The Effects of Cognition-based Subconscious Priming on Short-term Memory

A study in the Ice Cream industry

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This dissertation has the possibility to serve as a start for further investigation in the future regarding the subject of cognitive reasoning subconscious priming. Also, this study has made it possible to gain some insights about a possible future industry to work in, as well as a different method which can be used in a future Marketing Manager career.

Abstract

Purpose – The main objectives of this study were to gain substantial insights about subconscious priming and its role on accessibility through the utilisation of external cues; to draw information about the impulse ice cream industry and customers' shopping habits; to analyse the consequences of cognitive reasoning on short-term memory and choice after subconscious priming; and to analyse the main differences in satisfaction and loyalty after performing the experiments, and prior long-term favourite choices;

Methodology / Approach – This study used secondary research, which had a supporting role towards the primary research when it comes to concept revision. Also, this supporting role was important to gather information about the role of subconscious priming in accessibility and cognitive reasoning tasks. The primary research was based on a tri-grouped two-staged set of surveys, all different from each other, and each with its own purpose within the objectives presented for the study;

Findings – The findings of this research were as follows: Portuguese and British Olá – or Wall's – consumers, in average, buy ice creams from this brand once or twice per month, and usually from caffés and supermarkets. Frequency of purchase and age are both positively directly correlated with loyalty towards a brand. Respondents are more likely to purchase an accessible product when asked to perform a word comprehension task utilising cognitive reasoning, comparing to their long-term favourite. Consumers tend to be less satisfied when choosing a recently-primed product instead of their long-term favourite one;

Research and Practical Implications – Cognitive reasoning tasks can be used for managerial or marketing purposes when consumers are subjected to the correct word comprehension tasks. With a higher depth of research on this subject, subconscious priming with cognitive reasoning can be utilised in other industries other than impulse ice cream, through problem or puzzle-solving exercises which customers make before purchasing. These exercises have to take into consideration the consequences of consumer lower satisfaction associated with priming.

Originality / Value – This research continues the existing research on cognitive reasoning as a marketing subconscious priming method, and which can be important to marketing initiatives for more companies other than the ice cream Olá – or Wall's – described in this study. Also, the primary research used was adapted from few previous articles, specifically for one brand within the FMCG business.

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Introduction

" Today, as never before, we cannot take our business for granted. That is why understanding – and therefore learning to anticipate – consumer behaviour is our key to planning and managing in this ever-changing environment. " (Hawkins & Mothersbaugh, 2010, p.6)

Regarding the end of the Master's degree of the Double Degree Program between the partner universities Católica-Lisbon School of Business and Economics and Lancaster University Management School, in Business Administration and Advanced Marketing Management, this dissertation was concluded bearing in mind the previously agreed subject of Marketing or, more specifically, Consumer Behaviour applied to Marketing.

The topic for this dissertation was selected as a result of an extensive research on the topic of Subconscious Priming applied to Marketing (Kinoshita & Lupker, 2003; Fernandes & Mandel, 2013; McNamara, 2004). During this research, it was possible to notice that cognitive reasoning can also be used as a tool for subconscious priming, in addition to the traditional priming of the five human senses. On the one hand, sight (Elder & Krishna, 2012), the sense of hearing (Spence, 2012) and the sense of smell (Moore, 2014) were the most researched amongst academic investigators, and have contributed greatly to this subject within Consumer Behaviour. All of these studies have used cues – defined as identifying obscure objects, or secondary stimuli, utilised to alter a being's perceptions or responses on a subconscious basis (Harper & Boring, 1948) – as experimental tools for the study of subconscious priming. The studies mentioned above have concluded that these cues affect consumer perception and, therefore, future purchase intention. And, on the other hand, this dissertation aims to show that cognitive reasoning can also have the same purpose. Being used in several sciences, cognition is viewed under several perspectives, as philosophy, cognitive science, artificial intelligence and, finally, psychology. This last one will be the object of study, due to the link between Consumer Behaviour and Psychology (Venkatraman et. al, 2012). In this sense, cognitive thinking is often viewed as the processing of information through several mental processes related to the learning of new subjects or the altering of previous beliefs or intentions (Anshakov & Gergely, 2010).

In order to understand all of the concepts used for subconscious priming, a prior research on the concepts of Marketing and Consumer Behaviour was necessary. This research provides a useful

background which is important to further comprehend the concept of subconscious priming. Having said this, Marketing, which was associated, in the past, to the act of utilising several tools with the goal of coercing the general or a specific population to buy a company's products or services, is now more generally linked with the consumer-oriented view of satisfying each customer with a unique usage experience (Mihart, 2012). Also, Consumer Behaviour is often connected with social psychology: social and psychological processes which consumers go through when purchasing a service, a product or even generating an idea or daily practise are important to obtain consumer satisfaction (Bagozzi, Gürhan-Canli & Priester, 2002).

The previous insight on Marketing and Consumer Behaviour is crucial to understand that the object of this study – Subsconscious Priming – fits in some of the models often used in consumer behaviour research papers: according to Valkratsas and Ambler's (1999) AIDA model – Awareness, Interest, Desire, Action –, this study will focus on how the manipulation of the awareness component can affect all the others; or, according to Lavidge and Steiner's (1961) Hierarchy of Effects – Awareness/Knowledge, Liking, Preference/Conviction, Purchase –, how the first will affect the remaining components[1]. This means that this dissertation aims to focus on the area of the first contact with the product or service and the person's perception towards it, and how it will affect his/her purchase intention.

This study used, as primary research, a group of online surveys performed in two stages and three groups. Also, as secondary research, it used academic articles which investigated business, marketing and psychology topics. The result of these two types of research was the compilation of the necessary information to draw conclusions about the effect of cognitive reasoning on Consumer Behaviour – more specifically, purchase intention – in a specific industry. The methodology for this study was based on Fernandes and Mandel's (2013) methodology on the article "Political conservatism and variety-seeking", which aims to show that political views – conservatism vs. liberalism – can be temporarily altered if primed using subconscious priming. The present dissertation uses a part of the methodology used in the previous study – the idea of word comprehension tasks –, but applied to the Fast Moving Consumer Goods industry (from now on referred to as 'FMCG') and with a completely different scope, duration and structure.

The industry chosen for this study was the ice cream industry, due to several reasons. First of all, the season of the year – the summer – in which the study is performed was a crucial factor to choose the industry. Second of all, the seasonality of the products chosen was also important. Third of all, the academic background one obtains in the Advanced Marketing Management degree and

[1] See appendix 1 (page 46) for more detailed information about the mentioned theoretical models.

previous Marketing courses in Católica-Lisbon School of Business and Economics, and the availability of information online and offline about the industry and its purchasing trends were crucial in order to have reliable secondary research source. Because of the reasons mentioned, it became clear to follow this path of research, with all its advantages and limitations. Furthermore, having into account its clear advantage in the industry in terms of market share and brand awareness (Beeks, 2012), Olá – or Wall's – was chosen as a test subject brand for all purposes.

In a preliminary way, one is able to state that the main importance of this study is to aim to add a new insight on the knowledge of the current managerial practices associated with FMCG companies. Through a psychological and behavioural analysis of the present consumer, the goal is to draw certain conclusions about how likely is a buyer to change its perception and purchase intention when confronted with cognitive reasoning exercises, in any kind of purchasing environment. For example, if one can prove that cognitive reasoning subconscious priming is able to alter short-term memory when it comes to consumer preferences, companies can use this as a new advertising method. As a secondary objective, one is able to use this study as a continuation of previous psychological research regarding subconscious priming, as it can provide this area of study experimental background to conduct further studies on how (un)reliable is an ideal mental state or belief when confronted with new information. And, finally, as this dissertation has the possibility of having some importance towards the academic community if future research is performed on the ice cream industry in terms of cognition-based perception altering. More firms within the FMCG industry, such as brand suppliers, wholesalers or retailers can benefit from future insights and recommendations based on this study and future research on the same topic.

Literature Review

" Consumer behaviour must not be reduced to sensual reaction, but it should rather be seen as a complex mutual action of emotions, motives and perceptions forming the cognitive learning that stores knowledge in the form of deep memory traces. " (Batkoska & Koseska, 2012, p.76)

After a brief introduction including the reader onto the subject of this study, explaining why it holds value to the academic community and managerial environment, and introducing the first few broad concepts which are going to be discussed, it is important to review the most relevant literature theory in which this dissertation is based. This chapter will focus on explaining the current state of the literature in detail, while stating the present gaps in knowledge which can be addressed with this study. It is a chapter mainly focused on two aspects of the research: firstly, brief insights on the different theoretical concepts and ideas which may not yet be clear beforehand and are worth explaining to the reader, and an overview on the existing literature concerning previous research on the subjects comprehended below; and secondly, and on a different note, a summed-up description of the main ideas behind the ice cream industry on the two countries – Portugal and England – in which resided the survey responders, to provide a better understanding of the current state of this industry, as well as the reasons why the brand Olá – in Portugal – or Wall's – in the United Kingdom – was chosen as the subject of this study.

Academic Background and Current Literature

Subconscious Priming

One of the main objectives for this dissertation is to verify that priming can be used as a tool for cognitive reasoning subconscious priming, in addition to the general subconscious priming in terms of the human five senses described above (Berger & Fitzsimons, 2008; Elder & Krishna, 2012; Moore, 2014; Spence, 2012). For this, this thesis will use priming as a tool to link the concepts of ice cream characteristics with the respective ice creams, applied to a consumer point of view. Also, to attempt to change the perception of preference, from the supposedly ideal situation to the most recent object of priming. The concept of priming is explained by McNamara (2004) as a natural human response to stimuli, such as phrases, images and sounds. This happening occurs during a pre-

perceptual phase of a cognition-based experiment, and it is widely used for memory-activation purposes. Priming basically improves the speed and accuracy of response towards a selected memory – or prior experience – which was 'manufactured' by a present context, thus improving its semantic performance. This context forms an associative relation between concepts with somehow linked meanings, which can vary according to the target audience. Also, according to Kinoshita and Lupker (2003), in order to conduct an experiment utilising priming effects, usually two main stimuli are presented, the first one being the *prime*, and the second one being the *target*, and the objective of the experiment would be for the respondent to react to the target using the prime – usually a context – as a reference. For example, if one thinks about a house on the suburbs, a front lawn may come to mind, but if one thinks about a front lawn, a house may not come to mind, or do come to mind, depending on the person. Priming basically studies these relationships, and can be used in managerial or marketing purposes.

One of the most relevant academic articles regarding the subject of subconscious priming considers non-conscious influences as a method of subconscious priming (Fitzsimons et. al, 2002). The authors of this paper state that there are several processes within consumer behaviour which are not conscious, and customers are completely unaware of their existence when purchasing a product or opting for a given brand. Also, they argue that any choice is a mix of every conscious and subconscious process which occurs at the moment of purchase. The subconscious processes, according to the paper are as follows:

- Attention and Perception – Visual cues may not require a high level of attention to work as a priming object and capture the consumer's attention and change its perception, such as packaging or external environment. A pattern of results shown by Krider et. al (2001) and Raghubir and Krishna (1999) suggest a bias when awareness of brands and products are concerned, comparing to a situation when there are no external visual cues;
- Goal Activation – The fact that we pursue a certain goal when we search for a product makes it intuitive to reason that, in a particular situation of consumption, an unconscious strategy is formed to obtain the results of that pursuit;
- Learning and Memory – The authors suggest that incidental learning may occur unwanted, by forming concepts on one's mind without being aware of this process, although this is less effective than a wanted learning, as data shows academically;
- Attitudes and Preferences – A pre-designed attitude or preference towards a product may not be the most effective perception, seen as when a new information rises and a consumer

learns it at the moment of purchase, this information seems to bias the customer towards itself;

- Affect – Described by the authors as a set of three different types – evaluations, moods and emotions – which alter the way a consumer views the product or brand they are about to purchase. Basically, a person is subconsciously biased to a specific product, negatively or positively, according to his/her affection towards it.

There is another relevant article about subconscious priming which shows that this concept can be applied to everyday situations and products/brands can be primed with positive results. This paper focuses on real-world experiments: how exposure to product features from people's daily lives can have an effect on product evaluation and choice. Berger and Fitzsimons (2008), in this paper, concluded that, for example, people utilising a coloured pen when filling in a survey would more likely choose products from that specific colour. The authors also concluded that people who learned a slogan which linked vegetables to fruits and that were more often exposed to cues related to this subject would more likely consume a larger quantity of this products. These findings all suggest that conceptual priming, such as the one explored in this dissertation, influence product evaluations and likelihood of purchase, both in field experiments and lab experiments. In addition to these conclusions, the authors also suggest that the accessibility of information of a product or brand increases with the increase of cue exposure in the surrounding environment, and that these conceptually-related cues were more often reported by the experiment subjects when the product evaluations and actual consumption of these goods were high. In accordance Nedugandi (1990), this article suggests that, not only the conscious priming, but also the non-conscious priming can form conceptual links outside the awareness of consumers. This realisation directly relates to the real world in consumer behaviour: instead of relying only on artificially set cues on the market, marketers can utilise this knowledge to create links between the external environment's cues which can influence the consumer's choice and their own exposure features – such as exhibitors – which can act as a conceptual trigger, if used in the right way. For example, the use of an exhibitor in a retailing store is more effective, as an ice cream company such as Olá – or Wall's –, if the location of the exhibitor is in a highly refrigerated place, or if the outside temperature is higher.

Cognitive Reasoning

Another one of the main objectives of this dissertation is to show that the processing of information can have a direct effect on the purchase intention of consumers on the ice cream

industry, and propose suggestions for future research in the area. For this, word comprehension tasks are presented to the third groups of respondents – the experimental group –, and they aim to alter the perception phase by changing the processing of information, creating different short-term memories, thus changing consumer behaviour. Academically speaking, cognition is explained by Anshakov & Gergely (2010) as the set of mental and psychological phases which process the information that is gained at a certain moment, which will contribute to the acquisition of new knowledge and a certain predisposition towards it, depending on the person in question. Consequently, cognitive reasoning is often described as a person's sense of logic in the case of information that is not sufficient or complete, or with uncertainty in any situation. This means that the idea of cognition and cognitive reasoning are related with the processing of information, and will be crucial from this point on. The same authors also go into a deeper detail concerning this psychological phenomenon: they propose a model which divides it into two phases: the *reasoning* phase and the *perception* phase. In the reasoning phase, the subject is linked to the surrounding environment but does not take into account the external factors when proceeding with the reasoning; and, in the perception phase the agent converts the facts and information into its internal form, and solves new and old tasks and processes them to turn this new knowledge into short-term memory. For example, when an individual reads a piece of news about a controversial topic, the first automatic process is the reasoning of the information included in it, and the second process is the linkage between the given reasoning and the external environment, creating new short-term memories, also known as the perception phase.

