CONSUMER PERSPECTIVES ON GMO LABELING IN BRAZIL.

A QUALITATIVE STUDY OF THE PRACTICE OF SHOPPING IN A BRAZILIAN CITY

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ABSTRACT

In these modern days the overload of information of packages of food products is overwhelming. The amount of informative food labels have increased significantly over the years. How do consumers navigate between this overload of information and what do they believe to be good labelling? To investigate that, this thesis focuses on the case of the labelling of genetically modified organisms (GMOs) in food products. Through qualitative research an answer is being given to the question of how the GMO label influences the practice of grocery shopping in Brazil. This thesis shows how Brazilian consumers interact with the products on the shelves and how they evaluate their choices. Moreover, the consumers' perceptions of 'good' GMO labelling have been explored. In order to choose, they need informative labels that explain simply what the food products contain. Currently, the Brazilian label that indicates the presence of GMOs in a food product does not meet this requirement and is therefore considered to be not informative enough by many consumers.

LIST OF ABBREVIATIONS

CTNBio	Comissão Técnica Nacional de Biossegurança (Brazilian National Biosafety Technical Commission)
FDA	Food and Drug Administration
GMO	Genetically Modified Organisms
IDEC	*Instituto Brasileiro de Defesa do Consumidor* (Brazilian institute for Consumer Defence)
PT-party	Partido dos Trabalhadores (The workers party Brazil)
WHO	World Health Organization

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1. INTRODUCTION & PROBLEM STATEMENT

Louise Fresco (2012) opens her magnum opus with the statement that *'food is nowadays a source of intense confusion'* (p.9). Never ever have the choice of food products as been as huge as it is right now. Moreover, she argues that food has obtained a moral value over the last years (ibid.) Instead of merely judging food by its taste, it has to be beneficial for personal well being and it has to be environmental and animal friendly as well. However, judging whether a food product satisfies these requirements cannot be defined by the looks of the product, so more knowledge about the food chain and the production process is needed.

Besides moral questions, also new types of risks have entered the food system. First, several food crises over the past years have alerted people about the hacks in the food system in general. For instance, the BSE crises in Europe the 1990's, the E.coli outbreak in the United States in 1993 via hamburgers and in 2011 in Germany via vegetables (Fresco, 2012). Second, Beck have theorized that within late-modern nations, citizens are increasingly exposed to new type of risks, created by scientific improvements from which the long-term effects cannot yet been overseen (Beck, 1992). Therefore, these new types of risks are invisible, often irreversible and not bound to time and place; they might have an effect on the other side of the world, or affect future generations. An example is radioactive poisoning caused by nuclear disasters. In that sense, also food consumers are increasingly exposed to new type of risks induced by science, as the food system has incorporated modern biochemical techniques of food production and developed advanced methods of distribution. Tulloch and Lupton (2002) argue that British people are suspicious of modern techniques in the food industry.

For these doubts about moral and safety issues, food consumers have demanded more information, which has been answered by the food industry (Fresco, 2012). By entering a supermarket one encounters thousands of products, all wrapped by packages that contains a bulk of information about the way of preparation, validation date, nutritional value, a list of ingredients and labels. The amount of information is overwhelming and the proliferation of information causes often even more confusion at the side of the consumer (ibid.). Therefore, this thesis aims to understand how the consumer perceives this informative labelling, what they find useful information and how it affects their shopping behaviour.

In order to address these questions, mandatory labelling of genetically modified organisms (GMOs) in food has been chosen as a case study. GMO labelling is a specific type of labelling, as it is often not a voluntary labelling scheme that lures consumers into buying their products by

creating a niche market that indicates a beneficial quality, such as organic labels, animal friendly labels and sustainable fishery labels. Rather, GMO labelling alerts people to the presence of a scientifically created component of which the long-term affects are not yet known. Consequently, GMOs in food can considered to be a new type of risk as identified by Beck. It is created by science and the potential risks are invisible. Moreover, GMOs have penetrated the food system already to such a large extend that if they appear to be dangerous, the damage might be irreversible as well. The potential risks of GMOs have caused them to be a heavily debated topic by both scientists and lay people (Tulloch & Lupton, 2002).

This thesis especially focuses on Brazilian consumers, as every country has different laws about the production, commercialisation and labelling of GMO crops. Brazil is an interesting case, as it has released its first experimental GMO crops in 1995 and has since then authorized several GMO crops for consumption as well. Moreover, Brazil has a very particular law that requires mandatory labelling for all processed foods that contain 1% or more GMO ingredients since 2003. Hence, consumers in Brazil have had a considerable amount of time to get used to the both the idea of GMOs in their food and the label that indicates the presence of GMOs.

The research question of this thesis is: How do GMO labels influence the practice of shopping of Brazilian food consumers? This research question has been divided in three sub questions that help to answer the main question. These sub questions are:

1. How are GMOs in food products currently handled in Brazil?
2. How do Brazilian food consumers perform the practice of grocery shopping?
3. How do Brazilian consumers perceive GMOs and what do they consider to be a good GMO-label?

The aim of the research is to provide an in-depth insight in the behaviour of Brazilian consumers and to provide an answer to the question 'what do consumers consider to be a good label?' A 'good label' means that people would find the label informative enough to help them with their choice for a certain food product.

The research was conducted in the city Florianopolis. Florianopolis is located on a small island before the coast in the South of Brazil. It is one of the wealthiest cities in Brazil with the highest education rate and mark for 'quality of living' (Guimarães, 2013). This was beneficial to this research as there was more likeliness that the consumers were familiar with GMOs and its label.

Moreover, a city has a higher likeliness to house inhabitants from different socio-economic statuses and offer a higher variety of supermarkets that target different consumers groups. This variety will contribute to a less biased view when general conclusions are drawn about the perception of consumers or the supplies of GMO products and alternatives in the supermarkets.

READING GUIDE

Before continuing to the results of the research, the next chapter will first provide an overview of the debates with regard to GMO labelling. Especially the arguments of opponents and proponents of GMO labelling will be discussed as well as several policy options for labelling. Chapter 3 will discuss the conceptional framework that has been used to investigate the research question. For each sub question a different research method has been used. These methods will be explained chapter 4. Chapter 5 continues with the results of the research and will discuss sub question 1: How are GMOs in food products currently handled in Brazil. Chapter 6 tries to give an answer to the second sub question: how do Brazilian food consumers perform the practice of grocery shopping? This will be described as ethnography. The last sub question is answered in chapter 7, which explores the opinions of consumers towards GMOs and labelling further. Finally, the conclusion will provide an answer to the research question.

2. BACKGROUND

According to the World Health Organization (WHO) '*Genetically modified (GM) foods are foods derived from organisms whose genetic material (DNA) has been modified in a way that does not occur naturally, e.g. through the introduction of a gene from a different organism'* (WHO, 2015a). This means that by using modern biochemical techniques, DNA from one species can be transferred to another in order to create a new type of species. The aim is often to create plant varieties that are resistant to plagues, more tolerant to herbicides and pesticides and deliver a larger yield per hectare. Hence, the current GMOs are especially designed to aid the farmer. Currently, research is also conducted to increase the nutritional value of vegetables. These kinds of modifications are believed to combat the nutritional shortages in deprived areas, such as parts of Sub-Sahara Africa.

Nonetheless, there are many opponents of GMOs, who believe that GMOs harm the environment and are a risk for public health. GMO crops have proved to be dominant species that threaten indigenous species. Moreover, the consequences for human health on long term are not yet known. Both opponents and proponents of the use and commercialisation of GMOs take a stance on the necessity of labelling food that contains GM material. In order to obtain a deeper insight in this discussion around GMO labelling, this chapter will look at two main debates around GMO labelling. The first debate with regard to GMO labelling covers the topic if food that contains genetically altered material needs to be labelled at all, which will be discussed first. Afterwards, the second debate will be discussed, which covers the question what type of labelling would be the most sufficient for the consumers.

2.1 TO LABEL OR NOT TO LABEL?

The question whether food containing genetically modified material should be labelled or not, derives directly from the question whether GMOs are considered to be safe, which causes it to be a quite complex debate. Generally, actors that claim GMOs to be safe do not see the necessity of labelling. Meanwhile opponents of GMO consumption invoke on their 'consumers right to know'. Especially in the United States the GMO labelling provokes debates and resistance, since the Food and Drug Administration (FDA) does not require food products that contain GMO material to be labelled accordingly, as they consider GMOs to be safe. However, many civil society and consumer groups disagree with this policy and try to reform these regulations.

So what are the basics for these claims about the safety of GMOs? Holredge (2002) elaborately assesses the United States' policies on informative and non-misleading labelling. The FDA has two reasons not to label foods that contain GMOs. The first reason is that several unique proteins

do not need to be labelled when found in genetically modified crops, as they are inherent to the production of the crop. Only if these proteins were to be added as additives in the processing of food, labelling would be necessary. The second reason is based on 'substantial equivalence,' which means that a particular crop that is not genetically modified and the same crop that is genetically modified, do not differ in content and nutritional value (Holredge, 2002). Moreover, the World Health Organisation states that the GM crops that are currently authorized for consumption all have proven to be safe (WHO, 2015b)

Nonetheless, Holdredge questions the labelling policies of the FDA, as he argues that these claims about the safety of GMOs are based on incomplete data. Several studies has shown that different proteins were found in the cells of GM crops, that GM crops contained genes from viruses and bacteria that are normally non existent in plants and that GM food possibly contain allergens, that might cause allergic reactions in people sensitive to these specific allergens (Holredge, 2002). Therefore, the safety of GMOs for human health seems to be unproven (Raab & Grobe, 2013). These contrasting claims on the safety are the basis for the arguments in favour or against GMO labelling. Klintman (2002) argues that epistemological and ideological crossovers fuel the complexity of the GMO labelling debate; '*conflicting tenets surrounding GM food per se are radically transformed, and sometimes even reversed, by GM proponents and opponents when the focus of the debate is moved to labelling'* (Klintman, 2002: 72). Hence, one argument might be used by both sides of the debate and adjusted to the position of the speaker. As a consequence, it is quite difficult to separate the positive and negative arguments with regard to GM labelling clearly, since the pro-GMO and anti-GMO alliances often use the same arguments to justify their stances. Nonetheless, this chapter attempts to outline the most common arguments in favour and against GMO labelling of food products.

The first difficulty with regard to GMO labels, is that GMOs fall in the category of 'credence attributes' for food products (Zainol et all, 2013). Credence attributes are qualities of a product that cannot be experienced by consumers (Caswell & Majdzuska, 1996). This means that a consumer will never be able to evaluate by the taste or smell of a product if it contains genetically altered material. Another example of credence attributes are the nutritional value of a product; one will never know how much calories, vitamins, fats etc. is consumed before or after eating a meal. Credence attributes are the opposite of search and experience attributes, which can be assessed by the consumer through the look and colour of the product (search attribute) and the taste of the product (experience attribute) (Dimara & Skuras, 2005). Hence, consumer voting, or political consumerism, in the supermarket is not possible, if products that contain GMOs are not labelled accordingly (Macdonald & Whellams, 2008). Moreover, Zainoll et

all (2013) consider GMOs to be credence goods, as they might cause hazards on the long term that cannot be predicted by the current available scientific knowledge. Other 'credence problems' occur on ethic and religious beliefs (Klintman, 2002). For instance, vegetarians and certain religions might reject vegetables that contain genes from animals. As a consequence, GMOs are subject to consumers' personal beliefs and faith in biotechnology and food governance. From this view, it would be ethical to label the food products to provide consumers a choice and enable them to vote at the supermarket.

Scientists against GM labelling often respond that labelling does not necessarily 'provides a choice', as the labels would spread merely a confusing message. First of all, as the opponents of GM labelling consider GMOs to be safe, labelling would be unnecessary (Holredge 2002). Secondly, a label might imply a warning, which is confusing and might scare consumers unnecessarily (Klintman, 2002). Thirdly, placing words or a label on a packages is not the same as providing information or a choice. As consumers lack information about GMOs, a label would mean nothing to them and is therefore irrelevant (Spencer, 1998). Fourthly, since GMOs are credence attributes, a label would never be able to provide all the relevant information that a consumer might want to know (ibid.). For example, practically it would be difficult to provide technical information about the specific modification with regard to an individuals' moral and religious beliefs, such as the type of genes that introduced in the GM crop.

But, is it up to scientists to determine whether consumers are able to understand the labels? Several surveys have shown that a 85% of consumers in the United States would like to know whether their food contains genetically modified material (Klintman, 2002) Consequently, an argument that is often used in favour of labelling is 'consumers have the right to know'. Holdrege (2002) criticizes the standpoint of the FDA that the '*consumer has the right to know – but not to know everything'*. He clarifies that the FDA merely considers analyses of the end product as 'sound science' while analysing the process of food production is not, and therefore cannot be labelled. Furthermore, Holredge argues that 'science as authority' is not a procedure that holds up to democratic values. Hence, 'the right to know' represents a deeper ideological value of transparency (Klintman, 2002). Underneath this desire for transparency lies the assumption that the consumer is vulnerable because of the disembeddedness of the modern food system (ibid.). Consumers have little access to information about where their food comes from and what scientists and producers do with the foods they consume (Myszczuck & Glitz, 2010). From this view, it can be said that GMO labelling should be provided to consumers, as this information is a sign of transparency that will enhance the ability of democratic decision-making. However, Macdonald & Whellams (2008) doubt that the 'the right to know' is a valid claim for labelling GM

products. According to them, the 'right to know' implies merely a claim on their 'freedom, autonomy and informed control,' rather than a possible risk consumers want to have information about (ibid.). Consequently consumers have no 'right' but a 'interest' in knowing whether their food contains GMOs or not. Therefore, Macdonald & Whellams state that this claim on the 'right to know' does not have to be taken seriously.

Moreover, Macdonald & Whellams (2008) claim that a right is always accompanied by an obligation. If food manufactures were obliged to label their food products with a GM label, the costs of production would rise significantly. This arguments points to the argument about price raises of food products, since labelling does not only require some extra ink on a package, but also a control system to verify that the product indeed contains GMOs (ibid.:). Klintman (2002) identifies that this argument derives from the idea that consumers are economically irrational and a GMO label would confuse the consumers, as described before. Additionally, the increased prices of GMO labelled food would be detrimental for poor consumes, who usually benefit from low food prices due to the large-scale bio-industry.

Lastly, The discussion moves in the direction of the question whether consumers care about the production methods of their food. Several studies have indicated that consumers often practice routinized shopping and the nutritional labels are barely red (Heslop, 2006). In addition, Heslop shows in a study with an experimental design in the United States, that no significant differences were found in the willingness to buy cereals with a label indicating the presence of GMOs and a label indicating the product did not contain GMOs. However, Heslop did notice slight differences in responses to packages with a GMO label and packages with a GMO label that also provided some additional information; for instance 'the soybeans contained material from another crop, hence less pesticides could be used during production.' While only a GMO label might cause hesitant reactions, the additional information results in more acceptance. In addition, with regard to the limits of this experiment, Heslop recognizes that at that point in time not many consumers participated in the national GMO debates yet. To be added is that the general perspective of the United States towards biotechnology is more positive than the general perspective of European citizens (Moore, 2001). This is mainly due to the traumatic experiences of Europe with regard BSE crises in the early 90'ties, around the time also the first GMO crops were introduced (ibid.). Nonetheless, the opinions of consumers or the effect of labelling on their actual behaviour does not imply that the consumers do not want to know whether there is GMO material in their foods. As is shown that 85% of the Americans want to know whether their food contains GMOs, 'consumers don't care' does not seem to be a valid argument. Apparently, consumers do have an interest in information about GMOs in their food products.

In sum, the objections against GMO labelling were; 1. GMOs are safe as they are 'substantial equivalent' to conventional food products; 2. labels are not able to provide sufficient information and are therefore confusing and 3; GMO labels increase the production costs, which will be detrimental for consumers. On the other hand, proponents of GMO labelling argue that 1. As a credence attribute, one will never know from the outside of a product whether it contains GMOs or not; 2. long-term effects cannot yet be assessed, so consumers must be provided with a choice and; 3. consumers have the right to know. Technical outcomes of scientific research are often disputed, differently interpreted and adjusted to epistemological or ideological standpoints. Consequently, both camps float between ideological en epistemological arguments, as both are only able to rely on scientific probabilities and not certainties. However, when GMO policies are being created, the ideological and epistemological ideas have to make room for pragmatic and feasible solutions. Accordingly, the next paragraph will discuss different questions that are often raised with regard to GMO Labelling.

2.2 OPTIONS FOR GMO-LABELLING

According to Teasl & Caswell (2003) the main function of a label is to communicate about a specific quality attribute of the product. The information that a label provides must enable the consumer to take an informed decision (ibid.). There are several options for labelling with regard to policy schemes and design of a label. These include various technical questions, such as: Is it a voluntary or mandatory labelling scheme? What types of products require labels? How ought the labelling to be monitored? What type of information does the label provide (Teisl et all, 2003)? Generally, these questions overlap, since different solutions to one question imply different options for the following questions. However, the effectiveness and the informativity of a label is not easily measured. Therefore, this chapter will first shortly discuss several of these policy questions options for labelling, before turning to the methodology.

Based on Caswell (1998) four type of labelling policies can be distinguished:

1. Positive mandatory labelling: companies are obliged to label their food products if they contain GMO material
2. Negative mandatory labelling: companies are obliged to label their food as 'GMO-free' if it does not contain GMO material.
3. Positive voluntary labelling: Companies may choose themselves if they want to label their products that contain GMOs.

4. Negative voluntary labelling: companies may choose if they want to label their products as GMO-free.

The second option, negative mandatory labelling is a very unlikely policy to be chosen, as the discussion is not about whether regular food products should be labelled as GMO-free, but rather whether products that contain GMO ingredients should be labelled as such. The first labelling scheme of positive mandatory labelling is often used in more cautious countries, such as Europe and Japan. These positive mandatory labelling is often combined with negative voluntary labelling; companies that use GMO ingredients must label, whereas companies that do not use GMO ingredients might enjoy the benefits of a niche market by labelling their products as GMO-free. The United States and Canada opt for positive and negative voluntary labelling; a company is merely obliged to label if their product is significantly different from their traditional counterpart, or contains allergens that consumers would not expect to be present in the particular product (FDA, 2015). Otherwise they consider GMOs to be safe and therefore companies may decide themselves if they want to label the use of biotechnology, as long as their information is truthful.

Hence, the most important question seems to be whether a labelling scheme is voluntary or mandatory. The anti-GMO labelling group often argues for voluntary labelling for the same reasons as described in the previous paragraph; it is not necessary as GMOs are safe and it increases the production costs (Zainoll et all, 2015). Mandatory labelling does require an advanced tracking and administration system, in order to control which bulks of crops are genetically altered and which are not. During transportation, shipping, storage and processing many different companies handle the crops, which increases the chance of mixing GMO crops with non-GMO crops. Subsequently, the anti-GMO labelling advocates argue that companies should not be obliged to label, but should do so if they sense their business will benefit from it. For example, when the consumer acceptance of GMOs increases or when in the new generation of GMOs, the crops are not just beneficial for producers, but are beneficial for the end-users' health as well. Food manufactures might want to state this on their packages to create a niche markets. Nonetheless, in general, GMO labelling would mean a serious threat to the continuity of biotechnology in the food industry, as it still scares consumers (Philips & Isaac, 1998). As a consequence, the food manufacturing industry is not likely to introduce GMO labelling by themselves (MacDonald & Whellams, 2008).

