographic surveys still can use standard survey questions like true or false, ranking, or multiple choice questions.

3.5.1 Conducting an Ethnographic Surveys

To conduct our surveys, we used the platform called Google Forms. It is an online service that allows sharing of surveys very easily via a link. It allows the creation of surveys by adding questions to the form. There are different styles of questions, like short answer, long answer, multiple choice and checkbox. Once an informant has taken the survey their response is stored online and can be reviewed by the creator of the form. The data can also be exported to an Excel file which allows visual mapping and graphing of the data. For questions with short answer responses this data is also exported and can be analyzed accordingly.

We wanted to specifically target the audience of Løs Market with the surveys. In order to do this, we needed a way for people to be able to easily access our survey online via Google Forms. We thought the easiest way was to print business cards with a QR code on it. When people take pictures of the QR code with their phones, it will open a link and connect them to our survey. We also considered printing out posters to be put up in Løs Market, but this didn't work for several reasons. The first being that we wanted to have something the informant could take with them. This is because we wanted people to fill out the survey not necessarily in the shop or in the moment, they find out about it. We wanted the informants to be in a place they are comfortable. The second reason we decided against posters was because we specifically wanted to target Løs Market's customers, not just anyone who can see and scan the QR code. We also felt the business card format was a nice and professional way to present our survey, it gives a good impression to the informant that we are serious and value their input.

On several occasions we visited Løs Market to hand out the cards personally to people. We wanted to more actively promote the survey as well as interact with shoppers at Løs Market. Each of us interacted separately with the informants in order not to 'crowd' them. We also picked who we wanted to promote the survey to. For example someone who has just finished shopping in the store, we wanted to give the survey to, because it was clear they will have an opinion about their experiences.

We made sure to include different types of questions that would give us a good idea of what Løs Market's customers think about the store as well as their outlook on current state of environmentalism in Denmark. We wanted to elicit from the informants their opinions about what are the most effective actions someone could take to be environmentally friendly. At the

end of the survey we included a section where the informants could check a box if they would like to contact by us for an interview and if so, please write your email. We were uncertain if this approach would work, but since there is the opinion of check yes or no, then we felt it didn't hinder the informant or introduce any bias.

After leaving the business cards out for around 4 weeks, we decided that a post on Løs Market's Facebook page could help promote the survey even more. The disadvantage would be that because it is online, anyone from anywhere could take it. Meaning that our survey responses could be answered by someone who had never been in Løs Market. Despite this, we wanted to try anyway since some time had passed to allow the business card approach to work. We prepared a short text for a Facebook post and asked Frederic if he could post it to Løs Market's Facebook page. In the short text, written in Danish, is inviting customers for a short survey about their experience at Løs Market. We also made a picture which had the AAU logo together with the Løs Market logo. We wanted to do our best to make it a 'catchy' Facebook post so people would be enticed to click. We asked Frederic what he thought and if he could post it on Løs Market's Facebook page. But he expressed some hesitation because Løs Market is careful with their brand image on Facebook and they do not want to seem like they are 'spamming' people.

3.5.2 Data Handling for Ethnographic Surveys

The surveys were hosted on Google Forms and this meant that all the data was online in the back-end of the survey page. Depending on the type of question Google Forms will automatically graph and color code the data collected. For example, we can see what percent of people responded to a certain question in the form of a pie graph. The data could also be downloaded as an Excel if manual editing is required. We found that to graphing that Google Forms does automatically worked very well for visually representing our data, so we did not feel manually coding the data was necessary.

How often are you shopping at Løs Market?

16 responses

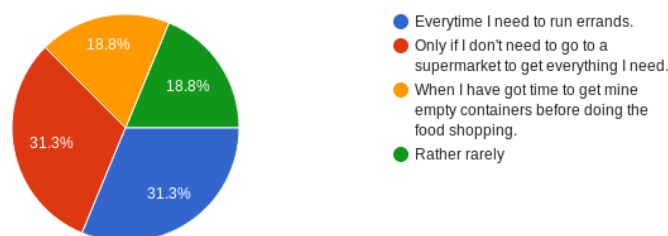


Figure 3 Google Forms Graph Example (Phillips, Vérot 2019)

3.6 Participant Observation

Participant Observation is a good starting point for empirical data collection as it allows the researcher a contextual understanding of the field they are working in. From an academic point of view through participant observation patterns, habits, status quos, norms, hierarchy, personal interactions, atmosphere can all be witnessed. This provides background and understanding for the phenomena or controversy being studied. From the informant's world point of view, it makes the presence of the researcher known and eventually expected in the group or community being observed. Researchers should aim to be expected in the community they are studying because it allows the informants to act as they normally would if not being observed (Schensul, Schensul, and LeCompte 1999).

The process of participant observation is divided into two parts; participation and observation. The former is the researcher being active and present in the event. Interacting with the informants as if they were one of them, doing what they do, eating what they eat, sitting the way they sit, etc. Being a participant is an attempt at 'near total immersion' (ibid). For the researcher this means that you are seen by the informants as a peer or at least someone related about in the community, depending on the varying degrees of acceptance. Observation is almost the opposite of participation. It is experiencing the field through the filtered lens of the researcher. The researcher sees what the informants are doing and analyzes their actions through theoretical frameworks. A researcher tries to be as analytical as possible when they are in the field. However, in this way, the informants are almost certain to notice they are being watched and could perhaps reject the researcher. Participant observation is a combination of these two ideas. The researcher is actively participating in the field to be 'in', but they also are trying to maintain an analytical overview of what they are observing.

3.6.1 Conducting Participant Observation

We visited Løs Market on a few occasions to see how people are interacting and using Løs Market's bulk systems as well as what people were doing in general. We wanted to find out if the store is attracting many new customers who are curious about how a shop like Løs Market could work. Or if there is mainly an established group who are 'regulars' and are familiar with the systems and staff there. While we were there we participated in the supermarket as much as we could. Sometimes it was as simple as buying a banana, but other times we used the bulk system and empty glass jars. We looked around both stores thoroughly to become familiar with the locations and what they have to offer. It also helped us 'blend' in as participants during our time there. The owner allowed us to be present in his stores a few times to observe customers and their interactions with the store. We wanted to observe how customers were interacting and getting on with the bulk systems in Løs Market. To see if there were any difficulties associated with using the set up in the store. We also wanted to see how customers were managing their own packaging for the bulk machines. Specifically, if they were bringing their own and if so what type of packaging they were using and how they were carrying it. If they were not bringing their own

packaging, then were they buying the glass jars that were available in the store. If so, how many? Overall, we wanted to see how well prepared the average Løs Market customer was when shopping there. Finally, we wanted to observe how busy each store was. If it looked like a lot of new people were stopping in or if the customers looked like regulars.

4. Theoretical Framework

4.1 Hartmut Rosa's Theory on Acceleration

In this chapter, we would like to use the concept of social acceleration developed by Hartmut Rosa which can lead to a form of alienation. The concept of alienation is naturally taken from Marx but through Rosa's theory of 'alienation and acceleration of the late modernity'. However, we won't focus on alienation in this research.

The concept of the social acceleration appears to be an original way to tackle the western world type of societal organization in order to understand how temporal norms can be held responsible for the attitude-behavior gap. Thus, in the first part of this chapter we will talk about the 'list' of expectation and its overwhelming potential on individuals. In the second part, we will focus more on the normative cadence of our society and how it can influence our position towards environmentally friendly behavior.

We will see now how Rosa divides acceleration in three categories which are the technological acceleration, the social change acceleration and the life pace acceleration.

4.1.1 Understanding the concept of Social Acceleration and its three categories

The concept of social acceleration simply put is the increasing change of the world surrounding us. The pioneer sociologists Durkheim and Simmel, but not only, were interested by this *social fact*. They all noticed how material, social and spiritual worlds change fast, and how it affects people in general. In his books *The Suicide* and *The Division of Labour in Society*, Durkheim (1930) talks about *anomie* to describe an absence, breakdown or confusion in the societal norms. He says, normally when the division of labor increases, it brings along social integration through organic solidarity. But where economic change is too rapid for the emergence of moral regulation to keep pace. To quote Durkheim, with the 'increasing differentiation and specialization then an abnormal or anomic pathological division of labour occurs' (Durkheim 1930). When Durkheim talks about anomic suicide, the same correlation between velocity of change and the confusion in the norms of a society can be found. Thus, the product of acceleration and alienation can be seen as the concept of *anomie*.

But what does it actually mean to accelerate in our modern society? It has to be said that not everything gets faster. All the aspects of the social life are not speeding up, especially time. An hour is still an hour no matter how we perceive it, and clearly, pregnancy, healing process and

seasons are not going faster (Rosa 2010). But Rosa tries to identify what accelerate means by outlining three different types of acceleration; technological, social change, and pace of life. Technological acceleration is the intentional speeding up of linear process such as transport, communication and production. The acceleration is 'goal-directed' meaning the technologies are developing towards a specific intention. An example of this might be that trains are goal directed towards becoming faster or computers are goal directed towards becoming more powerful. The direction of acceleration can reveal intention behind the technology. The effects of technological acceleration are not very easy to measure in society, but the impact is nonetheless huge. They have transformed the 'space-time regime' of society; that is the way by which society perceives and organizes its space and time (Rosa 2010). The way in which humans perceive things chronologically has also accelerated. Instead of it taking 2 weeks to travel from Berlin to Rome, it can be done in 4 hours. Similarly, sending a message from which by mail would take weeks can be done in a matter of seconds. In this way when there is acceleration through technology and compression or even of space takes place. The space loses its significance in the modern world. If we continue with the example of traveling from Berlin to Rome, in the past when it took 2 weeks, all the locations along the way were interacted with as part of the journey. Whereas today taking a flight means interacting with the departure and arrival airports. These new spaces that replace the missing spaces are 'non-places' which lack the history, identity or relation (Rosa 2010).

Rosa claims that the speed of communication increased by 107%, the speed of transportation by 102% and the speed of data processing by 1010% (Rosa citing Geißler 1999). These technical changes have a tremendous impact on our social reality thus deeply transformed the perception and the organization of space and time in the social life (Rosa 2010). Time is used to 'contract' virtually space by increasing the speed of transportation and communication.

Given that, the entire society tends to set its pace on the fastest and most convenient technologies. It is difficult or impossible for anyone to choose different means of communication and transportation. This is where the technical acceleration can be an obstacle for more sustainable behavior. Nowadays, it can be difficult to travel far away from home and not considering to fly. Especially when taken into account the fact that the amount of holidays an average worker gets per year is set on the basis of how fast communication and transportation are.

Technological acceleration is about processes within society, the acceleration of social change is about the acceleration of society itself. That is the speed at which change itself is changing. Attitudes, classes, lifestyles, fashion and milieus are just a few factors that contribute to social change. The process by which the direction of technology should accelerate towards is defined by the social change. In general societies want things like transportation to become faster and more efficient. To better understand the acceleration of social change, Rosa defines it through tenses. The *past* is what *does not occur anymore/is not valid anymore*, the future is represented by what *does not occur yet/is not valid yet*. So according to Rosa, the present is when the surroundings or '*space of experience*' and the expectations or '*expectation-scape*' coincide. Thus, everything in between is what is currently the present for society. This is precisely during these

moments that we find some certitudes upon our expectations to assess our surroundings and find our way through it. Therefore, the acceleration can be seen through the weakening of reliability between experience and expectation but also through the shrinkage of what is defined as present (Rosa citing Koselleck 2009). Rosa defines social acceleration as an increase in the rate at which things no longer are valid and things that are not yet valid. This compresses the present and makes the state of the present more cursory. With more acceleration it makes it challenging for the average person to keep up with the continuously changing nature of society. In addition, this also effects work and family dimensions. Historically, work was static throughout a lifetime and as a blacksmith or farmer your profession did not change. But through social acceleration, it forces almost everyone to change jobs throughout their life time in order to adapt to the changes that society is undergoing.

To go further, looking at the stability of the institutions and social practices can help to measure the acceleration or deceleration of social change. Once applied to environmentally friendly practices, it can be clear that what is 'good' or 'bad' for the environment can change rather quickly. Therefore, it can be difficult to navigate through the 'green' *space of experience* when the 'sustainable' *expectation-scape* is constantly getting updated. We often hear from different sources (television, newspaper and other scientific articles) the real impact of some diet (or more specific edible goods), or some way of travelling, or the way our clothes are made and the list is long.