Acessibility

The third main objective of this study is to test if, by performing cognitive reasoning tasks such as word comprehension tests, the short-term memory of the primed concept overrides the long-term favourite consumption pattern. By doing this, one aims to test if the accessibility of the primed ice cream on the person's mind has any effect on consumer behaviour when tested using word comprehension tasks instead of visual cues (Berger & Fitzsimons, 2008; Elder & Krishna, 2012), for example. In the current study, this concept accessibility is tested by exposing the subjects to word-comprehension tasks – defined as stimuli – and confirming if these were enough to alter the information-processing stages before the virtual act of purchasing. This verification is made taking into account the already existing consideration sets formed within the minds of the consumers in the ice-cream industry. The idea of accessibility is described by Srull and Wyer (1979) as a tool for judgement of new information or tasks. Basically, this means that, in any given individual or social

interaction, a person will respond with the most accessible information regarding the subject. In other words, accessibility plays the role of encoding the pre-existing information in a person's brain in order to react to further stimuli provided by the surrounding environment. When any new information is provided after this encoding is made, about the same subject, the individual will react according to the previously processed information, instead of the original stimulus, providing an attitude based on his/her initial perception. For this reason, accessibility is commonly associated with the concept of attitude. In this sense, and according to the theory, an attitude is formed towards an object only if the object itself activates a memory – thus, being more accessible – in the subject's mind. If the information about the object of the real-world situation or experiment is not accessible, or else, if there is no pre-existing encoding, the individual constructs an opinion on the spot by processing the several attributes of the object in question (Fazio, Powell & Williams, 1989). Other authors often link accessibility of information with the frequency of purchase, stating that the regularity and similarity of their behaviour towards an object influences an individual's accessibility of information and consequent attitude (Menon, 1993). Academically speaking, accessibility is often related to two main concepts: Memory and Consideration sets. As far as memory is concerned, Nedungadi (1990) shows that consumers' choices can be affected a brand's accessibility on a fixed set of choices, and that this choice is directly correlated with the concept of short-term memory. More specifically, this author verifies that the organisation of memory determines the nature of the set of brands from which a consumer can choose, by retrieving the accessible information, consequently influencing consumer choice; this means that, basically, the factors which influence memory, not only affect the brand or product which come to mind when the consumer is presented with stimuli, but also affect the consideration set more accessible at the moment of choice. Also, the author states that this accessible information is primed according to three main types of information: product category, product attribute or brand. With the objective of testing and verifying these hypotheses, Nedungadi recurs to a set of two experiments which tried to influence brand retrieval – seen as the process of cue priming to retrieve the most accessible information – without changing the consumers' brand preferences or evaluations. The author also divides the products in subcategories and brands, in major subcategories and brands – 'major' referring to 'highly accessible' – and minor subcategories and brands – 'minor' referring to 'lowly accessible' –[2]. According to the framework and the experiment, priming would directly affect the probability of retrieving the accessible brand, as well as the other brands of the same subcategory. In addition, no brand evaluations are affected during this process, while this increase on brand retrieval only happens when no other better-liked brands from the same subcategory are primed. Going into the

[2] See appendix 2 (page 46) for the major-minor categories and brands framework.

managerial world, Nedungadi states that external cues, which are intended to increase consumers' awareness towards a company's product, are also able to increase awareness towards the competitors' products, which is a reason for concern when trying to prime its own brand to the general public. Secondly, as far as consideration sets are concerned, Hauser (2013) defines them as sets of products from which the consumers are willing to choose their favourite, and which they will further evaluate to know which one to purchase. Also, this author simplifies the consumer decision process by dividing it into two mechanisms: a natural "consider-then-choose" mechanism which customers use in order to simplify their cognitive reasoning when passing through a high variety of brands and products; and a heuristic model which compels consumers to make a formal and unconscious decision rule to discover the products they are instinctively supposed to include in their consideration sets. In this sense, heuristics is described and exemplified by the author as a rule which, while sub-conscious, made consumers not consider certain products, but being different from industry to industry. For example, United States Automobile Manufacturers launched a multi-millionaire successful campaign to change the heuristics of its automobiles, seen as purchasers would not choose from them – they were not in their consideration sets – due to the fact that they never experienced a test drive on them. In relation to the subject of consideration sets, Hauser et. al (2010) confirm an hypothesis of a set of rules to define a consideration set called the "disjunction-of-conjunction" – or DOC –, a compensatory model which defends that simplicity in cognitive reasoning is a method which enhances the easiness of predicting consumer behaviour. In this case, DOC is an example of a helpful academic background in which to base this study on: if the study is well conducted, simplicity in cognitive reasoning is able to lead to more positive results when it comes to predicting consumers' choices.

The Industry

With the basic knowledge revised when it comes to theory on the most important subjects for this dissertation, it is crucial, before going into the utilised methodology, to also revise a more practical subject here present: the ice cream industry onto which Olá – or Wall's – is in. It is important to clarify the reasons why this specific brand of ice cream was chosen and also why these specific groups of sub-brands were picked in the survey to test the hypotheses proposed. Portugal

and the United Kingdom were the selected regions due to the fact that these were the countries in which the survey responders resided in.

- In order to have the highest possible quantity of responses to the surveys, Olá was chosen due to its distinctive market share and awareness amongst the brands of ice creams[3] (Euromonitor International, 2009). The Portuguese ice cream market is divided into three different categories – artisanal, impulse and take-home – where the artisanal are defined by being the ones which small producers manufacture on the premises of the retailing spot and for local consumption, the take-home are considered to be, as the name mentions, the ones which are to take home and served in tubs or cakes, and the impulse include single-served tubs, chocolate-coated, sandwiches and packaged cones[4], onto which are comprised the sub-brands which this research studied as, for example, Magnum, Calippo and Cornetto (Datamonitor, 2009). The reason why the impulse purchase was chosen as an object of study was its prominence in the Portuguese ice cream market, with roughly 75% of the total share, which has been stable since 2004, versus 20% of take-home ice creams and 5% of artisanal ice creams[5]..
- Also, the UK market of ice cream has basically the same types of ice cream, with the difference of the 'frozen yogurt' type also being often referenced, being defined as a frozen dessert onto which sweeteners are added (Datamonitor, 2009). Much like the Portuguese market, the UK market also has Unilever – with Wall's – as its leading brand of ice creams, with a market share of 28% in 2013. Magnum is referenced to be the leading seller, in addition to being expected to grow in the next few years. Similarly to this, the total market of ice cream is also expected to grow in the years to come. The leading position of Unilever, together with the leading position of the impulse ice creams made it possible to choose Wall's as an object of study in the United Kingdom (Euromonitor International, 2013).

[3] See appendix 3 (page 47) for a 2004-2008 table of market share in terms of brands of ice creams in Portugal
[4] See appendix 4 (page 47) for definitions of the several types of ice creams
[5] See appendix 5 (page 48) for a market share visual representation of the types of ice creams in Portugal

Central Proposition

As it was described above, the main objective of this study is to confirm ir a consumer is likely to change its behaviour when presented with certain priming cues.. Also, as previously mentioned, there are several types of cues, including visual cues (Berger & Fitzsimons, 2008; Elder & Krishna, 2012), smell cues (Moore, 2014), hearing cues (Spence, 2012) – which are the most researched ones so far – and the purpose of this paper is to introduce, in this industry or in further industries in the future, cognitive reasoning. For this, primary research and secondary research were completed, which will be discussed in the chapter below. In order to gain insights about this subject, the right questions must be asked or, in the case of a proper quantitative research analysis, the most adequate hypotheses are put to question. Our central hypothesis was to test whether priming concepts that represent a certain product would lead participants to switch their preferences. . The secondary data and the research group indicated that the there are mainly two types of ice-creams. One is characterized by being soft, smooth and classic, whereas the other one is characterized by being exotic and refreshing. Our goal is to test whether priming participants with those characteristics would drive them to switch their preferences. Following this logic, we predict:

H1: Consumers are more likely to switch their preferences when primed using word comprehension tasks.

This first hypothesis is the foundation for the totality of this study. The main goal of the dissertation itself is to find out whether this hypothesis is true in the specific industry it is in – the impulse purchase in the ice cream industry – and to what extent it affects consumer behaviour. As it has been said, there are still no relevant studies which try to verify this hypothesis As described above, Fernandes and Mandel (2013) use the same methodology on their paper, although to research a completely different market: politics. Also, according to Morwitz, Johnson and Schmittlein (1993), asking the intention to buy a product or just the satisfaction of the product increases its accessibility in the receiver's mind, which is consequently measured here; this effect is called the *mere-measurement effect,* and is widely used in subjects within consumer research. Given that priming increases the likelihood of purchase by changing the accessibility of a product and not by actually changing people's preferences, we predict that when primed people will be less satisfied

with the product they had selected. This is because they had made a choice following the accessibility of the product and not by their true preference.

Given this, the second hypothesis goes in a different direction:

H2: Consumers tend to be less satisfied with products purchased as a result of priming.

Also, according to the same authors as before, if a subject is primed using various cues to choose a certain product, which will be consequently more accessible, he/she will be less likely to be satisfied with the product chosen, due to the fact that this product is not his/her preference in the long-term, but only at the moment of purchase. H2 aims to measure if this effect is real in this situation, or else, if the theory is confirmed.

The third and last hypothesis continues to deviate from the initial one:

H3: Consumers who have higher disparity in product attributes are more likely to be more loyal to the brand.

This hypothesis directly relates to the brand Olá – or Wall's – within the concept of brand awareness. If a consumer is very loyal to a certain brand, it is reasonable to assume that his/her preferences are more highlighted regarding the attributes of the product, seen as their experimentation of the brand already gave them experience in choosing from that industry. Consumers which are not so loyal to the brand have their preferences more 'diluted', and the characteristics of their ice cream preferences will feel the same, consequently having similar ratings. H3 seeks to confirm whether this hypothesis is true or if this assumption is unreasonable.

Research Methodology

" Surveys are part of the language and fabric of contemporary life. [...] [Survey design] provides essential introductory information for those considering conducting a research survey. " (Addington-Hall et. al, 2007, p.1)

Research Philosophy

The methodology used in the present research was conceived having in mind two different philosophies of knowledge in mind: perspectivism and pragmatism. These views contributed to a having a better critical view of the findings and to subject the hypotheses to additional analyses in each step of the research.

On the one hand, perspectivism is defined by Johnson and Duberly (2003) as the denial of the concept of a concept-free tabula-rasa point of observation, which views knowledge as a problematic relationship between the outside and inside perspective of research. In this way, it was of main importance to the objectivism of the results found during the course of the dissertation that the researcher was aware of his own faults and previous perspectives on the matter. This is the reason why there are no assumptions based on opinions when it comes to the research, and conclusions and implications were supported by exterior references.

And, on the other hand, pragmatism is defended by Rochberg-Halton (1986) as a methodological view where 'truth' is which, in the long run, we find it the most expedient to believe in. It is important to state that a pure interpretivist view would be insufficient to draw conclusions on the research, as one would not be able to accept any fact as true, generating a loop of infinite discussion. On an academic pragmatic view, one is able to assume certain facts as correct in order to pursue the completion of the objectives of the research.

Through the utilisation of both these views on knowledge, it was possible to obtain valid and reliable results throughout this study.

Secondary Research

After considering the main central proposition for this study and the underlying philosophical view, it is important to specify the methodology used in the research in order to reach its objectives.

The first goal was to provide information about all the concepts which would be necessary to understand the crucial ideas referenced in this study. Even after choosing the topic, a large quantity of research papers and articles was needed to fully understand the magnitude and specificity of each concept, before applying it onto the study. This secondary research was performed in a way that one could provide a top-to-bottom explanation of how this topic was chosen – as it was done in the Introduction section –, a clarification of the main concepts which were about to be used and a group of articles where most of the previous research had been done. The results of the integration of the information provided by the primary and secondary research was only put together when it came to the interpretation, findings and conclusion of the paper (Östlund et. al, 2011). One of the reasons why both of this types of research were chosen was the fact that both of them support their information gathering in the concept of 'experimental logic', which makes them similar when it comes to causality, or else, there is no main difference in the causal relationship between raw data and useful information, with the exception of the interpretation of the given data (Tacq, 2010).

Regarding the previously mentioned secondary research, one can assume that, in this specific dissertation, it was utilised to describe the main concepts and implications for the study, as well as some practical cases where unconscious priming or accessibility exercises were the main topic, in order to discover the gaps in the present academic knowledge. The research in question was important within the range of theoretic models and ideas and how they can be applied to this case. It was also conducted through the research on academic journals and articles, previous dissertations, statistic reports from known reliable sources and websites. Despite this, the major method utilised, as well as the most time-consuming, was the primary research, through various stages and groups of web surveys – information which was already mentioned in the Introduction section – which will be described below.

Primary Research

Pre-Design of Surveys

The most time-consuming, as well as the most relevant part of this study was the design of a group of surveys which were important to achieve the goals mentioned before, as well as confirm – or disconfirm – the hypotheses put to test. These surveys were designed bearing in mind all the theoretical and practical implications shown by past authors who referenced how to conduct survey design, and which will be mentioned below.

Regarding the study made, the first concern was to structure it in a proper way. For this, research was made on survey design and its components, which has lead to the conclusion that it has to gather three main components: the sampling – characterised by the selection of the responders who one aim to answer the questions – in this case, the 174 respondents which provided their e-mail and answered the surveys; the questionnaire design – the building of the components for each question – and the methodology for collecting data, which will be described and discussed below. The purpose of the first component, sampling, is to draw unbiased, reliable and valid conclusions from the population which was of interest to the study. The respondents at the present study were randomly selected based on their availability of answering the survey, as the reliability and validity were crucial in order to draw consistent conclusions. In addition, theory states that one has to define his/her sampling frame – constituted by the group of individuals who are eligible to be responders –, be aware that the more the sampling size increases, the lower is the error the sample is subjected to when drawing conclusions about the information gathered, and use a probability or non-probability sampling method to gather the raw data (Addigton-Hall et. al, 2007). When it comes to this component, it was important for the researcher to gather as many valid respondents as possible in order to avoid biases and be able to make the conclusions of the study more valid. Other authors, like Lauer, McLeod and Blythe (2013), defend that the concept of designing surveys has been too facilitated with user-friendly platforms, which causes responses to lose their efficiency in information-drawing, as well as in the response rates. This concern was also taken into account when designing the survey, by engaging in techniques like leaving the personal questions to the end of the survey, but due to insufficient time and tools, this danger was not completely surpassed.As far as other issues are concerned, some authors defend that designing online surveys in several pages or by scrolling methods is indifferent, which enables for a higher level of creativity (Peytchev et. al, 2006).

In order to evaluate the quality of the survey created in this dissertation, Nielsen's (2011) three leads of quality on quantitative research papers were monitored: contribution, clarity and citizenship, which were taken into account when building the structure and content of this study:

- Contribution: there had to exist a description of the problem at hand, an explanation of the attempted solution and a prediction of what future behaviour would be. Also, the contribution to the academic literature had to be previously non-existent;
- Clarity: the structure and content of the paper had to be straightforward and unbiased. Nielsen (2011) proposes a specific structure which comprises an abstract, an introduction to the problem at hand, the characteristics of the participants, the sampling procedures, a description of the measures and sample, the research design, the conclusions and implications and the discussion of the results. All these structural constraints also have to be accompanied by a high level of content clarity, avoiding ambiguous information and biased information;
- Citizenship: the concept of citizenship implies a study whose content is able to be used in future research on the same or different areas of study; and it also implies that it is performed in an ethical way, being subjected to ethical research norms.

The best efforts were made in order to achieve contribution, clarity and citizenship on this dissertation. The contribution to the academic community was attempted by having made previous research on the subject and putting subconscious priming as a method of priming to test; A clear structure was followed, as explained throughout the study, to make it clearer; and the goal was to draw conclusions about cognitive reasoning and using it as a tool for priming, so it could be used in other industries or companies, as described further below.

Given the concerns presented above, the theoretical models described and the implications these may have had on this study about unconscious priming in the impulse-purchase ice-cream industry, a group of surveys were designed and put to test, and its process will be shown below.