At the other hand, cautious governments and consumer interests groups often plea for mandatory labelling, especially mandatory positive labelling (Zainoll et all, 2015). Governments

are often pressured by consumers and civil society organisations to develop and elaborate their policies on GMO regulation and labelling. Europe, Malaysia and Brazil have for example installed mandatory labelling policies. Moreover, Zainol et all (2015) state that in Australia and New-Zealand the food prices did not rise despite of mandatory GMO labelling schemes. Cater and Gruere (2003) explain that this is due to the small cost-share of GM ingredients in processed foods. This means that slightly more expensive GMO-free maize does not affect the price of the whole bread too much, as it is not the only ingredient that determines the price. Nonetheless, policy makers outweigh the costs and benefits of a GMO label with regard to choosing between mandatory and voluntary labelling. If only a small segment of the population is interested in knowing about the presence of GMOs, voluntary (negative) labelling will be a good option. However, if the majority of the consumers demand 'their right to know' mandatory (positive) labelling is a better option (Caswell, 2000).

Other questions deal with technical options to shape the mandatory or voluntary labelling policies. For instance; what type of products should be labelled? Philips and Isaac (1998) distinguish between two type of GMOs; product-based GMOs and process-based GMOs. This differentiation relates to the question where in the process the product encountered genetic modification. Process-based GMOs are genetically altered crops that will eventually be used for the processing of other food products. For example, GMO corn that is used to process oils or manufacture bread. Product-based GMOs are biotechnical alterations in the end-use attributes of a product (Phillips & Isaac, 1998). For instance, when a genetic engineered additive is added that increases the shelf-life. Furthermore, there is the option to label products that are derived from animals that are fed with animal feed containing GMOs. It is for example still unknown what effects GMO feed has on the composition of meat, dairy and eggs and how this affects the health of human beings (Teisl & Caswell, 2003). Labelling these different types of GMOs require different monitoring systems and perhaps even different labels with specific information. Other more practical labelling questions are; do merely packaged goods have to be labelled? Or can unpackaged goods, such as tomatoes, be labelled as well? Does prepared food need to be labelled as well, for example in restaurants?

The question of what type of products need to be labelled leads again to other technical questions about the monitoring and tolerance of the percentage of GMOs present in the end product. For example, what percentage of traceable GMOs in the end-product are allowed, before it needs a label? Or, does the whole chain of custody needs to be monitored and labelled to avoid contamination, in order to have a 0% tolerance? With regard to monitoring it is easier to test whether an end-product contains more than 1% of GMOs. Separating and controlling

GMO crops from seed to farmer to transport to processor can then improve even the traceability. However, detecting in the end-product if somewhere in the processing biotechnology is used requires monitoring of a broad range of products and a comprehensive tracking system is needed (Teisl & Caswell, 2003). Besides these technical questions with regard to control systems, also pragmatic questions are required with regard to labelling: for instance, what kind of information can be displayed on a package and does this provide truthful information that fits the systems of control? The next paragraph will discuss four types of labelling that is commonly used to indicate the presence or absence of GMOs in food products.

2.3 TYPES OF LABELLING

Product packages often have limited space for labels and labels have limited space for elaborated information. Hence, decisions must be made about the statements that the label contains. Caswell (2000) identifies four types of statements that can be placed on a label:

1. Does contain GMOs
2. May contain GMOs
3. Non-GMO
4. Does not contain GMOs

The first statement is very clear about the presence of GMOs in the product. When this is stated, the company often knows that it uses GMO ingredients and they can be traced in the end product. The second statement is less secure; the company might purchase its' raw materials all over the world, mixes the bulks of raw materials and performs poorly on record-keeping. When labelling is obliged, it is easy and safe to state that a product 'might contain' GMOs. The difference between the third and the fourth statement is less clear. Therefore, this thesis will approach this distinction as followed: non-GMO means that no GMOs are used or present in the end product. The rest of the product can be produced in conventional manner, for instance by using pesticides to increase the yields. The fourth 'does not contain GMOs' means that the product is actually labelled as 'organic,' which means that there are no GMOs present in the product and that the product is handled according to 'organic standards'. Hence, no pesticides, herbicides and growth-promoting antibiotics are used as well.

3. CONCEPTUAL FRAMEWORK

Besides outweighing the costs and benefits of mandatory or voluntary labelling, it is important to know for whom the eventual label is designed. Ultimately, the label must inform the consumer in the supermarket about an additional 'credence' attribute in food products. Hence, to have an effective label it is important to understand consumers and their perspectives. For a long time, consumers have been ignored in research by social scientist, as their behaviour was considered intangible and could therefore not be researched (Oosterveer & Sonnenfeld, 2012). Moreover, consumers were for a long time neglected by policy makers as well, as it was believed that it was too difficult to change or influence consumer behaviour. (Spaargaren & Cohen, 2012). However, since the 1990's different theories emerged that try to explain consumer behaviour.

Broadly four approaches within environmental social science can be distinguished: the ecosystem approach, the economic approach, the psychological approach and the social practice approach (Kantamaturapoj 2012). The ecosystem approach starts from a biological point of view and focuses on the impact that consumption might have on the physical environment (York, rose et all 2003, in Kantamaturapoj, 2012). Basically, this approach views (over)consumption as problematic. Although it is necessary to be aware of the environmental problems that are caused by overconsumption, this approach will not help us understand why people make certain choices in the supermarket.

The economic approach assumes that consumers take rational decisions based on a cost-benefit analysis. However, this approach has been heavily criticized as it assumes that consumers have access to perfect information, which is in reality often not the case (Kantamaturapoj, 2012). Moreover, Oosterveer and Sonnenfeld (2012) argue that consumers make decisions within time constraints and cognitive limits; consumers decide quickly between the products that are available when they are shopping. The third approach, the psychological approach, is an expansion of the economic rational choice theory, as it adds values to the choices consumers make (Kantamaturapoj, 2012). The psychological approach calls for attitude analysis, which does not only take economic factors into account but also moral and social values. Therefore, it is better capable of an extensive explanation of people's behaviour (ibid.:13). Nonetheless, this approach lacks the ability to include the non-human realities in explaining consumer behaviour.

The last approach is the social practice approach, which has it foundation in Giddens' structuration theory. In this structuration theory Giddens introduced his concept 'duality of structure' which means that '*structure is both the medium and the outcome of an action*'

(Gehman, 2008). Hence, structure is embedded in daily practices, which by repetition produces and reproduces structure. In these practices, the relation between human actors and the material world of things is being enacted. Hence, it must be stressed that within social practice theory, practices are more than just actions. Instead, practices are the location of the social, in which both social order and the individuality emerges (Watson, 2012).

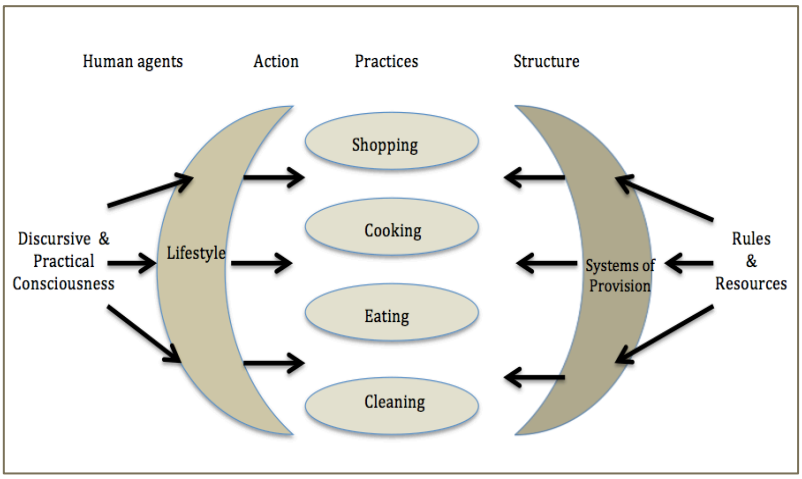


figure 1. social practice theory

Generally, when studying practices two angles of the practices are analysed: the social structure and human action. The social structure is often a macro study of the rules and resources that influence the system of provision. Human action emerges when agents perform, steered by their discursive and practical consciousness. An agent's social status and personal believes are represented by a certain lifestyle. The combination of systems of provision and agents' lifestyles give shape to practices (see figure 1) (Shove et all, 2012). If practices change, this will influence the structure and people's attitudes or lifestyles. The other way around is also truth: changing systems of provision or changing attitudes will alter practices. The social practice approach is most suitable to study consumer behaviour, as it offers an integrated and all encompassing framework for doing research to the actual practice of shopping. At one hand, it stresses the importance of the material environment and its' impact on practices. On the other hand it takes the actors' agency into account. The next paragraphs will shortly elaborate on the concepts of 'practices' 'lifestyle' and 'systems of Provision' and will show how this relates to this research about GMO labelling.

3.1 PRACTICES

As was already stated, practices are more than just actions. Reckwitz, (2002) distinguishes between 'practice' (praxis) and 'practices' (praktiken). He defines practice as the whole of human action, while practices are more specific routinized types of behaviour (ibid.). Therefore, practices consists of several interconnected elements; '*forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge*' (ibid.: 249). Moreover, practices consist of

multiple small single actions that can be performed in various ways. Together, these small actions form one block of actions, which are then 'practices.' For example, shopping is one practice, although it consists of various small actions like pushing a trolley, walking, searching for products, looking at prices and paying at the cash register. Hence, by peoples' performance of a set of actions, practices are given shape and reproduced, which is the basis for structure.

At the same time, within practice theory, the human is not seen as the centre of the study, as practices are the centre. The human actor is merely seen as a 'carrier' or 'host' of practices, but also of behaviour that is '*routinized understanding, knowing and desiring'* (Reckwitz, 2002: 250). By focussing on practices as the centre of research, the approach is able to look differently at relations between human actors and the material world. Thus, it transcends more individualistic approaches, which place individuals at the centre of the research. Consequently, the social practice approach is increasingly used in sustainability research, since it offers a sociological perspective on changing dynamics and the embeddedness of behaviour, without framing change as an individual choice (Watson, 2012).

However, practices can change over time and space (Watson, 2012). This change can be set in motion by the introduction of new technologies, changes in the believes of human agents or because other interconnected practices change. For instance, in the Netherlands, it was 50 years ago common to buy milk from a specialised mobile vendor in the streets. Nowadays, most Dutch people buy their milk in the supermarket. Changes that have facilitated this change of practices might have been the increase of peoples' mobility by the introduction of cheap cars and the increase of supermarkets that sell everything that is needed for daily life. In this case, the practice of buying milk has changed over time. With regard to differences in space one can imagine that grocery shopping in an African township requires different skills and know-how than shopping in a highly modernised mall in the United States. Whereas in the African township one must develop the skills to recognize quality fruit and vegetables and must know which vendors are trustworthy, the mall requires knowledge about opening hours, special offers and at what time a good parking spot can be found. Hence, a particular practice is different over time and space as it requires people to perform different practices.

3.2 Human Agents & Lifestyle

As carriers of practices, human agents influence the way in which practices emerge. Reckwitz says that first, human bodies have learned to perform skilful practices and are therefore the site of the social. The same way as practices are formed by bodily routines, they are also formed by

the mind of individuals. Reckwitz therefore concludes that mental routines are social as well. Reckwitz states on the contrary that other sociological theories always had difficulties with theorizing peoples' mind; first, minds fit rather the field of psychology than the field of sociology; second, often a distinction between the real inner thoughts and outward behaviour is problematized (ibid.). According to Reckwitz, the mind is rather simple in the social practice approach; as both the bodily and mental activities are needed to perform practices, both bodies and minds are the site of the social, and are thus represented in practices.

Nonetheless, this approach of Reckwitz seems to be a little bit too simple by reducing people to means of practices that hold social meaning. Rather, I prefer an approach that provides more space to the agency of people and the meaning of their behaviour. Spaargaren (1998) states that by analysing the strategic conduct, the motives and reasons of agents are explored and this is connected to narrations of identity and the self. The concept of 'lifestyle' can be a useful tool to analyse the influence of human behaviour on practices. Ones' lifestyle can be seen as a set of building blocks that build up the daily practices. These specific daily practices are embraced by the individual and often goes together with a narrative (Spaargaren, 2003). For instance, certain types of consumption are linked to social constructs such as hygiene, comfort or what 'fits' the gender (Oosterveer & Sonnenfeld, 2012: 228). Shove and Walker (2010) analysed for example the increase of taking baths due to altering perceptions of personal hygiene and improved water supplies in homes. Whereas a generation ago one bath per week would be sufficient, nowadays people take showers daily.

Hence, the concept of 'lifestyle' is the combination to this narrative through which people connect their believes and actions. This narrative is often shared by a group of people and therefore the concept of 'lifestyle' moves beyond the individual. For instance, higher educated global conscious young people often include environmental consciousness practices in their daily behaviour, such as separating domestic waste. Separating waste is then included in a narrative that represents the global and environmental consciousness 'lifestyle' of the practitioner. This narrative provides coherence, significance and shared values to the different social practices that people perform (Oosterveer & Sonnenfeld, 2012).

Subsequently, in order to understand how people perform the practice grocery shopping with slight differences, it is useful to evaluate their different lifestyles and search for the narrative that justifies their shopping behaviour. Eventually, the whole of these different performed practices is the practice of shopping. With regard to this research, an understanding of the practice of grocery shopping in Brazil is being provided by an empirical description in chapter 5.

This will allow to better understand the relation between human conduct and the systems of provision with regard to labelling. The next paragraph will explain further what is meant by the systems of provision.

3.3 Systems of Provision

At the other side of the social practice model the 'systems of provision' can be found. Practices often require the use of certain 'things' in a particular way (Reckwitz, 2002). The stability of the interaction between the human agents and the material world creates practices that provide structure. The material world does not only include material 'things' but is formed by 'rules and resources' (Gehman, 2008). For resources, two types can be distinguished: authoritative and allocative resources. Allocative resources are material things that physically can be touched. Authoritative resources are non material and relates to questions about power and domination. Rules are a special example of authoritative power. They are defined by Giddens as the '*generalizable procedures applied in the enactment/reproduction of social practices*' (Giddens, 1984 in Gehman, 2008). In this sense, rules are related to repeated practices and knowledge about how to apply these practices. With regard to written rules, Giddens state that these are already codified interpretations of the actual rules, instead of being rules in themselves (ibid.:). For instance, in the train people start to find their tickets when the ticket controller walks inside the coupe. They are used to the practice of showing their tickets, as is expected from them. The written rules provides the ticket controller the authority to fine when one is not able to show that the train ride was paid for.

Hence, structural circumstances shape the environment in which certain practices are more likely to happen. An example of different shopping practices are found in stores with a different system of provision. For instance, a store that provides a shopping trolley and long shelves that display many products invites people to perform 'self-service' shopping. On the contrary, a shop filled with merely showcases and cash registers requires people to interact with a shop assistant for purchasing. This example shows that in different systems of provision, different behaviour is required and practices altered, although it is still the same entity of actions. Thus, practices are formed by the interaction between human agents and the system of provision (Shove, 2012).

With regard to systems of provision this research will look at GMO labels on food products in Brazil in particular. This previous chapter has already shown that there are several options for labelling. Consequently, it is important to look at the options that Brazil have adopted and how this label affects the daily shopping practices. For example, the rules and debates with regard to the production and commercialisation of GMOs in Brazil will be discussed. Moreover, the

visibility of the labels in the supermarkets will be explored. Since consumers are at the end of the supply chain, the labels in the supermarket are the only chance for consumers to intact and deal with GMOs. Hence, the systems of provision of GMOs are especially reflected in GMO labels, as they state 'this product contains GMOs'. Especially when the practice of shopping is examined and encounter with labels are observed, it will become clear whether consumers are willing to accept GMOs or not.

4. METHODS

The research question of this thesis is: How does GMO labelling influence the behaviour of Brazilian consumers of food? In order to answer this question, merely qualitative methods has been used. Qualitative data collection was preferred as it provides a deep insight in shopping as practices. This method is inspired on the qualitative research done by Miller (1998) who accompanied consumers to the grocery store and argued that all (individual) decisions made in the supermarket are actually social and based on love.

In this research, three sub questions has been raised. These are meant to explore both the systems of provision as the lifestyle and opinions of Brazilian consumers that perform grocery shopping. The four sub questions were:

1. How are GMOs in food products currently governed in Brazil and how can this be encountered in the supermarket? (systems of provision)
2. How is the practice of shopping performed by Brazilian (food) consumers? (shopping practices)
3. How do Brazilian consumers perceive GMOs and what do Brazilian consumers consider to be a good GMO-label? (Beliefs & lifestyle)

This chapter will discuss per sub question the methods that have been used to obtain information about subject. Additionally, per research method an operationalization will be provided.

4.1 SUB QUESTION 1: LITERATURE STUDY & PARTICIPATORY OBSERVATION

The first sub question about the governance of GMOs in food explores the present systems of provision. Hence, this chapter starts with a literature review that shows a reconstruct of the debates and struggles within Brazil to legislate the production and commercialisation of GMOs from 1995 until now. Here, several articles are used that attempted to categorize the debates and arguments about GMO labelling. Articles were found via Internet databases such as Google Scholar and the WUR digital library. The appropriateness of the articles was based on the abstract and the year in which was written. I tried to pick articles that were written in a variety of years, from 1995 until know. Recent articles on the GMO debate in Brazil were hard to find.

The second part of this chapter focuses on the struggle of labelling products that contain GMO ingredients. For this part, the same scientific articles have been used as in the description of

struggles and debates of the previous paragraph. Moreover, magazines from the Brazilian consumer protection union, IDEC (*Instituto Brasileiro de Defesa do Consumidor*), were revised. These magazines originated from 2004 until 2010 and contained several articles that reported about governmental and court decisions with regard to GMO labelling. Moreover, IDEC published articles about research that controlled whether products are properly labelled. Hence, these IDEC magazines provided a particular perspective on the situation around GMO labelling.

The third part of this chapter explores the availability and visibility of GMO label in the supermarkets. By visiting three different types of supermarkets two times, the circumstances in the supermarkets with regard to GMO labelling were explored. The first time I visited as a normal consumer that went for daily groceries. At these visits I obtained a general impression of the store and was able to find out whether an inattentive consumer would notice the GMO labels. The second time I went to the supermarket as a researcher to explore the visibility of the GMO label further. Here, I especially analysed four aspects: 1. What products carry a GMO label on the package?; 2. What place do these products have on the shelf?; 3. Are their alternative products without a GMO label? and 4. What is the price difference in price between a GMO labelled product and a product without the label?

Besides the interest in the systems of provision in general, I was also interested in differences per supermarket with regard to GMO labels. Consequently, three different types of supermarkets were picked. With regard to sustainable consumption, Oosterveer & Sonnenfeld (2012) distinguish three types of supermarkets with a;

1. Maximum strategy: retailers that provide a wide range of ecological, biological and GM-free products. They try to promote a healthy lifestyle and the staff has a lot of knowledge about the products. These are often small specialised stores.
2. Basic strategy; these retailers provide ecological products and GM products in an approximately 50/50 ratio. Consumers have a lot of choice, but the availability of information and education is minimal.
3. Minimum strategy: these retailers have a small number of ecological products, according to Oosterveers and Sonnenfelds' division. The most products are vacuum packaged and have a long shelf life. The staff has little knowledge about the products (Oosterveer & Sonnenfeld, 2012: 205). This supermarket is comparable to for instance Walmart. Often they also sell clothes, household utensils and tools.

Since this thesis is not analysing sustainable consumption, but the presence of products that contain GMOs (and are presented on the label), I adjusted their definition to my expectation of finding GMO products. Hence, Supermarkets with a maximum strategy are likely to avoid GMO products, as GMOs are often considered to be destructive for environmental and human well-being. Supermarkets with a basic strategy sell GMOs and alternatives in a 50/50 ratio. Supermarkets with a minimum strategy sell a high proportion of GMOs.

