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MASTER THESIS - PRELIMINARY REPORT -

Persuasion and impact of the consistency between mandatory fact information labels and self-declared claims on the consumer pre-purchase behaviour

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MASTER THESIS

- Preliminary Report -

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1. INTRODUCTION

1.1. OBJECTIVE OF THE THESIS

According to 2016 Colloquy report, 65% of consumers consider themselves overwhelmed by too many advertising messages. In today's world, brands have numerous opportunities to communicate on their brand elements, especially on packaging, which is a direct consumer touchpoint (Lemon & Verhoef, 2016). In parallel, in 2017, new French regulations have been taken regarding mandatory environmental and nutritional labelling. For instance, the Nutri-Score, facultative label, allows consumers to compare food products with each other thanks to a colour code. Some companies, such as Auchan, Danone and Mc Cain have already joined this initiative. Besides, on July 2017, the European regulation established a new framework for energy labelling to simplify the energy label and provide additional information on product performance. Although there are lots of research concerning the packaging influences on consumers' purchasing behaviour in various fields and different areas of knowledge, most studies on the use of claims or labels have been done separately in a unique field. Through this thesis, we plan to analyse the relationship between self-declared claims, mandatory fact information labels and consumers' behaviour. How can mandatory fact information labels can reinforce or reduce persuasion of self-declared claims? How can the consistency of self-declared claims on packaging made by a brand combined with the mandatory fact information labels affect the behaviour of the consumer in the pre-purchase consumption act? We will add value to the research packaging area by being cross-category and by trying to correlate this impact regarding two moderators: consumers' sensitivity and knowledge into the French market. Furthermore, to go beyond our results, it could be interested to share some managerial implications to improve the FMCG companies' approach in terms of package communication relative to regulations.

Besides, it is also an opportunity for the authors, passionate about marketing and all the stakes it encompasses, to keep on growing in their own personal development and go further in some package and claim challenging projects they both faced during their gap year (*Exhibit 1*).

1.2. INTRODUCTION TO THE RESEARCH TOPIC

"Packaging is industry's silent salesman. It displays and describes the product it contains; leaving the consumer to choose which product is best suited his or her taste" (Bo Rundh, 2005). As the marketplace competition increased, packages are not only a protective function anymore. Their role has shifted from that of protector to information provider and even persuader (Agariya *et al.*, 2012). They are now perceived as a product-related attribute that contributes to the brand identity and enables differentiation (Keller *et al.*, 2011). As some 59 per cent of all purchases are unplanned before a customer enters a store (Inman *et al.*, 2010), manufacturers use every possible word they can, to widen the desirability of their products and thus influence the consumer behaviour at the point of purchase called "the first moment of truth" by Procter & Gamble (Inman *et al.,* 2009; Hui *et al.,* 2013; Nelson *et al.,* 2005). And, because packaging reaches consumers at that critical moment, it has become one of the most significant in-store communication tools that can lead the consumer to believe that he has taken something with superior benefits that satisfy its needs. Those promotion attempts for differentiation can lead to a positive impact on both brand equity and firm value, directly through increased profits and sales, and indirectly through intangible value creation (Joshi *et al.,* 2010; Srinivasan *et al.,* 2009).

According to a study published by Lado Cousté *et al.* (2012), the claims used on packaging can be gathered in three main categories: environmental (communication about recycled materials, reduced packaging, refill, reusable, and/or biodegradable), nutritional (communication about the positive - omega 3, protein... – or negative - decrease in fat, sodium, sugar… - nutritional attributes) and production (communication about the production process such as organic, natural, no artificial colour or flavour…). This study investigated claims on packages across different sectors on different U.S. grocery products (beverage, canned, cereal, cleaning, cosmetics, food…) by doing a longitudinal study over a 10-year time and registering over 18.512 new products introduction. It is relevant for our research, regardless the American perspective, because it investigated at a large number of packaged goods of grocery products during a long time period. However, it remains a descriptive study categorising the main claims that can be seen on the market and it does not investigate the effects on consumer behaviour.

Other previous studies have considered environmental claims (Banerjee *et al.,* 1995), nutrition claims (Baltas, 2001) or health claims (Fitzgerald *et al.,* 2009) separately. Some past researches have analysed the effect of specific claims, such as low fat (Chandon *et al.,* 2006).

Nowadays ethical, environmental or societal issues more and more preoccupy consumers in their decision-making process. Most often using package communication claims are a tool for marketers to answer to these concerns. For instance, some nutrition claims benefit from the recognition of obesity, the decrease in sugar and fat consumption, or consumers' desires for healthier foods (Geyskens *et al.*, 2007; Chandon *et al.,* 2006). In France, according to the 2014-2016 ESTEBAN study, belonging to the national health nutrition program set up by the French Ministry of Health, 54% of men and 44% of women, between 18 and 74 years old, are overweight or obese (BMI ≥25). Besides, green marketing has also been a key trend in the recent year. For instance, the use of such claims now benefits for the decrease in the energy consumption of electrical appliances, such as domestic ones, to protect the environment. These trends push manufacturers to introduce new product offers with nutritional or environmental attributes in their product mix. To this end, packaging, in particular package claims, are now a key element of the communication strategy. They are cheaper than traditional marketing, although shifting the package can still remain expensive (Rundh, 2012). But, it can be managed by developing package panels that can be changed independently. Consequently, as the use of self-declared claims has increased over the past years, especially in Fast-Moving Consumer Goods sector, there is a need to increase consumers' awareness. That is why French Governments and the French Public sector henceforth want to play a major role in this awareness by setting for instance mandatory fact information labels. CLYMBOL (Claims - Symbols - Consumers) project, from the European Commission in 2012, assesses the influence of health claims on consumers' behaviour. Nevertheless, the relationship between self-declared claims, mandatory fact information labels and consumer behaviour is also moderated by independent variables such as the willingness of the consumer to search for information (Stigler, 1961), then its environmental or nutritional sensitivity (Bamberg, 2003; Harrison *et al.,* 1992) and its knowledge (Thøgersen, 2005).