Engage in Survey Design

After all the theoretical concerns were taken into account before starting the survey design and the practical issues which arose when undertaking this research, it is important to clarify exactly which are the main objectives that this study proposed to achieve:

1. The first main goal of this study was to verify if priming key thoughts and ideas can be used as a tool for cognitive reasoning subconscious priming using word comprehension tasks on the ice cream industry, and if this has any effect on the act of purchasing. More simply put, if short-term memory overrides long-term loyalty to a brand or product. This goal refers to the first hypothesis proposed: '*H1: Consumers are more likely to switch their preferences when primed using word comprehension tasks.*";
2. The second main goal of this study is to show that the processing of information can have a positive and direct effect on the purchase intention of consumers on the ice cream industry, but that this momentary alteration in choice can have negative impacts on satisfaction. This objective refers to the second hypothesis of this study: "*H2: Consumers tend to be less satisfied with products purchased as a result of priming.*";
3. The third main goal of this study was to verify if long-term loyalty to a brand or product on the ice-cream industry has a direct effect on consistency of choice, thus the third hypothesis "*H3: Consumers who have higher disparity in product attributes are more likely to be more loyal to the brand.*"

On a first phase of gathering, it was asked, using social networks and a word-of-mouth method, that random people would to sign up their e-mail in a Doodle (Doodle, 2014) platform for a survey which would be further sent to their e-mail, when the client base had sufficient respondents. The goal of not sending the survey right away was, as mentioned before in the Introduction chapter, to later create groups of respondents on which an association of the response with each person's e-mail was possible, whose objective will be described below. After the initial gathering of a base of respondents, these were randomly assigned into three different groups, which would then serve three different purposes: the research group, the control group and the experimental group. In order to avoid any response errors or biases, the respondents which were the closest members to the author of this dissertation were asked to abandon the research. Also, the gathering of respondents only ceased when the number of people arose to more than ninety, due to the fact that, in statistical terms, a quantitative sample can only be treated as a normal distribution if its number is above thirty individuals: more than ninety individuals randomly divided into three groups, three groups of more than thirty people would arise.

In order for a better understanding of the process of the study which will be described below, please refer to the flowchart below:

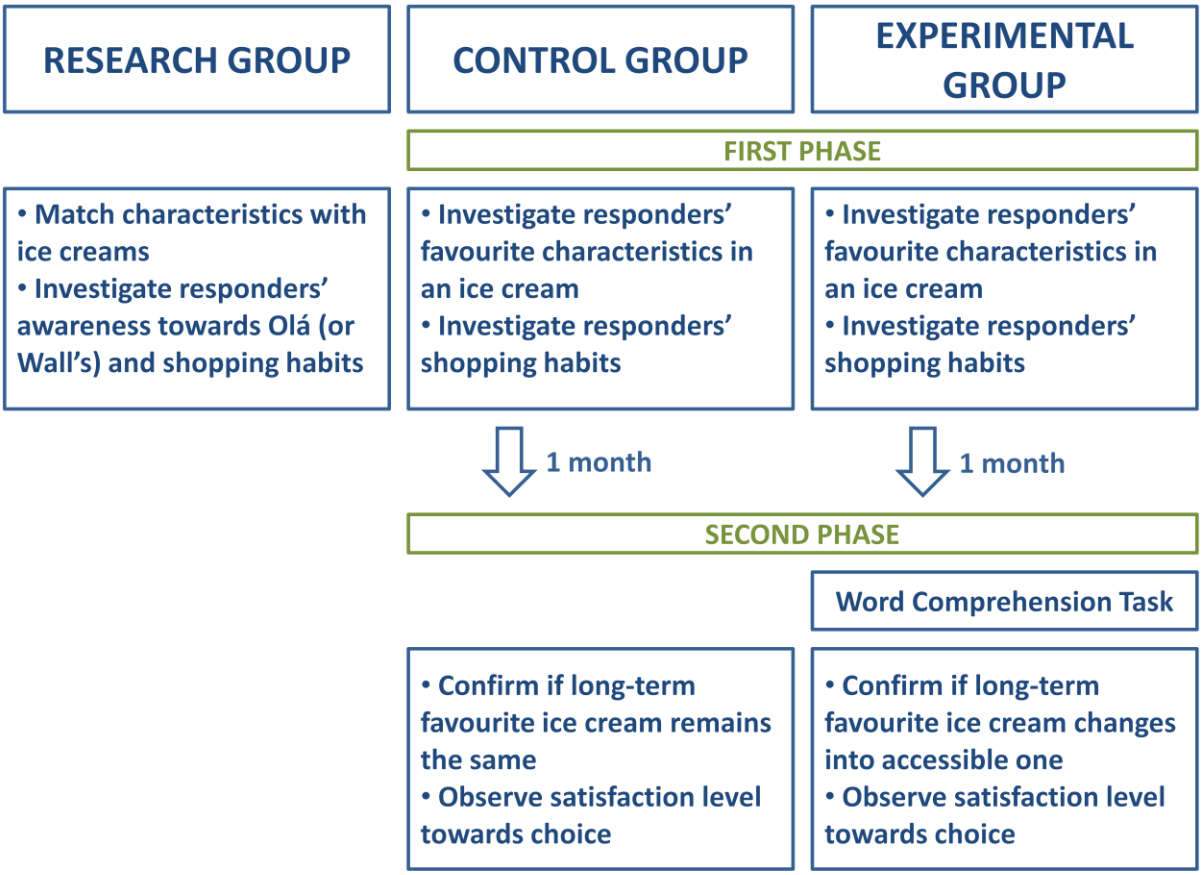


Figure 1 - Visual representation of the primary research process

As said above, every one of the three groups had its specific purpose, which would be used to draw different but complementary conclusions, according to the theoretical models reviewed.

1. The research group, which comprised one third of the respondents, was used as a method of matching, and it was the only one who only had one phase, instead of two phases. This means that it was used as a tool to know how much respondents knew about the Olá – or Wall's – ice creams, their shopping habits during the present season of the year – the summer, which would be the one which would make the most sense to evaluate, given the product analysed –, the gender and age group of the person and, most importantly, to match the characteristics of ice creams to each group of ice creams. To achieve this, after seeing a picture of a group of ice creams, they were asked to rate them, from a scale from 1 to 7, how much they would think that specific characteristic associated with each of the groups of ice creams. The main goal of this group was to support the experiment made on the experimental group, as it was necessary to match the characteristics of the ice creams themselves to the correspondent groups of ice creams, but done in a way that the respondents which were tested in the experimental and control groups – which will be

explained in more detail below – would not have to have their favourite ice cream directly accessible in their minds. This happened because when choosing their favourite characteristics, their favourite ice cream would have be implied in their responses of the characteristics. As an example of a reasonable assumption, a person who would have the characteristic "fresh" in the highest rating possible would be more fond of a Calippo, or the same would happen with "Exotic" and a Solero, or "Classic" and "Smooth" for a Magnum Classic.

Looking into the characteristic concept into more detail, it is important to mention the following: this research was made having into account that one had to maintain a user-friendly design to the respondents, which meant that an excessive number of ice creams from which a person had to choose from would result in a lower response rate, and the same with the matching of the characteristics. This meant that the designer was obliged to withdraw the information from the most reliable source of Olá – or Wall's – ice creams, the Olá website (Olá, 2014). After careful analysis of the ice creams which could be put together into similar groups, the following groups arose: Magnum Classics – Magnum Almonds, Magnum Classic, Magnum White, Magnum Double Chocolate and Magnum Caramel –, Magnum Snacks – Magnum Caramel & Nuts, Magnum Sandwich and Magnum Moments –, Cornettos – Cornetto Lemon, Cornetto Chocolate, Cornetto Cream, Cornetto Strawberry and Cornetto Choc'n'Ball –, Calippos – Calippo Coke, Calippo Strawberry and Calippo Lemon –, Classics 1 – Big Milk, Solero and Fizz Lemon – and Classics 2 – Feast and Rol –[6].

As far as the characteristics of the groups of ice creams are concerned, one was able to deduce the characteristics which were usually associated with specific ice creams from the Olá website, which resulted in the following list: Exotic, Pleasant Scent, Big, Smooth, Refreshing, Crunchy, Classic, Sweet, Creamy and Nutritional:

- To reach this conclusion it was necessary to navigate throughout the Olá's website, verify into how many groups were the ice creams divided into, and deduce which were the characteristics which were usually associated with each of these groups. Then, list all the characteristics found in order to use them on the research in question.

According to the Olá – or Wall's – website: exotic was usually associated with the Classics 1; Refreshing was usually associated with Calippos; Sweet and Classic were usually associated with Magnums; and Sweet and Creamy were usually associated with Cornettos. In order for the study to be as unbiased as possible, instead of assuming a set of characteristics to each ice cream or group of

[6] See appendix 6 (page 48) for a visual representation of the groups of ice creams

ice creams, they were given to each respondent as an exercise of rating, which will be explained in more detail below.

2. The control group, which comprised also one third of the respondents, would serve as a manipulation check, as well as a method of confirming that respondents which were not put to test with any task would maintain their long-term preferences, comparing with a choice of ice cream which was primed. The main goal of this group was to verify that the choice between the first and the second groups would not usually change if the products were not primed in accordance.
3. Also, the experimental group, which comprised the last third of the respondents, was the main essence of the first hypothesis of the study: its main goal was to demonstrate that, given a certain task (Fernandes & Mandel, 2013) that increased the accessibility of the characteristics of a certain group of ice creams – which would be the opposite of each respondent's long-term preferred one –, they would choose the most accessible one, being the recently primed one, instead of the favourite one. Both of these groups had different but complementary goals, and both had a similar structure of design:
    a. Two phases of response, which would be one month apart, to avoid memory from the first one. One month was applied to this specific situation due to the following reasons:
        i. The time frame between the first phase and the second phase had to be long enough so that the responders who answered the second phase did not remember their answers to the first phase;
        ii. The time frame between the first phase and the second phase would have to be short enough so that the drop-out rate was reduced to a minimum. Also, the participants had to remember that they had done a survey before, but not their answers in the survey;
        iii. Given the time frame to do the dissertation, the optimum time frame was estimated in one month between one phase and the other.
    b. To make sure their responses to the second phase were as unbiased as possible, there were two solutions applied: the first one was to avoid introducing any questions in the first phase which could be associated with their favourite ice cream; and the second one was to keep both phases one month apart. These two solutions, together with the way the surveys were designed, made it possible to know the information of what each person's long-term preferred ice cream was

and, at the same time, make an unbiased assumption of what it was, before the last purchase choice.

c. The first phase of both groups, being the same, asked about their consumption habits, also during the summer season, about their age and gender and, most importantly, asked respondents to rate the previously mentioned characteristics, on a scale from 1 to 7, how much each characteristic was important to have in their long-term favourite ice cream. In the second phase of the study, the control group was simply asked to choose between one of the five groups of ice cream available, if they had to choose in the moment. Differently, the experimental group was firstly asked to perform a cognitive reasoning task in which they had to complete a set of 8 sentences, bearing in mind that in each sentence they had to include a pair or a trio of words which was given to them in each case. This pair or trio or words would be the opposite of the respondent's first choice of ice cream characteristics – for example, a person who had rated "fresh" and "exotic" the highest on the first phase of the experimental group, had pairs and trios of words, to complete sentences, which were related to "smooth", "classic" or "creamy" –. After the task, the experimental group had to answer the same question as the control group, by choosing the ice cream they would consume at the moment, if they were able to choose.

d. The main objective of this task and both of these groups was to evaluate whether or not H1 was true. After this, they were asked about their satisfaction about the choice that they made, which, given the difference between the second phase of each of the groups, made it possible to confirm whether or not H2 was true. Finally, in every step of the way of each of the three groups, each respondent was always asked to provide the researcher with their e-mail, in order to be able to associate each response with each preference, and design the cognitive reasoning task accordingly.

Below find a visual representation of the phases of the study, which is more detailed than the visual representation above, as well as included the types of questions made on each group.

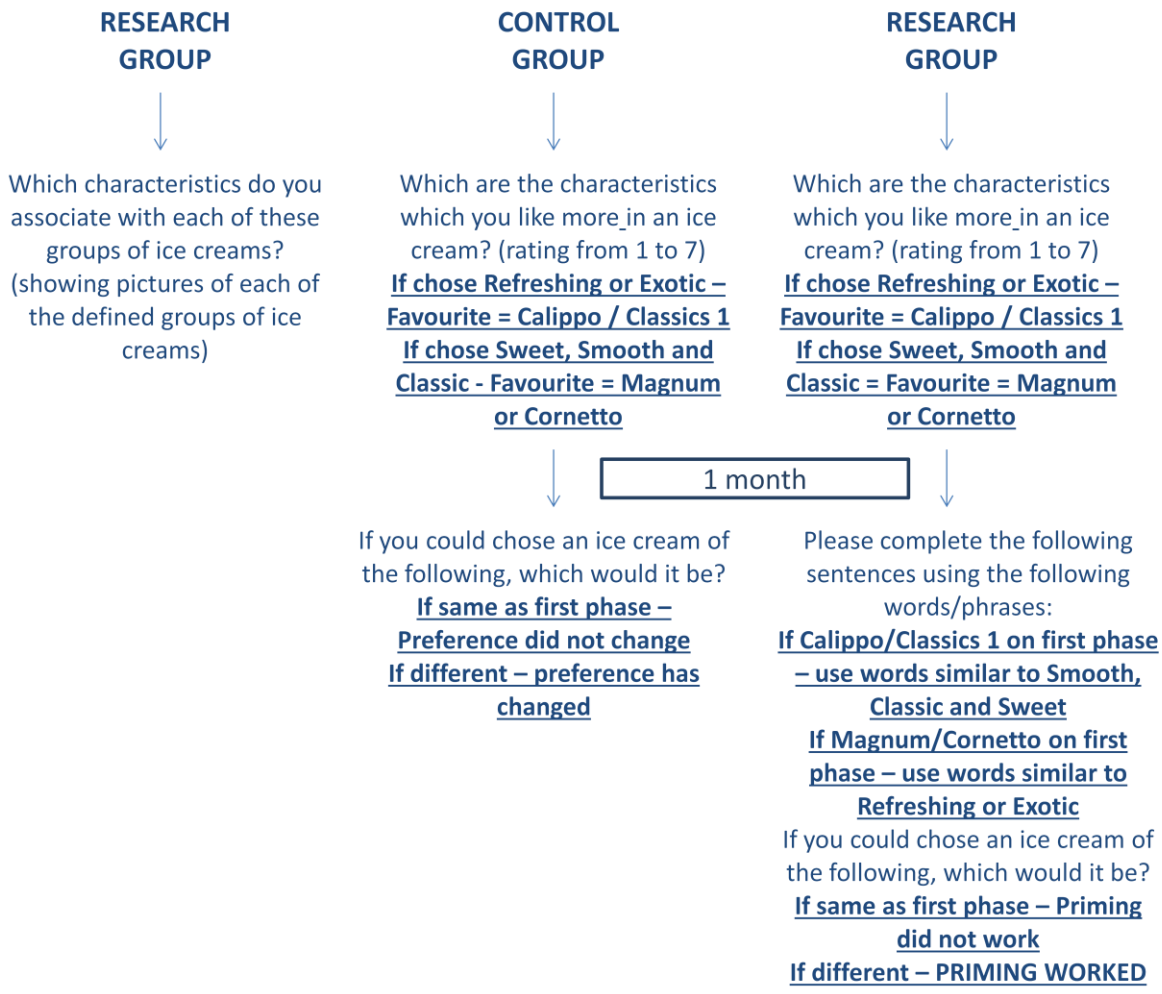


Figure 2 - Detailed visual representation of the primary research process

So, to sum up and link the whole process together, the research group was able to deduce which characteristics were normally associated with which group of ice creams, and the control and experimental groups were able to deduce if the long-term favourite ice cream choice was overcome by the opposite short-term accessible memory of the ice cream characteristics that the task imposed on the experimental group.