One of the most recent example, and quite controversial one, is the introduction of electric cars. The manufacturers claim that their cars are the new way to go around without damaging the environment. In opposition to combustion engines which release noxious gases and particles, both contributing to the global warming and the environmental pollution. But according to an article written by Jonathan Eckart for The World Economic Forum, 'it takes nine years for an electric car to be greener than a diesel car, on average', and this for three main factors. Firstly, the production line of an electric vehicle contributes to the global warming twice as much by doubling the amount of energy needed in comparison to the construction of an diesel car. And this is mainly caused by the production of batteries, which implies extraction and refinement of raw materials. Secondly, the electric car is 'only as green as the electricity that feeds its battery'. And thirdly, the competition between the combustion engine and the electric powered engine boils down to the lifetime of the cars but also to the reduced lifetime of the batteries themselves. This example illustrates well enough the confusion that can occur when the speed of social changes is too fast. This is something that needs to be investigated but we can assume that many of us think or thought that electric car can or could be one of the solution towards greener days. But the *space of experience* has already changed and our *expectation-scape* is already mismatching the former.

Acceleration of the pace of life is defined by 'time-famine' in modern societies. Most people feel as if they are running out of time or short on time in their daily lives. They long to have more free time, such as holidays, holy days, or longer weekends. Rosa (2010) states that free time can be a rare raw material like oil which is consumed and becoming scarce. This type of acceleration presents a paradox because with the acceleration of technology there should be more free time

and slowing down the pace of life. However, this does not happen. And if we use again the example of traveling Berlin to Rome, we use 4 hours instead of 2 weeks, as a worker this person should have much more free time because they are doing the same task in less time. But, instead of excess efficiency being used as a surplus of free time, it is instead used for more work. In the same way, that writing letters use to take up a certain amount of time we do not get awarded more free time by using email. Instead we send larger amounts of emails. As things accelerate technologically so too does the amount of work an individual must do.

In order to be able to measure it, Rosa suggests two approaches, a subjective one and a objective one. The subjective one touches on the way people feel time going, which takes into account the subjects' point of view only. The objective approach tries to measure the pace of life by looking at the 'action units' like eating, sleeping, working, playing, family time, etc. But also the tendency to compress actions and experiences by decreasing breaks or/and doing more tasks simultaneously. So according to Rosa, the objective approach take into account both the time spent on a given task but also the number of tasks achieved on a specific period of time.

That said, measuring the speed of our life pace is most likely a combination of both subjective and objective approach. The way of understanding time as a raw material helps us to make a parallel between the amount of time available for a specific person and the gap between an environmentally friendly attitude and its concretization through an environmentally friendly behavior. Indeed, having a more sustainable lifestyle often implies using more time. Means of transportation constitute a striking example to back up this claim. Travelling by train will have a significant difference in CO₂ emission in comparison to travelling by plane, but in return the train will be significantly slower than the plane. The crucial fact is being greener in our society is not always an easy task as it involves spending more time on specific actions which reduce the overall amount of tasks achieved on a given period of time.

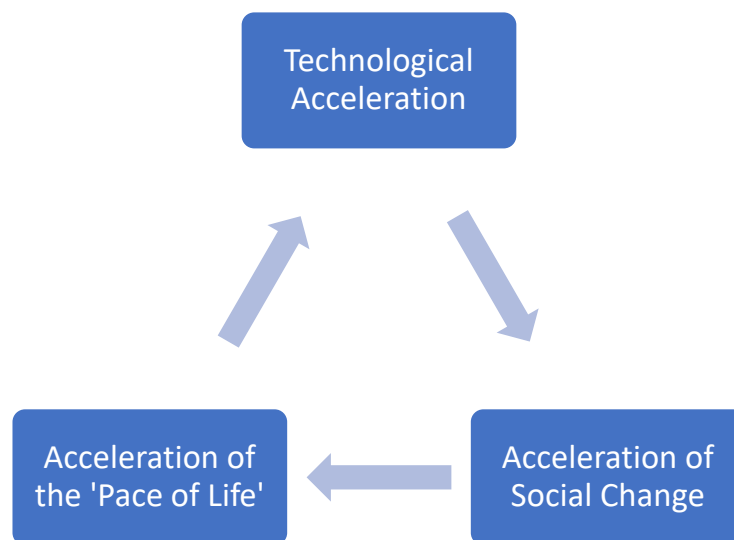


Figure-4 The acceleration-cycle (Rosa 2010)

These three categories can be used as tools to shed light on the factor *time* influencing significantly our daily choices and our lifestyle, often through concealed ways. Each category influences the other one and Rosa sees them as a part of bigger picture which he names *the acceleration-cycle* (Figure-4). By highlighting the acceleration of technologies, the social organization and the pace of life, the reasons that incentivize or discourage people's behavior can be understood in more holistic and sociological manners.

4.2 The Actor Network-Theory (ANT)

Actor-Network Theory (ANT) is a theory that bridges technology and social into one unified term; actors. Everything that exists in a network can be labeled as an actor. In ANT it does not matter if the actor is alive or an object, it is seen as something that can have influence over the network. Actors come together in an actor-network. The term being understood as something that is not reducible to either an actor or a network. That is to say that a single actor cannot stand-alone in a vacuum, there will always be other actors connected to it. An actor-network is at the time same time an actor whose activity is networking heterogeneous elements and a network that is malleable and able to be redefined (Callon 1989). An example of this would be the radio as an actor-network. It does not exist on its own but rather the scientists, engineers and designers that helped create the radio help form this network because through them the radio came to fruition. Along with the factories, workers, and consumers are part of this actor-network, because through them the radio becomes a material object. The social change that the radio brought to society is also part of this actor-network. It facilitated an informed society through the quick nature at which news could be delivered to the masses. Through this way of looking at radio technology it is possible to see which actors are forming the network and which actors are connected to one another.

The term actor-network was first used by Michel Callon, Bruno Latour and John Law. They wanted to use ANT as a tool to understand scientific and technical innovations of the past decades. ANT was inspired by many other theories before it, such as: Michel Foucault's theory of power and micro-politics, semiotics and anthropology (Cressman 2009). Thomas Kuhn's theory of sociology of science and technology (STS) also played a large role in the creation of ANT as well. ANT's main difference from the theories it was inspired from is that it takes the approach of looking at science, technology and society 'in the making'. Rather than looking at a phenomenon after it as occurred, ANT aims to study it while it is ongoing. ANT does this by 'following the actors' which means to look who is doing what, when and how. In most networks this can mean a lot of actors doing a lot of things and the network getting very large and complex. In ANT we want to open a 'black box'. We know the inputs and outputs of a network, but we want to open it up to see how exactly the input turns into the output. In most cases it is useful to start by looking at the network builders. The network builders are usually primary actors which many other actors disseminate from. This could be one technology, innovation, person, group, or corporation. Through ANT we can follow the network builders through the network we can see all connections to other actors

and understand how the network is constructed. We can also understand the relationship between actors in the network much more clearly. In the end we can present a network with all the actors which we can use to describe an event.

The relevance of ANT in our research appeared rather quickly as an evidence when we wanted to understand how green purchase and to some extent how green behavior can be influenced by the material organization of our society. According to John Law (1992), social orders are not neutral and can have a high influence on people's choices on the long run or on the daily basis. It is not to be understood as something immutable but rather like a 'site of struggle, a relational effect that recursively generates and reproduces itself' (Law 1992). Thus, these social orders can be negotiated to promote or prevent a behavior, but it is not without resistance. Actor-network theory can help us to understand how the interactions constitutive of the social orders can succeed in establishing and reproducing themselves by overcoming some forms of resistance. How they manage to be recognized as legitimate by our society, in order to influence social orders through the effect of power, popularity and seem to become macrosocial (Law 1992).

Given that actor-network theory treats social orders as a whole and suggest that society, organizations, actors and machines are all part of *networks of heterogenous materials*, it is possible to understand a behavior not as a pure social driven thing but as a piece of a whole.

If we look at an environmentally friendly behavior, we must assess it through a structure of objects surrounding the actor. This can be obvious, but it is important to underline it in order to support the actor-network theory. From an analytical stance, a green behavior cannot be understood without the material world, therefore people and objects must be comprehended as fundamentally identical, and this analytical viewpoint must be distinguished from an ethical viewpoint. This does not imply a denial of their 'rights, duties, or responsibility that we usually accord to people' (Law 1992).

Law's argument on this analytical point, is that people are who they are in reaction to an effect generated by a network of heterogenous materials. In other word, you have or need to interact with the material world to position yourself in a social manner. It would be difficult for someone to be more environmentally friendly without interacting with its surroundings (people or objects) and most importantly with material entities.

As we said earlier, there is an attitude-behavior gap between what people say on the topic of environment and what they do in practice. And this can be connected to Law's argumentation with a practical example; if we ask someone striving to reduce their carbon footprint to protect our planet, what will make this person a 'green' person is not and cannot be their only political engagement on the topic.

4.2.1 Black Boxes

As previously stated, Actor-Network Theory aims to open a 'black box'. The term black box is a generic one and used in many different types of fields. It is a way of identifying an object to study that can be 'opened' and investigated to see the inner workings. Black boxes have an input and an output, before opening all that can be observed is merely the inputs and the outputs, but it's

not known how the input is transformed into the output. In ANT black boxes function in a similar way, but the black box is caused by the sociotechnical relationship people have with the object (Cressman 2009). Using the example of the radio once again, the radio technology is in its own black box. Most people understand that you turn on a radio and noise comes out, but they do not understand how that happens. The reason why they do not understand is because they are distanced from the technical knowledge behind why it works.

A black box is a technical artifact that the user takes for granted and does not think about the inner workings of. Latour states that black boxes from everyday technologies can be very complex (ibid.). And made opaque depending on the number of different variables involved.

In Actor-Network Theory we aim to open the black box which allows us to investigate all the variables that make a black box opaque. This involves looking at the social and technical aspects and seeing how they come together.

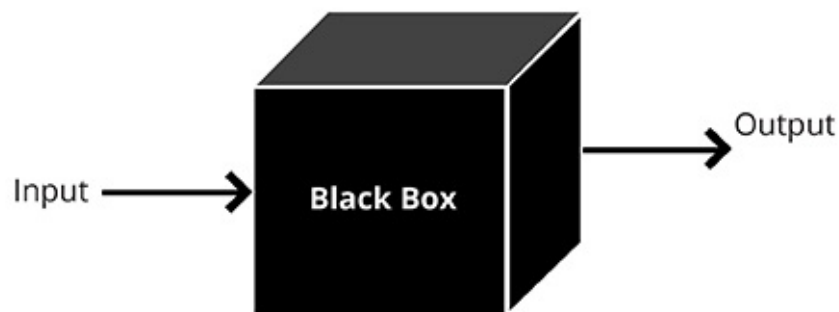


Figure 5 Black Box Model (Wikimedia Commons)

‘Punctualization’ is a process that is unique to black boxes in Actor-Network Theory, it allows for taking actor-networks with black boxes and transforming them into single point or a node into another network (Bijker, Hughes, and Pinch 1989). In this way large complex actor-networks which represented a black box can be used as node in another network. This leads to the realization that everything in actor-network theory is both simultaneously an actor and an available as a network. Actors will never exist in a vacuum and will always be connected in some way to other actors, thus forming a network (Cressman 2009). Taking the example of a computer which is a large complex machine and has a large complex actor-network of technical and social actors. This actor-network can be summarized or ‘punctualized’ as one node in another actor-network about digital technologies. We use the analogy of being able to ‘zoom in’ or ‘zoom out’ on a node in a network. Zooming in on a node one can see past the node itself and into the actor-network present and all the details therein. But zooming out, reveals the node itself surrounded by the actor-network present around that node. Law says this about punctualization:

Punctualization is always precarious, it faces resistance, and may degenerate into a failing network. On the other hand, punctualized resources offer a way of drawing quickly on the networks of the social without having to deal with endless complexity (Law 1992, p.385).

Technical objects in the actor-network are 'precarious' because they are not ongoing processes. The actors surrounding a technology and their relationships between those actors are constantly changing. This is reflected in how the network is arranged. To black box a technology also means understanding the non-static nature of it. Actor-Networks are changing and as researchers we only look at them in a certain configuration at the time of observation. This leads to the conclusion that black boxes are 'leaky' (Callon and Latour 1981) and can result in a failing network. There will always be other actor-networks and ideas that will try to open the same black box and punctuate. However, as Law states above, it is needed in order to avoid dealing with the endless complexities.