Consequently, our research aims at studying the impact of relationship between self-declared claims and mandatory fact information labels on consumer behaviour. **How does the consistency between mandatory fact information labels and self-declared claims influence the consumer pre-purchase behaviour?**

Overall, we will try to draw a correlation on how self-declared package claims and mandatory fact information labels are influencing consumer behaviour. By comparison with the French Government existing regulation on labels, we will divide package communication claims on FMCG products into two categories: environmental and nutritional. To handle our research question, (1) we will use a theoretical approach to define the meaning of pre-purchase behaviour, categorize packaging communication claims and evaluate their impact on consumers' propensity to change their purchasing behaviour. We will also try to go further in the persuasion notion to understand its main moderators. (2) Secondly, we will present a synthesis of our model and explain our methodology. (3) Finally, you will find our expectations regarding the master thesis progression over time.

2. LITERATURE REVIEW

2.1 CONSUMERS AND PRE-PURCHASE BEHAVIOUR

2.1.1 Consumer behaviour definition

Consumer behaviour could be defined as "the study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires" (Solomon *et al.*, 2013, p6). The consumer behaviour is consequently a complex concept that includes a lot of different steps, ideas and even actors. It exists three distinct phases in the consumer behaviour (Solomon *et al.*, 2013): pre-consumption, consumption and post-consumption. Thus, the consumer behaviour is an ongoing process, which is likely to be impacted by numerous factors. Value is not only created in the moment the consumption stage and that is why it is preponderant to analyse the issues that influence the consumer before the act of purchase.

2.1.2   Pre-consumption issues for consumers' final decision

Based on the typology implemented by Solomon *et al.* (2013), our field of research will concern pre-consumption issues, as they are more likely to help us assess the impact of self-declared claims and mandatory fact information labels on consumers during the making-decision process. Thus, we will pay attention to the influence of these elements before the purchasing act and how it can drive the consumer's final decision. When it comes to the information processing in the making decision-process, it exists three distinct stages: Intensity of information search, recall of attribute information and desirable choice (Balasubramanian *et al.,* 2002). Linked with Solomon *et al.* (2013) analysis, it refers to an ongoing process during which consumers spend more or less time on different stages, depending on moderators such as motivation or global knowledge. We will have the opportunity to come back to these moderators later. Based on Balasubramanian *et al.* (2002) typology, we will mainly focus on the consumer's choice variable, which is conditioned by the two previous stages of information search and attributes recall. Conducted research also revealed that positive experiences with the brand's marketing activities before the act of purchasing had a positive impact on consumer perceived value (Jiang *et al.,* 2017). In that way, packaging offers brands a unique opportunity to express themselves and communicate with self-declared claims. Based on the understanding of these communication stakes, the European Commission tried to balance packaging communication field by introducing mandatory fact information labels to give consumers complete and realistic information about what they consider or intend to buy. The roles of these regulations in the pre-consumption stage are very relevant to assess, relatively to self-declared claims.

2.2   PACKAGE COMMUNICATION CLAIMS

2.2.1   Environmental packaging claims

2.2.1.1   Definition and classification

Environmental claims, also termed green claims, "are assertions made by a manufacturer about the impact of environmentally beneficial characteristics of one or more of its brand attributes of a product or service. Sometimes, these claims also include the social responsibility or ethical manner in which products are

produced, distributed, used, consumed and/or disposed of" (OCDE committee on consumer policy). As organizations seek to communicate with consumers who are concerned about the environment, ads containing environmental claims are becoming more noticeable across many sectors (motor vehicles, household products…), on different media (product label, packaging, promotional materials…). They can take different forms (words, symbols, logos…) and most often refer to specific terms (eco-friendly, carbon neutral, green, natural, energy-efficient, non-toxic, low carbon, pollutant-free, clean, zero emissions, sustainable, ethical and fair). Based on the Matrix Method Approach of Carlson *et al.* (1993), environmental marketing claims can be classified into four categories: product-based (focuses on eco-friendly attributes of a product "*It is biodegradable*"), image-based (associates an organization with an environmental cause or activity "*it helps to preserve forests*"), process-based (deals with an organization's internal technology "*20 per cent of the raw materials used in producing this good are recycled*") and environmental information (involves an independent statement about the environment "*the world's rain forests are being destroyed by the end of 2020*"). In this study we will focus on packaging claims in the FMCG sector, containing product-based marketing claims.