The first week I explored which supermarkets were popular among the Brazilian population and I would ask questions about how they felt about these supermarkets. Moreover, I explored for myself what type goods several stores sold and what message and communication they had placed on the facade. For the supermarket with the maximum strategy I picked a store in my neighbourhood, which claimed to sell healthy and organic foods. Several people told me in the exploring weeks that they liked Angeloni for its' variety. Therefore, I choose Angeloni as the store with the basic strategy. Underneath the mall was a supermarket that was called 'BIG.' People would tell me that it was a cheap store that sells a lot of food and non-food products, although they lack a variety of different brands. Via internet I found out that BIG is chain of 'hypermarkets' owned by Walmart. A hypermarket is a store where the supermarket and usual merchandise is combined. Therefore, BIG was eventually picked as a supermarket with a minimum strategy, where I expected to find many products that carry the GMO label.

4.2 Sub Question 2: Participatory Observation

In the second sub question the objective was to understand the practice of grocery shopping in Brazil. Especially participatory observation has been used to investigate this aim. Practically this means that I have accompanied several Brazilian consumers to the supermarket. I followed them around in the supermarket, observed their behaviour and asked several questions. As I was interested in the way they choose a product, the focus was especially on picking products. When they were holding still in front of a shelf and scanned the products, I would ask what they were searching for. When they hold a product and examined the looks or the package I would ask what they were looking for and why this particular product was good or not. Moreover, these participants talked about shopping in general along the way. Hence, there was a lot of interaction during these observations, as many participants provided me with little tasks as well. For instance, they would ask me to reach a product at the highest shelf, as I am taller than most Brazilians. Also, I helped them to pick the right fruits and vegetables after they explained to me what was important about the fruit. In this way, I tried to incorporate the Brazilian way of the practice of grocery shopping. Additionally, the first questions of the interviews were directed towards their perceptions of supermarkets and their habits of shopping. The structure of these interviews will be explained in the next paragraph. The information that was derived from the

conversations and physical interaction led to an empirical description of doing groceries in Brazil. The insights from this question helps to better understand Brazilian consumers and their relation to picking products and reading labels.

With regard to the selection of respondents it was important to include a heterogeneous group of people. Consequently, I divided the respondents in gender, age groups and level of education. With regard to the gender group, I interviewed more women than men. The reason behind this is that women usually do the groceries within in a household. Men were only included in the respondent group if they had the main responsibility for the groceries in that household.

For the age-groups I divided between three categories; 18-29 years old; 30-49 years old and 50+. This division was made on the assumption that people in different phases of their lives have different consumption patterns. Therefore, they would perform different practices with regard to shopping. I choose this division based on a reconstruction of peoples lifecycles. Most Brazilians finish high school at 17 years old. From 18 years on they are allowed to go to university. In Brazil, a bachelor degree is obtained in approximately 5 years. Subsequently, the age group from 18-29 includes respondents that are studying in university or just started working. Generally, they did not have a spouse or children yet. The second age group consists of people with more work experience and often had families. The 50+ category consisted of people that had already grown up-children that had left the household or were about to leave and retirees. Hence, by dividing the respondents in age groups the chance of including different household compositions increased, which enriched the data and provided a diverse view of the Brazilian consumer.

The third category is based on the educational level. I divided between lower educated and higher educated, because the level of education often affects peoples' consciousness of health and the environment and therefore the practice of shopping. Generally, people with a higher education are more conscious consumers, as they for example tend to think more about their health. As I was conducting research in Florianopolis, the city with the highest education rate and standard of living in Brazil, I had to set the division between low and high educated relatively high (Guimarães, 2013). After high school, Brazilian pupils have three options. The first is to start working. Secondly they follow vocational training to become a professional worker (*ensino technico*). The third option is to go to college to get an academic degree (*ensino superior*) (Portal Brazil, 2014). Consequently, I divided lower and higher educated between people that went to college and people that did not. The aim was to have 20 respondents. Ultimately, I was able to interview 18 respondents in 16 interviews. Although, the division of

respondent is not perfect, I believe this research consists of a good variety of respondents. Table 1 shows how much people from each category were included in this research.

	19-29 years		30-49 years		50+ years		Total
	F	M	F	M	F	M	
Lower educated	0	2	2	0	2	1	7
Higher educated	1	3	3	2	2	0	11
total	1	5	5	2	4	1	**18**

Table 1: the division of respondents 1

4.3 SUB QUESTION 3: QUALITATIVE INTERVIEWS

The third research question is aimed to gain a in-depth insight in the consumers' perspectives on GMOs and GMO labelling. Subsequently, this part focuses on the lifestyles and personal beliefs of the human agents. For the interviews, the same respondents were used as listed in the table in the previous paragraph. After joining them to the supermarket, I mostly accompanied the respondents back to their homes to do the interviews. At other times, after the shopping we went to a café and performed the interview over a cup of coffee.

The interviews were semi-structured. This meant that an interview guide (Annex 1) was used with set questions. These questions were open for interpretation of the respondent and the respondent was mostly not steered into one direction. After the interviews were completed, they were transcribed in the language that was spoken in the interview. After transcription, the interviews were analysed per theme. Codes were inductively derived from the answers. Then, these coded answers were categorized. This enabled me to draw general conclusions that would relate to the practice of shopping and 'the opinion of Brazilian consumers.' Afterwards, the coded answers were connected to the indicated lifestyle of the respondent. This resulted in more specific data that was not only able to draw general conclusions about the practice of grocery shopping, but about the specific practices that different human agents perform.

The interview guide was build up in 5 stages. The first set of questions was meant as conversation starters. I would start with the age, education and number of persons in the household, followed by two questions about their cooking behaviour. The second stage was directed towards the practice of shopping. I started with asking how many times per week they would do groceries, what supermarkets they went most often and why. Hereafter, I asked about what they found important about a supermarket and what they paid most attention to when choosing a product. The second stage was aimed to support the findings of the participant observation that are supposed to answer the second sub question: how is the practice of shopping performed in Brazil?

The third stage of the interview was directed to explore the lifestyles of the consumers. The questions were especially directed towards the subject of healthy food, environmental consciousness and social consciousness. However, no fixed definition of these subjects was provided. Therefore the consumers could understand the question in their own terms and definitions of 'healthy, environmental friendly and social concerns. With regard to healthy food, they were asked whether the respondents valued healthy food and what a healthy diet meant to them. Hereafter, I asked if they ever had doubts about the environmental or social circumstances under which the food was produced. Most people valued healthy foods and seemed to think actively about what is healthy and what is not. With regard to environmental and social consciousness the responses varied extensively. During coding and analysing the data I divided the respondents in two categories; the first are 'conscious consumers', who expressed some kind of worries with regard to the environment or social circumstances and second the 'unconscious consumers' that answered these questions negatively. In general the consumers that expressed their worries also tried to adjust their shopping behaviour. This is a good example of how narratives of the self are connected to behaviour. Hence, these questions helped to develop a profile of the different lifestyles that were represented in the respondent groups. These two lifestyles, the conscious and unconscious lifestyle, helped to analyse the shopping behaviour and opinions of the consumers with regard to GMOs and GMO labels further.

The fourth stage was directed towards the respondents' opinions about GMOs. The first question was whether the respondents ever had heard about GMOs, since Guivant (2015) pointed out that not many Brazilian consumers are aware of the GMOs in food products. If they answered that they had heard about GMOs, their opinion on GMOs would directly be asked. Secondly, they were asked if they ever encountered the GMO label in the supermarkets. If they answered 'no,' a short explanation was provided, which included a simple description of what GMOs are and the

benefits and disadvantages of GMOs (translation in Portuguese is 'transgenics': *transgenicos*). The text stated that:

> '*GMOs are food that as an altered genetic composition through modern techniques. For example, a tomato can contain a fish gene. The advantages are that farmers need less pesticides and the yield of the crops is higher. Therefore GMOs can be beneficial to the environment and for the farmer. The disadvantages are that GMO seeds are considered to be dominant and therefore might affect biodiversity. Also the affects for human health in the long term are not yet known. Moreover, some people say companies that produce the GMO seeds have too much power because of patent rights at seeds, which is an disadvantage for farmers.*'

After this description, respondent were asked about their opinion. Although the text is aimed to be neutral, in certain sense it is not. This is mainly due to the fact that the description closes with three arguments against GMOs in opposition two arguments in favour.

The last stage of the interview was aimed at learning more about the respondents' opinion about GMO labels. First we talked about the Brazilian label and if they had ever seen the label in the supermarket before. Then we would discuss the look of the label and if they thought the label was 'good.' A good label means; is it sufficient for explaining the presence of GMOs and would it provide enough information? Hereafter, I showed them several other labels that explained something about the presence of absence of GMOs in the product. The selection of labels was based on the categorization of statements that Caswell (2000) made; Does contain GMOs; May contain GMOs; Non-GMO; Does not contain GMOs (chapter 2). Furthermore, I divided the information about GMOs presented in a written text or a symbol. The first label claimed somewhere on the package 'this product might contain GMOs'. At the second label the information was included in the list of ingredients and stated: 'contains genetically modified soybean oil.' Hence, these were written texts, with a different claim and a different place on the package.

The third label was the Brazilian label that shows a symbol of a yellow triangle and a 'T' in the middle. Most of the time, this label was discussed as first, since the conversation about GMOs led to the Brazilian label. The fourth label was a customized Brazilian label, in which I included extra technical information. Underneath the 'T' in the triangle, the word '*amendoim'* (peanuts) was added. I explained the respondents that a product that carried this label carried peanut genes because of the genetic modification. This label was included to contribute to the discussion about 'what type of information must be provided to consumers and how extensive must this information be.' Pragmatically, it would probably be impossible and otherwise too expensive to

provide this type of technical information on GMO labels. Hence, this label was included purely for experimental and hypothetical reasons.

The last two labels were examples of non-GMO and 'does not contain GMOs.' For non-GMO I choose the American label of the non-GMO project. This label means that in the production of the product no GMOs were used. With regard to the organic label, I choose the Brazilian organic label, as this is probably already familiar to the respondents.

I searched the Internet to find these different labels. As these labels were not always in Portuguese, I translated the labels verbally for the respondents in the interviews. With all the labels the respondents' opinions were asked and if they thought that the label was sufficient and provided enough information. Respondents that remained hesitant were asked to draw or explain their own 'perfect' label. Pictures of the labels, the results from these conversations and the most preferred label of Brazilian consumers are shown in chapter 6.

LIMITATIONS

This research has several limitations. The first is the scope of the research. A general critique of qualitative research is that the amount of respondents is not representative for the whole Brazilian population. Nonetheless, I would like to argue that due to the efforts to find a heterogeneous group of respondents, this critique would partly be covered. Moreover, I prefer qualitative research to quantitative research in combination with the social practice approach as it provides an in-depth insight in the particular practice of shopping.

The second limitation was the disability to explore the whole system of provision with regard to the labelling of GMOs. This system of provision can not only be found in the supermarket, but also includes for instance information about GMOs that is provided through media. Some respondents claimed that GMOs were never mentioned on the television, while others claimed to have seen documentaries. Furthermore, relying on the documentation of IDEC with regard to GMO labelling might provide a biased view. Other sources might have provided other information. Nonetheless, to keep this research within a reasonable scope, I decided to merely rely on the methods that were accessible to me.

5. CURRENT SITUATION

In this chapter, an answer will be provided to sub question 1; how are GMOs in food products currently governed in Brazil and how can this be encountered in the supermarket? An answer to this question will provide an understanding of the rules and resources that are the ingredients of the system of provision with regard to GMO labelling. First, a literature review of the debates around the production and commercialisation of GMOs will be provided. This will explain the challenges that the Brazilian Government faced during the implementation of biosafety laws and the mayor struggles with regard to regulation. Also, this overview will help to understand the context and the magnitude of the Brazilian market for GM foods. Afterwards, a reconstruction of the labelling practices will be showed, based on the publications of the Brazilian consumer protection union IDEC. IDEC has been fighting for a long time for proper labelling of products that contain GM material. Following their struggles and demands for proper labelling provides an oversight of labelling practices by Brazilian food companies and retailers. Lastly, the results of the field visits in the supermarkets will be describes. This will provide in a very practical and lively manner how the GMO labels are present in the Brazilian consumers' daily lives.

5.1 GOVERNANCE OF GMOS IN BRAZIL

In 1995, president Fernando Cardoso (1995-2002) established the first biosafety law that was supposed to govern the biotechnical innovations and commercialisation, such as genetically modified organisms. In this law, the government agreed to a national policy consensus, which allowed the regulated research and commercialisation of products that contain GM material, but prohibited commercialisation of GM crops (Jepson, 2002). Also, the National Biosafety Technical Commission (CTNbio) was installed, which was supposed to perform the regulated research to transgenics and controls the commercialisation of GM crops. Initially the CTN-bio started with a moratorium from 1995 to 1998 for the commercialisation of GMO crops (Jepson et all, 2005). Due to this moratorium, the Brazilian soybean market enjoyed several advantages, since the agricultural sector had time to interpret market signals and develop accordingly. For example, public and private research institutes created alliances with seed manufacturing companies such as Monsanto and develop their own competing technologies. Secondly, the Brazilian agricultural sector was able to develop a comparative advantage with conventional crops by establishing separate commodity chains of conventional soybeans and control systems to prevent contamination. Later, this created an advantage of USD$20 per ton over Argentinian soybeanmeal (Jepson et all, 2005).

Moreover, CTNbio was an attractive institution for Brazilian policy makers, as they used CTNbio to limit the GMO debates to economic and technical issues, while neglecting environmental,

health and negative social aspects of GMOs (Jepson, 2002). Nonetheless, a large opposition emerged. In 1998 CTNBio approved the first five soy varieties for commercial production (Scoones, 2008). The Brazilian consumer protection union, IDEC, immediately filled in a lawsuit and started a ripple-effect that resulted in an anti-GMO movement (ibid.). Guivant (2002) argued that in this anti-GMO movement unconventional alliances emerged, as they are a heterogeneous group of actors that might have different reasons and strategies to oppose GMOs. The working party PT (*Partido dos Trabalhadores*) for example, used GMOs as a token in their discourse against globalization, imperialism and multinational corporations (ibid.). On the other hand, action groups such as IDEC mainly mentioned the negative environmental and health effects of GMOs and battled through 'consumer awareness campaigns' (ibid.). For example, in 2000, IDEC and Greenpeace led consumer boycotts, by stating that at least 11 products contained genetic modified ingredients. This resulted in several protests at supermarkets (Scoones, 2008)

Like political parties and action groups as IDEC, the single states of Brazil took measurements to obstruct the expansion of GMO production from 1999 on. For example, the governor of Rio Grande, Dutra, declared in 2000 the state 'GM-free' as Monsanto did not comply with their demand to provide a detailed environmental impact assessment for its' seeds (Scoones, 2008). These law suits and protests against the commercialisation of GMO drove the government of Brazil into a corner. In 2002 all ministers signed a note of being in favour of GM crops. Subsequently, president Cordosa responded with giving CTNBio a legal status, in order to avoid the lawsuits against the government (Portugal et all, 2004)

In the re-elections of 2002 the anti-GMO lobby was hoping on the success of the PT, as they were often found to be an alliance against GMO commercialisation. Although Lula from the PT party won the elections, the new government found itself shortly after in an awkward position: Despite the efforts since 1995 to regulate the experimentation, production, transportation and commercialisation of GM crops, many genetically modified soybeans found already their way into the Brazilian agriculture. Many farmers imported GM-soy illegally from Argentina (Jepson et all 2005). Additionally, in 2004, 70 000 sacks of genetically modified cotton were found in the state of Mato Grosso, probably imported from Australia (ibid.:). Hence, while there were still many protests going on and regulations to control the production and commercial use of GMO crops, farming coöperations already decided in favour of the GM crops. In 2003 the government of Lula realised that huge quantities of GM crops were already produced in Brazil, which left them the choice to either destroy all these crops or legalize them.

As a consequence, in 2005, the new biosafety law was installed, that gave CTNBio the full authority over independent environmental assesments. Afterwards, CTNBio quickly authorized several GM crops. Moreover, Monsanto was successfully able to fight the Brazilian black markets of modified seeds and agreed with the farming industries to pay the seed industry royalties over the GM seeds (Scoones, 2008). Since 2008 the authorization of the commercial production of GM crops has rapidly increased (Peschard, 2012). Currently, there are 39 types of genetically modified crops authorized for commercial use in Brazil (IDEC, 2015).

5.2 The Labelling of GMOs

Since the struggles over the GMO legislation started in 1995, the Brazilian government demanded that GMO crops need to be properly labelled when commercialized. CTNBio was assigned to outline the labelling requirements. Nonetheless, as there were not yet GMO crops authorized for commercial use and other problems over environmental impact assessments took precedence, no labelling standards were available yet. In 2003 the ministry of justice decided that the packages of food and animal feed containing more than 1% GM material must show the 'transgenic symbol' (Soares, 2014). This symbol is a yellow triangle with a capital 'T' in the middle (figure 2). Furthermore, the package must mention the GMO product or by-product that is used for the production of the food or animal feed. This means that often a sentence is added that explains for instance 'this product contains genetically modified soy'. Products that are derived from animals that are fed with GMOs, are excepted from this law and do not need to wear the label.

Although the ministry of justice ordered this regulation already in 2003, the consumer protection group IDEC questioned the credibility of several products and the ability of the government to enforce this law. Consequently, they surveyed several responsible ministries, such as the ministry of agriculture, livestock and supply, the ministry of justice and the department of consumer protection and defence (IDEC magazine, September 2004). From this survey it appeared that the government was not yet prepared to enforce the law (ibid.). Moreover, the health surveillance centre of São Paulo stated that they already found 11 products that did not comply with proper labelling requirements. The labelling practices of companies is a theme that repeatedly comes back in the Magazine of IDEC. In 2005 they express their worries again, as a

Figure 2. Brazilian GMO symbol

video of Greenpeace has shown that Bunge and Cargill both make use of GM-crops in their food processing, but none of the end-products are labelled.

IDEC also recognizes that there are several other problems with regard to proper labelling of products that contain GMO-crops. First of all, it might be hard to detect whether a product contains GMOs. For example, soybean oil is being crushed and processed by the use of high temperatures, which makes it hard to detect genetically modified material in the end-product (IDEC, 2005a). Additionally, companies often do not control the origin of their raw materials. Subsequently, the raw materials might be grown from GMO or conventional seeds, or from both and might be mixed in the transportation, storage and processing. IDEC argues that if they would know about the origin of their raw products through, for instance, proper documentation, it would be easier to inform the consumers and label the food product accordingly. Moreover, IDEC argues that companies are increasingly responsible for the control of their raw materials and suggests an improved control system for raw materials (IDEC, 2005b).

In 2008 IDEC reports that food manufacturers make progress in the transparency of their supply chains, which leads to more properly labelled products. IDEC concludes this from an experimental research that tried to detect GMO-material in processed food products. This experiment showed that 16 industries were indeed selling GMO free products. Still, IDEC suggests that it is possible that many GM crops are used in highly processed foods, in which case it is hard to detect afterwards whereas it contains modified genes or not (IDEC, 2008). Although IDEC is quite positive, many other studies found that the monitoring of obligatory labelling still needs to be improved.

From 2008 on, IDEC's publications on the topic of GMO labelling decreases to zero articles. However, they still publish a yearly article that describes the risks and cautions with consumption of GMOs and they are still active in promoting non-GMO products. It seems that the labelling practices are increasingly enforced upon the food manufacturers. For instance, Nestlé was ordered by the court of São Paulo to label their cookies with the GMO label in 2012 (GMwatch, 2012). Nonetheless, in July 2015 IDEC expressed on their website their worries about the possibility that the house of representatives might change the regulation for GMO labelling. The yellow triangle with a 'T' will be removed and replaced by just the word 'contains transgenics,' as the current label is not informative enough (IDEC, 2015). According to IDEC, many civil society organizations are worried that this change affects the consumers' right to choose. This label 'contains transgenic' would mean that merely in the end-product GMOs can be detected. Hence, the information if the raw materials that are used for the production of the

processed food were transgenic will be lacking. Although this might be a technical solid argument, the question remains how consumers react upon the labels and how consumers think that informative labelling looks like. Before continuing to the behaviour and opinions of consumers in the next chapter, the next paragraph first aims to provide an idea of how the GMO label is displayed in the supermarkets.