4.2.2 Sociology of Translation

The Actor-Network theory (also known as sociology of translation) has developed many concepts throughout the years by many different scholars, notably John Law, Madeleine Akrich, Bruno Latour and Michel Callon. These scholars are seen as the initiators of this theory but Michel Callon is the one who introduced the concept of 'translation' in sociology. Sociology of translation claims that to understand society it is primordial to analyze the way 'human' and 'non-human' interact (Zheng 2017).

We will see through his renowned research on the domestication of the scallops and the fishermen of St Brieuc Bay (Callon 1986) how Callon suggests to analyze scientifically equally 'human' and 'non-human' objects.

To do so, Callon advises to divide the notion of translation in four moments: *problematization*, *interessement*, *enrolment* and *mobilization*. These four moments help to understand the way nature and society are put together through a process of 'construction-deconstruction'.

4.2.2.1 The problematization

The first step is meant to organize the social with a problem formulation. In his article, Callon follows a research directed by three researchers coming back from Japan to know more about the way larvae anchored themselves before changing into scallops. The whole point of this research is to protect the scallops from extinction and preserve the business of scallops. By formulating the situation such as 'Can enough larvae be anchored to the collectors in order to justify the project of restocking the Bay?'

To go further the three researchers have to take into account the different actors related to this problematization and identify them. To be able to identify them, a territory, a content and a context has to be defined in order to mobilize all the other actors.

The point of this moment is to create a consensus around the problem and the way to solve it. And this is rather important when we talk about environmentally friendly behavior because the

way to achieve it can be quite subjective. Therefore some individuals go public in order to suggest a common way to understand both the problem and the solution.

In order to make a successful problematization, the actor has to convince the other actors to admit the proposed research program. The argument can be formulated in this way: if the problem wants to be solved in order to serve the other actors' interest, then they have to agreeing on getting together by understanding that they can all benefit from it (Callon 1986).

4.2.2.2 *The interressement*

Once everyone understood the advantage in creating alliance, the second step consists in stabilizing it.

According to Callon, the *interressement* is a set of actions 'by which an entity attempts to impose and stabilize the identity of the other actors it defines through its problematization.'

From there, it is necessary to define more in depth what *interressement* means in this theory. For Callon, the term interested comes from *inter-*, which means in between. In other words, *interesting* is put something in between two entities. In Callon's article the three researches build devices (towlines) in between them and all the other actors of the network defined during the problematization moment (fishermen, scallops, scientific colleagues).

The possible strategies and mechanisms by which an actor interest another actor is quite broad and can appears in many different layout or format. Sometimes it can be correlated to the preexistent relationship between two actors, or the similarity in the problematization. A suggest problematization matches in rare cases at hundred percent someone else's problematization. But no matter how well actors' thoughts match each other, the process of interressement consist in delivering a convincing argumentation in order to lock the actors into place.

4.2.2.3 *The enrolment*

Despite a convincing argumentation and a well-designed device, the process of interressement doesn't necessarily lead to actual alliances among the actors. To achieve the enrolment, the moment of interressement has to be successful.

But what does enrolment actually mean? The interressement step tries to define the role of each actor by giving them a reason to be involved in the whole process. This involves many negotiations throughout the interressement, and if the definition of each role is accepted by each actor, then the mechanism of enrolment is successful.

4.2.2.4 *The mobilization*

The last moment of translation involves the mobilization of the defined and enrolled actors. The initial actor (the three researches in Callon's article) is speaking on behalf of the other actors, and such thanks to legitimacy gained throughout the previous moments of translation. It is important for the initial actor to have consent from the other actors in order to represent them. If the consent is not given then the actor claiming representing all the other actors involved in the process, will end up only speaking for itself.

In a successful case, the spokesmen by claiming and speaking on behalf of the others, will automatically mobilize them.

4.2.2.5 Social ordering

These four moments shows how the social fabric is made and unmade through a site of struggle, a site that rarely stabilizes itself completely, 'a relational effect that recursively generates and reproduces itself' (Law 1992). No version of the social order, no groups, no actor is ever 'complete, autonomous and final' (ibid.). The way that social and nature, human and non-human entities define their roles and positions among themselves depending on the situation, shows how technology and knowledge is negotiated. In other words, how the scientific field translate their expressions, their results, their concerns, their controversies in order to make them accessible to others. A striking example is the amount of successful innovations. According to Vinck (2017), only 20 percent of innovations are viable, against 80 percent of 'inapplicable' successful research. But the difference between a success and a failure is not that significant since failures are only a part of a learning process leading eventually to a success. Why talk about successful and failed innovations? Because it is symptomatic to the dynamic of the social fabric on which actors and networks are constructed and deconstructed, and such up until a steadier structure is found.

This will be useful to understand the dynamic within the so-called sustainable field where innovations and discoveries have to undergo a sometimes difficult critique from the other actors, and it is where the four moment of translation can help to unveil the complex mechanism behind the scene.

4.3 The Green Attitude-Behavior Gap

As defined in the introduction the Green Attitude-Behavior Gap is the disconnect between consumers wanting to purchase greenly and doing it. This gap is a key concept in our thesis, and it is this exact problem we set out to research in Løs Market's customers.

This concept was coined by Joshi and Rahman (2015) in their article Factors Affecting Green Purchase Behavior and Future Research Directions. Many countries around the world are beginning to recognize the problem with climate change and environmental harm because of the impact of human consumption. This has led to the term 'sustainable development' which focuses on finding and developing sustainable ways of consumption in goods and services. Consumers should become environmentally responsible where they are able to consider the full environmental impact of what they are buying, using and disposing of. In this way a consumer has the agency to choose what they think is the best sustainable product.

Environmentally responsible consumers only are active once the consumer has become educated on the topic of sustainable consumption, otherwise they never see the problem with conventional consumption and never feel the pressure to do anything differently. According to Eurobarometer (European Commission 2011) 96% of Europeans stated that protecting the

environment was important to them. A further 67% stated they are aware of sustainable products and would be willing to buy them (Joshi and Rahman 2015). They are aware of the topic and understand the importance of consuming sustainably. However, there is little evidence to show that green consumption has increased very much. The gap is the attitude among consumers is positive towards sustainable products, but their behavior shows they are not.

The attitude-behavior gap could be explained by three factors. The first being the attitudes for green behavior consumers say they have been weaker than other attitude-behaviors they also hold. These other attitudes could be the desire shop in a more convenient location, but products from a brand they like, or dislike of changing routine and habits surrounding shopping. A second reason could be price, green products usually end up costing more to the consumer. This could put off consumers that shop with a certain budget in mind. Or perhaps consumers do not think the increase in price is worth it. A third reason is related to the discrepancy between personal beliefs and social influences. On the individual level, factors that go along with attitude-behavior like general disposition, and mentality of a person are all variables in their likelihood to be sustainable consumers (Phipps et al. 2013). These are internal mechanisms that control a person's outlook on a certain topic. If through a person's own internal logic and 'gut feeling' that buying sustainably is not going to help, then this is a belief they will hold firm and likely not change (ibid.).

On their own a consumer may think that green consumption is a good thing and be motivated enough to act and purchase, but the people in their surrounding may not think the same way. Often customers are not just shopping for themselves, most consumers are shopping for others as well. In a nuclear family normally, there are two consumers who have the buying power. From a wider perspective a consumer's social circle will also have an influence on what they consume (Joshi and Rahman 2015). Attitude of the consumer is not the only factor for affecting their behavior. There are other things which can influence the behavior and the strength of the attitude-behavior relationship. The Attitude-Behavior-Context (ABC) model was developed that tries to explain these difference factors (Guagnano, Stern, and Dietz 1995).

In this model attitude and behavior do not exist in a vacuum, the context of the environment the individual is in, is also relevant to understand. Consumers who do not have a strong opinion towards green consumption would not consume greenly on their own but given a strong context they might. Likewise, people with strong opinions towards green consumption would on their own consume green products but given adverse context the strength of their opinion can weaken. An example of this might be someone whose behavior is not green and is indifferent about what they consume. This person worked at a certain job where the norm was not green consumption or behavior. The person changes jobs to a company that has a strong culture of green consumption and through the context of their new job they are compelled to start behaving greenly.

Consumer behavior comes down to an intricate balance between individual and social factors and the strengths and weaknesses of all the factors pulling on the consumer in different directions. An individual can feel a certain way internally but the social pressure from friends, family and colleagues can overrule the internal feeling. We see the consumer having a social

affinity based on this balance. The attitude-behavior gap is complicated to quantify but is not only affected by the attitude of the consumer, but many other things as well (Phipps et al. 2013).

5. Analysis

5.1 Actor Network Theory

In this chapter we will analyze how Actor-Network Theory applies to our empirical data we have gathered in order to answer the question of the attitude-behavior gap. In 5.1.1 we will first look at the Actor-Network that we have mapped out of this topic. This will give us an insight into who are the relevant actors and how they are connected to one another. In 5.1.2 we will look at what we have dubbed the 'green-black box' which the model for sustainable consumption where inputs become outputs through a process that is opaque to the consumer. Finally, in 5.1.3 we look at translation in ANT. Through Løs Market Frederic is purposing a solution to sustainable consumption. However there is failure in problematization so not everyone will agree with his approach.

5.1.1 The Network

We would like to start off by explaining how mapped the actor-network for sustainable consumption.

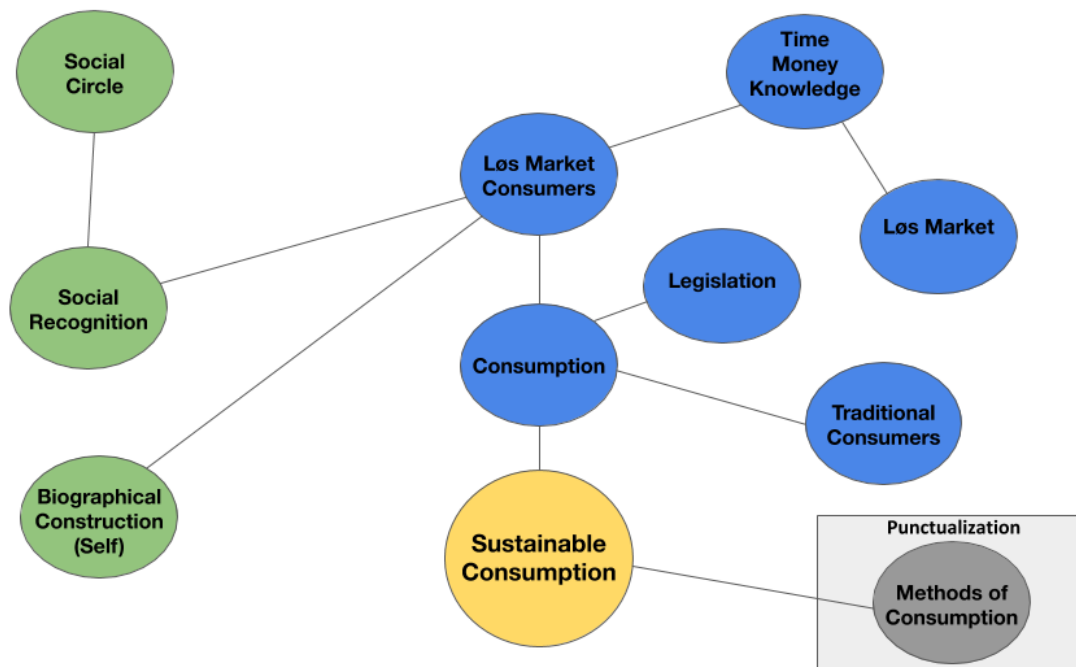


Figure 6 Sustainable Consumption Actor-Network (Phillips and Vérot 2018)

We formed the network based off of our observations and data collected during this research. Our actor-network is centered on sustainable consumption being the networker builder. We choose this because it is the technology that many actors in our network shape themselves around. In this network configuration the network is vertical with sustainable consumption on the bottom and all the other nodes going upwards. The direct connection upwards from sustainable consumption is consumption itself. Consumption is the core actor in this network since it is what everyone needs to do in order to survive on a daily basis.

The network can go in one of two directions either towards the traditional consumer node or towards Løs Market consumer node. We saw there were two main types of consumer actors; the traditional consumer and the Løs Market consumer. These two actors represent the main dichotomy in our research; the traditional consumer is likely aware that consuming 'greenly' is important, but their actions do not reflect that because they still shop at conventional supermarkets. The Løs Market consumers on the other hand are consumers that have been 'activated' and their behaviors match with their attitude on sustainability.