2.2.1.2   *Impact on consumer behaviour*

Over the past thirty years, environmental concerns have moved from a marginal subject to a mainstream and growing issue. Growth of environmental concerns has led to the "green consumerism" (Gussow, 1989), a marketplace orientation in which consumers' purchase, product usage and disposal decisions are driven by a desire to preserve the ecological balance. As a result, in response to growing consumer concerns about environmental degradation and climate change, manufacturers have increased self-declared environmental package claims as a corporate marketing tool to increase level of consumer environmental awareness and reinforce their brand image. Indeed, it is shown consumers are more likely to purchase a product because of its environmental concerns or claims (Chase & Smith 1992). Some studies showed that consumers prefer products that are less harmful for the environment and would be willing to change their buying habits to favour a company that is environmentally sensitive (Chase, 1991; Schwepker *et al.,* 1991). Other studies revealed that consumers are also more likely to react favourably to companies that are thought to be responsive to

environmental concerns (Bremmer, 1989; Kirkpatrick, 1990; Weber, 1990). Consequently, many organizations are striving to improve their environmental position such as Group SEB, which has implemented 10 years reparability for its products to struggle against planned obsolescence in favour of the circular economy. Nevertheless, there are also contradictory results of whether environmental packaging claims can lead to direct changes in consumer behaviour. An exploratory study witnessed that environmental packaging claims affect consumer behaviour at different degree (Tung *et al.*, 2011). Consumers can be confused about the meaning and veracity of self-declared claims, particularly those that seem inauthentic or unsubstantiated. This cynicism is a major barrier to eco-friendly purchases (Greendex, 2010).

2.2.1.3   Environmental packaging claims and need for a regulation

The increased use of environmental marketing claims has become an object of concern for policy makers, consumers and academics. Indeed, while many companies have made sincere attempts to reduce the environmental impact of their products, others have simply overstated or even make the environmental qualities of them (Garfield, 1991). For example, a "saves energy" claim can be perceived as environmental or as a money-saving claim. Similarly, "pesticide-free" may be interpreted as an environmental or health claim (Scammon *et al.,* 1995). This inability to interpret or evaluate them has resulted in governments' intervention around the world (Kangun *et al.,* 1995). That is why regulations are implemented such as the International Organisation for Standardization (ISO) that has drawn up a group of standards specifically governing environmental labelling as part of its ISO 14000 series of environmental standards. The ISO 14020 family covers three types of labelling:

- Type I (ISO 14024): label developed by a third-party (governmental or private organization).
- Type II (ISO 14021): label developed by the producer or a self-declared environmental or green claim.
- Type III (ISO 14025): declarations based on quantified life cycle product information.

While consumers seem to have more confidence in third-party labels, they often do not distinguish between third-party verified labels (ISO Types I and III) and

self-declared claims (ISO Type II). Besides, "The Grenelle de l'Environnement", a French innovative initiative leading to actions in favour of the environment, including environmental labelling, encourages companies to produce goods with less impact on the environment both during the production and use phases. In addition, the display helps to make consumers integrate information concerning the environmental impacts of a product as a decision criterion in their making-decision process in the pre-purchase consumption stage. The history of the regulation of environmental claims has been reviewed for legal (Rathe, 1992), governmental (Direction Générale de la concurrence, de la consommation et de la repression des fraudes) and marketing (Carlson *et al.*, 1993; Gray Lee *et al.*, 1994) issues. However, most studies are focused on the American people. French government has taken some actions to improve the effectiveness of these claims through the education of consumers about environmental claims guides or mandated environmental labelling requirements so that they can make more informed choices (e.g. efficiency labels). At present, the European Union is clarifying products labelling requirements under its Energy Labelling Directive, and is working on criteria for the voluntary EU Eco label.

2.2.2   *Nutritional packaging claims*

Nutrition labelling of food products has received great attention in the literature due to increasing interest in health and diet issues. About two-thirds (64%) of survey respondents say they follow a diet that limits or prohibits the consumption of some food or ingredients (Nielsen 2016). Consumers are becoming more health conscious and most people agree that eating healthily is a better way to avoid illness than using medication (Williams, 2006). This has led to the increased acceptance and consumption of products with health or nutrient-promoting capabilities (Hasler, 2002) and as a result, nutrition marketing has been developed. Nutrition marketing is "any marketing (including food labels and health claims) of food or beverages using health or nutrition information beyond minimum requirements" (Colby *et al.,* 2010), meaning exceeding the nutritional table which is mandatory fact information labels that always has to be printed on grocery products. Nutrition labelling is intended to enable informed consumer choices and stimulate the consumption and production of healthful products. However, as consumers become more attuned to the consequences of their food

choices, they are also paying more attention to those labels. The European Commission introduced mandatory nutritional fact information labels for all member States in December 2016 requiring specification of fats, carbohydrates, sugars, protein and salt amounts, added to the label in the field of vision. Thus, front-of-package claims are used as arguments in addition to the regulated nutrition facts label (Turner *et al.,* 2014). Nevertheless, it is not always easy for consumers to make healthy choices since it can be hard to understand those labels. Thus, package communication claims have been shown to influence the choice of consumers (Bui et al., 2008).