5.4 THE GMO LABEL IN THE SUPERMARKET

After reading about the successes of the Brazilian court in 2012, knowing that in 2013 91% of all the soybeans and 70% of all the corn planted in Brazil were genetically modified (Reuters, 2013) and that many processed foods contain soy ingredients (stichting ketentransitie verantwoorde soja, 2014) and 99% of the industrialised foods contain corn (Pollan, 2006), one would expect to find the supermarkets stuffed with packages with yellow triangles. However, the first visits to the supermarkets turned out to be quite disappointing. Either, not many products contain GMOs, or the food manufacturers are still failing to comply with the law to label correctly with the symbol of a yellow triangle and a 'T' in the middle. Nonetheless, I went to three supermarkets with different strategies to explore how costumers would experience the system of provision with regard to GMO labelling in the supermarkets. During the first visit, I went as a regular consumer that is shopping for daily groceries. These visits will generally be described for each supermarket in order to describe the sphere of the supermarket.

The second visit was focussed on finding GMO labels, to examine their placement in the store and the availability of alternative products. During several searches, I learned that especially chips, soybean oil, salad dressing, meal flour and mayonnaise carried the label. As a consequence, the description of the second visits generally focus on these products. The paragraphs will provide a full description of how the products were placed on the shelves and how much they cost. Nonetheless, the description will not include every product of every store into detail, as that would not benefit the readability of the chapter. Therefore, a maximum of three products per store are discussed that were most striking in each supermarket.

5.3.1 ORGANIC NEIGHBOURHOOD SUPERMARKET

The first supermarket was a small neighbourhood shop that claimed to sell many healthy products. It was located in a narrow, but busy street, with a broken concrete pavement. In front of the shop there was space for three cars to park. The sign above the store was green with yellow letters that stated '*espaço mais saude'* (space more health). In smaller letters the sign contained the words 'without gluten,' 'organic,' and 'diet'. Inside, the store felt quite chaotic, as the shelves were very tightly placed and the fruits and vegetables were right next to the cleaning

and personal hygiene products. The fruits and vegetables were piled up in big plastic baskets. The price tags only stated the price and the name of the fruit. Next to the hygiene products, there was a small shelve, that indicated with a little sign that the tomatoes, onions and herbs were organically produced. Behind this shelve, were refrigerators that contained juice, meat and dairy. Little stickers on the packages indicated the price of the products. In the back of the store, there were little stairs that led to a small bakery department. Here was also a space equipped for the 'healthy' products that were probably assumed at the sign outside. Here, a lot of diet candy bars, gluten free candy bars, 'super foods,' nuts, jams, organic tea and rice could be found. The products individually indicated what type of product it was and sometimes where it came from, for instance in case of the special slimming teas. The type of product was stated with small white signs with black letters on the top of the shelves. The sign indicated for instance 'diet,' for a whole shelve of candy bars. At the other side of the store there was another small space with stairs and here the sauces, herbs, coffee and sodas were displayed. Furthermore there was a counter with two cash registers. The whole of the store felt a little bit chaotic and messy to me. The shelves were not in good shape and seemed a bit shaky. Moreover the shape of the store was not square, as it was probably build in a former house. Consequently, the store had different corners and two stairs that probably used to be separate rooms of the house. Because of the sign outside my eyes were directly looking for biological products. I was stunned by the percentage of space of the small shop that was sacrificed for diet candy bars and 'superfoods' Nonetheless, I as able to find my daily groceries quickly as I bought some bread, cheese, eggs and fruits. The staff was very friendly. They greeted me when I entered the shop and at the cash register they packed my groceries in three small plastic bags. Hence, at my first visit, I did not see any GMO labels.

At the second visit, I went to look for GMO labels. The whole department with fruit, vegetables, hygiene products, meat and cheese did not carry the GMO label. In the back of the store at the department with dietary and healthy products no label with a yellow triangle was found either. However, in the hallway near the stairs a display contained pringles chips from two brands; the original pringles and 'Jacker'. Both brands were placed on the same stand, next to each other at eye-level. The original pringles carried the yellow triangle label and was only available in small sizes (40 gram). The can cost $R 5. The cans of the other brand did not carry the label and were available in bigger sizes as well. A large can of the other brand (75 gram) also cost $R 5. Hence, there was a cheaper option that presumably does not contain GMO ingredients. At the other side of the store I found corn flower from the brand 'yoki' that also carried the label. There were 2 packages from different sizes and were placed at knee level. A package of 500 costs R$3,45. There was no alternative brand of meal flour. Furthermore, I encountered two types of soybean

oil next to each other that were a little bit above eye level. The first one was from the brand 'liza' and carried the GMO label. This bottle of 900 ml cost R$3,25. The other bottle did not carry the GMO label and cost R$4,09. This is almost 26% more expensive.

This small neighbourhood store offered many products that are part of special diets. The marketing was directed at these products and the special quality of these products was indicated with extra signs on the shelves. On product level, sometimes information could be found about the origin of the product, such as with the special teas that they sold. However on the first sight, they did seem to bother about the presence of GMOs in food products. However, With regard to chips and soy bean oil alternatives without labels are sold in the store. Here it was striking that they only sold small cans of pringles with GMOs and large cans without GMO labels. It is questionable if these options were directed at their aim not sell GMOs or because of the price differences and the demand for the different brands in the neighbourhood. With regard to meal flour there were no options without GMO label. Nonetheless, due to the size of the store, it must be kept in mind that there is a limited amount of products available anyway. The provision of products with the GMO label or alternatives might have to do more with the limited availability of space and rational economical decisions for the market in the neighbourhood, than the vision of the store to merely sell 'healthy' products.

5.3.2 ANGELONI

Angeloni is a supermarket that uses a basic strategy. According to the inhabitants of Florianopolis, this supermarket offers a big variety of products. Moreover, they state that the shop aims to reach the middle class consumer. Therefore, this supermarket is generally considered to be 'expensive.' The first time I visited Angeloni, I felt a bit overwhelmed by the size of the shop and the shelves that were organized and filled close to perfection. The entrance of the shop was in the middle of the store and both at my left and right were approximately 6 aisles with shelves and products. At the sides of the shelves the promotion products were displayed, such as laundry soap and juices. Big advertisements hang above these shelves to call attention to the offers. In the middle of the shop the fruits and vegetables were presented in large boxes that were at waist level. On the small price tags it was also indicated were the fruits came from. The tangerines were from brazil and the pears were from Argentina. There was no sign that indicated whether the vegetables or fruits were organically produced. The aisles on the left were filled with pastas, rice, sauces, candy canned food, hygiene products and at the end was a bakery. To the right the shelves were filled with drinks, oils and fresh meat and milk. Above the aisles sings indicated what type of products could be found in that aisle. The shelves were approximately two meters high and therefore I felt surrounded by products. I started to stroll to

find the daily products that I needed. First, I walked to the bakery at the end of the store. There was a small counter with two employees that baked fresh breads and where costumers can order fresh bread and cakes. Next to this counter, there was a shelf that showed pre-packaged bread. The type of bread was indicated on the package of the bread. However, most packages looked the quite the same to me as they had the same lay-outs, but differed a little bit in colour. The choice for the bread was based on the colour of the bread and the information 'whole wheat' on the package. Afterwards, I found spaghetti, bananas, apples, vegetables, yoghurt and cereal. As there was so much choose, I found myself often in doubt with choosing a product. I carefully examined the fruits and vegetables for rotten spots, but I noticed there were not many bad fruits and vegetables present. At the cereal department I scanned the boxes and red the different types of grains and additional flavours, like chocolate chips or fruits, it contained. There were 16 cash registers with belts. Two cash registers were especially for elderly and disabled people that needed fast help. This was indicated with a sign above the cash registers. At every cash register there was someone who would scan the products and another one at the end who would pack the products in separate small plastic bags. Also in Angeloni, I did not encounter GMO labels at the first visit.

The second visit was directed at finding GMO labels. Therefore, I walked through every aisle and scanned all the products looking for the yellow triangles. The first labels I encountered was the meal flour. The meal flours were placed on a shelf that reached from belly level to the floor and it was approximately 50 cm wide. At belly level, there were several packages of meal flours from the brand 'yoki' that carried the label. The packages laid down on their backs, the bottom of the packages with the labels faced therefore the public. 1 kg of meal flour costs R$3,65. There were no other options than this brand with regard to meal flour, although there were other types of flours that did not carry the label. For instance, there was casave flour from different brands of which the price varied from R$2,75 to R$6,29 for one kg. Hence, there is only another option if the dish does not specifically requires the use meal flour.

The second product that I encountered with a GMO label was mayonnaise. A little bit above eye level the mayonnaises of Helmann's (unilever) were displayed. These jars did not carry a GMO label. A regular mayonnaise of 250 gram costs R$5, and the light version of 250 gram costs R$5,59. Other versions of Helmann's mayonnaise with additional flavours and jar sizes cost up to R$10,55. Other brands of mayonnaise that were sold by Angeloni are 'Liza,' 'Salada,' and 'Arisco'. All three brands carried the GMO label, in the front of the package, but very small. They cost generally less than the Helmann's mayonnaise; 250 gram of regular mayonnaise 'Liza' costs R$2,97 and 'Salada' costs R$3,95. These brands were placed directly underneath Helmann's and

covered therefore the shelves from belly level until the ground. In comparison this means that 250 gram of Helmann's mayonnaise is 68% more expensive than the mayonnaise from Liza.

In addition, there were a lot of soybean oils that covered almost the whole shelf of half an aisle from the top to the bottom. Besides soybean oil, there was also olive oil, cotton oil, rapeseed oil, sunflower oil and maize oil. But, especially the soybean oils carried the label. The soybean oils with GMO level were displayed between eye level and belly level and 900 ml of Soy oil from the brand Liza costs $R3,79. The brand SOYA is cheaper and costs for 900 ml R$2,47. Next to these brands, one bottle of soybean oil without GMO label was found and costs for 900 ml R$4,29. This is almost 74% more expensive than the cheap soybean oil of the brand 'SOYA'.

The advertising of this store was especially aimed at the quality of the products and the offers that were made. There was no special section that indicated if they offered vegetables that were organically produced. Nonetheless, the store was stuffed with products and there was an enormous variety. The general impression was that the supermarket was clean and organised. With regard to GMO labels, I expected to find them at the cereal boxes, but none of the boxes carried the label. This might be more due to the failure of food companies to comply with the law, then the strategy of this particular supermarket. On the second visit I encountered several products with GMO labels. In all cases, there were alternatives offered, although these were significantly more expensive. There seemed to be no pattern in the placement on the shelf of GMO labels. Helmanns' mayonnaise was placed at eyelevel, while for the soybean oil both bottles with and without GMO label were placed next to each other at eye level. Helmanns' mayonnaise was probably placed on eyelevel because it is a more expensive and well-known brand. Consequently, it did not seem the store had a special strategy of promoting GMO (free) products.

5.3.3 BIG

The last supermarket was a supermarket with a minimum strategy, which offers relatively cheap products in bulks. The staff has little knowledge about the products they sell. Wallmart is often mentioned as an example for these types of supermarkets. Since BIG is owned by Wallmart, this is the last supermarket that is included in this research. In Florianopolis, BIG was located in the basement of a huge mall. Entering the supermarket felt like entering a normal store in the mall that sells toys, clothes and household items. After these aisles filled with non-food, the section that displays fresh and packaged food started. Moreover, the store was even bigger than Angeloni and counted 22 aisles and 32 cash registers. Since I only came to buy several products, strolling all the aisles did not seem like an efficient manner to find what I was looking for. Hence, the first aisles with toys, clothes, household items and hygiene products were skipped and I

continued to the departments where I expected to find what I needed. The signs that hang above the aisles indicated which kind of products could be found in that specific aisle. I encountered the bread department, where also a bakery was included that baked fresh bread and cookies. Above the bakery big posters showed fresh baked cookies and pies. Pre-packaged breads were placed on the shelves next to the counter of the bakery. I picked the same whole-wheat bread from BIG as I did at Angeloni. Afterwards, I moved on to the fruit and vegetables. The fruits and vegetables were displaced in plastic boxes at belly level. The fruits and vegetables did not seem very fresh, but I was able to select some paprikas and tomatoes. The price tags only indicated the price and sometimes the origin of the fruits. Next to the fruits was a department where cheese was freshly sliced by an employer and a department where meat could be ordered. Furthermore, there were a lot of aisles that contained canned and pre-packaged products. There was one whole aisle filled with instant milk, condensed milk, milk powder etc. (nonetheless, respondents would say several times that BIG did not have the brands they were used to). In the middle between the aisles were separate displays with special offers. One of the offers that I encountered was filled with potato chips. When I picked up a big of potato chips, the first GMO label appeared. It was in the right under corner of the bag, but because of the structure of the display, it was hidden from sight until a bag was picked up. The display was in fact built up from card board boxes and the chips clamped behind a small raised edge, which covered the label. Nonetheless, I did not think this structure was meant to actively hide the label. I decided to not have chips but to buy cookies instead. As my curiosity towards the label was encouraged by now, I started strolling the aisles a little bit more. Nonetheless, I walked fast searching for the shelves with cookies, as I planned to buy those. At the cookie shelf, I expected to find the GMO label as well, so I scanned the boxes, but encountered none. Therefore, I picked a package of cookies with nuts and cranberries. When I walked further I encountered at my right a small part of the shelf that displayed organic products, such as juices, soymilk, cookies and honey. The shelf was a little bit hidden behind a roof supporting pole. Smaller signs attached to the shelves indicated that these products were organic. The products were considerably more expensive than in the rest of the store. Especially the prices scared me a little bit and I walked further to look for a cash register to pay. Many cash registers were open, but I still had to wait a considerable time before it was my turn to pay. Also in this store one staff member scanned my products and handled the payment, while another one packed my groceries in small plastic bags.

The second visit, I went to search for the GMO labels better and I walked every aisle that contained food products. Also in BIG I found especially soybean oil, chips, mayonnaise, meal flour and salad dressing to carry the GMO label. First, I encountered one type of soybean oil with a GMO label that was a sales promotion. Therefore it was placed on the side of an aisle. The

brand was '*bom preço'* (good price) and costs R$2,38. As I found the name of the brand quite odd, I assumed it was a house brand. On this shelf, no alternative soybean oils were offered. Two aisles later, I encountered another soybean oil from the brand 'Liza' which had the label and costs R$2,48. Both bottles of soybean oil were 900 ml. The soybean oil from the brand Liza was also presented at the side of the aisle. I did not find one shelf with all the soybean oils clustered. Hence, it seemed that there was no option to buy soybean oil without GMOs.

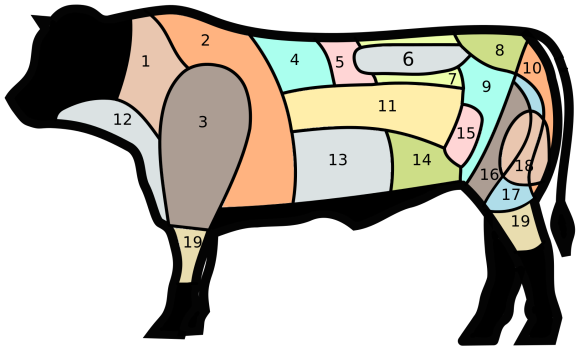
On the contrary, the shelves with mayonnaise was quite extensive. On top of the shelf there was mayonnaise of the brand 'Soya' and costs R$2,69. Underneath was 'Salada' and costs 3,98. Under Salada was Liza which costs R$3,88. All these mayonaisses carried the GMO label, presented in front of the products. Then from belly level on, there was Helmann's mayonnaise without the GMO label. These cost R$4,98 for the normal variant without additional flavours. On the bottom of the shelf, some unknown brands as 'Suavit avela' were presented which cost between R$1,38 and R$ 1,52 for 500 gram. These mayonnaises on the bottom did not carry the GMO label either. Hence, there was a very cheap alternative in comparison to the other GMO mayonnaises. When taking Liza from R$3,88 as baseline, the Helman's option without GMOs is 28% more expensive, while the cheap mayonnaise is 66% cheaper and both do not carry the GMO label.

Also for the corn flour there were cheaper options than 'yoki' which is a brand of corn flour that wears the GMO label. Also in BIG the packages of corn flour were laying on their back, presenting the label in front of the shelf, starting from belly level. 500 Gram of Yoki cost R$2,88. Underneath Yoki was another brand that carried the label and cost R$2,32. Next to this brand, I found an option of corn flour without the GMO label. This cost for 500 gram R$2,18. Hence, this product is one reais less than the established brand of corn flour that carries the GMO label.

5.4 Provision of GMO labels

In sum, with regard to GMO labelling the system of provision is formed by the way in which GMOs are governed; CTN-Bio has the full authority over approving the production and commercialisation of GMOs. Since 2003, companies are obliged to label their products with a yellow triangle if their product contains more than 1% genetically modified ingredients. Nonetheless, the enforcement of labelling turned out to be quite problematic. The Brazilian consumer protection unit IDEC functions as a watchdog for proper labelling of products that contain GMOs. Regularly companies that fail to label are sued and the enforcement of labelling is increasingly improved.

In the supermarkets, the visibility of the label is not yet optimal. The three supermarkets that were discussed in this chapter all applied a different sales strategy. The organic neighbourhood shop focussed on selling products that fit special diets. In the large supermarket chains, the systems of provisions differ with regard to the image and strategy of the supermarket. Angeloni has a basic strategy, offers a large variety of products and is especially directed towards the middle-income households. On the contrary, BIG is directed towards selling a lot of cheap products. Despite the different strategies, the supermarkets did not vary greatly in the information that they provided about the production methods of their products. Merely in the small organic supermarket with a maximum strategy I was able to find some additional information about the origins of the product, such as organically produced or 'diet' and 'gluten free'. In the BIG, with a minimum strategy I found a very small section that provided organic products as well. However, generally, additional information was mainly directed towards the quality of the products or towards special offers. For instance, if the pears were from Argentina, this was mentioned on the price tags, as these pears have a good reputation among Brazilian consumers. Hence, besides information about the product that is provided on the package level, the supermarkets provide little information about the production methods, unless it can directly be linked to quality. In the meat departments of Angeloni and Big there were schematic images of cows presented that indicated the part of the cow and the corresponding names of the meat that could be ordered (figure 2), but there was no information about whether the cows had lived an animal friendly life. When questioning residents of Florianopolis were I could buy organic fruits and vegetables they would send me to a small market on Wednesdays on the main square of the University or to a supermarket that was established by farmers to sell their product for a fairer price. In this store there was a small market stall that sold organic products as well. However, when visiting this special supermarket with a respondent no additional sign indicated that this was the organic department either. Hence, Brazilian consumers are not used to have clear information provided about the production methods within the supermarket, only about the quality of the products.



1. Pescoço
2. Acém
3. Paleta
4. Capa de filé
5. Filé de costela
6. Filé mignon
7. Contrafilé
8. Picanha
9. Alcatra
10. Lagarto
11. Aba de filé
12. Peito
13. Ponta de agulha
14. Fraldinha
15. Maminha de alcatra
16. Patinho
17. Chã-de-fora
18. Chã-de-dentro
19. Músculo

figure 2: meat information in the supermarket

Also, the visibility of the GMO labels was poor in all three shops, as I had problems during the first visits to encounter these GMO products. Nonetheless, during the second visit I encountered several products that carried the GMO label, so I was surprised that I did not notice this during

the first visit as well. This is probably due to the fact that products that carry GMO labels are quite specific products that are not encountered regularly in everyday shopping. For instance, mayonnaise and soybean oil are products that have a long shelf life and do not require regular replacement. Therefore, it is not necessary to buy these products in daily grocery shopping. On the contrary, bread, eggs, cheese, meat, fruits and vegetables are not labelled and do not need to be labelled according to law. Genetically modified fruits and vegetables are not yet approved for commercialisation on the market. Moreover, products derived from animals that were fed with GMO feed are excluded from labelling requirements as well. Consequently, it will not be common for consumers to encounter the GMO label on a daily basis.