Branching off from the Løs Market Consumers node there is the Løs Market node, which is another big actor in this network because they are the facilitator for sustainable consumption. In between Løs Market and Løs Market Consumers there are the values, time, money and knowledge. This actor is abstract but, from our data collection we have found out that these are the values that Løs Market consumers must have. We found that for consumers to go to Løs Market, they must have time, money and knowledge. This will be discussed in-depth later in this chapter. On the left side of the network there are two nodes connected to Løs Market Consumers. We define two motivations for Løs Market consumer's behavior; they are internal and external pressures. As Phipps et al. (2013) discuss, the internal motivation comes from a consumer's personal beliefs and disposition about sustainable consumption. We call this the 'biographical construction' of the consumer. The other side of this is the external motivation which is determined by social recognition. The social recognition is determined by the social circle of the consumer and how much influence it has on them. The social circle, consisting of family, friends, colleagues can exert a pressure on the consumer and push them towards sustainable consumption, as Phipps et al. (2013) describes.

Our informants from the semi-structured interview backed up the idea of internal and external pressures of sustainable consumption. The first informant talked about how he was personally motivated to be a better consumer because of his awareness and attitude towards nature. He tried to convince his wife to also aim for sustainable consumption. Whereas Marie said the opposite happened. She told us she was already familiar with sustainable consumption because of her upbringing in the 1960's and 1970's, but she was not actively doing much to consume sustainably. That was until her son convinced her to do so. This demonstrates that a consumer at Løs Market chooses their behavior based on internal motivations or social motivations from their social circle.

At the bottom right there is the methods of consumption node which is directly connected to sustainable consumption. This node represents the technical details of what determines sustainable or traditional consumption. Its placement in the network is indicative of the idea that

the technical details are far removed from the consumers. However, through consumption it is possible to observe how it works. Methods of consumption is punctualized and internal actor-network is as follows:

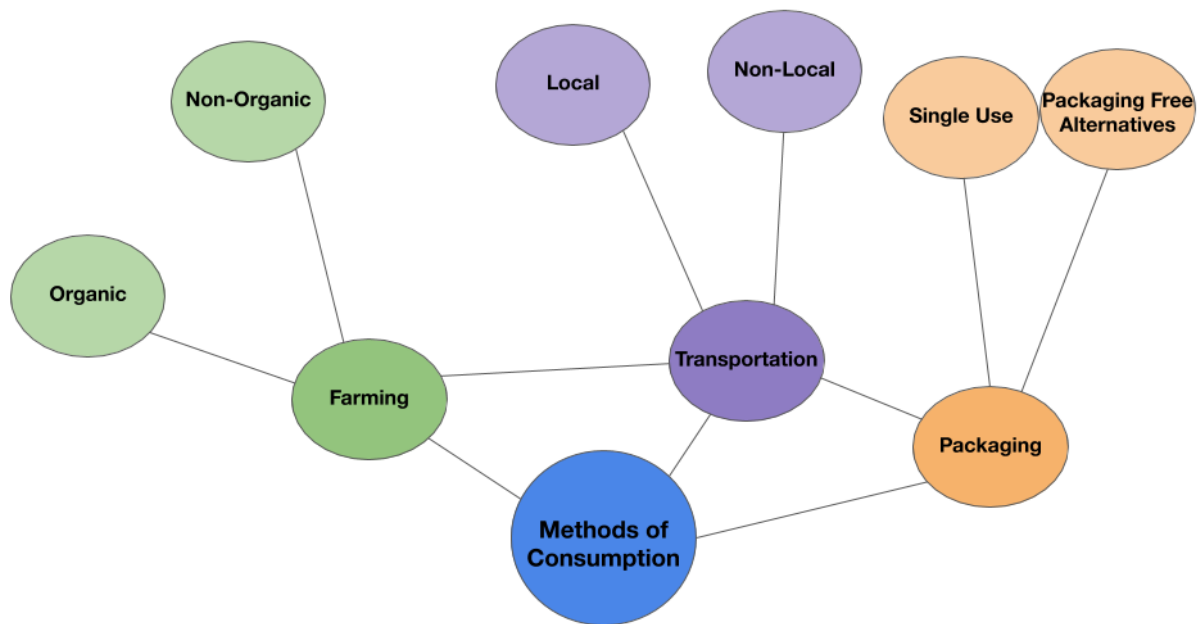


Figure 7 Methods of Consumption Actor-Network (Phillips and Vérot 2018)

This actor-network is populated by actors of technologies and techniques for either sustainable or non-sustainable consumption. This network is punctualized to make understanding it much easier. It is meant to represent the technical aspects of consumption. Methods of consumption are sustainable to a varying degree depending on sustainable or non-sustainable actors in the network. Connecting directly to methods of consumption are farming, transportation and packaging. These are the main three actors for determining sustainability of a consumable. Farming is how, where, and when a product is grown. The how, is answered by the organic and non-organic nodes. They are also their own complex actor-networks and have been punctualized for the sake of simplification. The where is referring to the physical distance the product is between the farm and the consumer. Longer the distance means more CO₂ used to transport the product. When is referring to when in the season the product is grown (if applicable). Out of season products for Denmark usually need to be grown in distant places where the product is in season, which means longer transportation. This is in relation to the transportation node, which has the local and non-local actors connected to it. Finally, the packaging node which deals with how the product is packaged and sold to the consumer. This again has two nodes connected to it; single use and packaging free alternatives. The single use packaging is not the sustainable choice and is what most conventional supermarkets will sell to consumers. The packaging free alternatives are solutions like Løs Market is using with bulk systems where the product is just sold loose, or the customer uses a re-usable container.

This actor-network for methods of consumption is a 'hidden' network for the average consumer. Since it is hidden consumers might not be aware and not educated about what goes into making a product sustainable or not sustainable. Things are further confused by the fact that there is no standardization of what is defined as a 'sustainable' product. Organic strawberries grown in Spain can be packaged in bioplastic and the consumer may think they are making the right choice by purchasing a 'sustainable' product. Because of the complexity and confusion in the network it does not make consuming sustainably straight forward and simple. The hidden network cannot be seen by consumers and is part of the 'green-black box' discussed in the next chapter.

5.1.2 The Green-Black Box

In this thesis the black box we will work with sustainable consumption. Because of the nature of the topic and the contents of the black box, we will call it the 'green-black box'. The green-black box is surrounding consumers at Løs Market and the process by which they are using or are not using sustainable consumption technologies.

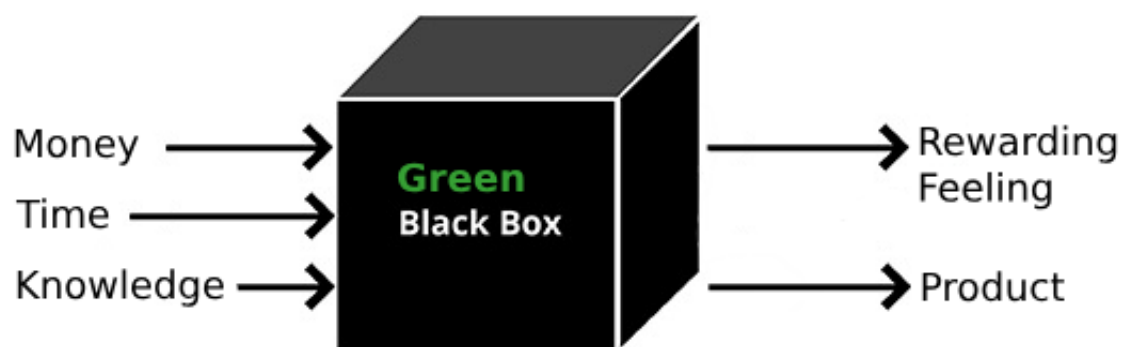


Figure 8 Green-Black Box of Sustainable Consumption at Løs Market (Phillips, Vérot 2019)

On the input side of the green-black box is money, time and knowledge. The money is the most obvious input for this black box. All goods will require money to purchase. Sustainable consumption does require more money on the part of the consumer. In general sustainable products will be more costly. It is due to the economies of scale for sustainable products being much lower than for traditional products. The cost per unit is lower if 500,000 of something verses 50,000 is produced. This extra cost is shifted onto shifted onto the consumer.

The second input is time. Which can mean two things, the first being the time which is the time spent by the consumer to shop at Løs Market. Extra time is needed to work with the Løs Market system of buying products. It takes extra time to bring in your own packaging, then fill up each container and then bring it all back out. If a consumer is doing their weekly or bi-weekly shopping this can result in many containers they need to somehow manage. During our participatory observation we saw people who were buying more than five products were slowed down by having to manage what they were holding. Often, they used the tables and counters to set down

things, which become confusing for the consumer when the stores got populated. One consumer we observed would take arms full of empty jars in from his cargo bike, fill them up, pay, return to his bike and take more. This individual repeated the cycle three or four times.

We also understand time as a measure of convenience for the consumer. It is not about the extra time needed to practically shop at Løs Market but it is the extra time needed to get their and back. Løs only has two locations in Copenhagen, either in Nørrebro or in Vesterbro. So if a consumer does not live in those parts of Copenhagen it can be out of their way to get there for their shopping. Another issue would be that Løs Market does not sell every product a consumer would need. This means that a sustainable consumer would have to frequent another store to get everything they would need. As our informant puts it:

'I mean the things I don't buy there it's because I can't get them. Like juice, orange juice or yogurt... it's like if they don't have it then we buy somewhere else.' - Jacob

This is also the basis for our assumption that not all Løs Market consumers shop exclusively there. Even among the consumers who are aware of environmental issues and wish to shop sustainability there is an attitude-behavior gap.

We also asked consumers in our survey how often they shop at Løs Market, their responses were:

How often are you shopping at Løs Market?

17 responses

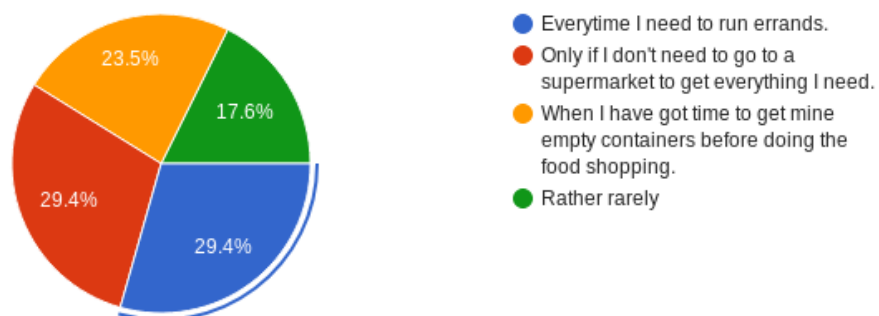


Figure 9 Ethnographic Survey Question #2 (Phillips and Vérot 2018)

Only around 29% of respondents said they go to Løs Market every time they run errands. While the majority responded otherwise. 29% responded that they only go to Løs Market if they do not need to go to a supermarket to get everything. 24% Responded that they go when they have the time to get their containers ready. Finally, 18% responded that they rarely go. Our interviews with the consumers from Løs Market agree with these results. One informant stated that she lives in Valby, but still comes into Nørrebro just to shop at Løs. She acknowledged it takes a lot

more time for her, but because she runs her own business, she could afford to do it. The other informant admitted, 'Of course you need to think... To plan a bit more or at least differently. You can't just decide to shop there just because you're nearby.' Consumers need to use more time and sacrifice on conveniences in order to shop at Løs Market.

Knowledge is an input because the consumers must have been informed in order to buy sustainable products. Consumers must already have educated themselves on why sustainable consumption is important and where they can shop to get the products they want. This does not mean that their knowledge is infallible and because of the complex technical aspects of sustainable consumption it can mislead consumers. Both informants we held interviews with were knowledgeable about environmental issues and understandings of why they needed to buy sustainably.

The first output of the green-black box is a rewarding feeling from the consumer at Løs Market. We had the idea that customers who purchase sustainably will feel a sense of reward for their efforts. This was proven correct by our survey responses, where more than 75% responded that shopping sustainably was rewarding for them. Despite the extra inputs in time and money the consumers still feel like they are doing the right thing by shopping at Løs Market.

How was your experience shopping in a packaging free supermarket?

17 responses



Figure 10 Ethnographic Survey Question #3 (Phillips and Vérot 2018)

The second output is a product, which is a tangible good the consumer can take with them and consume. It goes a little bit deeper than just a product in exchange for money. The consumer receives a product they think is sustainable and believe it is. The result of which is not only their money but also their time and knowledge of sustainability. Løs Market is doing the necessary work to ensure their products meet certain criteria. Another informant stated:

'...we should come back to a different respect for the food and the people who grow. Some people talk about food as a commodity, you know like they use the 'mad' and then the word 'fødevarer'. I hate this word 'fødevarer'. Because it means 'food commodity'. And it doesn't make any sense to me... So we need more respect for the growers.' - Marie

This informant's point of view is that the products are more than products and there is also connections to the growers in what people consume. There is something beyond the goods and it should not just be considered just a good or commodity as she puts it.