2.2.2.1 *Nutritional packaging claims: definition and classification*

Nutritional claims are "statements that are meant to link food products with a desired state of health in the minds of consumers in order to sell food" (Williams, 2005). As the market and consumer demand are changing, coupled with public health concerns and requirements, the European Union published EU Regulation on Nutrition and Health Claims (European Parliament and Council of the Union European, 2006). It aims to ensure that any claim made on a food in the EU is clear, accurate and substantiated to enable consumers to make informed choices for food and drinks. It distinguishes two categories of claims: nutrition claims and health claims. A health claim suggests that a relationship exists between a food product or one of its attributes and health. Conversely, a nutrition claim suggests that a food product has particular beneficial nutritional property. Consequently, nutrient content claim highlight specific nutritional features of food, about the level of actual nutrient composition in a food product "low in fat" (Wills *et al.*, 2012). These claims can be of either negative or positive (Lado Cousté *et al.,* 2012). Negative nutrients refer to nutritional characteristics that should be reduced (sugar, fat, sodium…) whereas positive nutrients provide a promise of better health (fibre, vitamins, calcium…). However, these claims differ from mandatory nutritional fact information in the way that they do not provide exhaustive information about the products nutrient profile, but rather they highlight key nutritional features meant to appeal to consumers (Ford *et al.,* 1996). In this study we will analyse nutrition content and health package claims in the FMCG sector as a whole under the label "nutritional claims".

2.2.2.2   Nutritional packaging claims and consumer behaviour

One role of nutritional (nutrition and health) claims is to allow consumers to convert indiscernible attributes into more actionable ones. Today, there is an increased importance for consumers of having the right information at the right time and the right place. Thus, if consumers do not get information they need, they might avoid the product or switch to another brand (Boer *et al.,* 2007). At first sight, nutritional claims may appear to do a public service by making more healthful products more readily identifiable to consumers. But, nutritional claims have both positive and negative impact on the consumer behaviour (Bui *et al.,* 2013). Prior researches showed that explicit health claims can make consumers believe that the product is more healthful than when the nutrient information is unavailable, ambiguous, or inconsistent with the claim (Garretson *et al.,* 2000, Roe *et al.,* 1999). Besides, health claims have been shown to influence product attitudes, purchase intentions and beliefs - perceptions *(*Dean *et al.,* 2007), liking (Norton *et al.,* 2013), naturalness (Evans *et al.,* 2010*) and* tastiness (Lähteenmäki *et al.,* 2010) -. However, nutritional claims can create a healthy image for an unhealthy product (Chandon *et al.,* 2006). For example, the claim "fat free" may lead consumers to overestimate product healthfulness, resulting in a halo effect (Chandon, 2013; Ford *et al.,* 1996), the claim "low in cholesterol" may also lead consumers falsely believe that product is also low in fat (Andrews *et al.,* 1998) and "low fat" may lead consumers to erroneously believe that the product has fewer calories (National Institutes of Health 2004). These findings show a relationship between nutritional claims and purchase intention (Chandon, 2013).

2.2.2.3   Nutritional packaging claims and need for a regulation

Over the past decades, food labelling and advertising containing nutrition and health claims have soared. Facing a lack of control, the need to regulate the sector at a EU level became important to protect consumers and to enable them to adequately and safely make their own decisions. Government regulations are currently designed to strike a balance between consumer protection and information, and businesses need to promote their products (Van Trijp & van der Lans, 2007). At an international level, the Codex Alimentarius adopted general guidelines on claims in 1991, guidelines for the use of nutrition claims in 1997 and health claims in 2004. At a EU level, the Regulation 1924/2006 of the European Parliament and of the Council on the 20th December of 2006 on

nutrition and health claims made on food (NHCR) ensures a high level of protection for consumers and facilitates their choice. It prevents them from being misled due to unclear or incorrect information and false claims. Overall, it ensures that those claims are truthful, relevant and understood by consumers. Consequently, this involved in part the necessity to implement a consistent, understandable, and usable nutrition fact label (Curtis & Dunlap, 2005). The regulation requires packaged food products to display nutritional information prominently in a new label format, namely, the nutrition fact panels. It also regulates serving sizes (to reflect what people really eat), health claims (that link a nutrient to a specific disease), and descriptor term ("low fat") on package. Consequently, if consumers have reliable information available at the point of purchase and if they understand it, that could result in a change in behaviour. However, if some studies reveal an independent effect between claims and mandatory nutritional fact information because the presence of a health claim does not influence consumers' processing of nutrition information (Ford et al., 1996), others studies found that consumers rely more on nutrition information than on claims when both are available (Keller et al., 1997). Furthermore, consumers may rely on easily visible nutrition claims and ignore the nutrition fact panel (Roe *et al.,* 1999). According to Stigler (1961) and his approach to the economics of information, a consumer searches product information, as long as the additional costs of searching does not outweigh the additional benefits of searching. Indeed, the costs of using nutritional fact information lie in the effort and time needed to gather and process information (Russo *et al.,* 1986). As an example, a consumer may look at labels to find the amount of fat, but disregard the amounts of sodium because it has less visible consequences on the human body (Keller et al., 1997). Mazis and Raymond (1997) reveal that consumers' beliefs differences exist if consumers are exposed to labels whether they contain nutrition information or not. Moreover, consumers do not hesitate to take into consideration all kinds of information that they are given on packaging (Szykman et al., 1997). To conclude, some consumers, called "information-seekers", are not only willing to take a look at self-declared claims but also at mandatory fact information labels. We thus examine the effects of nutrition claims and nutrition value information presented relative to consumers' motivation to process nutrition information.