In order to make this concept more visible, all the phases and groups of surveys are presented in the appendix. The research group has a Portuguese Version and an English Version[7], the first phase of the control and experimental groups also had a Portuguese Version and an English Version[8], the second phase of the control group had a Portuguese Version and an English Version[9] as

[7] See appendix 7 (page 49) for the English Version of the Research Group survey
[8] See appendix 8 (page 58) for the English Version of the first phase of the Control and Experimental Groups survey

well, and the experimental group was divided in four in the second phase: respondents whose favourite characteristics in the first phase were “fresh” and “exotic” – Portuguese Version and English Version[10] – and respondents whose favourite characteristics were “classic”, “smooth” and “sweet” – Portuguese Version and English Version[11] –.

[9] See appendix 9 (page 61) for the English Version of the second phase of the Control Group survey

[10] See appendix 10 (page 63) for the English Version of the second phase of the Experimental Group survey, for respondents whose favourite characteristics were initially “fresh” and “exotic”

[11] See appendix 11 (page 67) for the English Version of the second phase of the Experimental Group survey, for respondents whose favourite characteristics were initially “classic”, “sweet” and “smooth”

Research and Data Analysis

" Increasingly [...] research has shown that a large part of consumer decision making occurs outside of conscious awareness or is influenced by factors unrecognized by the decision maker. " (Fitzimons et. al, 2002, p.270)

After a brief view on how the research methodology was performed and which were the main propositions for this study, and a detailed analysis of its results, there are several findings which are consistent with the existing prepositions and assumptions based on the secondary research, and which are worth mentioning, that could add some insights to the academic community.

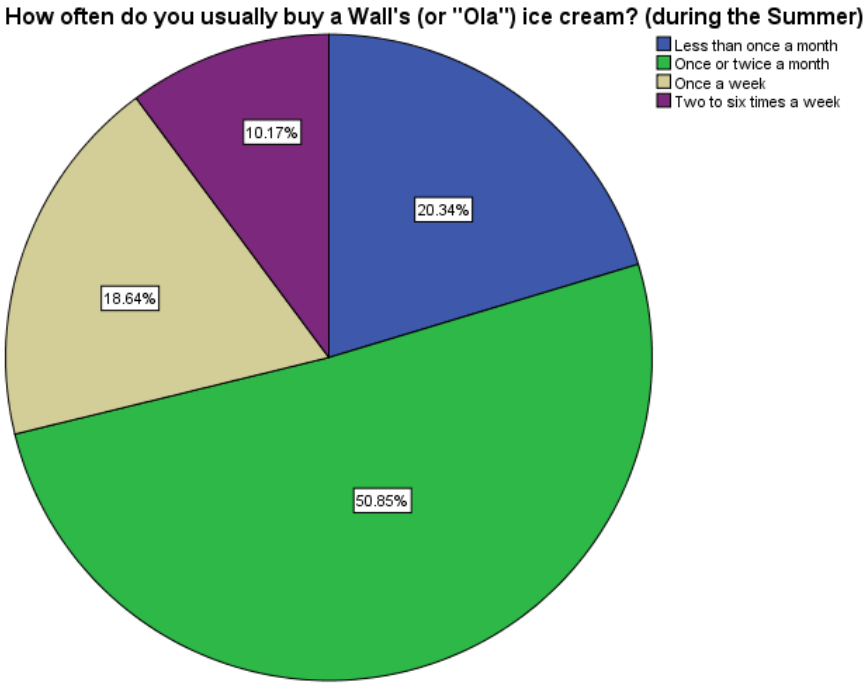
This chapter will divide in various parts, each of them concerning either the general results of the responses to the surveys, or the results specific to each hypothesis tested.

Data Analysis / Findings

In every quantitative study there are various commonalities comparing with the rest of the research. One of these points of parity is a slight decrease on the response rate, from the moment the study begins until the moment it ends – a non-response error (Malhotra et. al, 2012) –. In the case of this dissertation, and as mentioned before, a Doodle platform was assembled in order for respondents to volunteer to answer the surveys: a group of 174 individuals signed up by writing their e-mail on the online platform. After the first and second phases occurred, and enough time had been given for their answer – as well as any outliers whose answers were not in line with what was asked in the study. These outliers were spotted by verifying the answers individually, and were withdrawn from the statistics accordingly –, divided by the three groups – experimental, control and research groups –, 118 individuals completed the study until the end, which means a drop-out rate of roughly 32%. Of these 118 individuals, 46 respondents – or 40% – belonged to the Research Group, 36 respondents – or 30% – belonged to the Control Group and 36 respondents – or 30% – belonged to the Experimental Group.

In terms of results which can be generalised to the whole of the group of respondents, the following results were achieved:

- When answering the question related to their consumption habits in terms of frequency of purchase of Olá – or Wall's – ice creams, the mean, median and mode stood at the value 2, which meant "Once or twice a month"[12]. In this matter, 51% of the respondents claimed they purchased this brand of ice cream once or twice a month, and roughly 20% claimed to buy Olá's – or Wall's – ice cream only once a month, with an approximate value towards "Once a week" as well;

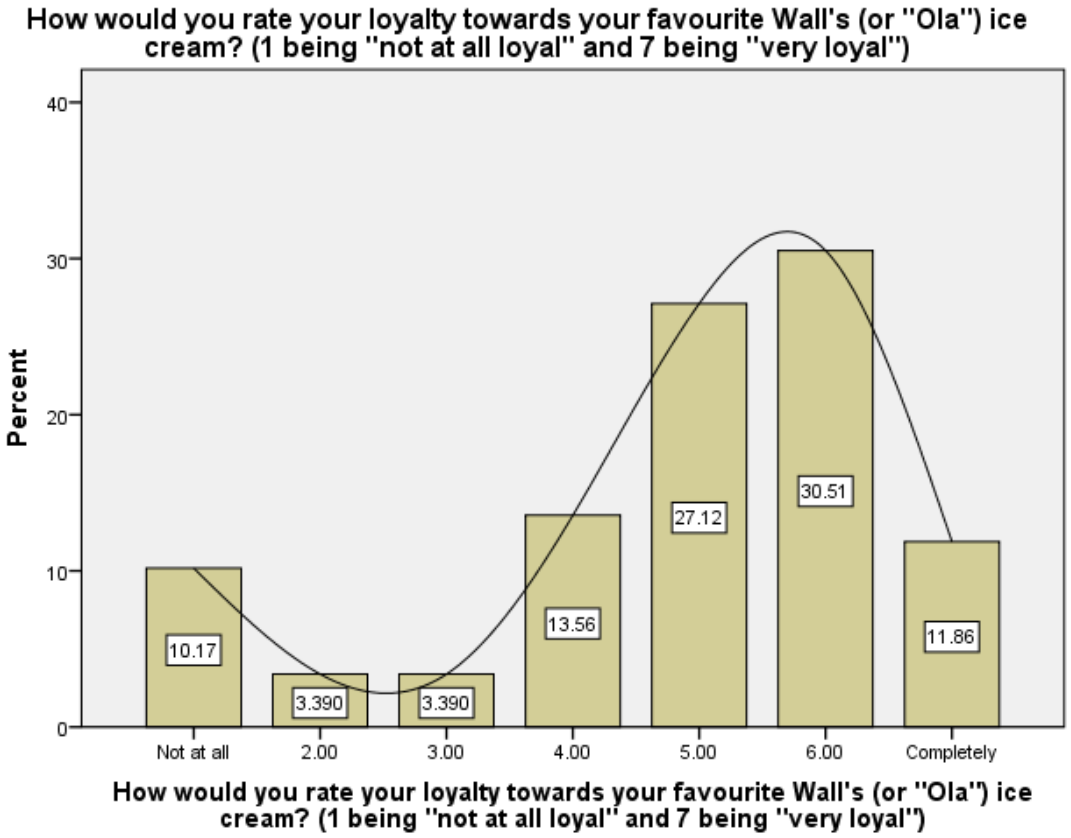


- In terms of the other question related to their consumption habits, and this time being the location where they usually purchased their Olá – or Wall's – ice creams, the most common place to buy this brand is in a caffé – with 80% –, followed by a supermarket – with 56% –, and after that the Olá – or Wall's – street stores, or boutiques, and the hypermarkets with 39% and 38%, respectively. While the restaurants had a 31% acceptance rate, grocery stores and hotels did not have significant values in this matter[13];
- When it comes to the demographics, the values found were roughly equally distributed: about 51% of the respondents were female which, in this case, it is 60 responders, in which

[12] See appendix 12 (page 71) for the statistics table of "How often do you usually buy an Olá – or Wall's – ice cream (during the Summer)?"
[13] See appendix 13 (page 72) for the statistics and tables of the question "Where do you usually buy your Olá – or Wall's – ice cream?"

38 of these were between the ages of 19 and 25. The same thing happens with the male responders, which represent the other 49% of the responders, and which have the same tendency of age, 38 being between the ages of 19 and 25. In general, 64% of the individuals were included in this age interval, while the second most present age group was between the ages of 26 and 35[14];

- Fourthly, if it comes to self-rating one's loyalty towards the Olá – or Wall's – brand, the results were as follows: almost one third of the respondents – roughly 31% – considered themselves almost completely loyal towards this brand of ice cream, with a rating of 6 out of 7. After that, the rating of 5 out of 7 was the most present rating amongst the respondents, bearing 27% of the 118 individuals. As it can be seen in the results, this self-rating towards loyalty represents a classic negatively skewed visual representation;



- And finally, in terms of a reasonable assumption of correlation between the variable of loyalty – as a dependent variable – and the variables of frequency of purchase, gender and age, the results were as follows: when a linear regression model is performed, one can verify that, with the specifications above regarding dependent and independent variables, the regression is reliable – the phi coefficient is below 0.05 (Malhotra et. al, 2012) – and two of

[14] See appendix 14 (page 74) for a crosstabulation table on the age and gender of the respondents

the three independent variables are also explanatory of the loyalty variable: frequency of purchase and age, whose phi coefficients were also below 0.05.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.571	.547		4.702	.000
	How often do you usually buy a Wall's (or "Ola") ice cream? (during the Summer)	.756	.164	.384	4.619	.000
	Please, indicate your gender:	-.493	.286	-.144	-1.727	.087
	Please indicate where your age is more appropriately put:	.330	.133	.204	2.473	.015

a. Dependent Variable: How would you rate your loyalty towards your favourite Wall's (or "Ola") ice cream? (1 being "not at all loyal" and 7 being "very loyal")

- Also, both these variables presented positive beta coefficients, which means that there is a direct positive correlation between frequency of purchase and loyalty and age and loyalty: in other words, the more frequent are the purchases of Olá – or Wall's – ice cream, the more loyal an individual tends to be, which seems to be a reasonable assumption. And, in addition, the older a person is, the more loyal an individual gets to the brand, which is reasonable as well. On another note, age is not, in this group of respondents, an explanatory variable towards loyalty – bearing a phi coefficient of 8.7% –[15].

Regarding the results which are general towards all respondents – which include the three groups –, these are the findings which are able to drawn. Now regarding other results which can be generalised: in order to gain insights on which sub-brands of Olá's – or Wall's – ice cream were the most accessible in people's minds, it was asked the Research Group to name five sub-brands which they could remember, before going into the characteristic rating. As expected, Magnum and Cornetto were the most referred sub-brands of ice cream, which means these were the most

[15] See appendix 15 (page 75) for the ANOVA test regading the regression tables when it comes to frequency of purchase, age and gender towards loyalty

accessible in the long-term[16]. The reason why it did not happen towards the other two groups was that, if the question occurred, the results of the second phase of the study could become biased in the Control and Experimental Groups, seen as the main objective was to realise which ice cream was each respondent's favourite without actually asking them directly. If this happened, their answer to the naming of the five sub-brands could bias the next question's answer – "Please rate the following characteristics in terms of how your ideal ice cream should be." – as their previous accessibility could change.

Hypothesis 1 – Cognitive Reasoning vs. Long-term Favourite

As described above in the Central Proposition section, the first hypothesis is related to the likelihood of purchase when it comes to the comparison between each respondent's long-term favourite Olá – or Wall's – ice cream and the one which has been the most accessible. The main difference between the Control Group and the Experimental Group was exactly the word comprehension task, as it can be seen on the visual representation above, which enables the researcher to analyse the proper difference between the two groups of subjects: according to the assumption, in the Control Group, respondents, in the first phase, would rate more highly the characteristics which were associated with their favourite ice cream, and would choose, in the second phase, the same group of ice creams as the first phase implied. In the Experimental Group, on the other hand, the opposite would happen as respondents, when faced with the choice, after the cognitive reasoning task pointing in the opposite direction of their long-term favourite ice cream seen in the first phase, they would choose the most accessible in terms of short-term memory.

In a preliminary analysis of the first phase, their long-term favourite ice cream was determined, not by asking them directly – for the same reason mentioned in the end of the previous sub-section –, but by analysing the results of the Research Group and forming clusters of highly-rated characteristics and matching them with the present groups of ice creams. The clusters were formed in a two-step process: firstly, by analysing which were the groups of ice creams which had the highest disparities between rated characteristics. In this case, there were two sets of characteristics which distinguished themselves from the rest: Cornettos[17] and Magnums[18] were

[16] See appendix 16 (page 75) for a visual representation of the results of the naming of five sub-brands of Olá – or Wall's – ice cream
[17] See appendix 17 (page 76) for the statistics tables on the most distinguishable characteristics of Cornettos
[18] See appendix 18 (page 77) for the statistics tables on the most distinguishable characteristics of Magnums

distinguished by their highest ratings on the "classic", "sweet" and "smooth" characteristics, and Calippos[19] and Classics 1[20] by their "exotic" and "refreshing" characteristics.

