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**“Size heuristics: the influence of
physical size on consumers’
product evaluations”**

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Table of Contents

EXECUTIVE SUMMARY	I
INTRODUCTION.....	1
RESEARCH QUESTIONS.....	3
LITERATURE REVIEW	3
HEURISTICS: CONCEPTUALIZATION	3
SIZE PERCEPTIONS AND EFFECTS ON CONSUMPTION	4
FUNCTIONAL REASONING: UTILITARIAN CONSUMPTION.....	6
EMOTIONAL REASONING: CONSPICUOUS AND HEDONIC CONSUMPTION	6
QUALITY, DESIRABILITY AND WILLINGNESS TO PAY	9
THE CONCEPTUAL MODEL AND HYPOTHESES	10
METHODOLOGY	12
VALIDITY AND RELIABILITY	12
QUANTITATIVE STUDY: WEB-BASED QUESTIONNAIRE (APPENDIX 1).....	14
PRE-TESTING OF THE QUESTIONNAIRE	15
SAMPLING	15
DATA ANALYSIS AND RESULTS	16
FACTOR ANALYSIS	17
HYPOTHESES TESTING.....	19
APARTMENTS CATEGORY.....	19
CARS CATEGORY.....	23
DISCUSSION AND IMPLICATIONS	26
DIRECT EFFECTS	27
REASONS BEHIND PREFERENCES	28
IMPLICATIONS	28
LIMITATIONS AND FURTHER RESEARCH.....	29
REFERENCES	31
APPENDICES	37
APPENDIX 1: QUESTIONNAIRE.....	37
APPENDIX 2: FACTOR ANALYSIS - ROTATED FACTOR MATRIX.....	44
APPENDIX 3: PRELIMINARY THESIS REPORT	45

Executive Summary

Consumer behaviour has always been the focus of academic marketing research due to its significant managerial implications; even so, various aspects worth analyzing have been neglected. Size heuristics is one of the topics that did not receive sufficient attention so far. Apart from the theoretical contribution to the marketing field, this topic has practical implications in the buying decision process as well as in the context of environmental concern. If size does influence the evaluation of a product, would it not lead to a contradiction with the general concern regarding a more sustainable consumption?

By identifying this gap in the literature, the present study proposes that there is indeed a link between the size of a product and the perceptions that consumers form upon its quality, desirability and willingness to pay for it. Through a web – based survey using two product categories - apartments and cars - this study examines whether the preferences for larger or smaller stimuli leads to differences in evaluating a product. The analysis shows a positive association between the preference for large items and the impact on desirability. However, this association could not be established for the other two variables.

The reasons behind a preference for larger items are also investigated. The authors propose three possible explanatory reasons: utilitarian, conspicuous and hedonic consumption. When the apartments category was investigated, utilitarian reasons were found to be a motivation for purchasing a larger version. On the other hand, conspicuous reasons were found to influence the preference for a larger version in the cars category. Hedonic consumption could not be explored due to the lack of reliable measurement scales.

The findings of this study have both theoretical and practical implications and point out essential aspects worth to be further examined. Consequently, the present study will not only contribute to the consumer behaviour literature, but most importantly will enable managers to better understand the purchase behaviour of consumers in terms of emphasizing the preferred physical attributes.

Introduction

It has been shown that humans use simple contextual cues to make aesthetic decisions (Silvera, Josephs and Giesler 2002). The literature on choice heuristics states that decision makers want to reduce the cognitive effort while keeping reasonable levels of decision accuracy (Simonson 1990). The most frequently used heuristics are brand names, price, physical appearance and retailer reputation (Dawar and Parker 1994). The objective of this paper is to prove the influence of another contextual cue on consumer decision making process, one that is so far lacking empirical research: physical size.

Since 1950, the average size of a new house has increased by 1,247 square feet even though the average household has shrunk by 1 person. The National Association of Home Builders' "showcase home" was 15% bigger than the model presented the previous year (Mother Jones 2005). Moreover, even though it is obvious that the streets get more crowded each year, people continue to buy large cars. TVs have become larger, with the introduction of LCDs on the markets, many consumers hurried in purchasing these TV sets in order to recreate the "cinema feeling". On the other hand, social studies link size to factors like power, attractiveness, income and occupational status (Josephs, Giesler and Silvera 1994 and Silvera, Josephs and Giesler 2002). Clothing and apparatuses but also political success, are found to have a positive correlation with size by applying the "bigger is better" rule.

In some cases corporate success started to be measured by the ability to build the smallest laptop computer, the smallest cellular phone, or the smallest microchip, thus it might seem counterintuitive to suggest that people actually prefer larger objects over smaller ones.

From a different angle, consumers advocating for a sustainable consumption should have a preference for smaller products as the resources used and the waste that it eventually brings along should be smaller than for a larger object. More and more nongovernmental organizations, worldwide conferences and seminars, social media channels, books and public persons sustain environmental friendly

causes. However, there seems to be a discrepancy between a declared environmental concerned behaviour and a consistent preference for buying environmental friendly products (Kilbourne and Picket 2008).