Consequently, leaning on all the previous researches we draw the two following hypotheses:

H1: Package communications containing self-declared environmental/nutritional claims consistent with mandatory environmental/nutritional fact information labels have a positive impact on consumer pre-purchase behaviour stage.

H2: Package communications containing self-declared environmental/nutritional claims inconsistent with mandatory environmental/nutritional fact information labels have a negative impact on consumer pre-purchase behaviour stage.

2.3 ELM – PROCESSING INFORMATION AND PERSUASION

How a consumer goes about understanding a claim can be viewed as an example of human information processing. It exists many processing models such as AIDA, Lavidge & Steiner's model or McGuire's one. For instance, in their study on food purchase, Keller *et al.* (2013) used such frameworks when they showed that nutritional claims can influence consumer behaviour to the extent that consumers are aware of it, understand it, draw inferences from it, consider it credible, appealing and motivating and translate it into action. However, when making a purchase, consumers may not always follow that sequence. For instance, when you buy a product, consumers often rely on available information in shelves such as price or package design and memory of previous experience, without much further cognitive elaboration or deep thoughts. Thus, information may be processed in depth or more superficially. It depends on the consumer current motivation and ability to process information. The Elaboration Likelihood Model (ELM) developed by Cacioppo and Petty (1984), integrated those issues by developing a framework for understanding attitude formation and change with regard to products or services (Bitner & Obermiller, 1985). According to the ELM when facing a message, consumers react by using either two channels: the central or peripheral route, depending of a level of "elaboration" (the amount of effort a consumer has to use to process and evaluate a message, remember it, and then accept or reject it. It is based on the level of motivation to attend to a message and the ability to develop relevant thoughts about it). Consumers use central route when the elaboration likelihood is high. Consequently, consumers will carefully analyse the message via an effortful processing of the information and then form attitude regarding that stimulus considered as strongly held and resistant to change

(Rucker & Petty, 2006). Conversely, when elaboration likelihood is low, consumers use the peripheral route because they are unable or unwilling to engage in deep thoughts on the message. The resulting attitudes weaker and easier to change are formed by signal and cues derived from the stimulus (Bitner & Obermiller, 1985).

Researches supported that different variables affect persuasion under high and low involvement conditions. One of the first studies in consumer behaviour to employ the ELM manipulated three factors: motivation to process the information (product involvement – relevance/irrelevance), central cues (argument quality – strong/weak) and peripheral cues (the source – celebrity/non-celebrity endorsers) (Petty *et al.,* 1983). The majority of purchase decisions of simple consumer grocery or retail products are made at the point of purchase. Thus, extrinsic cues or signals play a fundamental role in the consumer decision-making (East *et al.,* 2003). Nevertheless, there is disagreement regarding how a cue is classified using the ELM. Indeed, Cole et al. (1990) found that when messages with limited cues for central processing are available, a peripheral cue might take its place. Consequently, mandatory fact information on packaging serve many purposes such as educating consumers, attempting to influence attitude formation, purchase intent and resulting behaviour. Hence, cues or signals will be attended to and used differently by every consumer. Mandatory fact information labels probably need cognitive interpretation that is why there are some independent variables, also called moderators that we have to take into account.

2.4   MODERATORS OF MAKING DECISION PROCESS

2.4.1   Moderators introduction

There are complex interactions among self-declared claims and mandatory fact information labels, as well as some consumer factors affecting consumers' use of labels. For instance, whereas consumers assure they pay attention to claims or information in real life, evidence from eye-tracking studies indicating that participants do not spend much time looking at nutrition information, even when it is located on the front of a food package (Graham *et al.,* 2015; Graham & Jeffery, 2011). Do consumers search and pay attention to in-store information? Do

consumers selectively attend to precise information that can influence consumer behaviour? These are the relevant questions to the present study. According to Moore and Lehmann (1980), nutrition labels can be modelled as a function of several major categories of variables including individual characteristics (sex, age, race, education, household size, special diet status, and primary sources of nutrition information), situational variables (time and financial constraints such as employment status, average number of minutes spent shopping and income), product importance (product attribute such as price, nutrition, taste, and ease of preparation), and prior knowledge (product attribute and nutrition knowledge). Therefore, through past researches and among several factors, we found that knowledge (Thøgersen, 2005), environmental or health sensitivity (Bamberg, 2003; Harrison *et al.,* 1992), loyalty, perceived diet effectiveness, use of claims, scepticism, motivation to search for information and ability to process information and obviously use of food labels are susceptible to influence this relationship (Szykman *et al.*, 1997). In our model, the extent to which a consumer elaborates on environmental or nutritional claims depends on two main factors identified via the Elaboration Likelihood Model, e.g. motivation (personal relevance of the information, namely, environmental or nutritional sensitivity) and ability to process information (cognitive resources, namely knowledge).