These results were concluded using a weighted average of each of the characteristics according to their frequencies of choice in terms of rating, which followed the formula:

$$Weighted\ average\ of\ rating\ of\ each\ characteristic = \frac{\text{Average rating x Frequency of rating}}{\text{Total number of times rated}}$$

Each one of weighted average of these characteristics was calculated, and the results are shown on the graph below:

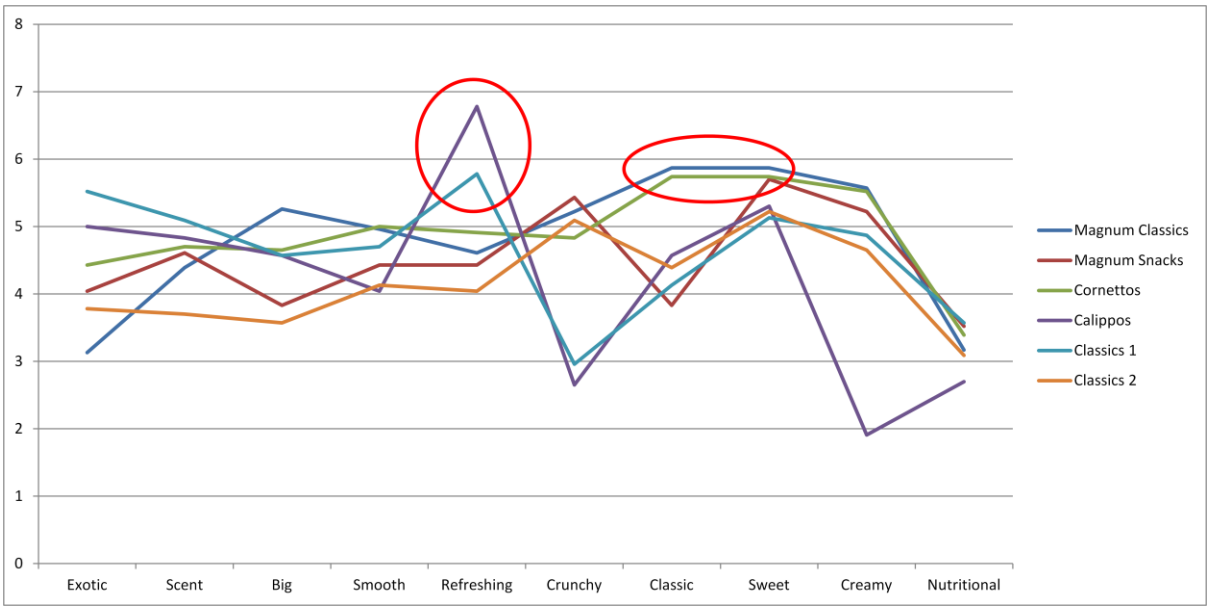


Figure 3 - Weighted Averages of Characteristics

If the average amongst the set of characteristics associated with the Magnums and Cornettos was higher than the average associated with Calippos and Classics 1, then the respondents' long-term favourite ice cream was amongst the groups of Magnums or Cornettos – and the same happened the other way around –. This way, a personalised word comprehension task was performed for each respondent in the Experimental Group, which was the opposite of the characteristics of their choice on the first phase, and which enabled the researcher to analyse whether the results would be different or similar according to the stimuli presented right before the final choice.

[19] See appendix 19 (page 78) for the statistics tables on the most distinguishable characteristics of Calippos
[20] See appendix 20 (page 79) for the statistics tables on the most distinguishable characteristics of Classics 1

As far as the results of the research on this first hypothesis are concerned, one can conclude that there is, indeed, a high tendency for the most accessible – through cognitive reasoning exercises – ice cream to be chosen when primed. The main objective of the Control Group was to analyse if the long-term favourite ice cream would remain the same if no cognitive reasoning task was performed, even when one month had passed. The main analysis on the Control Group showed this tendency, as 72% of the respondents answered the same choice of ice cream between the first and the second phases.

Figure 4 - Control Group - Same choice or different choice comparing to first phase?

As expected by the hypothesis tested, in the Experimental Group the results were different: 83% of the respondents changed their minds when facing a word comprehension task, comparing to their choice on the first phase.

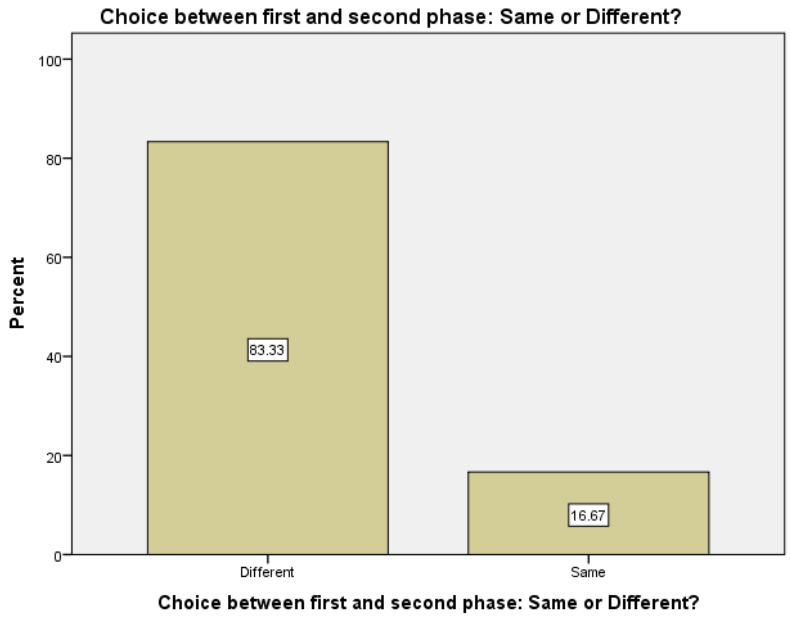


Figure 5 - Experimental Group - Same choice or different choice comparing to first phase?

Also, when facing both groups together in the same group of respondents but differentiating them in order to achieve a more complete analysis, a linear regression analysis was made to verify the conclusions written above. In this regression, the independent variable was whether the respondent belonged to the Control Group or the Experimental Group (dummy variable), and the dependent variable was if they had chosen the same group of ice creams as the first phase or not: being the regression reliable and explanatory – phi coefficient of 0.00 –, the independent variable was also reliable and explanatory of the dependent variable, and with a negative coefficient[21], which means that, to reinforce the statement above, the more likely a respondent is in the Control Group, the more likely he/she is to answer the same group of ice creams as he/she did in the first phase.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.722	.070		10.370	.000
	Control or Experimental Group?	-.556	.098	-.559	-5.641	.000

a. Dependent Variable: Choice between first and second phase: Same or Different?

[21] See appendix 21 (page 80) for the summary and ANOVA statistics tables regarding the results of the linear regression amongst both groups, comparing to whether or not the same group of ice creams was chosen

In conclusion, one can assume that Hypothesis 1 – *Consumers are more likely to purchase switch their preferences when primed using word comprehension tasks* – was successfully confirmed. One does not reject H1.

Hypothesis 2 – Satisfaction With / Without Priming

The second hypothesis of this study is related to the rating of how satisfied a respondent is when he/she chose the ice cream, comparing their ideal favourite ice cream situation with the one which was recently primed. In other words, the basic assumption is that, according to Morwitz, Johnson and Schmittlein (1993), respondents will be more satisfied when they choose their long-term favourite as their final choice, comparing with the one which is most accessible due to the word comprehension task. In order to test this, one is able to separate the cases – both in the Control Group and the Experimental Group – where the respondent answered the same favourite ice cream from the ones the respondent answered differently.

After careful analysis of the satisfaction between both groups, the following conclusions were able to be drawn from the information provided: 72% of the respondents which belonged to the Control Group answered the same group of ice cream as the one chosen in the first phase, while the other 28% chose differently. Inside these 72% of respondents – which correspond to 26 individuals –, 85% had a satisfaction level between 6 and 7 out of 7, which means they were completely, or almost completely, satisfied with their choice. When it comes to the 28% who chose differently, none of them was completely satisfied with their choice and all the respondents were between 5 and 6 in their level of satisfaction, being 40% and 60%, respectively[22].

[22] See appendix 22 (page 80) for the statistics table regarding satisfaction results of the Control Group

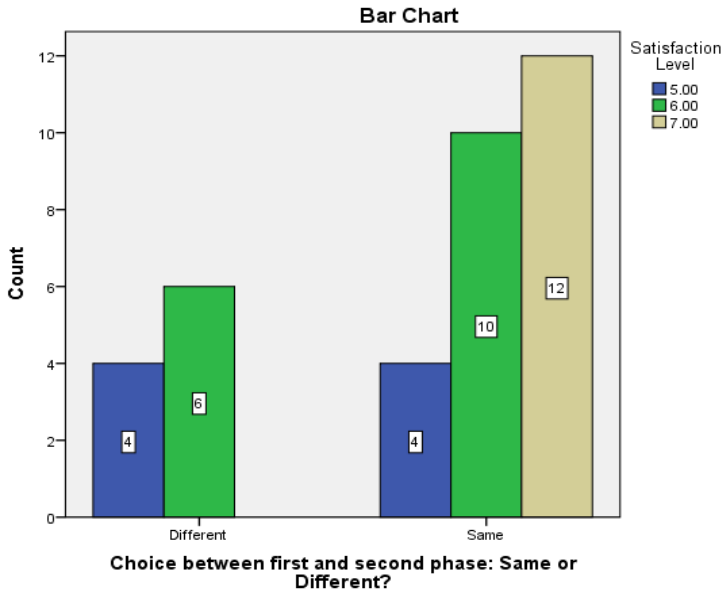


Figure 6 - Control Group - Level of satisfaction when choosing compared to first phase

The same tendency also applies to the Experimental Group: amongst the 6 people who chose the same as the first phase, all of them are equally distributed between the three highest levels of satisfaction; on the other hand, between the respondents who chose differently, more than half rated their level of satisfaction between 4 and 5, and less than 15% was completely satisfied with their choice[23].

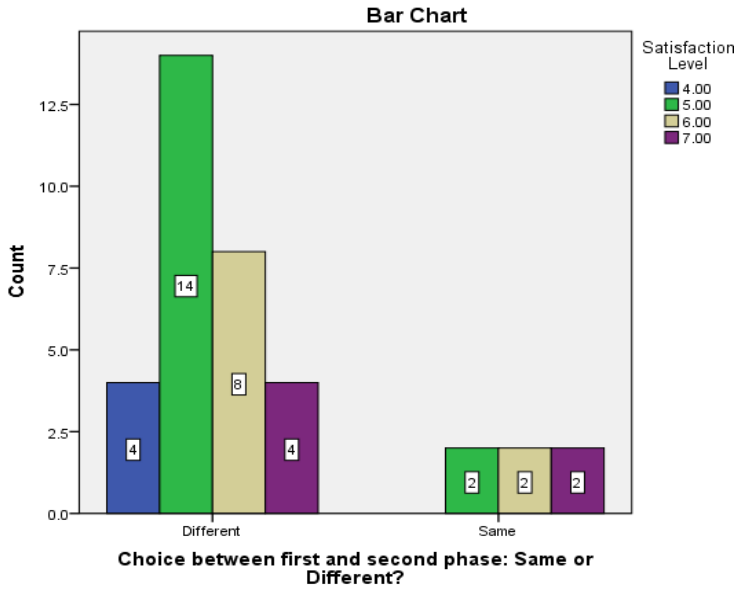


Figure 7 - Experimental Group - Level of satisfaction when choosing compared to first phase

[23] See appendix 23 (page 81) for the statistics table regarding satisfaction results of the Experimental Group

Also, reinforcing the validation stated above, a One-Way ANOVA test was perform, having as the dependent variable the satisfaction level, and differentiated amongst groups – Experimental and Control Groups –. When means are compared, the test is deemed reliable – phi coefficient below 0.05 –, demonstrating that there is, in fact, a difference in the satisfaction level, when it comes to the respondents being subjected to subconscious cognitive priming.

ANOVA

Satisfaction Level

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.722	1	6.722	9.691	.003
Within Groups	48.556	70	.694		
Total	55.278	71			

Given all the results mentioned above, one can assume that Hypothesis 2 – *Consumers tend to be less satisfied with products purchased as a result of priming.* – was successfully confirmed. One does not reject H2.

Hypothesis 3 – Product Attribute Disparity and Loyalty

Finally, the third hypothesis of this study is related to loyalty, and how this level of loyalty affects the disparity of the product attributes seen in the ratings of the respondents towards their long-term ideal Olá – or Wall's – ice cream. The basis of the assumption made in the hypothesis is that individuals who are more loyal to a certain brand – which was also directly correlated with age, as it was seen in the previous sub-section of "General Results / Findings" – are more likely to experience disparity when it comes to rating ice cream attributes. In other words, the characteristics of their ice creams are more accentuated in their minds from the experience they have had with the brand in question.

The best way to measure disparity between the rating of the attributes is to test the standard deviation – and, subsequently, the variance – of these ratings. If a person is loyal to a brand, it would be logic that his/her preferences were more well defined, which meant that inter-attribute rating disparity was higher, leadin to a higher standard deviation between these attributes and their ratings. If a person is less loyal to a brand, it stands to reason that the opposite might happen.

To test this, the first stage was to analyse the standard deviation of the characteristics which every respondent rated in the Control Group[24] and Experimental Group[25]. The second stage was to use this new variable of standard deviation to compute a linear regression analysis between the independent variable of "loyalty" and the dependent variable of "standard deviation", to see if the assumption for this tendency is accurate. Opposing the other two hypotheses, and according to the results analysed, the assumption does not seem to follow this tendency: both in the Control Group and in the Experimental Group, the standardised betas of the only independent variable – Standard Deviation – were negative, which would mean that the intra-attribute disparity would decline with the increase of loyalty. Also, the Control Group's beta is reliable, having a 0.03 phi-coefficient, but the Experimental Group's beta is not, having a phi-coefficient of 0.435.

Coefficients – CONTROL GROUP[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.951	1.129		7.042	.000
	Standard Deviation of the characteristics	-2.511	.780	-.483	-3.219	.003

a. Dependent Variable: How would you rate your loyalty towards your favourite Wall's (or "Ola") ice cream? (1 being "not at all loyal" and 7 being "very loyal")

Coefficients – EXPERIMENTAL GROUP[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.611	1.106		5.075	.000
	Standard Deviation of the characteristics	-.642	.812	-.134	-.791	.435

a. Dependent Variable: How would you rate your loyalty towards your favourite Wall's (or "Ola") ice cream? (1 being "not at all loyal" and 7 being "very loyal")

Apparently, according to the results achieved, one is not able to state that intra-attribute disparity increases with the increase in loyalty. This means that a consumer may be very loyal towards the Olá – or Wall's – brand but not have the distinction of the attributes perfectly thought of.

[24] See appendix 24 (page 81) for the table of the characteristics and standard deviation from the Control Group
[25] See appendix 25 (page 83) for the table of the characteristics and standard deviation from the Experimental Group

According to these final results one can assume that Hypothesis 3 – *Consumers who have higher disparity in product attributes are more likely to be more loyal to the brand.* – was an unsuccessful assumption. One rejects H3.

Conclusions, Implications and Recommendations

" One popular perception is that neuroimaging data can identify a 'buy-button' region in the brain; neuromarketing, then, should simply strive to find products and services that activate this region of consumers. " (Venkatraman et. al, 2012, p.150)

After careful analysis of all the information and insights provided throughout this study, some conclusions are able to be drawn, which may have some practical managerial and academic implications in the future.

This thesis examines whether priming can change people's choices and its consequence for consumer satisfaction. The results indicate that indeed when participants are exposed to characteristics of the product (e.g., refreshing or soft), they are more likely to select products that fit into these characteristics. This is consistent with research on priming and the role of consideration sets. That is, accessibility is a strong driver of choices. In addition, we find that primed participants report lower satisfaction. That is, priming influences choice, but makes consumer less satisfied. This is because consumers end up selecting a product based on the priming and not on their true preference.

Firstly, from the secondary research performed prior to the survey, one can realise the importance of accessibility in consumer choice (Srull and Wyer, 1979). Through the tools used in priming, marketers are able to utilise the sense of hearing, sight and smell to influence consumer behaviour to buy their advertised brand, and to continuously gain insights about how consumer behave when subjected to certain stimuli. Even if not always conscious of which stimuli they are being subjected to, consumers instinctively alter their behaviour in accordance to their own environment and externalities. Sometimes, even externalities which marketers could not predict affect customer involvement with products and brands: much like Mars's sales' sudden increase when the Pathfinder spacecraft was sent to the planet Mars (White, 1997), or the colour of the pen a respondent is writing with (Berger and Fitzsimons, 2008).

Recommendation: In any case, there is a decision to be made by marketing managers in the managerial world: how does one utilise these externalities, being produced by their own company or being solely externalities, into one's advantage, considering one's specific industry? The answer requires more information about each incident and high precision on how consumers will react to

such cues from their 'environment'. So, more research has to be made on the subject, and apply it to different industries and different cultures, so that a tendency can be discovered and explored by marketing managers in industries in the ice cream industry and outside of it.