5.1.2.1 Opening the Green-Black Box

Opening the Green-Black box can help us to understand what is going on inside the technology of sustainable consumption and help explain the attitude-behavior gap for Løs Market consumers.

The box itself is the consumption technologies or methods which represent all the different types of sustainable consumption possibilities. As discussed above, there is an overwhelming amount of solutions for sustainable consumption that consumers can choose from. If a consumer has decided that they want to be a sustainable consumer, there are many paths for them to pursue. But is not certain for them if the path they choose is the right choice. The consumer would have to spend lots of time researching and understand the different effects of all the products they want to consume. Weighing the different types of products against one another to find which is the most 'sustainable' is a large task that not many would have time for. A popular example of this, we observed is the new plastic bag COOP is offering.

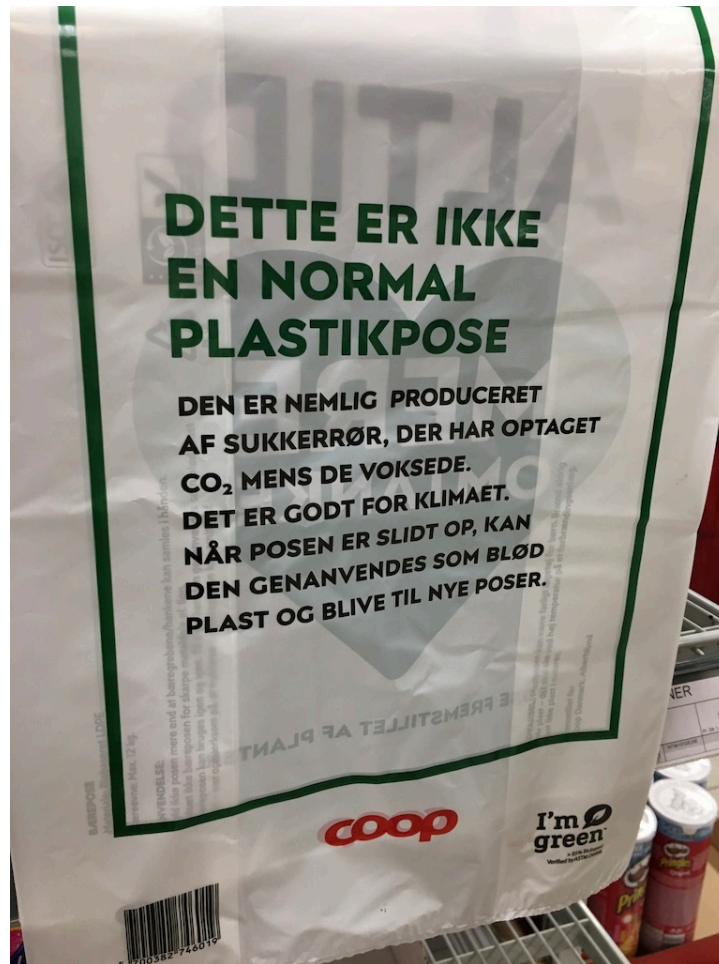


Figure 11 'This is not a normal plastic bag' - COOP Bioplastic Shopping Bag

This is a plastic bag we found COOP is selling at all their stores in Denmark. It is a 'bioplastic' bag made from cane sugar as opposed to conventional plastic which is made from oil products. The claim is that this bioplastic bag is better for the climate and thus sustainability. Bioplastic is an alternative to conventional oil-based plastics, but bioplastic is not any better for the climate than oil-based plastics. Neither is it better for the environment because bioplastic faces the same problems in nature as conventional plastics. Bioplastics require farm land to grow the material needed for their production. Farming is usually done non-organically and on a large scale uses more energy and emits more CO₂ than production of oil-based plastic bags (Consortium 2010). Frederic from Løs Market also told us his findings with bioplastics during the interview,

'If you replace the [oil-based] plastic with bioplastic what's happening then? ... You already use so much corn that you are suing all the water and corn is only taking 10% of the water... it's non-sense.' - Frederic

To present bioplastics as a better choice for the climate is not totally accurate to consumers and could lead them to believe their actions are sustainable. Many products on the market face this challenge because they might be labeled 'green', 'good for the climate', or 'environmentally friendly' These types of details about products are hard for consumers to discern what a product will actually do for sustainability and what it will not do.

Our informant stated they trust Løs Market to provide them with products that are the best choice in terms of sustainability:

'it's kind of like if you go to Løs and it's the kind of store that it is... I kind of trust that I don't have to look through the label to look at the ingredients .. I trust them...' - Jacob

This is representative of the black box that exists for sustainability consumption. The informant does not know what the best option is, but they rely on Løs Market's understanding it for them. The green-black box is opaque because of technical details of consumption that the consumer cannot know because of their position in the network. They are positioned too far away from the technical knowledge in the actor-network and it does not have a big impact on them. The mechanisms for sustainable consumption are obscured by the technical aspects of the farming, transportation and packaging. This distance in between the consumers and the technology in the actor-network can account for some of the attitude-behavior gap. The technology of sustainable consumption is punctualized and therefore unstable and precarious. In the current network configuration, it is only a few actors that understand the technology enough to see clearly what a sustainable choice is.

5.1.3 Translation and its four moments

Another factor that contributes to the attitude-behavior gap is the concept of translation. It is important to see how the concept of translation given by actor-network theory can help to understand the existence of Løs Market in itself. Several actors are more or less related to its existence and to the way Løs Market has taken place and organized itself both physically and ideologically.

In his article about the scallops in Saint-Brieuc, Michel Callon (1986) shows in an original way how the social and the natural world are negotiated to progressively take shape and, in case of success, stabilized themselves around a certain type of knowledge recognized as legitimate, as well as its spokesmen. To illustrate his thoughts, he maps out the different connections the different actors involved in the scallops case study. He draws up a list of 4 actors, namely – the three researchers, the Pecten Maximus (the scallops), the Fishermen of Saint-Brieuc and the scientific colleagues.

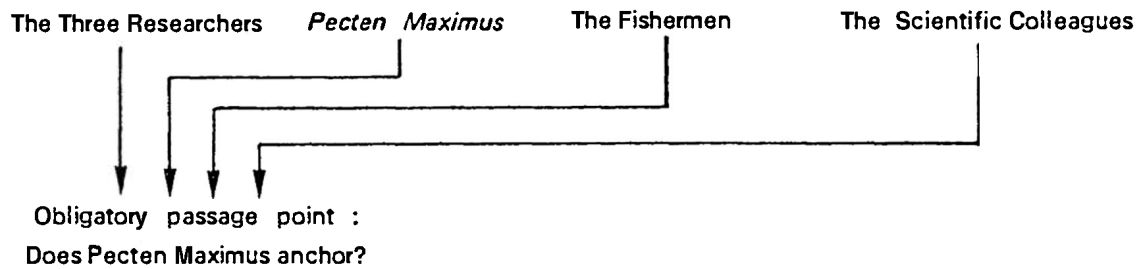


Figure 12 Dynamic properties around the problematization process (Callon 1986)

From this drawing we can make an analogy with our fieldwork, where the three researchers can be Løs Market or Frederic itself as a sort of pioneer in this type of grocery, the pecten maximus could be the consumers, the fishermen could be the producers of organic goods and the scientific colleagues could be the politicians and the distributors can be added to the network. And the obligatory passage point (OPP) can be: how consumers choose to shop sustainably?

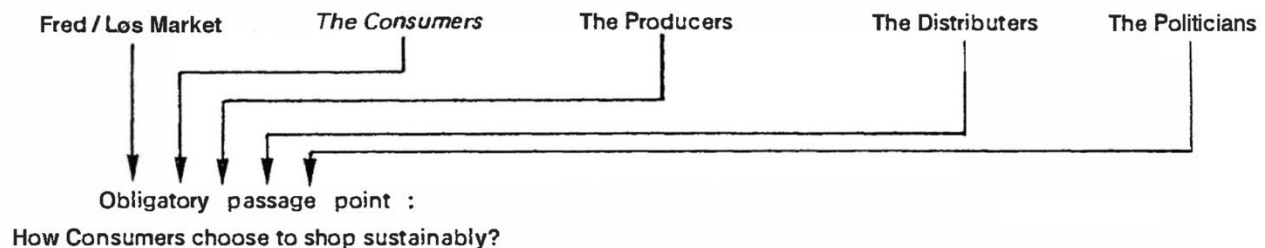


Figure 13 Dynamic properties analogy around the problematization process

As Frederic indicate during the interview, the shop has the objective to prove that sustainable stores are possible. And this must undergo a process of translation which is divided in four moments.

5.1.3.1 The problematization

Frederic explained in his interview that he personally saw sustainable markets during a trip in Grenoble (France). To get to know more about these businesses, he met the people involved and decided to experiment with this in Copenhagen. The question: 'Is this type of store transposable to Copenhagen?' Of course, at that stage it is difficult to get an answer, but according to him, people's habits, the green initiatives coming from many different actors, like citizens, supermarkets, politicians, and others and also the way the city is organized (bike lanes, public transportation) can give a hint for a successful enterprise.

The problematization has been explicitly said by our informant in a slightly different way - 'how do you change people's habits?'. The way we decided to put it was to pinpoint the actors having a significant role in the network in a clearer way - how consumers choose to shop sustainably?

This way of putting it involves directly and indirectly different actors; the consumers, Frederic (and to some extent his shop), the producers, the politicians, the distributors. These actors are appearing in several parts in our research; the interview with Frederic tackles all of them, but also in our survey answers and in the other interviews we conduct with the costumers.

The way Frederic sees these actors is as follows:

The consumers are the one that should change their habits and make responsible choices when they consume. The producers should go organic because it is a safe investment and it gets more and more mainstream. The politicians should get more in touch with the problem of climate change and environmental issues and take pragmatic actions to incentivize all the other actors to adjust their behavior to currents environmental issues. And the distributors should be more aware of their footprint impact and try to reduce packaging on their merchandise.

But Frederic pointed out that all these actors are linked by a great cause, which is making consumption sustainable and to some extent preserving the planet. And by using the same analytical process we can find in the Callon's research, Frederic must convince the entire network gravitating around sustainable consumption to change their customs to preserve it. And as he says, the solution can be found if each actor agree on making alliance. And in this case, Frederic says using Løs Market as a 'tool' to change the current consumption dynamic, which can be seen as an experimental shop to show the path towards a more sustainable way of consuming and making business in general.

But this leads us to the second moment of translation, namely the moment of *interessement*.

5.1.3.2 The interessement

So, as we saw, Frederic is trying to point out different group of people that can have a role to play within the situation he tries to problematize. As we can read in Callon's article, each entity can decide to validate the problematization and integrate it or reject it by giving a different interpretation of what is the problem and how to solve it, if there is any.

Callon says that the word *interessement* is used because of its specific etymology. It means interposing in between something or someone. Which makes a lot of sense when we look at how Frederic talks about the different actors. His problematization falls on the way of the consumers, when he says 'they should change their habits', he does the same about the producers when he says 'they should all invest in organic farming', and the same about the politicians when he says 'they should put the VAT at 5% on organic goods', and finally Frederic does it again about the distributors when he says 'people working for this supply chain they are on another planet! They tell us that we are completely mad!'.

His shop is an archetype of the *interessement* process, to reuse the term used by Callon (1986) when he talks about the towline and its collectors. By opening a business like this one, Frederic tries to draw attention on his problematization to prove that it is possible to have a place respecting thoroughly the conditions to be sustainable and make it fit the law of the market. The Løs Market customers were consumers seeking to do their food shopping in a more sustainable way and Løs Market was standing in the way as a potential solution to their concerns. If Løs

Market continues to exist and grow through time, the intersement process can lead to a potential alliance with the actors mentioned earlier on. The creation of alliance is crucial at this step if Løs Market wants to ensure its existence.

5.1.3.3 The enrolment

Drawing attention on a specific problem by interposing a solution on the too often confusing path of sustainable consumption is a real challenge. But once the attention received, Frederic needs to define the role for each actor and convince them directly (distributors, producers) or indirectly (politicians, consumers) to play along. The role they have to play is defined by the statement that Frederic makes when he says that if we all want to preserve our planet, consumers need to shop more responsibly and sustainably, producers need to stop using pesticide and grow organically if they want to preserve their soil, distributors need to see their financial interest in reducing packaging and doing more local business and the politicians has to endorse the movement by making new laws if they want to achieve something and be recognized publicly. This is why it is crucial for the owner to make the actors change their habits in order to make a success of its pioneer business. Callon (1986) talks about 'multilateral negotiation, trials of strength and tricks' to describe the way that the enrolment take shape in practice.