2.4.2   *Environmental or nutritional sensitivity*

It refers to the ability to recognize that a decision-making situation has environmental or health content. Consumers' perceptions and behaviours are generally influenced by their prior attitudes and beliefs and thus consumers who are highly involved with a certain topic react differently to product relevant information. Researches showed that consumers with a high level of environmental concern react to information about sustainable products differently than consumers with low concern levels (Bamberg, 2003; Van Birgelen *et al.*, 2009). Similar phenomena have been revealed in case of nutritional arguments processing. Therefore, we propose that consumers with high environmental/nutritional concern may be more open to environmental initiatives and that any incremental environmental information will generally increase the persuasive impact of mandatory fact information labels. We expect a three-way

interaction between self-declared claims, mandatory fact information labels and the environmental or nutritional sensitivity of the consumer.

2.4.3 *Knowledge*

Environmental and nutritional knowledge refers to knowledge of concepts and processed information about the environment and nutrition including health. Prior literature suggests that appropriate knowledge is a prerequisite for environmentally conscious behaviour. However, the majority of consumers currently lack of knowledge, especially at the point of purchase (Thøgersen, 2000, 2005). Similarly, French consumers are the least likely to understand nutrition labels, with only 31 per cent indicating full comprehension of provided information; 58 per cent understand only partly information and 11 per cent say they do not understand them at all (Nielsen, 2012). It appears that while consumers claim the use of mandatory fact information and general understanding of dietary matters, they are often confused by technical terms (Mueller, 1991; Black & Rayner, 1992; Eves *et al.*, 1994; Abbott, 1997) or miscalculate nutrient intake (Frazao & Cleveland, 1994). For example, some people do not know what recommended daily values mean or how to use them in dietary planning (Burton & Andrews, 1996). According to the Roper report, 52% of consumers use food labels to get nutritional facts about a product. In addition, 70% believe that the mandatory fact inforamtion is the best place to find additional nutritional information (Mueller, 1991). Knowledge is powerful because it renders attention, comprehension, memory, and decision-making process more efficient (Chiesi et al., 1979; Ericsson & Kintsch, 1995). Based on this work, nutrition knowledge could support the use of nutrition information on food mandatory fact information use in at least three ways. First, prior knowledge could enable consumers to pay attention to important information and to be careful with marketing features. Second, prior nutrition knowledge can facilitate comprehension of food mandatory fact information label. Third, prior nutrition knowledge could support the remembered information of the food choice. Moorman and Matulich (1993) show that higher levels of health knowledge have a positive effect on information acquisition from media sources (including nutrition fact information reading). Derby and Fein (1994) also showed on two studies conducted by the FDA that increased knowledge and awareness are related to the use of food labels and

nutritional intake. Thus, consumers with prior knowledge are more likely to use mandatory fact information label effectively to make their choice in the pre-purchase stage.

Most information-processing theories state that the human memory is organised as an associative network (Solomon *et al.*, 2013). When a consumer faces information, he or she can access knowledge stored in the network, through a spreading activation process (the activation of one particular memory item can lead to activation of others with particular meanings linked to them). Those notions are relevant to determine consumer understanding of nutritional and environmental claims. Because of spreading activation, those claims may have meanings that go beyond what is actually stated in the claim. For instance, the consumer's understanding of a claim "low in cholesterol" may be influenced by that existing knowledge and by how far activation spreads through the stored knowledge network. Then, it may bring to mind ideas about other nutrients such as "fat". Those links can lead to a conclusion beyond what is stated in the claim and lead to misinterpretation "low in cholesterol e.g low in fat". Consumers who are highly involved with the issue being communicated are more likely to process the information in more detail before reaching a decision (the systematic route).

Consequently, leaning on all the previous researches, we draw the following hypotheses:

$H1_a$: The presence of mandatory environmental/nutritional fact information labels on the packaging consistent with self-declared claims will even more positively affect the consumer pre-purchase behaviour when the consumer environmental/nutritional sensitivity or knowledge is high.

$H1_b$: The presence of mandatory environmental/nutritional fact information labels on the packaging consistent with self-declared claims will not affect the consumer pre-purchase behaviour when the consumer environmental/nutritional sensitivity or knowledge is low.

$H2_a$: The presence of mandatory environmental/nutritional fact information labels on the packaging inconsistent with self-declared claims will even more negatively affect the consumer pre-purchase behaviour when the consumer environmental/nutritional sensitivity or knowledge is high.

$H2_b$: The presence of mandatory environmental/nutritional fact information labels on the packaging inconsistent with self-declared claims will not affect the consumer pre-purchase

behaviour when the consumer environmental/nutritional sensitivity or knowledge is low.

H3: When the consumer environmental/nutritional sensitivity or knowledge is high, mandatory fact information labels become a stronger argument than self-declared claims for consumers through the pre-purchase stage.

H4: When the consumer environmental/nutritional sensitivity or knowledge is low, mandatory fact information labels become a peripheral cue through the pre-purchase stage.