Secondly, bearing in mind what has been mentioned above, and the primary research conducted during the course of this dissertation, one is able to deduce that there is an addition to the subconscious priming effects and measures studied so far: cognitive reasoning. Supported by the results of Hypothesis 1 and Fernandes and Mandel's (2013) study, cognitive reasoning can play an important part in cue-creating processes in various situations. Much like the authors above confirmed in their article, this thesis also implies that word comprehension tasks can momentarily alter consumer perceptions when purchasing a product, being the choice of a political party, or the making of an impulse ice cream choice. In spite of the positive results in this matter, one has to be aware of the also positive results on Hypothesis 2: a product chosen as a result of a priming process is less likely to be consumed with the same amount of satisfaction as a long-term favourite one (Morwitz, Johnson and Schmittlein, 1993).

Recommendation: Since brand managers have to be aware that one of the main goals of marketing is to match consumer expectations and consumer satisfaction (Sweeney and Swait, 2008), it is important to be aware that, although priming is able to alter customer choice in the short-term, long-term effects have to be considered in the equation. In a managerial world, this cognitive reasoning subconscious priming can be utilised in various ways in several industries, from puzzle-performing while waiting to eat in a restaurant, to practical informative pamphlets in a supermarket.

Thirdly, and related to the ice cream-related habits of Portuguese and British consumers, one now assumes a medium frequency of impulse ice cream purchase – once or twice a month –, in which consumers mostly use the caffés and supermarkets to purchase Olá – or Wall's –. Also, it was confirmed that loyalty is directly correlated with age and frequency of purchase, which is now an important insight for some specific manufacturers of this product.

Recommendation: Practically, this information can be useful in the managerial world of companies like Unilever: when gathering all the learning present in this study, cognitive reasoning tasks can be utilised in caffés and supermarkets to increase frequency of purchase of Olá – or Wall's – ice creams, and consequently increase loyalty and willingness to return to purchase more. The same concept can also be applied to an example of cross-selling of Unilever products or simply brand awareness expansion.

And fourthly, from the findings on Hypothesis 2, this dissertation corroborates Arnould and Thompson's (2005) paper Consumer Culture Theory: first of all, consumption is not purely based on momentary rationality but on a series of factors like sociohistoric influences; more importantly, as seen in this study, consumption according to a favourite choice plays a more important role on satisfaction than priming, as priming negatively impacts said satisfaction. This basically means that, and also according to CCT, actual consumption has more meaning than priming, which makes it reasonable to state that purchasing actually has a symbolic meaning when compared to concept priming.

Recommendation: It is crucial for marketing managers to realize the importance of satisfaction in terms of consumption. Priming is a powerful tool which can be used for mass and niche markets, but consideration has to be given to the fact that satisfaction may be affected by this tool. So, carefulness would be a crucial thing for marketing managers when priming their products to consumers.

Limitations / Future Research Suggestions

This study presented some limitations which were unavoidable in the conditions it was developed: firstly, there was a 32% drop-out rate in the whole process, which can slightly compromise the efficiency of the study, although such rate would neither alter the reliability and validity of the study, nor would it be unexpected; secondly, the time frame for the completion of the study was too short for a multi-staged proper complex study of various possible cognitive reasoning tasks which would be able to be used instead of solely a word comprehension exercise; thirdly, quantitative studies have a typical rate of unresponsiveness to the survey in the due time which makes it hardly viable to be able to manage the researcher's time properly; and lastly, it is reasonable to believe that a study whose second phase – the choice phase – had been performed in the presence of the respondents, and funding had been handed towards a more practical and less online process of choosing the ice cream – the product actually being offered to the consumer upon choice –, the study could have been more reliable.

Future Research Suggestions

In future research, cognitive reasoning as a method of priming to increase accessibility in FMCG can be deepened by consumer behaviour or neuropsychology specialists. There is still much to be discovered in the human reasoning process, and how this process can be applied to marketing and managerial purposes. In addition, future researchers should also focus on other industries other than ice cream, in order to analyse if the findings are homogeneous between studies. Also, with the objective of eradicating some limitations which were pointed in this process, more time needs to be assigned towards the primary research; that way, future academic researchers are able to draw more insightful conclusions, which will lead to more reliable managerial predictions. Some limitations of the current study include the lack of a manipulation check. It was difficult for us to implement a manipulation check given that the primes should operate nonconsciously. If we had asked explicit questions to see whether the manipulations worked, the primes would not remain at the nonconscious level. Future research may include a separate test to check whether the primes are successful at increasing the nonconscious accessibility of certain concepts.

Randomization of participants between conditions ensured that the effects were not due some extraneous factor that caused changes in preference in the experimental group. However, future

research may examine whether the same effects reported here replicate when the time difference between phase 1 and 2 are shortened.

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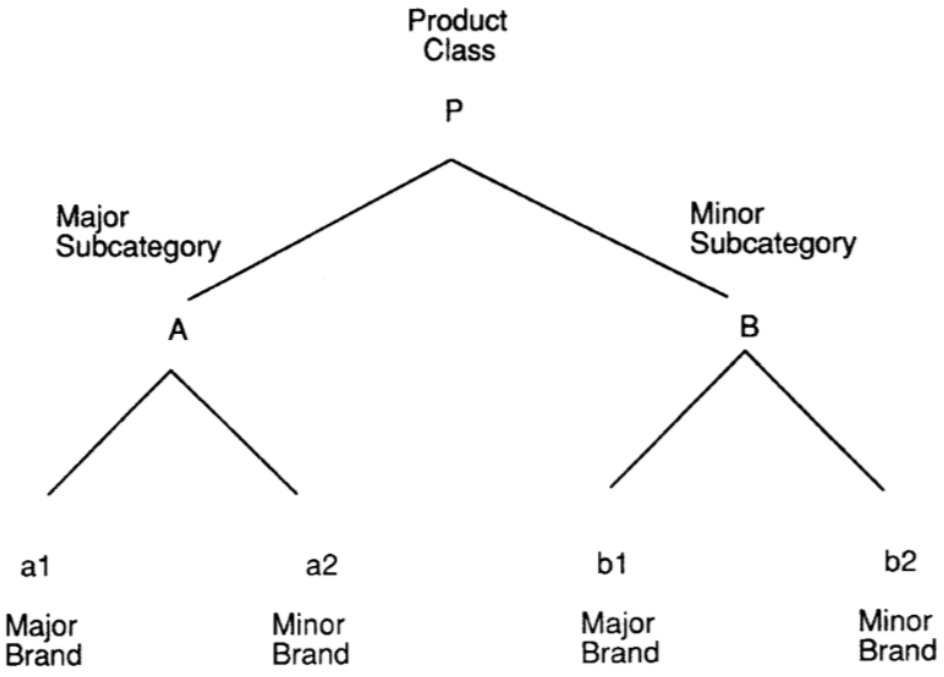
Appendices

Appendix 1 – Martins, Yusuf and Swanson's (2012) revision of Lavidge and Steiner's (1961) Hierarchy of Effects and Valkratsas and Ambler's (1999) AIDA model

Hierarchy of Effects	**Models Building Blocks**	AIDA
Awareness Knowledge	**Cognitive**	Awareness
Liking	**Affective**	Interest
Preference Conviction		Desire
Purchase	**Behaviour (Conation)**	Action

Appendix 2 – Nedungadi's (1990) framework of major and minor subcategories and brands



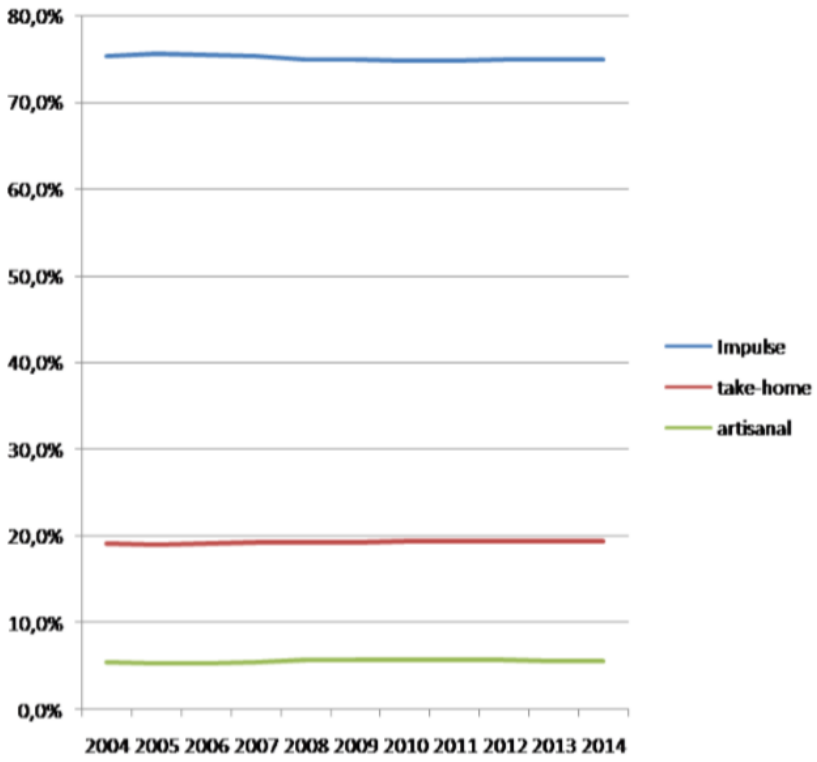
Appendix 3 – Euromonitor International's (2009) table of market shares of brands of ice creams, from 2004 until 2008, in Portugal

Ice cream company shares 2004-2008 (in %)					
Company	**2004**	**2005**	**2006**	**2007**	**2008**
Olá	53.1	54.8	55.0	56.8	58.5
Nestlé	11.8	11.4	10.9	10.2	9.9
Mars	-	-	-	5.8	5.5
Häagen-Dasz	3.0	3.0	3.1	3.1	3.3
Dunkin' Brands	-	0.4	0.4	0.4	0.4
Kalise Menorquina	0.1	0.1	0.1	0.1	0.1
Masterfoods de Portugal	7.3	6.7	6.4	-	-
Private label	8.7	9.2	9.6	9.8	9.8
Artisinal	5.5	5.4	5.4	5.4	5.7
Others	10.5	9.1	9.2	8.4	6.8

Appendix 4 – Datamonitor's (2009) table of definitions of the different types of ice creams

Ice cream category definition		
Category	**Segment**	**Definition**
Artisanal ice cream	Overall	Ice cream manufactured by small local producers for sale on the premises. Includes impulse and take- home sales, but not on-the-premises consumption
Frozen yoghurt	Overall	Soft frozen dessert made from cultured dairy products, with added natural or artificial sweetener and flavoring. Includes all impulse and take-home sales
Impulse ice cream	Dairy-based	Also 'novelties'. Dairy- or vegetable oil-based ice cream products sold for impulse (on-the-go) consumption. Includes single-serve ice cream tubs, packaged cones (e.g. Cornetto), ice cream sandwiches, and chocolate-coated ice creams (e.g Magnum). Includes low fat dairy and oil-based products (other than frozen yogurt)
Impulse ice cream	Water-based	Also 'novelties'. Water-based frozen desserts sold for impulse (on-the-go) consumption. Includes single serve sorbet/sherbert tubs and ice lollies e.g. Calippo
Take-home ice cream	Dairy-based	Dairy- or vegetable oil-based ice cream products sold for take-home consumption. Includes multiple- serving ice cream tubs (e.g. Ben & Jerry's, Carte d'Or, Häagen-Dazs) and, ice-cream cakes (e.g. Vienetta). Includes low-fat dairy- and oil-based products (other than frozen yogurt)
Take-home ice cream	Water-based	Water-based frozen desserts sold for take-home consumption. Includes sorbet/sherbert tubs

Appendix 5 – Euromonitor International's (2009) visual representation of the Portuguese market's types of ice creams



Appendix 6 – Visual representation of the groups of ice creams

Magnum Classics	Magnum Snacks	Cornettos
		
Calippos	**Classics 1**	**Classics 2**
		

Appendix 7 – English Version of the Research Group survey

Page 1 – INTRODUCTION

Greetings!

Firstly, I would like to thank you for your interest and availability to provide me with your e-mail and answer this survey.
This survey is destined to the completion of a Master's dissertation about Consumer Behaviour, and will not take more than 5 minutes of your time. This survey will be anonymous and confidential.

Again, I thank you very much for your help!

Page 2 – THE INDUSTRY

1. Are you familiarized with the Wall's (or "Ola") brand of ice cream? (if not, this is the end of the survey for you)

Yes □

No □

2. How often do you usually buy a Wall's (or "Ola") ice cream? (during the Summer)

Less than once a month □

Once or twice a month □

Once a week □

Two to six times a week □

Everyday □

3. Where do you usually buy your Wall's (or "Ola") ice creams? (choose as many options as you like)

Hotels □

Restaurants □

Caffés □

Supermarkets □

Hypermarkets □

Grocery stores □

Wall's (or "Olá") street stores (boutiques) □

Other: _____ □

4. Please name 5 Wall's (or "Ola") subbrands of ice cream. (if you do not know any more, insert "N/A")

1: _____

2: _____

3: _____

4: _____

5: _____

Page 3 – THE SUBBRANDS

5. Please rate each of the following subbrands in terms of each of the characteristics, 1 being the minimum and 7 being the maximum. (e.g.: crunchiness: 1 = not at all crunchy; 7 = very crunchy)

    a. Magnum Classics

Magnum Classics:

Exotic	1	2	3	4	5	6	7
Pleasant scent	1	2	3	4	5	6	7
Big	1	2	3	4	5	6	7
Smooth	1	2	3	4	5	6	7
Refreshing	1	2	3	4	5	6	7
Crunchy	1	2	3	4	5	6	7
Classic	1	2	3	4	5	6	7
Sweet	1	2	3	4	5	6	7
Creamy	1	2	3	4	5	6	7
Nutritional	1	2	3	4	5	6	7

b. Magnum Snacks

Magnum Snacks:

Exotic	1	2	3	4	5	6	7
Pleasant scent	1	2	3	4	5	6	7
Big	1	2	3	4	5	6	7
Smooth	1	2	3	4	5	6	7
Refreshing	1	2	3	4	5	6	7
Crunchy	1	2	3	4	5	6	7
Classic	1	2	3	4	5	6	7
Sweet	1	2	3	4	5	6	7
Creamy	1	2	3	4	5	6	7
Nutritional	1	2	3	4	5	6	7

c. Cornettos:

Cornettos:

Exotic	1	2	3	4	5	6	7
Pleasant scent	1	2	3	4	5	6	7
Big	1	2	3	4	5	6	7
Smooth	1	2	3	4	5	6	7
Refreshing	1	2	3	4	5	6	7
Crunchy	1	2	3	4	5	6	7
Classic	1	2	3	4	5	6	7
Sweet	1	2	3	4	5	6	7
Creamy	1	2	3	4	5	6	7
Nutritional	1	2	3	4	5	6	7

d. Calippos:

Calippos:

Exotic	1	2	3	4	5	6	7
Pleasant scent	1	2	3	4	5	6	7
Big	1	2	3	4	5	6	7
Smooth	1	2	3	4	5	6	7
Refreshing	1	2	3	4	5	6	7
Crunchy	1	2	3	4	5	6	7
Classic	1	2	3	4	5	6	7
Sweet	1	2	3	4	5	6	7
Creamy	1	2	3	4	5	6	7
Nutritional	1	2	3	4	5	6	7

e. Classics 1

Classics 1

Exotic	1	2	3	4	5	6	7
Pleasant scent	1	2	3	4	5	6	7
Big	1	2	3	4	5	6	7
Smooth	1	2	3	4	5	6	7
Refreshing	1	2	3	4	5	6	7
Crunchy	1	2	3	4	5	6	7
Classic	1	2	3	4	5	6	7
Sweet	1	2	3	4	5	6	7
Creamy	1	2	3	4	5	6	7
Nutritional	1	2	3	4	5	6	7

f. Classics 2

Classics 2:

Exotic	1	2	3	4	5	6	7
Pleasant scent	1	2	3	4	5	6	7
Big	1	2	3	4	5	6	7
Smooth	1	2	3	4	5	6	7
Refreshing	1	2	3	4	5	6	7
Crunchy	1	2	3	4	5	6	7
Classic	1	2	3	4	5	6	7
Sweet	1	2	3	4	5	6	7
Creamy	1	2	3	4	5	6	7
Nutritional	1	2	3	4	5	6	7

6. What is your favourite Wall's (or Olá's) ice cream?

_____

7. How would you rate your loyalty towards your favourite Wall's (or "Ola") ice cream? (1 being "not at all loyal" and 7 being "very loyal")

Loyalty 1 2 3 4 5 6 7

Page 4 – DEMOGRAPHICS

8. Please, indicate your gender:

M □

F □

9. Please indicate where your age is more appropriately put:

0 – 18 □

19 – 25 □

26 – 35 □

36 – 45 □

46 – 55 □

+55 □

10. Please indicate your e-mail, with the goal of making sure you already answered this survey.

_____

Page 5 – ACKNOWLEDGEMENTS

Thank you very much for your participation in this survey!