In this case, some external factors (which exclude the actors we have been mentioning so far) can affect Frederic's goals. The law of the market is one of them. Implacable, if the shop cannot manage to make ends meet then his whole enterprise and all the given battles will be lost and abandoned until someone else problematize the situation differently. But there is at least another external factor that Frederic can hardly fight alone, and it is simply time. As we can find in the survey and in the interview with him, time can play against him. According to Frederic and his costumers time can have a direct consequence on someone's consumption behavior. We will see more in detail the problematic of time with Hartmut Rosa's theory and how the need for time can affect the whole network of actors, with a specific focus on the consumers.

And a last external factor we detected is the experience of shopping at Løs Market, and Frederic is striving to give a convenient shopping experience in his shops. Shopping in a packaging free store implies a change for people's habits, everything must be, in his words, 'convenient'. If too many costumers' things that it is too much of hassle to shop there, then the enrolment process fails.

5.1.3.4 The mobilization

The mobilization part is the last moment of the translation and involves representatives or spokesmen (as Callon says) of all the actors related to Frederic's business. And it seems that Løs Market represents an objectification (or translation) of the necessity of providing alternatives solution to the conventional consumption. Frederic expects to speak on behalf of the consumers and organic producers who express the need for acting on solving environmental issues. Politicians and distributors are not easy to convince therefore represent. The distributors contacted had some strong opposition to his suggestions we saw earlier on.

To say it in a clearer way, the mobilization is all about ‘mobilizing’ the consumers, the producers, the politicians and the distributors on their behalf by claiming to represent their wishes or the wishes they should have according to the owner of the shop.

What matters to Frederic is to make the four groups of actors (see Figure 5.1-9) agreeing on the fact that the environment needs to be preserved and this can be done by changing the way we produce and consume. Therefore, each sector gets shaped by the problematization that Løs Market suggests - sustainable consumption (consumer group), sustainable production (producer group), local and reusable packaging (distributor group) and endorsing sustainable market (politician group).

The four moments of translation give us a better understanding of the network in what Løs Market is part of. And gives us the possibility to reformulate the OPP to - how to preserve the environment? If this OPP is accepted by enough members of each group, then Løs Market can be in position to be their spokesman and expect to make its business viable by assuming this position.

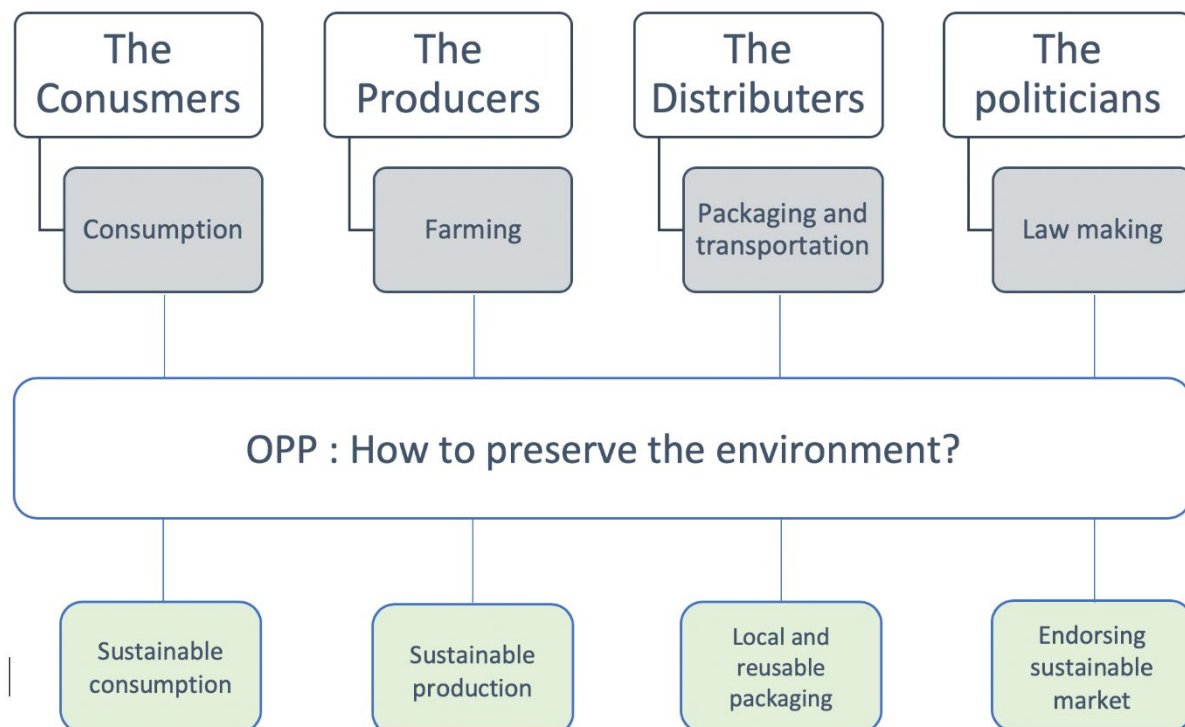


Figure 14 The OPP layout (Phillips and Vérot 2018)

To summarize, the four moments of translations reveal a few reasons among many others that can explain the attitude-behavior gap that we can observe on the consumer group but also on the other actors of this network. In the introduction of this research, we pointed out the significant gap that can occur between people’s opinions and people’s behavior when it comes to act to protect the environment. This can be explained with the lack of means on people’s

everyday life to make a change but also it reveals the necessity for a group of people or a society to agree on a common understanding of the situation. This is needed in order to agree on the implementation of a solution plan. That is why, it is important for people like Frederic to succeed in every moments of the translation. It shows in a more intelligible manner how the 'social and natural world progressively take form' (Callon 1986), and how the representativity of some actors has to be negotiated through a process of struggle for legitimacy in order to be in a position to speak on behalf of represented actors.

5.2 Greener or faster?

In modern societies everything seems to tend towards more effectiveness which often means doing more with less. Our daily lives have been highly influenced by this diktat and we feel the pressure to be more productive, more efficient, more informed, healthier, younger, smarter, etc. In other words, being better than yesterday. All these social injunctions are strongly shaped by a social fact named *time*. And we will see through our field that being more environmentally friendly can be synonymous with using more time.

Throughout our investigation, we stumbled upon the term 'time' relatively often and decided to see it as an important influencing factor on people's life. As Hartmut Rosa (2010) explains it, time and more precisely its acceleration is inherent to the structure of our societies and can be felt on many aspects of our daily life. If we look at the characteristic of time acceleration, it appears as an 'totalitarian' entity as it fulfills every aspect of what definition is given - there is a pressure on the subject's desires and actions, it is impossible to escape from it, it is omnipresent, no matter where we are located, and it is almost impossible to criticize or fight it (Rosa 2010).

Marie, one of our informants, tells us that 'spare time' plays a big role in people's decisions and has a direct influence between a green or non-green behavior.

'I do have freedom [at my work] and realized that it's a part of the reasons that make me think about these things.

-What do you mean when you say 'freedom'?

-I mean spare time!'

From this extract, it is clear that having a full-time employment requires being somewhere every day on average 37 hours a week, can dissuade a more sustainable behavior. And Marie continues by saying:

'Look, how could we have this meeting [interview] at 11 o'clock in the morning on a week day, if I had an office-job? That's why for me it has to do with the infrastructure and how people work. You are expected to be at work at 8 o'clock, go home at 4... can we do things in a different way?'

A conventional week is highly structured by time and leave a reduced amount of spare time which can be translated as 'freedom'. Freedom to decide, freedom to enjoy family moment instead of going to work or cooking. According to Rosa, the problem is the amount of tasks that we juxtapose on a given period of time. Instead of enjoying the available time, we decide as a society, to work longer or work further away, as we can commute faster, cook faster, clean faster, shop faster, and so on. So all these technological accelerations has an influence on social norms, and creates an social acceleration.

Frederic highlighted one of the consequences when he says 'we don't have time to cook'. This shows how busy our schedule became, understanding; so busy that we 'don't [even] have time to cook' anymore.

Since buying more sustainably can involve buying less processed food, it implies spending more time in the kitchen. And according to Løs Market's customers it can be more time-consuming to shop there. As the containers are needed, planning is an important step.

But of course people manage to make food for themselves and others but it implies making choices that are not always the best to preserve the environment.

Marie gave us an interesting point of view when she talks about food:

'We are all very aware of the situation and the way we shop [consume]. So why do people now go to the supermarket and buy a ready-made dinner wrapped in plastic? It's because they feel pressured! Because they long for spare time. They would rather, maybe, sit around with their kids than standing in the kitchen and cook!'

Furthermore, the consequences of the acceleration of our society can be seen in our survey in several answers.

When we asked the question 'how often do you shop at Løs Market?', one third of the respondents answered, 'only if I don't need to go to another place to get everything I need'. This entail the amount of effort put into it, but this doesn't go without the amount of time needed to achieve the grocery shopping task.

That is also visible in this answer 'When I have got time to get my empty containers before doing the food shopping', which encompasses 23.5% of the respondent. Once again, we can see a link between convenience and time. Rosa does not treat convenience as such as the meaning can be quite subjective depending on the situation and the actor. But within our fieldwork we realized that when the term *convenience* is used, it is to be understood as a synonym of *time saving*. More explicitly, something convenient is not only something that helps you to achieve a task without hassle, it also implies that you are optimizing your time by doing it.

We believe that it is an important point in Rosa's theory, and it needs to be developed more thoroughly as Rosa does not mention convenience explicitly. We can understand it when he uses the concept of the acceleration of the 'pace of life'. As we saw earlier, this type of acceleration implies the increase in number of tasks completed within a time unit. And such tasks can be fulfilled one after the other or simultaneously. Thus, the term *convenience* refers to the capacity

to a given task to be achieved with the minimum amount of time and/or its compatibility with other tasks that can be achieved at the same time.

5.2.1 The quest for (yet) valid information

Where Løs Market can be seen as a time-consuming shopping style, for the reasons we just mentioned, it can also benefit from the fact that only sustainable items are sold in the shop. Jacob talks about how convenient it is to have a shop that excludes everything that is not sustainable. According to him, it makes his shopping experience easier as he doesn't need to look out for the ingredients or the origins of what he buys. The shopping task becomes shorter than going to a conventional supermarket and having to skim different sections to find the desired product. It seems difficult for the average consumer to find their way through all kinds of products. Finding the product that fits sustainability expectations can be quite puzzling. And sometimes something that was more sustainable becomes as bad as anything else. And this occurs when people start to investigate behind the labels. That's what Marie highlights by saying that organic doesn't go with sustainable. According to her, whereas organic farming is significantly better than conventional farming, doing monoculture farming is not a solution to preserve the biodiversity and to some extent our environment. This example is symptomatic of an inconstant knowledge when it comes to the definition of environmentally friendly.

In his book, Hartmut Rosa (2010) writes about the increase of mismatch occurring between expectation and reality. He calls that the acceleration of the social change. This concept illustrates rather well the inconsistency of what should be done in order to preserve the environment. It can be hard for the average consumer to stay updated and make the right choice. Because it can be rather challenging to stay well informed in a world where time is a rare commodity, some consumers decided to avoid processed food as much as possible. By doing so, their expectations (*expectation-scape*) have higher chances to match the surrounding (*space of experience*). When buying an unprocessed good, the access to some information like the origin and the exact content become easier to pinpoint. By doing so, the consumers are entering a more steady *space of experience*. Especially, in shops like Løs Market where the variables that a product carries along is better known by reducing as many variables as possible. The variables can be the environmental cost of the transportation between the producer and the end-consumer, but it can also be the impact of the packaging on the environment through its entire life. That's what Frederic tries to do when buying local, packaging free and organic. Cutting as many steps as possible between the two ends of the spectrum.