Therefore, through all those researches and among several factors, we found that environmental or nutritional sensitivity, which leads to motivation to search for information, and knowledge, which allows the ability to understand and process information, are the main variables capable of influencing the relationship between self-declared claims, mandatory fact information labels and the consumer behaviour. Thus based on previous research we decide to draw the current model:
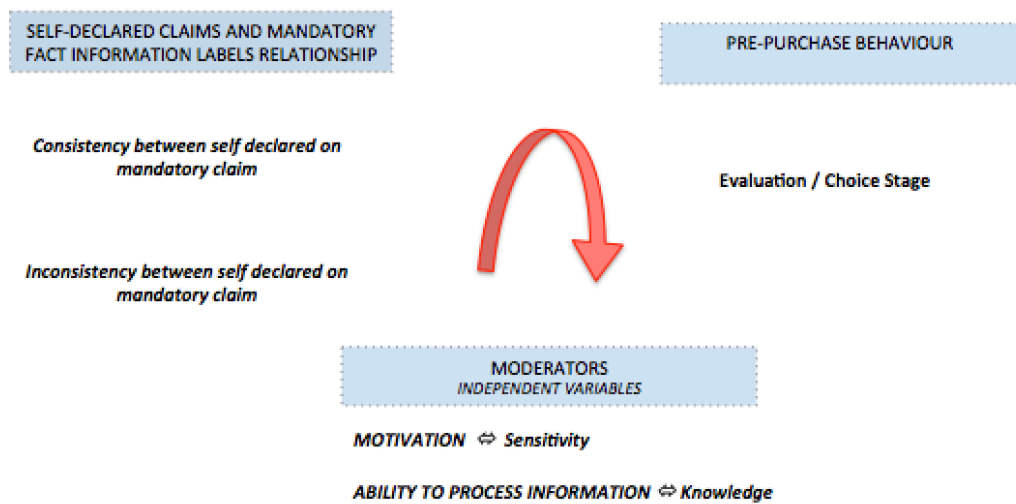
3. PLAN FOR DATA COLLECTION - METHODOLOGY

Participants: To test our hypotheses, we aim at having four hundred participants (at minimum) respecting gender equality (The closest of 50% male and 50% female) with an age distribution that covers the different life stages (mean and standard deviation to be calculated). Participants will be recruited from our own networks via a digital, mail and oral communication to take part in the experiment. Obviously, both being part of the Y generation, we intend to use social media channels and our own personal networks to spread the words at no cost. We also can count on seeding strategy on social media channels. According

to Hinz *et al.,* (2011), hubs (well-connected persons - high degree centrality) and bridges (consumers connected to other network – high between degree centrality) seem to work best, 50% better than random and 8x better than fringes (consumers that are on the edge of the network – low-degree centrality). Thus, seeding to well-connected individuals is the most successful approach because these attractive seeding points are more likely to participate in viral marketing campaigns, and in our cases spreading our survey. It contradicts a common assumption that well-connected individuals despite their higher reach do not have more influence on their peers than do less well-connected individuals. Furthermore, as our network is in majority composed of young people aged between 21-28 years old, it can be useful because young persons are more susceptible to influence than older ones and influence goes up as people get older (Aral *et al.,* 2012). The experiment will be designed and performed on Qualtrics software and will last until we get a significant amount of participants. The experiment will comply with the Helsinki declaration and French regulation.

Apparatus and materials: The experiment is divided into two stimuli. It will consist of images assimilated to product packaging in different categories of high consumption products: coffee machines and vacuum cleaner for environmental issues / cereals and chocolate bars for nutritional issues. Those products are carefully chosen because they are qualified for environmental/nutritional claims and are believed to be familiar to most participants. Familiar products minimize potentially confounding effects associated with the participants learning about a new product.

In both stimuli each image will consist of a combination of two elements: a self-declared claim and a mandatory fact information label, joined together to form a shape, which is displayed in a consistent or inconsistent manner. In the first stimuli, the mandatory fact information label will reinforce the self-declared claim. However, in the second stimuli, the mandatory fact information label will bring attention to other elements that are not in concordance with the self-declared claim (*Exhibit 2 for examples)*. We will use software such as Photoshop to modify the elements included in the mandatory fact information labels. Qualtrics (bino.qualitrics.com) is the survey system used to collect data.

Design and procedure: The experiment follows a 2 (consistency, inconsistency) × 2 (high sensitivity, low sensitivity) x 2 (high knowledge, low knowledge) × 4 (coffee machine, vacuum cleaner, chocolate bar, cereals) within participant design. At the beginning of the experiment, the participants will be presented with the general aims of the study ("we are interested in understanding the impact of mandatory fact information labels associated with self-declared claims on the consumer pre-purchase behaviour") and be asked to sign a standard consent form. In the aim of the study, we will explain to the participants the two previous terms "mandatory fact information labels" and "self-declared claims", so that they could be aware of what we will talk about. Once they agree to take part in the study, they will be asked to report their age, their gender, their nationality and their professional social category. Then, they will be asked to indicate to what extent (1) they are environmental and nutritional sensitive and (2) have knowledge about environmental and nutritional issues on a 5-likert scale. Afterwards, they will be asked to indicate to what extent they pay attention to some elements on the packaging during their buying-decision process on a 7-likert scale to evaluate the importance of all criteria. First, in case of an environmental product, the criteria will be price, package aesthetic, brand, energetic efficiency, performance, noise and self-declared claim. Secondly, in case of a nutritional product, the criteria will be price, brand, package aesthetic, ingredients list, nutritional information and self-declared claim when evaluating a product during the buying process.