Your insight was very important for this research.

Diogo Pinho

Appendix 8 – English Version of the first phase of the Control and Experimental Groups survey

Page 1 – INTRODUCTION

Greetings!

Firstly, I would like to thank you for your interest and availability to provide me with your e-mail and answer this survey.
This survey is destined to the completion of a Master's dissertation about Consumer Behaviour, and consists in two parts.
This part lasts around 2 minutes, and the second part is variable, which will be further sent to your e-mail. This survey will be anonymous and confidential.

Again, I thank you very much for your help!

Page 2 – THE INDUSTRY

1. Are you familiarized with the Wall's (or "Ola") brand of ice cream? (if not, this is the end of the survey for you)

Yes □

No □

2. How often do you usually buy a Wall's (or "Ola") ice cream? (during the Summer)

Less than once a month □

Once or twice a month □

Once a week □

Two to six times a week □

Everyday □

3. Where do you usually buy your Wall's (or "Ola") ice creams? (choose as many options as you like)

Hotels □

Restaurants □

Caffés □

Supermarkets □

Hypermarkets □

Grocery stores □

Wall's (or "Olá") street stores (boutiques) □

Other: _____ □

Page 3 – THE CHARACTERISTICS

4. Please rate the following characteristics in terms of how your ideal ice cream should be. (e.g.: crunchy: 1 = not at all crunchy; 7 = very crunchy)

Exotic	1	2	3	4	5	6	7
Pleasant scent	1	2	3	4	5	6	7
Big	1	2	3	4	5	6	7
Smooth	1	2	3	4	5	6	7
Refreshing	1	2	3	4	5	6	7
Crunchy	1	2	3	4	5	6	7
Classic	1	2	3	4	5	6	7
Sweet	1	2	3	4	5	6	7

Creamy 1 2 3 4 5 6 7

Nutritional 1 2 3 4 5 6 7

5. How would you rate your loyalty towards your favourite Wall's (or "Ola") ice cream? (1 being "not at all loyal" and 7 being "very loyal")

Loyalty 1 2 3 4 5 6 7

Page 4 – DEMOGRAPHICS

6. Please, indicate your gender:

M □

F □

7. Please indicate where your age is more appropriately put:

0 – 18 □

19 – 25 □

26 – 35 □

36 – 45 □

46 – 55 □

+55 □

8. Please indicate your e-mail, with the goal of the participation in the second part of this study, which will be further sent to your e-mail.

_____

Page 5 – ACKNOWLEDGEMENTS

Thank you very much for your participation in this survey!
Your insight was very important for this research.
The second part of this study will be sent to your e-mail in a few weeks.

Diogo Pinho

Appendix 9 – English Version of the second phase of the Control Group survey

Page 1 – GREETINGS

Greetings!

Firstly, I would like to thank you for agreeing to participate in the second phase of this study. Your input will be extremely valuable and appreciated.
This phase will last for around 1 minute and this survey will be strictly anonymous and confidential.

Page 2 – THE CHOICE

1. If you were given a choice at this moment, which ice cream would you purchase, or else, to which group of ice creams would your choice belong to?

Magnum Classics □

Calippos □

Classics 1 □

Cornettos □

2. On a scale from 1 to 7, how satisfied would you be with your choice? (1 being the least satisfied and 7 being the most satisfied)

Satisfaction 1 2 3 4 5 6 7

3. Please, provide your e-mail as a confirmation that you completed this survey.

_____

Page 3 – ACKNOWLEDGEMENTS

This page completes the study of this part of my dissertation.
Thank you very much for completing this survey are being a part of this study!

Best regards,

Diogo Pinho

Appendix 10 – English Version of the second phase of the Experimental Group survey, for respondents whose favourite characteristics were initially "fresh" and "exotic"

Page 1 – GREETINGS

Greetings!

Firstly, I would like to thank you for agreeing to participate in the second phase of this study. Your input will be extremely valuable and appreciated.
This phase will last for around 10 minutes and this survey will be strictly anonymous and confidential.

Page 2 – WORD COMPREHENSION TASK

This part of the study consists in sentence completion. Each subtask will have two/three words, and you are asked to form a sentence utilising the two/three words. (e.g.: dog, house: The dog lives inside the house)

1. Classic, sugared

_____

2. Sweet, soft

_____

3. Smooth, status

_____

4. Delicate, sweetness

_____

5. Smoothness, classic

_____

6. Mild, sweetened

_____

7. With class, tender

_____

8. Classic, sweet, smooth

_____

Page 3 – THE CHOICE

9. If you were given a choice at this moment, which ice cream would you purchase, or else, to which group of ice creams would your choice belong to?

Magnum Classics □

Calippos □

Classics 1 □

Cornettos □

10. On a scale from 1 to 7, how satisfied would you be with your choice? (1 being the least satisfied and 7 being the most satisfied)

Satisfaction 1 2 3 4 5 6 7

11. Please, provide your e-mail as a confirmation that you completed this survey.

_____

Page 4 – ACKNOWLEDGEMENTS

This page completes the study of this part of my dissertation.
Thank you very much for completing this survey are being a part of this study!

Best regards,

Diogo Pinho

Appendix 11 – English Version of the second phase of the Experimental Group survey, for respondents whose favourite characteristics were initially "classic", "sweet" and "smooth"

Page 1 – GREETINGS

Greetings!

Firstly, I would like to thank you for agreeing to participate in the second phase of this study. Your input will be extremely valuable and appreciated.
This phase will last for around 10 minutes and this survey will be strictly anonymous and confidential.

Page 2 – WORD COMPREHENSION TASK

This part of the study consists in sentence completion. Each subtask will have two/three words, and you are asked to form a sentence utilising the two/three words. (e.g.: dog, house: The dog lives inside the house)

1. Refreshing, exoticism

_____

2. Exotic, refreshment

_____

3. Freshener, tropical

_____

4. Exoticness, freshen up

_____

5. Refrigerated, different

_____

6. Freshness, wild

_____

7. Out of the ordinary, fresh

_____

8. Refreshing, exotic

_____

9. If you were given a choice at this moment, which ice cream would you purchase, or else, to which group of ice creams would your choice belong to?

Magnum Classics □

Calippos □

Classics 1 □

Cornettos □

10. On a scale from 1 to 7, how satisfied would you be with your choice? (1 being the least satisfied and 7 being the most satisfied)

Satisfaction 1 2 3 4 5 6 7

11. Please, provide your e-mail as a confirmation that you completed this survey.

_____

Page 4 – ACKNOWLEDGEMENTS

This page completes the study of this part of my dissertation.

Thank you very much for completing this survey are being a part of this study!

Best regards,

Diogo Pinho

Appendix 12 – Statistics tables of the question "How often do you usually buy an Olá – or Wall's – ice cream (during the Summer)?"

Statistics

How often do you usually buy a Wall's (or "Ola") ice cream? (during the Summer)

N	Valid	118
	Missing	0
Mean		2.1864
Median		2.0000
Mode		2.00
Std. Deviation		.87656
Skewness		.554
Std. Error of Skewness		.223
Minimum		1.00
Maximum		4.00

How often do you usually buy a Wall's (or "Ola") ice cream? (during the Summer)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than once a month	24	20.3	20.3	20.3
	Once or twice a month	60	50.8	50.8	71.2
	Once a week	22	18.6	18.6	89.8
	Two to six times a week	12	10.2	10.2	100.0
	Total	118	100.0	100.0	

Appendix 13 – Statistics and tables to the question "Where do you usually buy your Olá – or Wall's – ice cream?"

Statistics

		Place_Hotels	Place_Restaurants	Place_Cafés	Place_Supermarkets	Place_Hypermarkets	Place_Grocery_Stores	Place_Boutiques
N	Valid	118	118	118	118	118	118	118
	Missing	0	0	0	0	0	0	0
Mean		.0000	.3051	.7966	.5593	.3729	.1186	.3898
Median		.0000	.0000	1.0000	1.0000	.0000	.0000	.0000
Mode		.00	.00	1.00	1.00	.00	.00	.00
Std. Deviation		.00000	.46241	.40424	.49859	.48563	.32475	.48979
Std. Error of Skewness		.223	.223	.223	.223	.223	.223	.223
Minimum		.00	.00	.00	.00	.00	.00	.00
Maximum		.00	1.00	1.00	1.00	1.00	1.00	1.00
Skewness			.858	-1.493	-.242	.533	2.389	.458

Frequency Table

Place_Hotels

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	118	100.0	100.0	100.0

Place_Restaurants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	82	69.5	69.5	69.5
	Yes	36	30.5	30.5	100.0
	Total	118	100.0	100.0	

Place_Caffés

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	24	20.3	20.3	20.3
	Yes	94	79.7	79.7	100.0
	Total	118	100.0	100.0	

Place_Supermarkets

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	52	44.1	44.1	44.1
	Yes	66	55.9	55.9	100.0
	Total	118	100.0	100.0	

Place_Hypermarkets

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	74	62.7	62.7	62.7
	Yes	44	37.3	37.3	100.0
	Total	118	100.0	100.0	

Place_Grocery_Stores

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	104	88.1	88.1	88.1
	Yes	14	11.9	11.9	100.0
	Total	118	100.0	100.0	

Place_Boutiques

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	72	61.0	61.0	61.0
	Yes	46	39.0	39.0	100.0
	Total	118	100.0	100.0	

Appendix 14 – Crosstabulation table on the age and gender of the respondents

Please, indicate your gender: * Please indicate where your age is more appropriately put: Crosstabulation

			Please indicate where your age is more appropriately put:						Total
			0-18	19-25	26-35	36-45	46-55	+55	
Please, indicate your gender:	Female	Count	2	38	12	0	6	2	60
		% within Please, indicate your gender:	3.3%	63.3%	20.0%	0.0%	10.0%	3.3%	100.0%
		% within Please indicate where your age is more appropriately put:	100.0%	50.0%	46.2%	0.0%	75.0%	50.0%	50.8%
	Male	Count	0	38	14	2	2	2	58
		% within Please, indicate your gender:	0.0%	65.5%	24.1%	3.4%	3.4%	3.4%	100.0%
		% within Please indicate where your age is more appropriately put:	0.0%	50.0%	53.8%	100.0%	25.0%	50.0%	49.2%
Total		Count	2	76	26	2	8	4	118
		% within Please, indicate your gender:	1.7%	64.4%	22.0%	1.7%	6.8%	3.4%	100.0%
		% within Please indicate where your age is more appropriately put:	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix 15 – ANOVA test regading the regression tables when it comes to frequency of purchase, age and gender towards loyalty

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.175	3	26.392	11.166	.000[b]
	Residual	269.436	114	2.363		
	Total	348.610	117			

a. Dependent Variable: How would you rate your loyalty towards your favourite Wall's (or "Ola") ice cream? (1 being "not at all loyal" and 7 being "very loyal")

b. Predictors: (Constant), Please indicate where your age is more appropriately put:, How often do you usually buy a Wall's (or "Ola") ice cream? (during the Summer), Please, indicate your gender:

Appendix 16 – Visual representation of the results of the naming of five sub-brands of Olá – or Wall's – ice cream

	Fa	Fre	Pla	Pla	Pla	Pla	Pla	Pla	Pla	Names_1	Names_2	Names_3	Names_4	Names_5
1	1	2	0	0	1	1	0	0	0	Magnum	Cornetto	Perna de P...	Calippo	Epá
2	1	2	0	0	1	1	1	0	1	Fizz	Magnum	Cornetto	Calippo	Roll
3	1	2	0	1	1	1	1	0	1	Epá	Super Maxi	Magnum	N/A	N/A
4	1	3	0	0	1	0	0	0	1	Cornetto	Magnum	Perna de P...	Calippo	Swirl
5	1	3	0	0	0	1	1	0	1	N/A	N/A	N/A	N/A	N/A
6	1	3	0	1	1	0	0	0	1	N/A	N/A	N/A	N/A	N/A
7	1	1	0	0	1	0	0	0	0	Cornetto	Magnum	Calippo	Epá	Mini Milk
8	1	1	0	1	1	1	1	0	1	Magnum	Cornetto	Roll	Perna de P...	Epá
9	1	4	0	1	1	1	0	0	1	Magnum	Solero	Epá	Perna de P...	Mini Milk
10	1	2	0	0	1	0	0	0	1	Magnum	Cornetto	Solero	Calippo	Epá
11	1	2	0	0	1	1	1	0	0	Cornetto	Epá	Big Milk	Magnum	N/A
12	1	2	0	0	1	1	0	0	1	Magnum	Cornetto	Mini Milk	Epá	Calippo
13	1	2	0	0	1	0	0	0	0	Supermaxi	Cornetto	Magnum	Perna de P...	Epá
14	1	4	0	1	1	0	0	0	1	Magnum	Cornetto	Solero	Calippo	Epá
15	1	4	0	1	1	0	0	0	1	Magnum	Cornetto	Solero	Calippo	Big Milk
16	1	3	0	1	1	0	0	0	1	Magnum	Cornetto	Calippo	Perna de P...	Super Maxi
17	1	2	0	1	1	1	1	0	1	Magnum	Cornetto	Calippo	Super Maxi	Roll
18	1	2	0	0	1	1	0	0	1	Magnum	Cornetto	N/A	N/A	N/A
19	1	1	0	0	1	0	0	0	0	Magnum	Epá	Cornetto	Perna de P...	Mini Milk
20	1	2	0	1	1	1	1	0	0	Cornetto	Magnum	Epá	Calippo	Perna de P...
21	1	1	0	0	1	0	0	0	1	Magnum	Cornetto	Calippo	Epá	Perna de P...