With regard to the packaged products that carried a label there was a wide variation among the supermarkets in relation to the availability of GMO labelled products and possible alternatives without label. In the small organic supermarket all choices were limited, also with regard to GMO products and their alternatives. In Angeloni, with a basic strategy that targets middle-class consumers, I was only able to find products without GMO label that were considerably more expensive than the products with GMO label. In Big, that uses a minimum strategy, I was able to find very cheap options in comparison to the brands with GMO labels. However, the absence of labels does not necessarily mean that there are no GMOs present in the product. Unfortunately, it was not within the scope of this research to identify the reliability of the product information. Besides the differences in availability, the supermarkets seemed to have no strategy in promoting GMO labelled or GMO-free products, since there was not extra information available and both GMO-labelled packages and packages without label were placed next to each other or right under each other. Both in Big and Angeloni, the price seemed to be a better indicator for the placement on the shelf. In both supermarkets for instance relatively expensive Helmann's mayonnaise was placed on eye or shoulder level, whereas the cheaper products were placed underneath and the cheapest were at the bottom of the shelves. Hence, if consumers want to have information whether a product contains GMOs, they should carefully examine the packages to indicate the label or seek for information on for instance the internet, as supermarkets do not seem to guide the customer with these choices.

6. AN ETHNOGRAPHY OF GROCERY SHOPPING

Until this point, we have learned about the systems of provision in Brazil with regard to GMO labelling and the presence of GMO labels in the supermarket. Before continuing with the perspectives of Brazilian consumers about the quality of GMO labels, it is necessary to discover how the practice of shopping is being performed by Brazilian consumers. The act of purchasing goods provides valuable information about the general attitudes of consumers towards grocery shopping in general. It is important to understand the practice of shopping, as a proper label designed to inform the consumer should affect the practice. Therefore, the respondents were accompanied on trips to the supermarket to observe how and why they pick certain products and especially, if they read the product labels. Afterwards they were asked in qualitative interviews about opinions and concerns with regard to supermarkets, their own shopping behaviour and environmental friendliness. This research resulted in an ethnography of the 'practice of grocery shopping' that captures the sphere of the practice and the main concerns of Brazilian consumers in the supermarket.

6.1 A DIFFERENT NOTION OF GROCERY SHOPPING

Already in the first weeks of my research, I experienced that Brazilian consumers have a quite different understanding of grocery shopping than me. Every time I tried to make an appointment to accompany someone to the grocery store they would answer me: '*sorry, I just went to the supermarket this week, I go next month, can we make an appointment then*?' Confused by their answer I made an appointment for the next month, although I wondered what they would eat that week or where they stored all their food. When they were asked if they did not need to eat this week they replied '*oh, yes, but I will just stop by the store to pick up some fruit and bread.'* After this answer, it appeared to me that Brazilians probably have a different notion of doing groceries than I was expecting.

Fazer compras (doing groceries) differs from 'picking up some fruits' or 'stop by the shop' by the kind of products that are bought, the effort it takes and the amount of time it consumes. Doing groceries is considered to be a monthly event, people would buy products that have a long shelf life, such as personal care products, hygiene products, rice, pasta, beans and canned products. Generally, they would take a car to a large supermarket that, in their believes, would sell these products for a good price. The whole process in the supermarket takes about an hour and the products and prices are compared extensively. I was only able to accompany women to *fazer compras,* who took some time to explore the packaging and read all the ingredients. Men seemed to be less considerate, although a legit explanation might be that I, unfortunately, only accompanied

men on picking up some weekly groceries. Hence, the aim was to buy quickly something that they needed and did not take time for reading packages.

For both, women and men, 'Just stopping by the shop' is a short and easy act. The amount of times a week varies from every day to two times a week. At this occasion, people would buy fresh products such as fruit, vegetables, meat, milk and bread, dependent on what they need that week. It is not necessary to take the car for this kind of groceries, the supermarket or market place nearby would serve just fine for this purpose. A common argument for going two or three times a week to buy fruits and vegetables is that the climate in Brazil is not suitable for storing fruit a long time; it will be rotten by the end of the week. Nonetheless, this did not explain why buying fruits and vegetables was not considered to be grocery shopping, while *fazer compras* is. According to a 68-year old man this attitude towards grocery shopping is an inheritance from Brazil's past food crises. People would only go the store once a month, waiting for the moment when the food was in abundance and the prices were low. While currently the food prices are quite stable, many people continue this habit, although it seems that some people try to change this habit as they live in small apartments and have problems with storing the food for one month.

This clear distinction between two types of doing groceries, also affects the feelings of the consumers very directly. This is clearly stated by an 28-year old Biology student, as she explains:

> '*I hate doing groceries, it takes so much time, you have to check the prices and check the labels. I almost never do groceries, only like once a month… No I don't hate going to the shop, I go almost everyday to the shop nearby and then I buy some bread and fruits and cigarettes, I need that everyday'* (woman, 28 years).

Apparently, this young woman connects doing groceries to a negative experience, while buying food in itself is not negative. Moreover, she explains the difference between grocery shopping and buying some food by the amount of consciousness that is involved in the experience. When she goes grocery shopping, she has the feeling that she needs to make the right choices and spends a lot of time comparing products. During the observations, I noticed that she searched for cheap products, which also had the quality that she expected from it. Multiple times she found two products that were approximately the same price. In order to make the right decision, she would read the list of ingredients of both products and choose the one that was according to her the healthiest one; with the least of sodium and trans-fats for instance.

This young lady and her concerns about healthiness was not an exception. The consumers that I accompanied to *fazer compras* showed me elaborately the quality of several products and what they were looking for in a product. Each one of them had their own special concerns, ranging from the quality of a product to environmental related concerns, on which will be elaborated later in this chapter. This was less the case with people that were joined to buy some food quickly. In the interviews I also noticed a difference between the answers of people that were accompanied to *fazer compras* and people that were accompanied on their daily shopping. When I accompanied them to *fazer compras,* they would answer more consciously to questions about what they find important when choosing a product. For example, they gave more extensive answers and they were able to indicate the importance of the price, the validation date and the quality of the products. On the contrary, people that were accompanied on daily shopping would simply answer that they paid most attention to the price and if it looked 'pretty'. In the last case, it took more effort of the interviewer to have all the questions covered. Consequently, it seemed that even in the interviews afterwards, the consumers that came back from *fazer compras* were more conscious about the products and their own behaviour in the supermarket. They were able to explain extensively their doubts and considerations.

This shopping behaviour has a direct consequence for the visibility of labels. As the Brazilian consumers only take time to do extensive and considerate grocery shopping once a month, they are also only exposed to the labels on products once a month. Particularly, since merely very particular products carry the GMO label. On the other regular shopping trips, only fruit, vegetables, bread and cheese is bought. These are products that do not carry the label. Hence, it is probably just one time a month that a consumer is exposed to the GMO labels an have to make a choice about whether to buy this or not.

6.2 Price and Quality

For Brazilian consumers the price is a determining factor for choosing a product. Many consumers express their wishes to pay a good price. Accordingly, they do their grocery shopping in supermarkets that they believe to sell products for a fair price. Nonetheless, it is not easy to determine what a good price is. For some a good price means the lowest price, while others care more about quality and are willing to pay more for a brand that they like.

Especially people from the lower middle class were looking for the lower priced products. For example, a 68-year old woman that lived with her 24-year old grandson was trying to do their best to purchase the cheapest products. While the grandson pushed the trolley forwards, the grandmother was actively picking up products from the shelves and comparing the prices to one

another. When she tried to pick ketchup, she had a dilemma, as she did not know the brand of the cheapest one. However, the other ketchups that they knew were two to five reais more expensive. As she consulted with her grandson, they decided to take the cheap ketchup to try its' quality. When I asked about it later the grandson told me there was no other option, as the others were too expensive.

Consumers with higher incomes were looking for the lower price as well; although more often quality would take precedence over the price. For example, they did not buy another brand if their 'own' brand was more expensive. Another example is rice, which is considered to be one of the most important basic foods in Brazil. Brazilians would eat rice and beans everyday. They even have a saying 'it is like rice and beans,' which means it is the 'basics'. As rice is considered to be very important, most of the consumers would stick to the same brand of rice, although they would always check through the transparent parts of the package if the rice looks good. Almost everyone picked up at least 3 packages of rice, of the same brand, compared the quality of the bags with each other, before picking one to place in the trolley.

Sometimes, consumers consider the price as a indicator of quality. A 32-year old woman warned me not to buy the cheapest mayonnaise:

> '*You cannot take the cheap mayonnaise. If you take the cheap mayonnaise you are going to die. How can mayonnaise possibly be one reais? It is probably very bad, it probably doesn't even taste like mayonnaise, probably it isn't even mayonnaise*.' (woman, 32 years).

Of course, the woman was joking, but she was serious about convincing me not to buy the cheap mayonnaise. Apparently, the low price of this mayonnaise caused her to distrust the quality of the product. When she was asked if she had ever tried this mayonnaise she responded that she had not; but judging on the price the product was not tasty and especially not healthy.

Nonetheless, this willingness to pay more is up to a certain level. A 39-year old woman showed me special, first class rice, which would cost 44 reais for a kilo (approximately €14,66). '*This is very, very good rice, but the price is insane, so I don't buy it*' she said. Another upper-middle class woman who did her grocery shopping in 'campo grande', which is a farmers' supermarket, had a very specific policy for buying organic and conventional products. From the organic department, which was more expensive, she would buy lettuce, strawberries and other fruits that do not have a peel. Nonetheless, she did not totally believe that fruits from this department were really

organic: '*these are supposedly organic,'* she said. Apparently, she was not convinced about the integrity of the department, but she bought it anyway. In the conventional part of the store she bought peaches, melons, pumpkins, onions etc. She explained that the difference for her is the peel. Fruits and vegetables with a peel were according to her generally more protected against the herbicides and pesticides. She explained that by peeling these fruits she reduced the consumption of the amount of agro-toxics, while fruits without peel would contain chemicals to the deepest inside of the fruit. '*You have to be practical'* she said. This was her strategy to avoid chemicals and pesticides, while not spending too much on the groceries. Hence, consumers have strategies for combining their values of a low amount of agro toxics and a good price in their shopping behaviour.

6.3 QUALITY CHECK

The quality of products is very important for Brazilian consumers. When the respondents were asked in the interviews what aspects they pay most attention to when they choose a product, every respondent mentioned 'good quality' among other aspects. They defined 'good quality' as a product from which they liked the taste very much. As was already mentioned, many consumers stick to the same brand of products they find important, such as condensed milk and rice. Still, the respondents would compare different packages of the same bread and the same rice in order to guarantee they are buying a good quality. In Brazil it appears to be very important to check the quality of the product before buying, especially with fruits and vegetables. In every supermarket, the fruits and vegetables were stocked in baskets. Next to the baskets a plastic bag dispenser would provide the costumers with plastic see-through bags to pack the fruit. All the respondents that were accompanied by me would elaborately check every fruit or vegetable they would pick up, before placing it in the plastic bag. All of them answered that they were checking if the fruit looked 'pretty'. 'Pretty' meant that it was not over-ripe, was not too soft, not too hard and had no black or ugly spots. Two men in their twenties were not able to find tomatoes that they needed that night. After some searching, they found the tomatoes, but they were all green. '*wow, that looks bad, look how green it is'* they shouted, and they did not buy the tomatoes. If you do not check the fruit and vegetables before buying, you might encounter some problems, as I found out by myself the first couple of weeks of my staying in Florianopolis. As I was not used to pay much attention to the vegetables I buy, I sometimes came home with rotten tomatoes or moldy sweet peppers.

Another aspect that Brazilians always check is the expiration date, especially from bread. Many of them would answer that it sometimes happens that the bread is only valid for one more day, or is sometimes even expired already. On the contrary, some people explained that this

happened more often in the past, while nowadays things are better arranged and these kinds of mistakes happen less. Nonetheless, the habit of watching the validation date remains.

It is also necessary to check the eggs. All respondents would open several boxes of eggs before choosing one to buy. They responded that they checked if none of them was broken. After a couple of weeks I bought myself a box of eggs that were broken, which I noticed at home. After that moment I started checking the boxes as well and I encountered indeed several boxes that contained broken eggs.

Lastly, the consumers would also carefully evaluate the meat they were buying. Two men in their twenties explained to me that they did not want the meat that looked dark. In general, people would pick up several packages of meat and stare at it, turning it around, and then they would pick one of the packages, and put the others back on the shelf. In the interviews they answered that they were often concerned about the quality of the meat. Almost every supermarket had a department were meat is freshly cut by several employees. The respondents would say that they always looked if this place was clean:

> '*When I see the butcher, and he is all covered in blood, I am not going to buy the meat. If the butcher cannot handle himself, imagine how the meat is handled!*' (man, 32-year).

Hence, Brazilians are very aware of the dangers of mal-treated meat and bad hygiene. When asked if they had ever encountered any problems due to bad meat, most of them would answer no. Probably, this is because Brazilians seem very conscious when they are doing groceries. As it proved with the fruit, vegetables and eggs, it is also necessary to be conscious and pay attention in Brazilian supermarkets. Sometimes the fruits and vegetables are not ripe or already rotten and eggs are broken from time to time. Apparently, the systems of provision with regard to the quality of the products require Brazilian consumers to be conscious and pay attention. At the other hand, older respondents explained to me that many of these controlling habits are an inheritance from the past when the supermarkets were not that advanced yet. Nonetheless, controlling the date and quality is still an important part of the practice of grocery shopping. It is likely that when the quality of products in the supermarket continues to improve, paying attention to the colour or validation date might partly disappear as a component of the practice.

6.4 HYGIENE

Besides the consciousness in the supermarket about the quality of the food, Brazilians are also very alert to hygiene. Most of the respondents would answer that the most important feature of a supermarket is cleanness. This became for example clear in the previous example of the meat, were respondents would pay attention to the cleanness of the butcher and his workplace. Another example is of a 39-year old woman explained to me that she would sometimes go to the supermarket Big and smelled a bad odour from the store. If she notices this smell, she leaves without buying the products that she came for.

With regard to hygiene, the respondents in general defined mal-hygiene by an observation. For instance, the amount of blood on the clothing of the butcher or the identification of a smell are observations. Secondly, they connect this observation to a normative value; a smell means that the place is not clean. However, cleanness is not always observed by an objective observation, but consumers can also judge the cleanness of a place by a feeling. In the neighbourhood Carvoeira are two small supermarkets located next to each other. A 32-year old man explained that he preferred one of the supermarkets to the other, because he 'felt' that that one was cleaner and fresher. The other supermarket he described as 'shady' and 'ghetto-like'. Objectively, he could not identify for example a smell, or proof of dirt on the ground. He just 'felt' that the other one was cleaner.

In general, Brazilians are very focussed and conscious on hygiene around food. One of the most extreme examples was of a woman who washed the fruits and vegetables after she had peeled it first. Another example is the attitude towards touching food with your hands in public place; In restaurants, bakeries, bars, *lanchecafes* (for coffee and little snacks), and other places were they sell food, there will always be a separate space where the check can be paid. The employee that touches the food is not allowed to also touch the money as well. A 28-year old woman told me with disgust how she bought a waffle in Belgium and the man who handled the payment also handed her the waffle. '*Do you know how many bacteria a 10 reais note contains?*' she asked. '*In Brazil they did a research and a huge percentage of the money even has traces of drugs on it*' clarified her friend. Moreover, throughout my stay, several people told me not to eat my food with my hands directly touching it, but it was better to wrap a napkin around it.

6.5 THE IMPORTANCE OF HEALTHY FOOD

When doing groceries, healthiness is a recurring theme among Brazilian consumers. Only one respondent said that he did not care that much about healthy food, as he liked sweets and snacks too much. However, all the remaining respondents looked at the fruits in the supermarket. Even

when I accompanied respondents to *fazer compras,* they would quickly scan the fruit department to see if their was some fresh and ripe fruit in the cheap supermarket where they normally would not buy their fruits. Another woman spoke with disgust about the instant noodles that she bought for her son, as she believed it is not healthy. Moreover, in the interviews they all had specific ideas about what a healthy diet means. At least half of the respondents mentioned that they had visited a dietician once in their lives. For many, a visit to the dietician was included in their gym membership. The combination of the gym memberships and care for healthy food points to a lifestyle in which healthiness is highly valued. In a statement about what healthiness means for her family, one higher educated woman stated that this lifestyle is connected to an obsession with beauty:

> '*Brazilians are obsessed with beauty. But it is a burden to be beautiful. We need to eat healthy and practice a lot of sports ... We eat a lot of granola and oranges, because it has vitamin C that will protect you from the flu. Healthy food is also especially organic, without toxics and for the grains, integral rice is better, but sometimes I buy white rice. And we buy brown rice, because it is less processed and contains less chemicals, this is healthy for us'* (woman, 39 years).

Several elements of this statement are representative for many answers of higher educated consumers that identify what healthy food is. First, she connects healthy food to a general living standard that she believes to be popular in brazil. Then, she switches from a general statement about Brazilian beauty standards to what healthy food means for her and especially her family. Here, she provides very specific examples of what is healthy. From each product that she mentions, she can state what the healthy quality of that product is. For instance, oranges contain vitamins C that protect against the flu and brown rice contains less chemicals. Hence, she differentiates on product level and separates which variant she considers to be healthy and which not, such as two types of rice.

For lower educated respondents healthy food is important as well, but they identify healthy food in another way. To the questions 'how important is healthy food for you?' and 'what is healthy food?' a common response is:

> '*I do not know a lot about the rules of healthy food, but I have a son with high cholesterol. So I try to buy healthy food, but my children enforce me to buy unhealthy stuff. My son takes a lot of cake and cookies and chocolate. But he is a little overweight, isn't he? So I try to buy healthy food* ... Healthy foods are, *you know, fruit, yoghurts,*

meat, vegetables, uh, oranges, rice, beans, that is healthy, isn't it? Not many fats and sweets and salty snacks' (woman, 44 years).

This woman already mentions that she does not have a lot of information about what exactly healthy is, but she identifies per product if it is healthy or not. She considers sweet and salt snacks to be unhealthy, while fresh foods and yoghurt are identified as healthy. Hence consumers of different socio-economic classes identify and recognize healthy food in a different manner. Accordingly, lower-educated respondents performed during shopping a quality check that was based on the price, the colour and the validation date of the product, while respondents from higher economic classes searched for more information on the packages of some products, such as the percentage of trans-fats, the presence of additives or the production method.

6.6 CONCERNS WITH CHEMICALS

Besides the attention that is being paid to the hygiene of the supermarket or the healthy value of food, some respondents were also very careful with products that are meant for personal hygiene or housekeeping. These respondents believed that chemicals in these products are bad for their own personal health and they are careful with their purchasing. When I accompanied a 62-year-old man with his 32-year-old daughter on a shopping trip we spent a lot of time in front of the toilet paper. They were picking up packages and reading the information elaborately. Eventually, it seemed that they decided not to buy the toilet paper in this supermarket, but that they would visit another supermarket the next day to buy toilet paper. When I asked what the problem was with this toilet paper, the daughter explained to me that they believed that all the toilet paper that was sold here was fragranced. She continued to explain:

'*Fragranced toilet paper is bad, because it affects the well being of your private parts. Maybe not directly, but on long term you might get problems. I have read a lot about this and now we try to buy unscented toilet paper. However, all these packages seem to contain fragranced toilet paper'* (woman, 32 years).