Finally, they will move on to the actual experiment. The 4 images will be presented one by one, in a randomised order to avoid position effects and assess according to 6 questions. The first question gathers 4 sentences and will instruct participants to indicate on a 7-likert scale (from extremely unlikely to extremely likely) the extent in which they would be likely to (1) purchase the product, (2) be willing to buy the product, (3) make this product one of their first choices in this product category and (4) exert a great deal of effort to purchase this product. The second question is designed to measure loyalty, to avoid potential bias at the previous question, instructing the participants to choose between (1) I only buy my preferred brand, (2) It is rare that I look at new brands, (3) I consider every brand. The third question will ask participant to what extent they agree with the following statement:
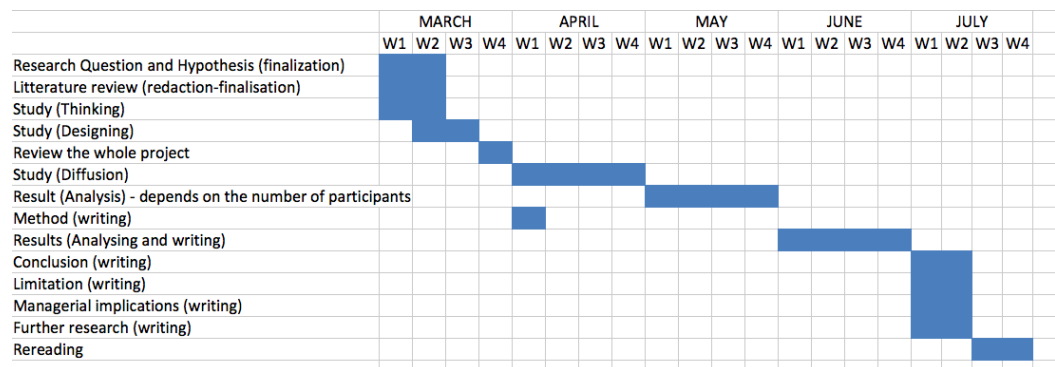
- Vacuum cleaner: (1) This product is effective, (2) This product eco-efficient and (3) this product is silent

- Coffee machine: (1) This product is eco-efficient, (2) This product is silent and (3) this product is compact

- Chocolate Bar: (1) This product has a good taste, (2) This product has low free and (3) this product is low calories

- Cereal: (1) This product is low calories, (2) This product is healthy and (3) This product has low sugar

The fourth question will gather two sentences and instruct the participants to indicate the extent to which they look at (1) self-declared claims and (2) mandatory fact information labels when they make a purchase decision.

The fifth question will instruct participants to indicate to what extent (1) they use mandatory fact information labels to make their purchase decision and (2) understand environmental/nutritional mandatory fact information labels. Finally, we will ask a final question to better understand which content consumers prefer to make their decision in an recommendation objectives (colour, shapes or figures).

4. THESIS PROGRESSION

Here is the timing that we intend to keep. We are pretty sure that we are going to reduce time in the diffusion study. Nevertheless, as we will hopefully get a job by the end of April, we may have underestimated the time that analysis and results phases will take.

	MARCH				APRIL				MAY				JUNE				JULY			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Research Question and Hypothesis (finalization)																				
Litterature review (redaction-finalisation)																				
Study (Thinking)																				
Study (Designing)																				
Review the whole project																				
Study (Diffusion)																				
Result (Analysis) - depends on the number of participants																				
Method (writing)																				
Results (Analysing and writing)																				
Conclusion (writing)																				
Limitation (writing)																				
Managerial implications (writing)																				
Further research (writing)																				
Rereading																				

APPENDIX

EXHIBIT 1: RELEVANCE OF AUTHORS' PERSONAL BACKGROUND

Both completing a double Master degree in Business Management at EDHEC Business School and Marketing at BI Norwegian Business School, the two authors are both passionate about marketing and all the stakes it encompasses. After both having achieved a gap year in the marketing field in the fast moving good sector and faced packaging and claims challenges, the theme of this research thesis naturally came up.

Antoine Chabret: *Firstly Junior International Market Manager at Groupe SEB, he had the opportunity to understand all the marketing issues a world-leading company in small domestic appliances could face in its development. He has been especially interested in the major role that packaging plays to help the consumer make his purchasing decision, taking into account different constraints such as legal ones. After a strategic marketing experience, he decided to come closer to the field, joining L'Oréal Group as a Key Account Manager Assistant. At this position, he has been able to better understand the consumer behaviour and how the latter reacts to diverse advertising messages.*

Sarah Le Faucheur: *After two 6-month internships in Marketing department as a Brand Manager Assistant in two international companies, respectively Mondelez International and Mars Chocolate France, she also had the opportunity to have an overview of marketing issues and trends that world-leading companies could face. And, with some missions focused on the development of packaging from simple shifts to design reflection, combined with its interest in nutritional trend, she wanted to continue its reflexion regarding legal compliance.*

EXHIBIT 2 : VISUAL EXAMPLES FOR OUR EXPERIMENT

These are not definitive pictures. For instance, if the packagage is claimed "the most silencious", we will put in the first survey a consistent number in the "db" case of the mandatory fact information label (such as 75db) and in the second survey a number very high compared to the standards.
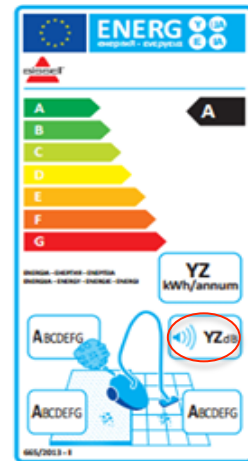
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