22	1	1	0	0	0	1	0	1	0	Solero	Capri	Domino	N/A	N/A
23	1	1	0	0	0	1	0	1	0	N/A	N/A	N/A	N/A	N/A
24	1	2	0	0	1	1	0	0	0	Magnum	Cornetto	Perna de P...	Calippo	Epá
25	1	2	0	0	1	1	1	0	1	Fizz	Magnum	Cornetto	Calippo	Roll
26	1	2	0	1	1	1	1	0	1	Epá	Super Maxi	Magnum	N/A	N/A
27	1	3	0	0	1	0	0	0	1	Cornetto	Magnum	Perna de P...	Calippo	Swirl
28	1	3	0	0	0	1	1	0	1	N/A	N/A	N/A	N/A	N/A
29	1	3	0	1	1	0	0	0	1	N/A	N/A	N/A	N/A	N/A
30	1	1	0	0	1	0	0	0	0	Cornetto	Magnum	Calippo	Epá	Mini Milk
31	1	1	0	1	1	1	1	0	1	Magnum	Cornetto	Roll	Perna de P...	Epá
32	1	4	0	1	1	1	0	0	1	Magnum	Solero	Epá	Perna de P...	Mini Milk
33	1	2	0	0	1	0	0	0	1	Magnum	Cornetto	Solero	Calippo	Epá
34	1	2	0	0	1	1	1	0	0	Cornetto	Epá	Big Milk	Magnum	N/A
35	1	2	0	0	1	1	0	0	1	Magnum	Cornetto	Mini Milk	Epá	Calippo
36	1	2	0	0	1	0	0	0	0	Supermaxi	Cornetto	Magnum	Perna de P...	Epá
37	1	4	0	1	1	0	0	0	1	Magnum	Cornetto	Solero	Calippo	Epá
38	1	4	0	1	1	0	0	0	1	Magnum	Cornetto	Solero	Calippo	Big Milk
39	1	3	0	1	1	0	0	0	1	Magnum	Cornetto	Calippo	Perna de P...	Super Maxi
40	1	2	0	1	1	1	1	0	1	Magnum	Cornetto	Calippo	Super Maxi	Roll
41	1	2	0	0	1	1	0	0	1	Magnum	Cornetto	N/A	N/A	N/A
42	1	1	0	0	1	0	0	0	0	Magnum	Epá	Cornetto	Perna de P...	Mini Milk
43	1	2	0	1	1	1	0	0		Cornetto	Magnum	Epá	Calippo	Perna de P...
44	1	1	0	0	1	0	0	0	1	Magnum	Cornetto	Calippo	Epá	Perna de P...
45	1	1	0	0	0	1	0	1	0	Solero	Capri	Domino	N/A	N/A
46	1	1	0	0	0	1	0	1	0	N/A	N/A	N/A	N/A	N/A

Appendix 17 – Statistics tables on the most distinguishable characteristics of Cornettos

Char_Cornettos_Smooth

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	4.3	4.3	4.3
	3.00	2	4.3	4.3	8.7
	4.00	12	26.1	26.1	34.8
	5.00	10	21.7	21.7	56.5
	6.00	18	39.1	39.1	95.7
	Completely	2	4.3	4.3	100.0
	Total	46	100.0	100.0	

Char_Cornettos_Classic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	4	8.7	8.7	8.7
	4.00	2	4.3	4.3	13.0
	5.00	12	26.1	26.1	39.1
	6.00	12	26.1	26.1	65.2
	Completely	16	34.8	34.8	100.0
	Total	46	100.0	100.0	

Char_Cornettos_Sweet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	2	4.3	4.3	4.3
	5.00	18	39.1	39.1	43.5
	6.00	14	30.4	30.4	73.9
	Completely	12	26.1	26.1	100.0
	Total	46	100.0	100.0	

Appendix 18 – Statistics tables on the most distinguishable characteristics of Magnums

Char_Mag_Classics_Smooth

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	4.3	4.3	4.3
	3.00	2	4.3	4.3	8.7
	4.00	12	26.1	26.1	34.8
	5.00	16	34.8	34.8	69.6
	6.00	8	17.4	17.4	87.0
	Completely	6	13.0	13.0	100.0
	Total	46	100.0	100.0	

Char_Mag_Classics_Classic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.00	6	13.0	13.0	13.0
	5.00	10	21.7	21.7	34.8
	6.00	14	30.4	30.4	65.2
	Completely	16	34.8	34.8	100.0
	Total	46	100.0	100.0	

Char_Mag_Classics_Sweet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3.00	2	4.3	4.3	4.3
	4.00	2	4.3	4.3	8.7
	5.00	10	21.7	21.7	30.4
	6.00	18	39.1	39.1	69.6
	Completely	14	30.4	30.4	100.0
	Total	46	100.0	100.0	

Appendix 19 – Statistics tables on the most distinguishable characteristics of Calippos

Char_Calippos_Exotic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	2	4.3	4.3	4.3
	3.00	2	4.3	4.3	8.7
	4.00	10	21.7	21.7	30.4
	5.00	14	30.4	30.4	60.9
	6.00	14	30.4	30.4	91.3
	Completely	4	8.7	8.7	100.0
	Total	46	100.0	100.0	

Char_Calippos_Refreshing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5.00	2	4.3	4.3	4.3
	6.00	6	13.0	13.0	17.4
	Completely	38	82.6	82.6	100.0
	Total	46	100.0	100.0	

Appendix 20 – Statistics tables on the most distinguishable characteristics of Classics 1

Char_Classics1_Exotic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.00	2	4.3	4.3	4.3
	3.00	2	4.3	4.3	8.7
	4.00	2	4.3	4.3	13.0
	5.00	12	26.1	26.1	39.1
	6.00	20	43.5	43.5	82.6
	Completely	8	17.4	17.4	100.0
	Total	46	100.0	100.0	

Char_Classics1_Refreshing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4.00	4	8.7	8.7	8.7
	5.00	14	30.4	30.4	39.1
	6.00	16	34.8	34.8	73.9
	Completely	12	26.1	26.1	100.0
	Total	46	100.0	100.0	

Appendix 21 – Summary and ANOVA statistics tables regarding the results of the linear regression amongst both groups, comparing to whether or not the same group of ice creams was chosen

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.559[a]	.312	.303	.41786

a. Predictors: (Constant), Control or Experimental Group?

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.556	1	5.556	31.818	.000[b]
	Residual	12.222	70	.175		
	Total	17.778	71			

a. Dependent Variable: Choice between first and second phase: Same or Different?

b. Predictors: (Constant), Control or Experimental Group?

Appendix 22 – Statistics table regarding the satisfaction results of the Control Group

Choice between first and second phase: Same or Different? * Satisfaction Level Crosstabulation

			Satisfaction Level			Total
			5.00	6.00	7.00	
Choice between first and second phase: Same or Different?	Different	Count	4	6	0	10
		% within Choice between first and second phase: Same or Different?	40.0%	60.0%	0.0%	100.0%
		% within Satisfaction Level	50.0%	37.5%	0.0%	27.8%
	Same	Count	4	10	12	26
		% within Choice between first and second phase: Same or Different?	15.4%	38.5%	46.2%	100.0%
		% within Satisfaction Level	50.0%	62.5%	100.0%	72.2%
Total		Count	8	16	12	36
		% within Choice between first and second phase: Same or Different?	22.2%	44.4%	33.3%	100.0%
		% within Satisfaction Level	100.0%	100.0%	100.0%	100.0%

Appendix 23 – Statistics table regarding the satisfaction results of the Experimental Group

Choice between first and second phase: Same or Different? * Satisfaction Level Crosstabulation

			Satisfaction Level				Total
			4.00	5.00	6.00	7.00	
Choice between first and second phase: Same or Different?	Different	Count	4	14	8	4	30
		% within Choice between first and second phase: Same or Different?	13.3%	46.7%	26.7%	13.3%	100.0%
		% within Satisfaction Level	100.0%	87.5%	80.0%	66.7%	83.3%
	Same	Count	0	2	2	2	6
		% within Choice between first and second phase: Same or Different?	0.0%	33.3%	33.3%	33.3%	100.0%
		% within Satisfaction Level	0.0%	12.5%	20.0%	33.3%	16.7%
Total		Count	4	16	10	6	36
		% within Choice between first and second phase: Same or Different?	11.1%	44.4%	27.8%	16.7%	100.0%
		% within Satisfaction Level	100.0%	100.0%	100.0%	100.0%	100.0%

Appendix 24 – Table of the characteristics and standard deviation from the Control Group

Control Group										
Exotic	Scent	Big	Smooth	Refreshing	Crunchy	Classic	Sweet	Creamy	Nutritional	**STD DEVIATION**
4	5	6	6	6	5	5	5	6	4	0.788810638
4	3	3	4	5	6	4	4	5	5	0.948683298
5	2	4	3	4	6	2	4	4	5	1.286683938
5	5	3	5	6	5	4	5	5	3	0.966091783
4	6	3	5	7	4	5	3	5	2	1.505545305
6	3	3	5	7	6	3	4	5	4	1.429840706

3	3	5	6	6	6	3	5	6	2	1.58113883
4	6	5	6	7	7	7	4	7	4	1.33749351
3	4	3	5	7	4	4	6	4	7	1.494434118
5	3	6	5	6	5	6	6	4	7	1.159501809
4	3	3	4	6	4	2	4	5	2	1.251665557
3	4	7	4	4	3	3	5	5	3	1.286683938
7	3	7	6	7	7	1	2	6	7	2.359378449
4	4	5	2	6	5	4	5	3	2	1.333333333
5	6	3	6	6	6	6	5	5	4	1.032795559
4	6	2	6	6	2	3	2	6	3	1.825741858
5	4	3	5	6	2	5	6	5	2	1.494434118
4	7	5	4	7	5	2	7	5	1	2.057506582
4	5	6	6	6	5	5	5	6	4	0.788810638
4	3	3	4	5	6	4	4	5	5	0.948683298
5	2	4	3	4	6	2	4	4	5	1.286683938
5	5	3	5	6	5	4	5	5	3	0.966091783
4	6	3	5	7	4	5	3	5	2	1.505545305
6	3	3	5	7	6	3	4	5	4	1.429840706
3	3	5	6	6	6	3	5	6	2	1.58113883
4	6	5	6	7	7	7	4	7	4	1.33749351
3	4	3	5	7	4	4	6	4	7	1.494434118
5	3	6	5	6	5	6	6	4	7	1.159501809
4	3	3	4	6	4	2	4	5	2	1.251665557
3	4	7	4	4	3	3	5	5	3	1.286683938
7	3	7	6	7	7	1	2	6	7	2.359378449
4	4	5	2	6	5	4	5	3	2	1.333333333
5	6	3	6	6	6	6	5	5	4	1.032795559
4	6	2	6	6	2	3	2	6	3	1.825741858
5	4	3	5	6	2	5	6	5	2	1.494434118
4	7	5	4	7	5	2	7	5	1	2.057506582

Appendix 25 – Table of the characteristics and standard deviation from the Experimental Group

Experimental Group										
Exotic	Scent	Big	Smooth	Refreshing	Crunchy	Classic	Sweet	Creamy	Nutritional	**STD DEVIATION**
5	5	4	4	6	5	5	4	4	6	0.788810638
5	4	6	4	5	6	2	5	6	5	1.229272594
2	3	4	3	6	5	4	4	3	3	1.159501809
6	7	5	7	7	7	6	5	7	7	0.843274043
6	5	4	5	6	5	4	5	6	6	0.788810638
4	5	6	5	6	6	4	5	5	5	0.737864787
6	1	2	6	7	4	3	3	5	2	2.024845673
5	1	7	4	5	7	4	3	4	2	1.932183566
4	5	6	4	7	5	4	5	4	2	1.349897115
5	5	4	6	6	5	2	6	5	3	1.33749351
5	4	5	5	6	4	6	6	5	2	1.229272594
4	4	5	5	7	6	4	6	6	6	1.059349905
5	3	6	6	6	6	4	5	6	5	1.032795559
3	3	5	5	6	5	3	3	5	7	1.433720878
5	4	3	5	7	6	1	6	6	7	1.885618083
4	6	3	6	7	6	7	1	6	7	2.002775851
5	7	4	6	7	4	4	7	7	7	1.398411798
5	6	6	6	6	7	6	6	3	7	1.135292424
5	5	4	4	6	5	5	4	4	6	0.788810638
5	4	6	4	5	6	2	5	6	5	1.229272594
2	3	4	3	6	5	4	4	3	3	1.159501809
6	7	5	7	7	7	6	5	7	7	0.843274043
6	5	4	5	6	5	4	5	6	6	0.788810638
4	5	6	5	6	6	4	5	5	5	0.737864787
6	1	2	6	7	4	3	3	5	2	2.024845673
5	1	7	4	5	7	4	3	4	2	1.932183566
4	5	6	4	7	5	4	5	4	2	1.349897115
5	5	4	6	6	5	2	6	5	3	1.33749351
5	4	5	5	6	4	6	6	5	2	1.229272594
4	4	5	5	7	6	4	6	6	6	1.059349905

5	3	6	6	6	6	4	5	6	5	1.032795559
3	3	5	5	6	5	3	3	5	7	1.433720878
5	4	3	5	7	6	1	6	6	7	1.885618083
4	6	3	6	7	6	7	1	6	7	2.002775851
5	7	4	6	7	4	4	7	7	7	1.398411798
5	6	6	6	6	7	6	6	3	7	1.135292424

Appendix: PowerPoint for Prospective Employers

Presentation of the Study

Title: The Effects of Cognition-based Subconscious Priming on Short-term Memory

Goals:

- Deepen knowledge about subconscious priming and its role on accessibility
  - Through utilisation of external cues
- Draw information about impulse ice cream industry and shopping habits
- Analyse behavioural consequences of cognitive reasoning on short-term memory (accessibility)
  - Choice before priming
  - Choice after priming
- Explore main differences in self-rated satisfaction and loyalty
  - Long-term favourite vs. Primed choice

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Research Methodology – Surveys

RESEARCH GROUP	CONTROL GROUP	EXPERIMENTAL GROUP
	FIRST PHASE	
• Match characteristics with ice creams • Investigate responders' awareness towards Olá (or Wall's) and shopping habits	• Investigate responders' favourite characteristics in an ice cream • Investigate responders' shopping habits	• Investigate responders' favourite characteristics in an ice cream • Investigate responders' shopping habits
	⇩ 1 month	⇩ 1 month
	SECOND PHASE	
		Word Comprehension Task
	• Confirm if long-term favourite ice cream remains the same • Observe satisfaction level towards choice	• Confirm if long-term favourite ice cream changes into accessible one • Observe satisfaction level towards choice

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Findings and Implications

Shopping Habbits:

- Average frequency of purchase: Once or twice a month
- Most frequent locations of purchase: Caffés and supermarkets
- Loyalty directly and positively correlated with:
  - Age
  - Frequency of purchase

- Higher accuracy in segmentation of the impulse ice cream industry
- Consequent more effective methods of marketing and advertising

Hypothesis: Verified

Consumers are more likely to purchase a product which has been reasoned by his/her own cognition, comparing to his/her long-term preference.

- New cognitive reasoning cues as priming alternatives for companies (puzzle solving in restaurant menus, informative pamphlets in supermarkets)

Findings and Implications (2)

Hypothesis: Verified

Consumers are more likely to be more satisfied with a product whose characteristics are more highly evaluated previously by him/her, comparing to the purchase immediately after priming.

- Marketer's main goal: match consumer expectations with marketing delivery
- Better acquaint of danger to long-term effects of priming in brand awareness

Managerial and Research Future Implications

- Deepen research on cognitive reasoning as a method of priming in FMCG
- Homogenise knowledge by studying other industries within FMCG business
- Consequent better accuracy in predicting consumer behaviour when subjected to priming