In this statement, the woman denies that she or one of her family members is allergic to fragranced toilet papers. However, although this family never encountered any problems themselves, they have developed a strategy to avoid the risk of getting problems. This lady in particular did a research to chemicals in make-up and therefore became aware of this particular risk of fragranced toilet paper. This knowledge caused a slight alteration in the practice of shopping of her whole family, that is now concerned about fragrance toilet paper and actively reads the packages in search for unscented toilet paper.

Another woman of 30 years old explained to me that she was very careful when she bought body wash or shampoo. Moreover, she stopped using laundry softener at all, as she believed that the chemicals would threat her well-being. '*You know, the chemicals go from your clothes into your skin, it is not healthy'* she stated while choosing soap for washing hands; '*I take this one, because it is a little bit more expensive, but it also has some sort of vitamins in it, it says here, look.'* Hence, as hygiene is important for Brazilians, the soaps and products for personal hygiene are at the same time a source of potential health hazards, that can be avoided by buying products with special (additional) qualities.

6.7 ENVIRONMENTAL CONCERNS

Besides concerns about the prices, quality, hygiene and personal well-being, some of the respondents also expressed environmental concerns when we were doing grocery shopping. Especially the women were conscious about the environment, while the men expressed less care. I categorized a respondent as environmental conscious, if he or she could name an example of an environmental issue that they thought about and acted upon while doing groceries. Out of 8 men, 6 responded that they never thought about environmental issues while doing groceries. On the contrary, 7 out of 10 women named more than one concern and often acted upon these concerns in the supermarket. Generally men would respond to the question whether they had environmental concerns during grocery shopping with:

> *I don't think about it, I just buy. I feel like it is too much a political process… It is about how politics is handled... Being a part of it doesn't seem like it is going to get anywhere. I think people in general, and I, are not going to worry about it until it is convenient for us. It is so much trouble that it is not worth paying for'* (man, 32 years)

Or:

> '*To be honest with you, no, I don't worry about that. Here in Brazil there is a difference in the price. The organic lettuce costs twice as much as the regular one. Brazil is a very big country; I don't think I will make a difference you know, people will continue to buy brands that are not environmental friendly… Maybe I should be worried; I should be embarrassed about this. I should try to change things… People with more awareness can influence colleagues and friends'* (man, 30 years).

Both these men are higher educated. The reason that they did not worry about environmental problems when doing groceries is because they had the feeling that changing their behaviour

would not have any affect and was too much effort. Ultimately, they defined that other consumers are free riders, so that their efforts would not be worth it. Nonetheless, the second man was less negative than the first man, as he also expressed that if he worried and tried, he might be able to trigger behavioural change.

However, the price of the products seemed to be the most important factor for not buying environmental friendly products. Other men answered that they simply looked at the price and had no idea why they never worried about environmental problems. The women that did not worry about environmental problems also stressed that for them a good price was the most important:

> '*No I don't worry. I just look at the price. The price is important to me'* (woman, 62 years)

Or:

> '*No, I have to worry about a lot of things. I worry about my family and children and the house and the business, so I do not worry about the environment'* (woman, 44 years)

Both women were lower educated and stated that they did not worry because there were more pressing problems in their lives, such as financial problems or a busy life. The last woman that had not many environmental concerns always went to do groceries with her husband. She explained that he enjoys searching for information on the Internet and that he knows what to buy. Consequently, she stopped worrying about it. Hence, the difference with the responses of the women and men is that these women were more focussed on their own life and family, while the men blamed the attitudes of the society for their own lack of environmental consciousness behaviour.

However, still 8 women and 2 men that were concerned about the environment, named several concerns and adjusted their shopping behaviour. One of the most heard concerns was about the amount of plastic bags they used while doing groceries. In Brazil it is common to put all the fruits you buy in different plastic see-through bags. When you proceed to the counter, an employer would pack your groceries into other little plastic bags. These plastic bags are small and are not very strong, as they easily tear out when the content is too heavy. Therefore, every little plastic bag would contain merely one to four items. This structure in the supermarkets results in a large pile of plastic bags when coming home to unpack the groceries. Some of the respondents where aware of the problem with regard to plastic pollution and expressed their guilt to their extensive use of plastic. The structure of the stores makes it hard for people to use less plastic. A 32-year

old middle class woman explains her strategy of combining different fruits in one plastic bag and the practical difficulties that occur with this strategy:

> '*I often put different fruits in the same plastic bags, especially if I have only one or two of them. For example the avocados can go with the peaches, as I only take two avocados. I actually cannot put it all in one plastic bag, because the lady at the counter will get mad at me. She has to weigh everything and take everything out of the plastic bags if it is mixed. That is why they want you to put it in different plastic bags. Also it takes a long time, and then the people behind you in line get mad. I try to take into account the environment, the desk lady and the other people that are shopping, haha…. but they don't make it easy for us, do they? They can make it easier for us to not use that much of plastic'* (woman, 32 years).

Hence, the structure of the store causes it almost to be impossible to use less plastic, as they require that you organize the fruits in different bags. Furthermore, this woman does not like to make the job of the supermarket employees harder by not following the rules. Nonetheless, the respondents told me that, although they were worried about the environment, they also found a good use for the plastic bags as garbage-bags. In some way they felt a little bit better that they were able to re-use the plastic for a good purpose.

Additionally, some concerns were especially directed to the packaging of products and the relation to the quality of the product. The importance of rice in the Brazilian kitchen was already pointed out, but one respondent explicitly explained that she only would take rice from a brand that has a see-through package. According to her, this was necessary in order to assess the quality of the rice. Another woman found honey important and she explained to me that she preferred honey that was packaged in a glass pot, as she believed this would conserve the honey better. She spent a lot of time reading the labels of the honey in plastic pots and concluded that they all contained added sugar. She believed this was necessary to preserve the honey in plastic, while honey in glass pots do not need added sugar.

Another concern was about biodegradable hygiene products, such as laundry- and cleaning detergent. One student spent a long time at the shelves with laundry detergent. While reading the labels of several packages, she complained that she could not find if it was biodegradable. After a while she got tired of doubting and picked the cheapest laundry detergent. A 42-year old upper middle class woman told me that she always tried to use biodegradable soap, although

one of the products for housekeeping she used was not biodegradable; '*but it is very effective'* she explained. She was working as a professor in the university and had two small children of 7 years and 9 months old. This woman particularly tried to weigh her conscious lifestyle against the question: 'what is practical?'

This same woman was also the only one who bought organic products during my field research. Earlier in this chapter was explained that she had the strategy to buy organic vegetables and fruits without a peel and the fruits and vegetables she bought with a peel came from the conventional department of the supermarket. This was her strategy to reduce her expenses and be 'practical'. Besides, buying organic products, she also paid attention to the origin of the products. '*I don't like my food to travel far, that is bad for the environment, you know?'* she said. In the participatory observation, I did not encounter another respondent that bought organic products. Generally, they found this too expensive. However, with regard to locally produced products, approximately 3 respondents mentioned in the interview that they sometimes went to a small market where they sold products from the region, or they preferred to buy some product from a special brand from which they knew it was produced in the near region.

Two other respondents expressed especially concerns about the production methods of the products. One woman preferred to buy more expensive milk that was supposed to be produced by a farmers union who aimed at producing biologically and tried to sell their products against a better price for the farmers. Also she read the labels of several packages carefully in order to learn more about the production methods. She was not always able to find these kinds of information. When she could not find this information, she would stick to her old brand.

All these examples above show that if it is too much effort to consume environmentally friendly, the easiest option takes precedence. When a product is not available at that particular supermarket, or another cleaning product shows a better result, than the environmental concerns quickly make place for convenience. In this research, none of the respondents expressed concerns about animal friendly products. In the former chapter it was also shown that the supermarkets did not provide any information about how the farm animals are handled. Nonetheless, many consumers, and especially women, take environmental concerns into account and they develop several strategies to act upon these concerns. For instance, they try to reduce the amount of plastic bags that is brought from the supermarket, they buy biodegradable cleaning products and they develop strategies to have a part of their fresh fruits and vegetables organically produced.

6.8 READING (GMO) LABELS

The former paragraphs already mentioned that the Brazilian consumers are reading the labels of products quite elaborately. First of all they check the price. Secondly, they check the quality, the expiration dates, the ingredients and the environmental considerations that are important to them. All these types of information can generally be found on the label, and in general the Brazilian consumers take some time to read it if it interests them at that moment. Especially, when *fazer compras,* the Brazilian consumers seem to think that they have to make an important decision that affects their habits for the whole month. One respondent I accompanied on *fazer compras* had a very particular strategy for deciding which brand she wanted. First she would look at the price, but when she found two products for approximately the same price, she would read the lists with nutritional values of both products and compare which of the two had the least trans fats or which one contained more vitamins. Moreover, there were several consumers who regularly picked up a product to read for instance, about the added sugar in honey, or whether the toilet paper is fragranced. Consequently, I would like to argue that Brazilian consumers are definitely not careless when they are doing groceries. Maybe habits as comparing fruits and rice can considered to be routinized, but every time a consumer a takes the time to assess the quality of a fruit or read the list of ingredients, they are trying to make a considerate choice and weigh their values; which one takes precedence? This becomes especially clear in the following examples of the three people (out of 18) who recognized the Brazilian GMO label during the trip to the supermarket.

The first one to recognize the label was a PhD-student of 32 years old. She lived together with her husband and a dog in the north of the Island. She was very considerate while doing groceries. When she was choosing a can of tuna she explained to me that she did not want the other brand, as she thought it came from China; '*It states here, that it comes from China I think. I do not want that, I do not want products that come from that far away'.* Then she picked up the can of tuna to read were it came from, but she could not find the right information that she just mentioned to me. '*Anyway, I know something was wrong with it, therefore I do not buy this one*' and she placed it back on the shelf and picked tuna from another brand. For the lettuce she explained to me that she always paid attention to buy organic lettuce. That day she did not need anything that would possibly contain GMOs, but during the interview she answered positively on the question if she knew what the Brazilian label for GMOs looked like. She was very surprised to hear that she was the first one to recognize the label until that point. '*I never buy products with that label, I don't want to eat GMOs, I am very conscious about that'* she explained to me.

The other respondents who recognized the label were a mother and a daughter who were doing groceries together. The woman is married to a pastor and has 3 children. One of her daughters studies sociology at the University. Throughout the shopping they were very conscious about buying products that guaranteed to pay a fair price to farmers. When they were choosing a *corn meal* they picked up a package with the GMO label and started to read the package. '*Normally I have this brand of corn meal, Yoki, but I want to know if this corn flour has another production method, if it is better for the farmers* she said, '*but I cannot find it, I think I stick to the corn flour I always take'.* She picked up an corn flour that also had the label on its' package and we turned to the soybean oil. The daughter picked up a soybean oil without the GMO-label and she showed it to her mother. To me she explained that technically there are no GMOs in the oil she picked, while all the other soy oils contain GMOs. After a little while, the mother responded to this; '*well, that one without GMOs is 15 reais, while this one is only 5 reais, so we take this one of 5 reais'.* At the shelf with salad dressings they were able to find a brand that was relatively cheap and had no GMO label. They seemed very content with this choice. When I asked about the corn flour having the GMO label they responded that there is for corn flour no option without GMOs, so they would take one with GMOs.

Although in both cases the respondents were informed and considerate about their choices, they were also very different. The first lady paid a lot of attention to the products she was eating and claimed that she actively tried to avoid products that contain GMOs. Nonetheless, the second woman was very considerate about the buying 'fair' products, which seemed to take more precedence than the presence of GMOs. Moreover, she choose practically; the soybean oil without GMOs was three times more expensive, so she would choose the cheaper option. Also, when there is no option without GMOs available, as in the case of corn flour, she would eat the corn flour that contains GMOs anyway. Every time a consumer has to make a choice like this, they have to reflect upon their values: how to rank your beliefs, and to what extend is living up to your norms and values possible? Do you have to change your whole diet if there is no option of corn flour without GMOs? Is my health more important than a fair price for the farmer?
In several cases consumers picked up a product with a GMO label, and they did not know what it meant. The first time was the grandmother with her grandson. They doubted in front of the corn flour if they would buy a package. The grandmother picked up a package that contained a GMO label the size of a thumb and she mumbled something inside her mount. She discussed with her son the size of the packages while screening with her eyes both the front and the back of the package. Eventually, they decided not to buy the corn flour and she placed it back on the shelf. The reason was that the package contained too much for the two of them. Later on in the interview, she said that she missed the GMO-label on front of that package at all and that she had

never seen it before. More or less the same thing happened in other cases, when respondents choose mayonnaise and scanned all the brands and then bought one without a label based on the quality of the brand. This proves that the meaning of label must be known on forehand, otherwise it will not be noticed at all.

6.9 THE PRACTICE OF GROCERY SHOPPING

In sum, this chapter has provided a thick description of grocery shopping in order to find an answer to the question: how do Brazilian consumers perform the practice of grocery shopping. This chapter has shown to what aspects Brazilian consumers pay most attention and how they interact with the environment around them. The practice of grocery shopping starts with deciding or knowing what type of grocery shopping is going to be performed that day, since Brazilian consumers identify two types of grocery shopping. One type of shopping is quick and easy to pick up some fresh foods for that week, while *fazer compras* is once a month, and requires thoughtful shopping. Based on this decision, the consumers choose to which supermarket they go and if they need to take the car or can go by foot.

With regard to the supermarket consumers prefer that it looks clean to them and that they sell products for a fair price. This means that when they *fazer compras,* they often go to a big supermarket that uses a minimum strategy. Here they can buy all the processed and canned foods and hygiene products they need for the coming month for a low price. If they need daily groceries and fresh fruits and vegetables, they usually go to a supermarket nearby, a local market or an organic shop.

In the supermarket, it is needed to pay a lot of attention to the products, as these sometimes lack the quality. For instance, the fruits can be rotten or the eggs can be broken. Therefore, Brazilian consumers are very conscious when they are shopping for groceries, whether they *fazer compras* or just stop by the shop. Nonetheless, when *fazer compras*, often even more attention and consciousness is being paid to the products that are needed for that month. For example, valuing whether the fruit is ripe enough or if the beef has a good colour can be a quick routinized habit, while reading the nutritional value of several products and comparing the price per kilos is a time-consuming activity. During *fazer compras,* it is more likely for consumers to encounter GMO products, as only pre-packaged products that are not needed every week carry the label.

When a product is chosen, it is a continuous back and forth between the persons beliefs, values and resources and the systems of provision, with all the brands and prices in that store at that moment. In this moment it occurred to me, that especially choosing a product is the main micro

practice that reflects the relationship between actors and the material world. Generally, choosing a product is performed by Brazilian consumers by first scanning the shelf. When scanning the shelf, they look at the prices and brands. Then two brands are picked up and compared, or two packages of the same brand are picked up and the difference in quality between the same products is valued. The quality is often judged by the colour and in case of fruit the ripeness. Then one of the products is picked and placed in the shopping trolley before moving to the next product. These practices can be categorized as a routinized understanding, knowing and desiring as every respondent performed this broadly in the same way. All the respondents had learned how to evaluate whether meat and fruit has a good quality and they all desired the products to be of good quality.

While this is a general observation of the practice of shopping, the consumers also showed different practices that are unique to their personal values and believes. While almost all respondents claimed to pursue a healthy lifestyle, there was a difference in how the respondents identified healthy food. The higher educated respondents differentiated per product whether it was healthy or not, while lower educated people differentiated per product group. For instance, a higher educated person was able to tell which margarine was healthier based on the nutritional value, while a lower educated person simply knew that fruits and vegetables were good for their health.

Another difference per consumer group is the care for the environment, in which it is shown that especially women adjusted their shopping behaviour according to their believes. They had for instance concerns about the amount of plastic they use, the packaging of the products, the production methods and the origin of the methods. Because of these concerns, they had developed special strategies to shop for better products at local markets, or to eat healthy organic products while not spending too much on groceries. Usually, they searched the information on the packages of products to gain information about what they found important. Nonetheless, they did not claim to live an environmental friendly lifestyle, as they often admitted that practicality took sometimes precedence. When no better, environmental friendly option was available for a good price in that store, or when another product is more effective for cleaning, the non-environmental friendly product was chosen. Moreover, there were consumers who had some very particular information about a product group that influenced their decision-making behaviour around that product. For instance, one man and his daughter spend a long time searching for unscented toilet paper, as they believed that this would protect against potential future health issues.

Consequently, we can say that the practice of shopping in Brazil consists of making careful choices. All the respondents spend time to check the price and quality of each individual product and at least half of the respondents spend extra time to evaluate additional qualities, such as the nutritional value or environmental friendliness. However, with regard to GMO labelled products, merely three respondents recognized the GMO label. This label affected their behaviour in the sense that they preferred not to avoid products with this label. However, one women still bought products she needed with this label in the absence of products without a label or if the alternative was too expensive in her opinion. In the next chapter, the opinions of the other respondents about GMOs and GMO labelling will be discussed.

7. GMOs & Labelling

In the last research question the aim is to find an answer to the sub question: How do Brazilian consumers perceive GMOs and what do Brazilian consumers consider to be a good GMO-label? The aim is to gain an insight in the consumers' opinions about GMOs and GMO labels.

7.1 Opinions about GMOs

The opinions with regard to GMOs varied widely among the group of respondents. Out of 18 respondents, 15 were already somewhat familiar with GMOs and their use. Two respondents were distinctively in favour of GMOs and seven people were in doubt about the benefits and disadvantages, but preferred to not consume GMOs. Among this group there were three people who just learned about the use and existence of GMOs. The other nine respondents were against the use of GMOs and often expressed very emotionally loaded statements. This paragraph will provide an overview of the mixed understandings and the different opinions about GMOs that were aired during the interviews.

The group of people that opposed the use and commercialisation of GMOs were quite militant. The most people in this group were higher educated women who were in their household mainly responsible for the groceries. The first woman that I spoke to was a lower educated Brazilian married to a higher educated man from the United States. She even blamed for her allergies. She claimed that as a child growing up in Brazil she could eat anything that she wanted. Nonetheless, when she lived in the United States for five years, she started to have allergic reactions to nuts, milk and shellfish. She explained to me that this was due to the modified preservatives and food additives that her body was not able to process. She mentioned that she also knew other people who had the same problem as her. When I asked her why she thought this was due to the use of GMOs in her food she explained:

> *'... it changes the structure, the natural structure of the food. And everything is connected. So if you change the natural structure of that plant, you will affect the animals that live in that environment where that plant grows, the soil, (...) and uh also because they use these special chemicals for growing that specific plant and those chemicals also affect the environment. When consuming those plants it is estranged to the body. Because, it is not natural and our bodies can't recognize that element and then our bodies react against it. I believe that is why I have allergies, because my body cannot recognize that strange food'* (woman, 32 years).

With this statement, the woman makes two important assumptions: 1. The human body does only recognise things that can be found in nature; 2. Unnatural structures are bad for human health. Her negative feelings towards GMOs do not originate from something that she read or saw on the news, the threat of GMOs have become a lived experience, as she believed it affected her health. Consequently, she shows strong emotions in her responses with regards to GMOs.

Besides the anger about her state of health, she also showed anger and mistrust towards food companies that flawed the food system through power imbalances. Her statements were quite militant towards companies such as Monsanto, who wronged and endangered farmers. When discussing the GMO label she blamed companies for lying as well.

> '*The big companies are able to pay for quality marks and they dictate what products are good and healthy and what products are not. Small companies cannot afford this. So I don't know what to believe. Is this label obliged for all the companies or only for some companies?*' (woman, 32 years).

Although this quote is a bit confusing with regard to her understanding of GMO labelling, it does express her doubts towards the reliability of information that companies offer on the packages of their products. Hence, her frustration was especially directed towards the lack of proper information about what the food actually contains. This was also the frustration of another woman, who was angry because she felt that she did not had an opportunity to choose whether she would eat GMOs or not. She directly reacted with quite some anger towards the question what she thought about GMOs:

> *'I think that they should be discriminated, you know, I should have the right to choose. (…) But I think it is so much into our food chain already, the corn, rice, beans, soy, also. So I think it is so much you don't know, how much of that (*GMOs in the food chain) *has already happened* (woman, 43 years).