5.3 Attitude Behavior Gap

The attitude-behavior gap is influenced by different factors. Such as the consumer having weaker or strong attitudes towards sustainable consumption, the price of the good, or difference between personal beliefs and social influences. But how do these factors tie into the larger picture which help explain the reason for a choice? The attitude-behavior gap can be broken

down into two different types of factors; the contextual and the situational. Each of these sides can be explain by the Green-Black Box and Rosa's theory of acceleration used above. In this chapter we will explain how these theories can explain the contextual and situational factors involved in the attitude-behavior gap

5.3.1 Attitude Behavior Gap Ratio

We understand the attitude-behavior gap among Løs Market consumers as a spectrum. No consumers are 100% shopping exclusively at Løs Market or even truly 100% sustainably. This is simply not possible. Even Frederic admitted to us that he still consumes products with plastic from time to time and it is inescapable fact of modern consumption. We see the attitude-behavior gap is a prism which rather than diverting light into certain colors it diverts consumer's behaviors. When a consumer makes a choice where or what to purchase there is the possibility that the choice can be made sustainably. The choice comes down to different factors which we have mapped. The synthesis of these factors determines the outcome of the attitude-behavior gap.

We believe that this can be explained with a formula that results in a ratio. We call it the *attitude behavior gap ratio*. In this ratio there are two values, attitude and behavior. If all the attitudes match the behaviors, then the ratio is equal to one. If the attitudes are greater than the behaviors, then the ratio is less than one. And finally, if the behaviors are greater than the attitudes then the ratio is higher than one. This results in a negative, equal or positive attitude behavior gap ratio respectively. The result is the synthesis between attitude and behavior depending on the factors contained within. The different factors which are either contextual or situational respectively. The strength of weakness of each factor can combine with the other factors to determine the outcome. The attitude and behavior are an amalgamation of the factors. The contextual factors affect the attitude of the consumer and the situational factors affect the behaviors of the consumer. The contextual factors stem from the attitude-behavior-context developed by Guagnano, Stern, and Dietz (1995) where consumer choices and patterns are explained by factors from within the consumer's own context. The context in which the consumer exists has an influence on their attitude. These are mechanisms that determine a consumer's disposition towards a certain topic. There are four contextual items that can affect a consumer's attitude. Them being knowledge and awareness, sociocultural environment, socialization background, and biographical construction. Knowledge and awareness is related to the consumers own current education and involvement on the topic. An individual without much knowledge or awareness on a topic is less likely to have a strong opinion formed about it. On the other hand an individual with knowledge and awareness on a topic will have already formed an attitude about said topic. The sociocultural environment is referring broadly to the social landscape of the consumer. This encompasses their own customs, habits, values and beliefs which are influenced by the society and culture they are living in. Socialization background is influenced by personal history, life experience, education, and profession of an individual. Finally,

biographical construction is how actors perceive and construct a story of themselves through their own history.

On the other side of the ratio there are situational factors, which are factors from the consumer's environmental surrounding the consumption. These factors being: Purchase power, convenience, availability, time, infrastructure, and societal norms. Convenience is about how easy to use things are for the consumer. An example might be the extra steps needed to fill up bulk containers with product. If the process is too complicated, then it will turn the consumer off to this method. Availability is about how easily found is a product or solution. Simply put, if there are not many of something then consumers must work harder to find it. As we observed with our survey responses not many are willing to travel to purchase something if it is out of the way or does not contain everything they need. Time is related to the consumer having to use more time on a certain process of consumption, in our case that could be the bulk systems at Løs market taking more time to use than just grabbing a bag of pasta and involving carrying the containers. This is an active choice to go to Løs Market instead of going to the supermarket next-door. Concerning the purchase power, it is a quite straightforward factor and it concerns the price of the goods. As we heard from our informants some dread higher prices, and it seems to be common sense to think that environmentally friendly items mean more expensive purchases. The infrastructure is everything related to the physical organization of an area. To be precise, Copenhagen is a city that promotes the use of a bicycle as citizens can find exclusive and safe bike paths almost anywhere, they go. Therefore, it is easier for an inhabitant of Copenhagen to be more environmentally friendly when commuting than, for example, an inhabitant of Paris. Regarding the societal norms, it is important to not confuse it with social norms. The norms of a society, in our understanding, are every explicit or implicit behavioral or moral value hints spread around the city, imbedded in street furniture, billboards, anti-pollution campaigns and so on. Finally, technical literacy is about the consumer's ability to understand the technology behind what they are consuming in the moment they are making a purchase decision.

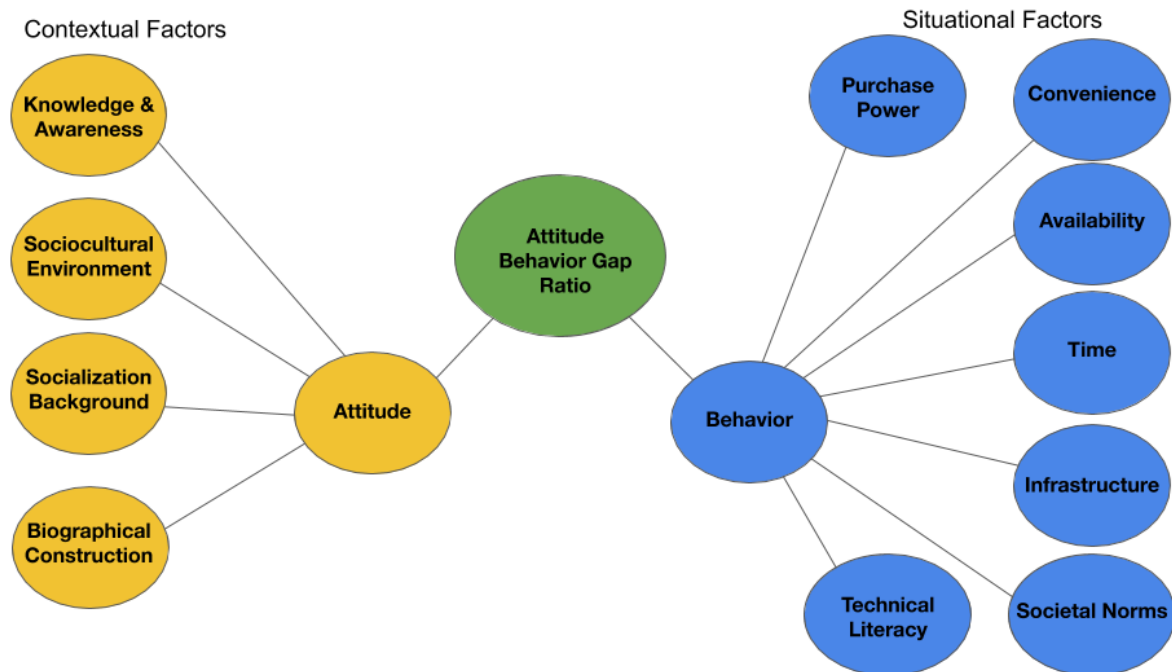


Figure 15 Attitude Behavior Gap Ratio Visualized

5.3.2 Explaining the Attitude Behavior Gap

In this section we will explain how the theories we have used in this analysis fit into the attitude-behavior gap for sustainable consumption. Actor-Network theory use relevant in explaining some of the situational and contextual factors in the attitude-behavior gap. By looking at the green-black box we labeled one of the inputs as knowledge and awareness from Løs Market consumers. This falls into the contextual factors side of the attitude-behavior gap ratio. Knowledge and awareness are contextual factors in influencing the attitude in the attitude-behavior gap. A consumer must have a certain knowledge in order to align their behaviors with sustainability. If a consumer has no knowledge about the topic then it will never influence their attitude. Likewise, with awareness if they have heard somehow that certain products are bad for the environment this has effect on their attitude for what they will consume. In our case, consumers at Løs Market are inputting a specific knowledge and awareness which informs their attitude on the topic.

Money is also an input into the green-black box. This is a barrier to entry for sustainable products which are in general more expensive than conventional products. In the attitude-behavior gap ratio this is a situational factor we call purchase power. It is the measure of what an individual can buy with their amount of money. For some consumers this is higher or lower and either they have or do not have the budget to buy sustainably.

With the green-black box, consumers can merely see and understand the inputs and the outputs of the sustainable consumption. They do not necessarily understand what makes a product sustainable or the different technologies behind sustainability. Like Jacob stated, they just 'trust'

that Løs Market has done this for them. But even things that are labeled as green products are not necessarily green, like the COOP bioplastic bag. The customers are not capable of discerning this difference due to obfuscation from the green-black box. This is one reason for the attitude-behavior gap. If all customers at Løs Market understood what was happening inside the green-black box then they would know which products and technologies are most sustainable and their behaviors would reflect this. This comes down to the consumer's technical literacy of sustainable consumption. A lack of technical literacy leads to misguided behaviors because the choice in what should be consumed is not clear or not known.

With acceleration by Rosa, we can see that time is precious for modern individuals and they are expected to do more as technology improves. Consumers are pressed for time to fulfill their necessary shopping for food and daily goods. Which means that they will seek solutions that are most convenient for them. On the attitude-behavior gap ratio we see several factors that are in connection to modernity and acceleration. The first being time, which was also an input into the green-black box. The amount of time consumers have will determine their behavior. In our case all consumers shopping at Løs Market have an excess of time. This is because using the bulk systems and managing your own packaging takes more time than a conventional supermarket. Closely connected to time is convenience, or how easy it is for the consumer to use something. If something is not very easy then it will be reflected in the behavior of the consumer and they will not use it. With Løs Market we observed that the bulk systems worked well if the consumer has a few jars or containers, but when someone is trying to buy for a whole week then it gets less convenient. We observed one customer that brought 15-20 jars of product from Løs Market and every 5 jars (what he could hold in his hands) he would check out, go out to his bike, deposit the full jars, take empty ones, and repeat. The bulk systems at Løs Market are not convenient for use for large shopping trips.

Availability is also closely connected to time and convenience. It is about how many opportunities the consumer must use or find services and products. With Løs Market there is only two stores in all of Copenhagen and the two stores serve the neighborhood and surrounding area well, consumers in other parts of Copenhagen are less likely to go out of their way to shop at Løs Market.

The attitude-behavior gap ratio is influenced by different factors which we have defined as being either contextual or situational. Through green-black box we can see how the factors of knowledge and money are all factors for determining the outcome of the attitude-behavior gap. The contents of the green-black box are a barrier for consumers and represented by the factor of technical literacy. Consumers are not knowledgeable about the technical inner workings of sustainable consumption and will not always make the sustainable choice because of this. Finally, acceleration means consumers are pressed for time in modern society and to consume sustainably requires time. This breaks down into three factors: time, convenience, and availability. All of which play a role in determining the consumer's behavior. If something is not convenient, available or takes too much time, then there is a low likelihood the consumer will align with that behavior.

6. Discussion

6.1 Reflections

In this chapter we will discuss our reflections, reflectivity, feedback, and observations we gathered about sustainable consumption during the process this semester. These are topics we felt should be brought up in the discussion as part of the wider picture of this research.

6.1.1 Marketing of Green Products

We discussed in the analysis an example of a bio-plastic bag that COOP is using instead of conventional plastic bags. The branding on the bag is such that it makes the layperson think that bioplastic is clearly the better option and uses less CO₂. This is not necessarily always the case and bioplastics are not a clear green alternative. Yet, it is presented to customers as one. This leads us to the concern that perhaps 'green marketing' is being used as a market trend to attract consumers who want to buy sustainably. This is misleading to consumers and could be damaging to the environment because the solutions that are environmentally friendly are not being promoted. Rather non-sustainable or not fully sustainable solutions are being promoted instead. Those consumers who are closing their attitude-behavior gap and trying to shop sustainably are doing it in the 'wrong' way because they expect what they were buying is good for the environment. This is symptomatic of the green-black box for sustainable consumption, if consumers were able to understand what makes something sustainable then they would be equipped to navigate through the green marketing.

The Danish Ministry for the Environment is trying to introduce a package labeling that could help inform consumers better about the actual environmental impact of a product². They want to put a sticker on the packaging that shows the impact with ranking. It is not clear what this ranking will be, but it will convey to the consumer the impact their purchase has on the environment and climate. This should be something that makes the choice clearer to the consumer. This is a step in the right direction for opening the green-black box for consumers along with making the them able to discern if a product is sustainable or not.

6.1.2 Technological Angle

Because of the technology we have chosen for this research, the question might arise, 'Is this research techno-anthropological?' We would argue that yes, it is. This paper is focusing more on the anthropological and by extension sociological side of answering the attitude-behavior gap. The technology is not always visible or clear throughout. But as Birkbak (2013) states, all anthropology should be considered techno-anthropology. Technology and humans are separated but are intertwined with one another and to try to explain one without the other is only getting half of the story. Humans create and invent technologies their involvement in them is explicit.

² <https://www.thelocal.dk/20181008/denmark-to-mark-food-according-to-effect-on-climate>

What we define as technology is always crafted and invented by humans. Since we are the ones inventing it we are the ones making it purposeful. When a technology is created, its function is intersubjectively defined by the users. In other words, users all agree on the function assigned to the technology.