Hence, this lady directly translates GMOs to her inability to choose if she eats products that contain GMOs or not. She shows frustration towards the incomplete information about the whole food chain with her claim that she 'should have the right', but it is impossible to know 'how much happened.'

Besides anger, some people showed fear. One woman stated for instance:

> '*I don't know, it has to do with manipulation, with forms of creation right? I am not sure, but I don't think that is a good thing. Actually I am a little bit afraid of that* (woman, 42).

Hence, she does not exactly know what GMOs are but she knows it has something to do with altering food in an unnatural way. Her lack of knowledge of the subject scares her as well. Nonetheless, she was also practical and stated later in the interview that she would buy GMO soybean oil if it meant that she would pay significantly less for this soybean oil. There were four lower educated respondents that had more or less the same response as this woman. They expressed that they lacked information about GMOs, and did not really know what to think of it. Still, in general, they preferred to avoid GMO products, on the condition that the alternative is not a lot more expensive.

Sometimes, the fear was not so much directed to the GMOs themselves, but to the unclearity and scientific probabilities of GMOs. This group of consumers consisted of five people and were a mix of higher educated men and women. They were less militant than the ones that showed anger, but also aired their doubts about GMOs. A biology student of 28 years old mentioned that GMOs have a big impact on the environment. However, GMOs can have benefits for human health, especially when the products contain more nutritional value due to genetic modification. Therefore, she feared damage for the environment but did not actively tried to avoid GMO products. Especially, since products containing GMOs were generally cheaper than products without GMOs. Two other women stated that they were not sure about whether GMOs were bad or good, but they preferred to not buy them. '*Scientists do not know whether GMOs are bad or good, they have never made a clear position about that, so I prefer to not buy them'* (woman, 37 years). Coincidentally, this lady invited me over to eat homemade guacamole and tortilla chips the weak before. The packages of the tortilla chips carried a big yellow triangle. When I asked her about that chips she answered: '*I know, but you have to eat guacamole with tortilla chips.'* Apparently, there are limits to avoid GMOs if they are required in a delicious dish. She believed that a one-time exception does not do much harm. This is an interesting thought, as it seems that GMOs in this sense are associated with 'unhealthy' snacks that have to be avoided, but are ok to consume maybe once a month.

Furthermore, this group of consumers was able to give me an elaborated explanation of the use and benefits of GMOs. They explained that it benefits the yields and the farmers. However, as they did not know what GMOs would mean for their health, they preferred to avoid the consumption of GMOs. '*It has a lot of benefits, but I don't think it is healthy'* (man, 24 years).

Subsequently, it seemed that these people tried to apply the precautionary principle to their personal lives: they tried to avoid GMOs 'just in case.' Not all of them were familiar with the label, but they tried to avoid GMOs by selecting brands that they believed to not use GMOs. Subsequently, even though they were not particularly negative about GMOs, they had thought of strategies to avoid them.

The two respondents that did not care about GMOs in their food were both young higher educated males. Both of them had studied business management. They both argued that GMOs were necessary to feed the increasing world population. Moreover, one of them explained that he did not fear GMOs because he understood the technique of GMOs. According to him, biotechnology is no different from breeding and crossing that has been practiced for hundreds of years. He viewed GMOs as a modern version of this old practice. '*Other people are not educated, so they fear the GMOs and their technology, but not me, I have informed myself good enough and I trust the technology*' (man, 32 years). Consequently, he also opposed obligatory labelling schemes, as he felt that people would be warned about something they do not need to worry about.

Nonetheless, when we were discussing whether he was willing to pay more for products that contained a GMO-free label he admitted that he was willing to pay up to 10% more. He explained that he expected that a GMO-free product would be handled with more care and with a closer relation to nature. The idea of his food taken proper care for appealed to him. In general, most respondents stated that they would pay a little bit more for a product if it does not contain GMOs. '*I rather pay a little bit more for my food than I pay for a doctor later. I think that would be more expensive*' (woman, 37). However, there was a difference in the amount that people were willing to pay more. For instance, the man of 32 years old was very specific about his 10% marge. Others said that they only would pay the difference if it is a little bit more. Three higher educated females paid the difference anyway as they had the resources.

Two lower educated respondents were not willing to pay more; '*I always go with the most cheap product, haha, that is important to me. I don't care about the GMOs, haha*' (woman, 57). This lady lived next to me in one room of 12 square meter with her grandson. After a couple of months she told me she started working again, although she was already retired and her grandson worked full time. They needed the money she said. Consequently, I expected that her financial situation would not allow her buy more expensive products and therefore she would answer not to care. Only one other woman was also not willing to pay more for GMO free products, although she

married a wealthy man, had no children and was very militant about the use of GMOs. She explained that she thought it was not fair that good products are more expensive and that everybody has the right to be able to buy 'good and healthy' food.

In sum, the opinions about GMOs vary greatly among the respondents, especially among the higher educated respondents. While two higher educated respondents thought GMOs are beneficial, four were against and four did not yet made up their minds due to doubts about the scientific probabilities. Guivant (2009) argues that regular consumers are not very much involved in the debate among GMOs and little is know about their perceptions. Rather, the GMO discussion is held within scientific and political spheres. It is probably therefore that the opinions among higher educated respondents are more divided than among the lower educated consumers, as they are more often included in debates. Among the lower educated respondents, three heavily opposed the use of GMOs, while four did not really know what to think about it. However, based on gender, it can be said that women have more concerns than men; one man heavily opposed GMOs, while the others doubted their standpoints and two men were even positive. On the contrary, 6 women heavily opposed GMOs, while four had their doubts, but none of the women were distinctively positive.

This variety of opinions makes it even more interesting to learn about their opinions about proper labelling. Nonetheless, 17 out of 18 respondents stated that the labelling of GMOs is important, in order to provide consumers a choice. The next paragraphs will show the different labels that were discussed with the respondents and demonstrates their opinions about these labels. The last paragraph aims to describe how the ideal GMO label is designed.

7.2 The Brazilian GMO label

The first label was showed after questions about GMOs. The respondents were asked if they had ever seen the GMO label that is used in Brazil to indicate that a product contains 1% or more GMO ingredients. The respondents were almost equally divided in their opinions; 8 people thought it is a good label, while 10 people thought it is not. With a positive reaction to the label people would say that it was an easy recognizable symbol. Nonetheless, even though they thought it was a good label there were also enough points of improvement mentioned. The first point was that if you recognize the label and you know what it means, than it is a good label. Hence, the pre-condition is to know

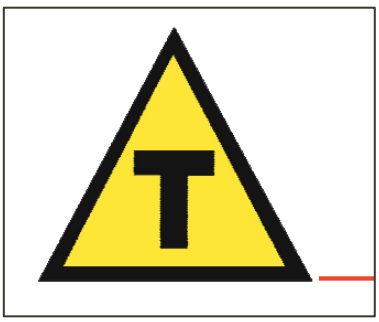


Fig. 4: Brazilian GMO label 1

what it means. In addition, negative comments were directed to the fact that the label does not carry any information at all. '*T, what does T mean? It can mean anything, it can mean 'temperature' for example, you know?*' (woman, 28 years). Hence, the label is not clear enough and therefore needs more information. The type of information that most respondents would like to know is what type of GMOs are included in the product and the exact percentage of GMOs in the product.

Moreover, few people indicated that the label is too small and sometimes not visible enough. One woman who recognized the label said that it is sometimes on the side of the product and that you have to look really good to find it. She stated that a GMO label in general should call for more attention.

7.3 May Contain GMOs

The second label is a label that indicates that a product might contain GMOs. This image was chosen because it shows the word 'may' clearly. Moreover, the location of this statement was important: it is a written text somewhere on the package and not between the list of ingredients. 14 respondents found this label 'ridiculous.' This was mainly due to the vagueness of the label. They expressed the wish to have a clear statement on the label: 'a product contains or does not contain GMOs'.

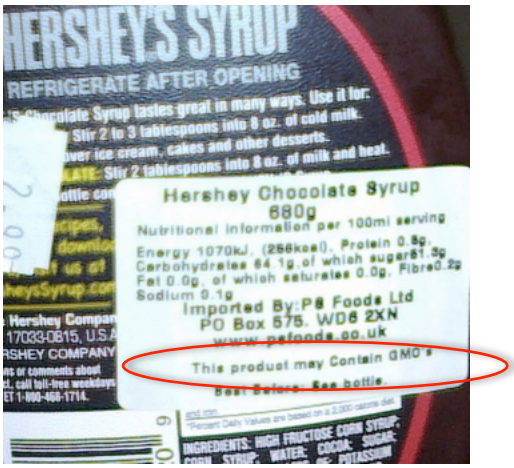


Fig. 5: Statement 'might contain GMOs' 1

Two women were rather positive about this label. One said '*ok, now I know that it might contain GMOs, so I would not buy it*' (woman, 37 year). Another woman was happy with this label as it at least provided some information and honesty. She stated that for example the packages of soy milk in Brazil does not explain anything at all about the methods of production. In general, this lady preferred packages that made some sort of statement about the product and the production methods.

Another often heard comment about the abbreviation of 'GMO.' Although I translated it verbally as 'transgenicos,' many people mentioned that it should be written as a word and not an abbreviation, also for a label in the United States. The general opinion is that a simple word is clearer than an abbreviation. '*If you put the word transgenico, people start to think you know?*

They hear genes, so it is something with genes and then they can look for information' (woman, 43 years). This woman thought that the word 'genes' in itself would alert people. Hence, a clear GMO label should contain a statement about the state of the genes.

7.4 CONTAINS GMO AMONG THE INGREDIENT LIST

This label was chosen as it was a clear statement that contained more information about the type of GMO present in this product, as it specifies what ingredient has been genetically modified. Moreover, the statement is placed among the other ingredients. In general, most respondents liked this type of information very much. 14 respondents reacted positively. They stated that the information provided was good, as it specifically indicated that the soybean oil was genetically modified. They said that they would regularly read the nutrition label and therefore would encounter this information. However, 4 respondents argued that the information was in the wrong place and that more attention is needed to warn people about GMO content. Three of these respondents stated that a symbol would be easier to recognize and read. A general assumption was that other people would not read the packages. '*personally, I like to read what I eat, but other people do their groceries quickly. They don't read, they don't look*' (woman, 62 years). Nonetheless, this is quite a contrary statement when compared to the participant observation. During this participant observation I have seen many people reading the nutrition labels and whether they were not reading the labels, they would carefully evaluate the quality of the products by the looks and smell of the product.

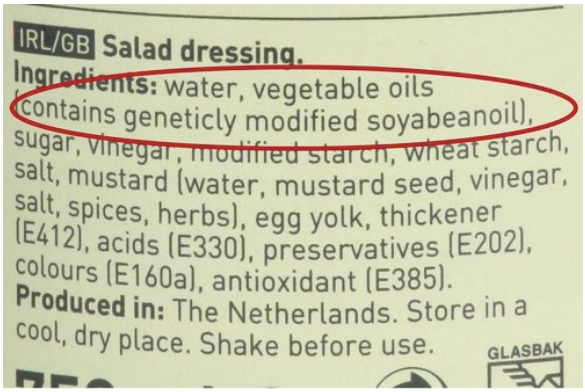


Fig. 6: Statement 'contains GMOs'

7.5 TECHNICAL LABEL

This label was included to contribute to the debate about the amount of information that should be provided in a label. During the interviews it was explained that *amendoim* (peanuts) means that this product contains a GMO with peanut genes. Hence, if this product is corn meal, than the corn contains peanut genes. Pragmatically, arranging this type of information on a package would need an extensive system of control and registration, which results in extremely high costs. Therefore this label was introduced purely as hypothetical

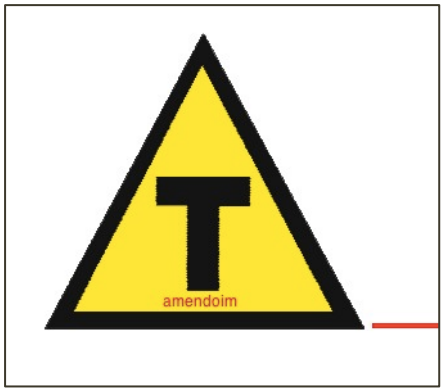


Fig 7: Additional technical information

label to see if respondents would feel that this type of information is necessary.

The responses to this label varied. It took most respondents some time to fully understand. After understanding the label, they needed some time to think. Eventually, 9 people liked the label and 7 respondents stated that this label was necessary as people deserved this information. Three people state that this would not have any effect, as nobody would understand what it meant. In addition, the comment often made that was that there still was no word 'transgenic' included, which would make the symbol more comprehensible. Therefore, the symbol and the technical information is according to them not informative enough.

7.6 NON-GMO LABEL

Then we continued to the labels that indicated that no GMOs are present in the food products.

Fig. 8: GMO free label 1

This label was chosen as it explicitly states that there are no GMOs in the product. It is a label that can be found in the United States.

Except for one respondent everybody liked this label very much. Generally, they thought this label was very beautiful. Almost everybody mentioned the friendliness of the butterfly and the green colour. '*This label gives you the sensation that the products are handled with more care*' (man, 32). Hence, this label provided people with a sense of healthiness. In addition, the label called for enough attention when placed in the front of a package. Others mentioned that they trusted the label because of the type of information that was displayed. Both the word 'verified' and the website gave many respondents trust. The idea that there is website were more information could be found comforted at least three people in this small group of respondents. Moreover, two respondents explicitly stated that Brazil needs this label as well. However, the one of the respondents stated that she liked the label, but would not trust it. According to her, only companies with a lot of resources are able to afford these kinds of labels and therefore the labels are often not trustworthy.

The one respondent that voiced a negative response felt that there might be too much information in this label. She stated that one simple symbol should be enough, as people do not have time to read the whole label. According to her, a simple symbol would be better.

7.7 ECOLOGICAL LABEL

With regard to the organic label a label from Brazil was chosen, as this would probably familiar to most respondents. Most of the respondents thought this was a good and important label as well, although they thought the label of the non-GMO project was better for indicating the absence of GMOs. When the respondents were asked about which label was better, everyone pointed at the non-GMO project label. They stated that the reason for this is that it had more colour and looked trust-worthier. One lady mentioned that this label would say something about the way in which the crop was produced, namely organically, but it did not tell her about the origin of the seed. She still reacted somewhat hesitant when it was explained to her that the organic label also meant that no GMOs seeds were used. Hence, with regard to GMOs it seems that Brazilian consumers expect an explicit statement that indicates whether there are GMOs present in the product or not. The next paragraph will discuss the ideal types of GMO labels according to the respondents in this research.

Fig 9. Label organically produced

7.8 THE IDEAL LABEL

Within this research, a lot of data was gathered on how people would like to see a label. From the former paragraphs it has clearly shown that the respondents prefer a clear statement about the presence of GMOs. Hence, mandatory positive mandatory labelling as applied in Brazil fits the interests of the Brazilian consumers. Nonetheless, due to the lack of knowledge about the existence and the meaning of the current label, some improvements can be made. At first, the systems of provision with regard to information flow about the meaning of the label could be improved, but this is beyond the scope of this research.

With regard to a GMO label, the respondents would like to have additional information. Just a symbol with a T in the middle is for the majority not clear enough and carries no meaning. On the contrary, they indicated that they prefer to have some written statement that tells what ingredient in genetically modified and how much percentage of this ingredient is used in the product:

> *'I would like to know how the percentage of GMOs in the products. Just like with transfats you know? Maybe if there is only 1% of transgenics, I buy the product, but*

10% might be too much and I don't buy it. I have no baseline right now, so I do not know how much is too much, but you know what I mean, right?' (Woman, 44)

Subsequently, this lady is against GMOs, but is willing to have a little part of her food to consist of GMOs, if she believes that this amount does not affect her health. This is an interesting notion in which GMOs seem to gain a similar statement as transfats; if there is not too much from it in the food, it does not affect your health so much. In this sense, perhaps, directly stating the percentage of GMOs present in food products might as well help to increase consumer acceptance of GMOs, as this will allow consumers to slowly get used to GMOs (Heslop, 2006).

In addition, the information needs to be simple. A simple symbol with some understandable words is preferred. Many people had problems with understanding the abbreviation 'GMO' or in Portuguese 'OGM' (*organismo geneticamente modificado).* Subsequently, many respondents stated that they just wanted to read '*transgenico'* (transgenics), as this would be clear information. One lady stated that she preferred to read something about the production method in a clear written statement. She showed an example of lettuce that stated on the front; 'this product is organically produced. No pesticides and fertilizers were used and the farmers were paid a fair price'. Heslop (2006) stated that additional information had a slight influence on the behaviour of consumers. A package could for example state in a positive way: 'this product contains genetically modified soy. Therefore, less pesticides and herbicides were used during the production.' This type of information would also help to let consumers get used to the presence of GMOs in their food.

Nonetheless, this would probably not sufficient to most respondent, as it would be too long and badly noticeable. Most respondents said that they preferred a colourful symbol. In terms of format, an example of a good label could be the NON-GMO project from the United States, which almost everybody liked very much. The positive features of this symbol are the colours and the friendliness of the symbol. Moreover, it seemed trustworthy because of the website and the word 'verified.' With regard to a GMO label it helps to use a bright colour that states the word 'transgenico'.

Moreover, the place of the label on the package is important. Only 1 respondent did not approve of GMO labelling in general, but the rest were very firm about the amount of attention that needs to be on the package to warn for GMOs. For instance, 6 respondents stated that the original Brazilian label is too small or not visible enough. They believed that with regard to GMOs, the

label must scream for attention. Hence, with regard to the placement of the label it might be a good option to have a short statement or a symbol in the front of the package.

Subsequently, I think that a colourful comprehensible label with some useful information will eventually alter the shopping behaviour of Brazilian food consumers. Especially considering the amount of time an average Brazilian consumer spend on evaluating the package, looks and price of a product. In general, Brazilians try to avoid GMOs due to a negative opinion towards GMOs, or a lack of certainties about the long-term effects. However, the current systems of provision with regard to the visibility of the label and the lack of knowledge of this label prevents people from making a considerate choice. It is likely that an increase of GMO labels and additional information about the production process will influence the level of acceptance of GMO ingredients in the food products, as Heslop (2006) indicated.

DISCUSSION

These chapters have explored how Brazilian consumers interact with GMO labels by using a qualitative approach. In this sense, the thesis had a double aim; to grasp an understanding of Brazilian consumers and to investigate how they interact with (GMO) labels. The social practice theory has been used to analyse the data that had been collected. This approach had both its' advantages and disadvantages, which will be discussed in this section.

The visits to the supermarket were very useful to explore the systems of provision within the supermarket. In the first visits it became already very clear that it was hard to find GMO labels. The first visits were extremely useful to discover whether supermarkets use marketing strategies to promote GMO or GMO-free products and if GMOs are an issue in daily life. The second visits provided me an overview of the availability of GMOs and alternatives. In this way I was able to find out that not many products carry the GMO label and that for some products, such as corn flour, it is hard to find alternative brands that do not carry the label. If I had merely visited the supermarkets on the supermarket trips with consumers, I would have encountered less GMO's and would have had no idea to what things and products I should have paid more attention when the respondents were shopping. Hence, it provided me also with extra information that benefitted the rest of the research as well.

Nonetheless, exploring the systems of provisions included actually much more aspects than that would have fitted in the scope of this research. For instance, the availability of information can have an effect on the behaviour of consumers. Within the interviews, some respondents explained that they did not know anything about GMOs, as the subject did not appear on the television. However, others who were familiar with GMOs explained that they saw different documentaries on the television. Again others explained that they found information about it on the Internet and read articles that were shared on Facebook. The consumers that had special concerns about products were often alarmed by something that they had heard or read about. Therefore, exploring the whole system of provision requires a thorough investigation of the information supplies as well. Which consumers with have access to what information? And what is the main source they get this information from? In this sense, it is also interesting to find out what type of information has the most effect and on whom. A horrifying documentary or a scandal in the news probably affects the practices more than a campaign. Nonetheless, due to the social practice approach in this research, both flaws in the systems of provision as in the knowledge of consumers were identified. This causes a mismatch between the presence of GMO

labels and the effects of it on consumers. Hence, the social practice approach was useful, but for a more conclusive understanding, the research should have been carried out more extensively.

Because of the participatory observation, the practice of shopping has been analysed on micro-level. A general critique on this type of research is that respondents behave differently when a scientist accompanies them. It is believed that they would show socially accepted behaviour. Of course, their behaviour was different, as for many people I functioned as a shopping help. However, due to my attempts to hide the subject of my research, I believe that they did not made different purchases or acted differently towards the products because of my presence. Hence, the detailed description of these shopping trips has resulted in a deep insight in the behaviour of consumers. As a consequence, it became clear that Brazilians have a different notion of grocery shopping, since they distinguish monthly grocery shopping from daily grocery shopping. Moreover, I had the chance to zoom in on all the little moments of choice making when people interact with the material world in a very intense way. Examples are the way in which consumers define quality by looking at the colour or shape of a product and what a particular demands consumers had with regard to some products, such as unscented toilet paper. Unfortunately the approach was less useful to answer the research question, since the label does not yet affect the behaviour of consumers so much. Therefore, it was hard within the supermarket trips to observe behaviour in encounters with the GMO label.

The interviews were useful to explore the beliefs and values of consumers. Since I already accompanied them on a shopping trip, the respondents were able to refer back to our experience together to explain what they meant. Moreover, the interviews provided time for the respondents to reflect on their beliefs and values, which led to useful insights in their behaviour. Especially in discussing the GMO labels I have learned a lot about what people would prefer to have on packages. These opinions on labelling also reflected in some sense the opinions about GMOs, as most consumers liked to avoid it and required clear and prominent information on the packages. Nonetheless, I felt the respondents were also honest as they admitted often that they would not buy alternative products if they are much more expensive.

Besides exploring the beliefs and values of respondents in the interviews, the intention was also to identify lifestyles; the narratives that people tell about themselves to justify behaviour. I have tried to capture the lifestyles within chapter 6; an ethnography about grocery shopping. Nonetheless, it is quite difficult to identify what someone's lifestyle is from what they tell in an interview. Due to my own association with GMOs and environmentalism, I noticed that my focus on searching for ecological responsible lifestyles almost blinded me to see what kind of lifestyle

is more important in Brazil; the healthy lifestyle. Moreover, can something as an 'environmentally practical' lifestyle be identified for consumers who developed strategies to combine environmental conscious purchases with cheaper products? Or can a lifestyle be described as 'financial conscious' for the respondents that had to watch their expenses? And how do these lifestyles connect to small differences in practices? And can these lifestyles be attributed to people based on gender, age and education? Moreover, is it scientifically valid to categorize ones lifestyle based on merely on practice; the practice of shopping? Or do more daily practices need to be analysed to match a lifestyle to a person? Secondly, how is a practice properly measured and how does this indicates a certain lifestyle? Thirdly, can one person have more lifestyles at the same time, or does this combine together to a whole new lifestyle? Hence, within my data, it was hard to find patterns to answer these questions. As a consequence, the concept of lifestyle turned out to be a challenge within this research. Probably, a larger number of respondents and larger numbers of examined practices would have solved a large part of these problems.

Nonetheless, it was useful within this research to differentiate between 'the practice of shopping' and practices, since it helped me to both find general patterns and small differences. Examples of the general patterns are the quality and price check. The small differences were the specific themes of interests that differed per respondent. Especially these small differences *pointed* to certain lifestyles. Here the emphasis on 'pointed' is made, as I do not think that one interest or practice defines a whole lifestyle per se, but merely shows a direction to one type of lifestyle. The other way around, it can also be one exception that does not fit one's lifestyle at all. Therefore, in order to avoid problems according to the measurability of practices, I mainly relied on the interviews and the narratives of the respondents themselves. In general they did not only talk about their shopping behaviour, but explained their general beliefs and habits as well. Hence the identified lifestyles were connected to their discourses, instead of to their particular practices.

Although there was sometimes a mismatch in concepts or small flaws in the methods, I think in general this research approach has been useful to gain insights about the behaviour of Brazilian consumers and it has showed what Brazilian consumers think about GMO labelling. The next paragraph contains the overall conclusion of this research. Hence, this approach enabled me to answer the research question.

CONCLUSION

This thesis has tried to find an answer to the question: how do GMO labels influence the practice of shopping of Brazilian food consumers? This question was approached with the social practice theory. The advantage of this theory is that it places practices at the centre of study. Therefore, the approach does not only focus on human behaviour, but it tries to understand the relation between humans and the material world. This had the side effect of exploring more dimensions than are included in the research question. For instance, information was also gathered about Brazilian lifestyles in relation to consumption in general. As a consequence, this conclusion will not only include an answer to the research question with regard to the GMO label, but will also slightly touch the discussion in relation to possibilities for sustainable consumption.

In the first stage of the research, the systems of provision with regard to GMO labelling in Brazil has been analysed. Especially, the history of the struggles and laws surrounding the production and commercialisation of GMOs has been outlined. Here we learned that Brazil currently approved the commercialisation of 37 GMO crops. Moreover, Brazil obliges a positive mandatory labelling system for all processed foods that contain 1% or more GMO material. However, analyses of the newsmagazine from the Brazilian consumer protection union, IDEC, showed that there have been problems with the enforcement of these laws. As a consequence, only some very specific products carry the label.

This became also clear during the field visits to three different supermarkets; the label is not very visible. Supermarkets provide very little information about the production methods and they do not promote different options with regard to GMO's. For instance, there are no signs that alert people when a product contains GMO's or are GMO free. If they have a section where they display organic products, it is often small and indicated with a little sign. On the contrary, they do place advertisement boards that point to special offers or the quality of a product. For instance, at meat departments a large signs indicates what meat comes from what part of the cow. Another example is the origin of fruits that is mentioned on the price tags. Unfortunately, it was not within the scope of this research to explore other sources of information to find out to what extend information about GMOs in product is available. Nonetheless, the combination of the problems with enforcement of the labelling law and the lack of visibility in the supermarkets, raises the expectation that consumers are not very familiar with the GMO label in general and the label does not affect their shopping behaviour so much.

This expectation was right. Out of the 15 people that knew what GMOs were, only 3 of them recognized the label. This is not because those other 12 people do not care about GMO's in their food. On the contrary, most of them tried to avoid GMOs, especially when they aired strong feelings against GMO's. They had developed strategies to avoid GMOs. For instance, they tried to buy only from brands they knew that did not use GMOs in their products, or from locally produced brands. They believed that in this way they were able to eliminate GMOs from their diets. Hence, besides reading the information on the packages, the consumers also looked for information on the internet. This would indicate that consumers are not lazy and unconscious shoppers, but they adjust their strategies to the information they have and find important enough to act upon.

The main source of information is placed on the packages of products. Brazilian consumers do read the nutritional labels on packages. When I joined respondents to the supermarket to explore how Brazilian consumers perform the practice of shopping, they often read the packages to find out about the nutritional value or the production methods. Since consumers are not used to supermarkets providing a lot of information about the production methods or environmental impact of the products, it is necessary that they read the information on the packages, if they want additional information. Generally the practice of shopping is made up of little micro practices of quality assessments. When a consumer wants a product, he or she first looks at the shelves and oversees the brands and prices. Then one product is picked up and judged by its' looks. A package that has see-through plastic is judged by the colour and shape of the product. Canned and pre-packaged products are compared by their nutritional value and by their production methods. Hence, the looks of a product and the information on a package are able to cause little differences in the shopping practices of Brazilian consumers. Each one of them judges their food according to their own values. Examples are the case of the man that tried to avoid fragranced toilet paper, the woman that tried to avoid additives in honey or the biology student that compared margarine on the nutritional content.

At the same time, Brazilian consumers share many values in relation to food. For instance, all fresh fruits and vegetables have to be ripe and look pretty. Moreover, all Brazilians prefer to buy rice of a good quality, since it counts as an important part of their daily food intake. These shared values are partly reflected in the lifestyles that Brazilian consumers identify with. For instance, it has been shown that the respondents had varied concerns with regard to environmental and social issues. Especially women showed environmental and social concerns and read the packages carefully. Nonetheless, the majority of the respondents did not identify their lifestyles as environment conscious. They developed strategies that fitted both their

personal beliefs and were at the same time convenient. An example is the mother of two small children who reduced her expenses by selecting organic products without a peel and conventional products with a peel. Or the woman that searched for biodegradable laundry detergent, but just picked one when she could not find what she was looking for. Hence, practicality and the financial situation of the consumer takes precedence over environmental conscious behaviour. Even the two most environmental fanatic respondents mentioned a lot of problems with regard to the safety of the food, environmental hazards and underpaid farmers, but they still admitted that in the end they were not willing to pay a lot more for their food products. They believed it was unfair to pay more for food, as they felt that good food should be accessible for all the consumers and not only the rich consumers.

Instead of environmental conscious, the Brazilian consumers rather frame their lifestyles as 'healthy'. Almost all respondents stated that they valued healthy food and actively tried to pursue this. Many of them had gym memberships and had visited dieticians. They regularly explained that they preferred healthy food in order to stay fit. This healthy aspect seemed to be more important for Brazilian consumers than environmental impact. Especially higher educated respondents differentiated on content level if a product is healthy or not. They recognized the different quality and health aspects of different types of rice and they searched for products that were low in trans fats. On the other hand, lower educated respondents differentiated healthy food from unhealthy food on the product level. They mentioned for instance that fruit, vegetables, rice and meat are healthy, while salty and sweet snacks are not.

Also with regard to GMOs, the concerns were especially directed towards the health aspects than environmental treats. Especially the higher educated respondents answered that they thought GMO's might be good for farmers, but they might be their health and therefore they tried to avoid GMOs. After the impact on their personal health, they discussed the possible environmental impact and the unequal power balances that are often associated with the GMO industry. Most higher educated respondents preferred to avoid products with GMO content, while they awaited the developing discussion and conclusions around the safety of GMOs. Lower educated people were willing to avoid GMOs as well, as they found the concept of altering food on genetic level strange. However, they admitted that the price of the product would still take a much higher precedence than buying products that are 'GMO-free'. This points to a conclusion that lower-educated people are likely to make short-term decisions that are convenient at that moment. At the same time, higher educated people buy products that are little bit more expensive and view this as an investment in their health on long-term. On the whole, the respondents' choices are all very self-centred and based on their personal situation and not on

arguments that contribute to a better world. For instance, during my whole stay in Brazil I did not meet vegetarians or veganists, with pressing principles about animal welfare, or people that would only buy fair trade products. There was only one respondent who mentioned the plastic soup in the oceans and tried to avoid using much plastic.

Nonetheless, although the opinions about GMO's were somewhat divided among the respondents, most of them try to avoid them in their diet. We have concluded that the GMO labels are not very visible in the supermarkets, since only very special products carry the label. At the other hand, we have seen that consumers do read packages to have information about the nutritional value. Therefore it seems strange that only three people were familiar with the label, while more respondents were concerned about GMO's. This suspects that this might have something to do with the appearance of the label.

The opinions about the GMO label were divided. Almost all respondents were in favour of labelling products with GMO content and indicated that this is very important. Half of the respondents liked the current label, although they could mention points of improvement. They also indicated that a yellow triangle with a 'T' could mean anything and that the label therefore did not provide enough information. Rather, they preferred a little statement with somewhat more information, such as an identification of the GMO ingredient in the product and a percentage. The label may not use abbreviations, but needs to contain simple words that indicate 'transgenic'. Ideally, Brazilian consumers prefer a bright symbol on the front of the package with a brief description. Apparently, the current label does not affect the practice of shopping in Brazil so much, since not many Brazilian consumers are familiar with the label and have trouble with understanding the meaning of it.

Would this mean that a clearer label causes a change in the practice of shopping? Probably not. Besides having a clear label, it is also important that the meaning of the label is communicated. Furthermore, consumers should care enough to let this information affect their behaviour. Most of the respondents answered that they only were willing to pay more to a certain level for GMO-free products. Also in the participatory observation a woman bought GMO-labelled products although she was against GMO's. At that moment there was no alternative product that complied to her price/quality standards. Another respondent claimed to avoid GMO products, but she ate GMO chips with her guacamole. Hence, although these people claimed to avoid GMO's actively, in practice this seemed unavoidable due to a combination of available choices and personal desire. Sometimes they know that they eat GMO's, but they eat it anyway, believing that this little

amount does not do any harm. It appeared that GMO's are gaining the same status as for instance 'transfats'; 'if you do not eat too much of it, it does not do you harm'.

Hence, these GMO labels do very little with regard to altering shopping practices. They merely provide additional information to people who already have information about what the label means. The label in itself does not provide a choice. In many cases no alternative options to the GMO products are available. When no alternative option is available in a particular supermarket, people often still choose the option that contains GMO's. It is likely that even when the appearance of the label is altered and is converted to a statement or more recognizable symbol, consumers still buy it if there are not proper alternatives available. Nonetheless, the transformation of the label towards a more recognizable and comprehensible label might enhance the informative value of the label, since consumers do read the packages. Although this would not per definition change consumption behaviour, it would cause consumers to have more direct access to information about the content of their diets. Eventually, the GMO-label was introduced with the intention to be informative and provide a choice, and not to influence the behaviour of consumers.

How do these findings apply to other types of labelling that have the intention to influence consumes' behaviour? It has been shown that a combination of three conditions are identified with regard to GMO labelling that influence shopping practices, which probably also applies to other types of labelling as well. The first one is the availability of information. Secondly, there needs to be a proper alternative option, which means that it needs to be of an acceptable quality and within a certain price-range. Thirdly, the consumer needs to care enough personally to act upon the label. Personally, I would argue these conditions apply to every consumer in the world with regard to shopping practices in general. Especially the third condition about caring is interesting. With regard to GMO labelling we have seen that the higher-educated people had information and cared enough to develop strategies to avoid products with GMO content. On the other hand, the same consumers made exceptions when the circumstances did not allow them to avoid these particular products. Lower-educated respondents, who where new to the information about GMO's, admitted that the price would be more important than the exact content.

GMO's have been a heavily debated subject over the past years. Therefore I had expected that people are not easily seduced by products with GMO content that promise to have a pleasurable taste, like potato chips. Nonetheless, consumers easily let their principles go if this opportunity appears. Hence, I would like to argue that within 'caring,' there are different levels of

commitment to principles. Apparently, for most consumers that avoid GMOs, GMOs are not what meat is to vegetarians. On the contrary, it is believed that if not many GMO's are consumed, they do no harm. Moreover, I would carefully argue that the extent of social loyalty influences ones' shopping behaviour. In this paper the theory of Miller (1998) was shortly mentioned in which he argued that grocery shopping is highly social and comes down to love for ones' family members. In relation to sustainable products, the question whether consumers are able to expand their loyalty during the practice of shopping from their personal situation towards the other end of the production chain, is interesting. If consumers are able to think beyond their selves about their family members, can they not think about the farmer who produced their grains? Hence, with regard to exploring the possibilities of a change of practice, it is important to explore the limits of association and feelings of loyalty and empathy. To what extent can these limits shift in an era of globalisation and an increased interest in sustainable consumption? This research showed that with regard to GMO's no extended level of social loyalty could be identified yet, since the main reason for Brazilian consumer to not consume is personal health. Moreover, many principled consumers generally make exceptions for their beliefs and consume GMOs in their food products anyway. Hence, the GMO label in Brazil is not likely to cause a change in consumption practices, but does add up to the pile of information that consumers are exposed to while doing groceries, and therefore contributes to more doubts while performing the practice of shopping.

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ANNEX 1: INTERVIEW GUIDE

(1)

Sex:
Age:
Education:

For how many people do you do groceries? Para quantas pessoas você faz compras?

Do you like cooking? Você gosta de cuzinhar?

(2)

How many times a week do you do groceries? Quantas vezes por semana você faz compras?

To which supermarket do you go most often and why? Para qual supermercado você ir com mais freqüência e por quê?

What do you find important about a supermarket? O que você acha importante sobre um supermercado?

To what things do you pay most attention when you are choosing a product? Para qual coisas você pagar mais atenção quando você está escolhendo um produto?

Do you sometimes have doubts about a product? Às vezes você tem dúvidas sobre um produto?

(3)

How important is healthy food for you? Qual importância tem alimentação saudável para você?

How would you describe healthy foods? Como você descreveria alimentos saudáveis?

Do you actively try to purchase healthy foods? Você tenta ativamente para comprar alimentos saudáveis?

Do you sometimes have environmental concerns when you are purchasing food? Às vezes você tem preocupações ambientais quando você está comprando alimentos?
- What kind of environmental concerns? Qual tipo de preocupações ambientais?

Do you sometimes question the social circumstances under which food is produced? Você às vezes questionar as circunstâncias sociais em que os alimentos são produzidos?

Do you sometimes question the safety of the food products you are purchasing? Você às vezes questionam a segurança dos produtos alimentícios que você está comprando?

(4)

Have you ever heard of Genetically Modified food? Você já ouviu falar de alimentos geneticamente modificados?

What do you think of genetically modified foods? O que você acha dos alimentos geneticamente modificados?

Have you ever seen the GMO label Brazil? Você já viu o rótulo OGM no Brasil?

Yes: Does the label make a difference for you in your purchasing behaviour? Faz a marca a diferença para você no seu comportamento de compra?/
No: Now you know what the label means, will it influence your choice for certain food products? / Agora você sabe que o rótulo significa, vai influenciar a sua escolha de produtos alimentares?

Do you think you will actively look for the label next time you go grocery shopping? Você acha que você vai procurar activamente o rótulo próxima vez que você ir fazer compras?

(5)

Do you think the Brazilian label for GM food is a good label? Você acha que o rótulo brasileiro para alimentos GM é um bom rótulo?

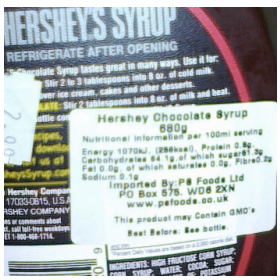
Does it provide enough information? Será que providência informações suficientes?

**show other labelling schemes* (see chapter 5 for bigger pictures)*

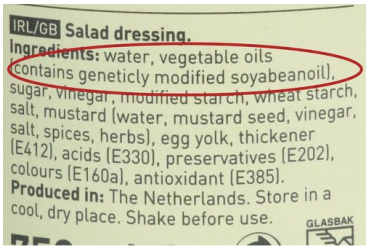
Per label:
What do you think about these labeling scheme? O que você acha sobre o sistema de rotulagem tese?

Does it provide enough information? Será que providência informações suficientes?

1. 'Might contain GM'
"Poderia conteinerização GM

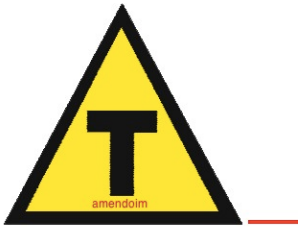


2. ‘contains GM’ in words
"Contém GM’ no palavre



3. ‘contains GM” in a symbol (Brazilian label)
‘contém OGM” symbolica

4. GM contains ….(nut gene)
GM contém …. (amendoim)



5. GMO-free
Transgenetico livre

6. Organically produced
produzido organico

Which labeling would you prefer on the packages? Qual você prefere rotulagem nas embalagens?

Do you think that labeling scheme is also the best scheme? Você acha que o sistema de rotulagem é tambem o melhor sistema?

Are you willing to pay more for product that does not contain transgenics?/ Você está disposto a pagar mais por produtos que não contêm transgênicos.?