We wanted to make this semester a continuation of last semester and make it exclusively about packaging technology. But Frederic told us during the interview that packaging is a piece of a much larger problem. The problem being sustainable consumption overall. We later did not realize that sustainable consumption could be the technology for this project until we began to apply Actor-Network theory to this case. In ANT the network is almost always centered around a technology and the actors all have some type of connection to the technology. The technology is made relevant by the actors' interactions with it. As mentioned in Chapter 2, we see sustainable consumption not as a tangible technology but more as an abstract one. It is a type of technology that is a collection of technologies for making food and necessary products sustainable. This would include the way in which crops are farmed, for example whether the farmer is using organic or non-organic techniques, how much plastic is being used in the product, how much processing a product needs before it is ready for consumption, and finally how long a product must be transported in order to get the sales point.

Sustainable consumption technology is not only defined by the way it is made but also through the way we intersubjectively define its function. Put differently, it is the way we all define the purpose of what a sustainable product is meant to be.

6.1.3 Missing Data

As we began to analyze the data we collected, we realized that interviews and survey responses from the conventional consumers would have been useful to compare against the data from the Løs Market consumers. We would have been able to directly compare behaviors from both groups and been able to make conclusions about the differences and similarities. It could have revealed more about what causes the attitude-behavior gap. However, this research is limited in scope to the attitude-behavior gap in Løs Market consumers, and gathering data from conventional consumers would be off the topic of this research. It would make a good premise for further study or research where the focus is more centered on the difference between two consumer groups.

Regarding the attitude behavior gap ratio, we developed for this research, we acknowledge the contextual factors contain elements about a consumer's background, life history, personal experiences and so on. These are factors that are exclusive on an individual to individual basis and were not part of the scope of our data collection or analysis. We focused mostly on explaining the phenomenon of attitude-behavior gap from a sociological perspective. That is not to say the contextual factors are invalid only that we do not fully use them with the theories because of the direction we took. Looking closer into the contextual factors would be grounds for further research. Combining this with previously mentioned interviews with conventional consumers would be a good approach to collecting data to be used on the contextual factors.

6.2 Action Research

As mentioned, we are using Action Research as our framework for this project. Which means that we will need to concretize our findings into solutions that Fredric can use practically. This is challenging because it means taking something technical and turning it into tangible solutions. One of our main motivations for writing this thesis was to discover the reason behind the attitude-behavior gap and then try to work with someone to close the gap. Despite working a whole semester on this problem, according to the Lewin model we are between the unfreezing and change steps. We have researched and planned actions and then learned from the results of those actions. We have had feedback loops between the unfreezing and changing steps. For example, interviewing Frederic and hearing his thoughts on the problem help inform what the solutions for the attitude-behavior gap should be. The surveys and interviews with consumers also gave us feedback about what they would like to see in a solution.

We found that changes come slowly and implementing solutions will take time. Frederic is a small business owner and for him to make changes takes lots of resources. Every time we met, he was always busy and we understand, from his perspective Løs Market is his livelihood. To move onto the refreezing step, we need to present our solutions to Frederic and hear his feedback and perhaps go back and make changes yet again. To finish the 3-step model, we would need to see the solutions implemented. Unfortunately given the scope of this project and the solutions, we will not be able to see any of the solutions we suggest implemented. Because of this we will be 'stuck' on the second step for this research. Despite this, we still have solutions to present that we feel are worth consideration given all the feedback and input we have gotten from informants and data collected.

6.2.1 The Solutions

From all the data we've collected, we see two possible solutions that could be implemented to help close the attitude-behavior gap. The first solution being better education for consumers about the topic of sustainable consumption. This would help the consumers understand more of the technical aspects of sustainability and better inform their choices. As our first informant told us, he 'trusts' Løs Market to sell the products that are sustainable, but he does not investigate this for himself. This is a symptom of the green-black box for sustainable consumption and education on the topic could help. This education could come in the form of workshops that are ran by the community. A workshop where the technical details are discussed, such as the choice between organic and non-organic, the pros and cons of each method on the land. Julie our contact from Frederic told us during an interview that she runs many workshops for free where people are taught alternatives to conventional products. She told us that the only way people can change is if that change is presented to them and they can see how it works. She felt that many people do not want to take the first steps towards sustainable consumption because they see it as having to change everything about their life. While she admitted there was some change involved, it is not nearly as bad as most people think and when shown, people can see how easy

a sustainable change can be. Finally, she told us that a change cannot be forced onto someone because they will never accept it, but you must give them the knowledge and the tools and allow them to come to the solution. This was also clearly visible in our surveys; we asked the informants to pick from a list of words what describes the reason they got involved in caring about their personal footprint. The list of words was concern, anxiety, guilt, contribution, community spirit, morals / principals, peer pressure and duty. From this list every word was picked except 'peer pressure'. This conveys to us that no informant felt like they were ever forced to act sustainably. However, the down side with education is that it still is demanding more of the consumers which already see their time as a precious commodity. It might also not be in interest of everyone to go to workshops or seek further education. But for those consumers who are actively trying to make positive moves towards sustainability then this could be a good solution for them.

The other solution would be to make a political change in terms of legislation to incentivize consumers towards sustainable consumption. During the interview Frederic brought up that Denmark is a country that has consistent VAT rates for all products on the market. He told us that in other countries VAT rates for different products are something that governments can regulate to make certain products cheaper or more expensive. His idea was that a similar policy could be applied to the Danish market. Products deemed sustainable could have their VAT rate reduced to encourage purchasing. This could make sustainable products closer in price to non-sustainable products. Hopefully attracting more consumers towards purchasing them. It would also be a possibility to have the VAT rates for non-sustainable products raised to discourage purchasing. But this is a more aggressive solution since it is forcing consumers down a certain path rather than showing them the way with the education solution.

In the best case, both solutions could work together in tandem. For consumers to shift towards sustainable consumption, they need to understand it which involves education. Workshops are the best case, but this most likely will not work for everyone. A marketing campaign that promote facts about sustainable products could be very helpful in getting the message across. This could take the form of catchy poster, radio, internet and TV advertisements. As well as a website that could serve as an information point to help inform people. This combined with a legislative approach could be very effective. If people are previously educated, then they will understand the reason why they should consume sustainably. Combined with closer price parity to non-sustainable products means buying sustainably will be a larger possibility for more people.

6.2.2 Next Steps in Action Research

We did not fully complete the action research cycle according to the Lewin model. In the Lewin model the cycle is completed once the proposed changes have been implemented. The next steps we would like to have taken would be to step up another interview with Frederic. He expressed an interest in hearing our results and finding from this research, so we would share what we found out with him. The presentation would not be in such an academic format. We would present our solutions to the attitude-behavior gap and ask for his feedback. We would listen to his feedback on our ideas and include his input into revising the ideas.

The education solution would be likely something he would respond positively towards since Julie is already making workshops for Løs Market customers. Our solution is just an extension of that for a wider audience. We would propose making a marketing campaign for Løs Market as well, this would contain the benefits of sustainable consumption and spread knowledge and awareness about the topic. For the solution involving politics, the issue of sustainable products is already being debated politically in labeling foods according to climate impact. But the idea of changing VAT rates based on sustainability is a new idea. If business owners start to take a stand and demand lower VAT rates on sustainable products, the idea might get momentum. Small business owners like Løs Market carry little weight, but larger chains like COOP, Salling Group, or Rema 1000 could start to lobby for this idea.

For the scope of this research the final step of unfreezing is a long way off. Going into this project we assumed we would not be able to see the changes go into effect. We were motivated to research and write about this topic because of the urgency in which action needs to be taken. Frederic was eager to listen to our ideas and wanted our help to figure out how more customers could use his stores. He also expressed the same urgency on the matter and told us that action needs to be taken now by consumers.

6.3 Is Løs Market's approach the right approach?

From the perspective of Actor-Network theory and Translation we identified that Frederic's problematization and solution for sustainable consumption does not suit all consumers and therefore this account of part of the attitude-behavior gap. We would like to consider that perhaps Løs Market's approach is not suitable for a wider audience of consumers. Løs Market is admirable for trying to do something different and provide solutions for sustainable consumption. There are very few supermarkets with this focus. Alongside this, Frederic told us he is not out to make a fortune from the business and would want to see the environment benefit rather than accumulate personal wealth. However, as discussed Løs Market's approach was developed from within from an internal perspective on what should the solution be. The outcome with organic foods, sourced as responsibly as possible and a bulk system.

Certainly, this system works and there is enough customers to call it a success, but what about the majority of shoppers who do not shop there? What solutions would work for them? Further research on this topic would be needed to answer these questions fully. Certainly, interviews with conventional consumers would shed light on these questions. Even among Løs Market consumers, as we found out from the survey data, most of them were guided by convenience. Løs Market did not offer everything they needed, so to go there was an extra step on their shopping trip or an excursion of its own. Consumers seem to be guided by time and convenience as Rosa's theory of acceleration suggests. So, it is then a matter of making sustainable consumption as convenient as possible to 'convert' conventional consumers over.

Price might also be an issue for conventional consumers, as we mentioned in the analysis, consumers who do not have the budget cannot consume sustainably as much as those who have

the money. There is a financial barrier to entry to be able to consume sustainably. Frederic told us that his prices are as low as they can be, and he is often competitive on some items with larger supermarkets. But the cost to buy everything from Løs Market that is needed would be much higher than conventional supermarkets. During the interview Jacob brought up an interesting point of view, he told us that for a shop like Løs Market to work it must be both better and cheap in comparison to the competition. It is already better, but not cheap. Once it is cheap it will make the difference for many consumers.

7. Conclusion

Through this research we wanted to investigate the issue of sustainable consumption and the attitude-behavior gap through Løs Market. We did this by collecting empirical data by interviews, surveys and participant observation. We interviewed two experts, conducted interviews and surveys with Løs Market customers. It helped us to find out that most Løs Market's customers are highly aware of environmental issues and a lifestyle oriented towards sustainable behaviors. This entails a specific usage of time around sustainable consuming.

We gained a theoretical understanding from Actor-Network theory and Acceleration theory from Rosa and we used them to interpret the data we collected. Our findings were that; thanks to the concepts inspired from Actor-Network theory, the Green-Black Box helped us to unveil some unspoken reasons that lead a green attitude to an environmentally friendly behavior. The Green-Black Box is to be the backstage of the sustainable production, and to reuse the theater analogy, the consumers can only see the final product while the latter is performing. Because of the limited amount of information provided by the final product, the consumers have no choice but trusting the system of production.

Furthermore, by getting to know our fieldwork better, we realized that the variable *time* and its perception has a strong influence on people's life. We investigated the influence of the pace of society on people's behavior through the concept of *acceleration*. This gives us the means to pinpoint a more structural reason that pushes people to materialize their attitude into behavior. In a society where time is a rare commodity, it can be difficult to be more sustainable for the simple reason that according to our informants and other researches on the topic, being greener often means *decelerating*.

We used the mentioned theories above to explain the gap between the attitude and the behavior of the consumers. Actor-network theory and Acceleration were both able to partially answer how the attitude-behavior gap takes shape. We developed the formula of the attitude-behavior gap ratio to give a more holistic picture of the components involved in determining the outcome.

Through this formula, the gap between attitude and behavior for sustainable consumption is broken down into two main categories; contextual and situation factors. Each category contains its own factors within it. Contextual factors correspond to the attitudes of the consumer and these factors are the mindset and predisposition for potential green attitude. The situational

factors correspond to the behaviors of the consumers and these factors are the means and surroundings needed to give the possibility for green behaviors.

Finally, we understand that not everyone will consume sustainably all the time, 100 percent of the time. It is simply not possible unless you go to great lengths. The consumers at Løs Market are not the average consumers, they have sought out a solution to consume sustainably. They are more dedicated on the issue of sustainability than the average consumer is. We should not expect every consumer to follow the model of the Løs Market consumer, and if they did then it would pose another type of sustainability problem. The solution is then in the diversity of solutions, not just one holistic solution but rather many sustainable solutions that can hopefully fit most people. Not everyone needs to be as proactive as Løs Market's consumers. If most consumers were able to change a little bit and shift some of their behaviors towards sustainable solutions, then it would positively benefit the environment eventually.

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Appendices

Appendix A. Photos Taken During Fieldwork



A1 - Løs Market Bulk Dispensers for Dry Goods



A2 - Løs Market Bulk Dispensers for Liquid Goods



A3 - Løs Market Bulk Soaps