Behavioral indexes were introduced in order to measure an individual's tendency towards a lifestyle of voluntary simplicity driven by ecological awareness, a need to feel more self-sufficient and efforts to decrease personal consumption of goods (Leonard - Barton 1981). Nevertheless, green marketing strategies started to emerge as researchers showed how important it is to align the social performance goals and the corporate entrepreneurship orientations with the environmental concerns (Menon and Menon 1997). Killbourne, McDonagh and Protero (1997) argue that sustainable consumption reduces environmental effects, takes into consideration the needs of future generations and is essential for the fulfilment of needs that generate a better quality of life.

Investigating consumer behaviour and knowing how size influences consumers' judgments would have significant managerial implications for product manufacturers. If size does have influence on product choice, managers would know how to design their products in order to appeal to customers and thus increase their profit using this simple aspect.

The purpose of the paper is therefore to determine if there is indeed a link between the size of products and the desirability, perceived quality and willingness to pay for these products. Could there be specific reasons for which people choose according to the "bigger is better" rule? In the context of sustainability, these issues have an even larger impact due to the psychological conflicts between a desired environmental friendly behavior and actual purchase behavior.

Research questions

Several studies, especially in the psychology field, have been conducted in order to determine the influence that the physical size might have on people's behaviour. So far this connection has not been established in the marketing and management fields, creating an important gap in the literature. In order to set the research boundaries and illustrate the contribution that our study will address, the following research questions have been developed:

Do consumers use the size factor of a product to evaluate its quality and/or its desirability?

Are consumers willing to pay more for larger items?

Are there conspicuous, utilitarian or hedonic reasons behind the preference for larger items?

Literature Review

Considering the lack of previous studies on size heuristics and more specifically on the link between the influence of size on the quality, desirability of a product and/or the willingness to pay, this literature review will focus on presenting the stream of research that has so far emerged in other subject areas and connect it to the focus of this present study. The paper will address size related issues along with the possible explanatory factors (utilitarian, hedonic and conspicuous consumption). However, the concept of "heuristics" will firstly be introduced in order to better understand the process.

Heuristics: conceptualization

The concept of heuristics has had a long history from the 21 rules for the Direction of the Mind proposed by Descartes but its use in psychology started with the work of Simon Herbert in 1957, who believed that humans have to construct simplified models of the world, in order to select the first option available that meets a minimum of standards (Gigerenzer 1991). Heuristics are thus seen as short cuts that help us come up with efficient decisions.

Tversky and Kahneman (1974) refer to heuristics as “errors” in probabilistic reasoning “People rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations. In general, these heuristics are quite useful, but sometimes they lead to severe and systematic errors” (Tversky and Kahneman 1974, 1124).

A consistent body of research shows that people can use simple judgment rules based on immediate information rather than on computationally complex one (Pelham, Sumarta and Myaskovsky 1994): familiar objects can be preferred over unfamiliar objects (Whittlesea 1993), country of origin (Chang 2004) or brand names (Maheswaran, Mackie and Chaiken 1992) can stand as a cue in the decision making process. However, from our knowledge no study has been conducted to determine whether physical size can stand as a heuristic in the consumers’ evaluation process.

Size perceptions and effects on consumption

One of the most important contributions brought to the size heuristic topic is made by Silvera, Josephs and Gielser (2002) who show that the size of an object can act as a heuristic cue for preference judgments. A downside of the study is that it limits itself at studying the influence of physical size on preference and not on observing whether it has an impact in the evaluation of the quality and/or desirability or willingness to pay for a product. It also proves to have little applicability in real life, as the stimuli used in the experiments are just abstract shapes, alphanumeric characters, and Chinese Kang Xi characters.

There is however clear evidence in the literature suggesting that the different size packages affects consumers’ usage volume and their perceptions. It seems that when visualizing a cylindrical object, people tend to focus more on the vertical dimension than on the horizontal one. Tall rectangular boxes that have equal volumes to square boxes are perceived as having a larger volume (Krider, Raghubir and Krishna 2001; Wansink, Painter and North 2005) leading to over pouring (Stewart 1994) or to a faster consumption (Raghubir and Krishna 1999), consumption that decreases as supply diminishes due to the usage decisions made before pouring the amount (Folkes, Martin and Gupta 1993). On the other hand people can be more willing to “finish-up” large-size packages because they take

up too much space in household inventory (Hendon 1986). In the context of sustainability, public policy officials are interested in decreasing the amount that a consumer wastes whereas managers are interested in selling more of a product (Shapiro 1993). For example it has been shown that customers are willing to pay more for a pizza if they are given a picture rather than when they are given the diameter using numbers because they can compute more easily the overall size (Krider, Raghubir and Krishna 2001). In some cases however, downsizing was offered as a strategy that was supposed to better satisfy people's needs of packaging (like bottled water), customers appreciated this change and actually increased their purchase frequency (Adams, di Benedetto and Chandran 1991).

As mentioned earlier, the consequences of size perception are not only correlated with package design but also with food intake. Studies are focused on the effects that portion size has on food intake (Fisher and Kral 2008; Fisher, Rolls and Birch 2003; Diliberti et al. 2004) with evidence supporting the fact that large portions influence energy intake and encourage obesity. Without knowing how much is appropriate to eat or how much one has eaten, the amount of food left in a container can provide a biased consumption norm. Over-reliance on such cues may, in turn, influence how much food people consume in distracting or engaging situations. Wansink, Painter and North (2005) showed that people who were served soup from "bottomless," refillable soup bowls ate 73% more soup than those eating from conventional bowls, but they did not rate themselves any more full. Portion size also affects the development of hunger and satiety; people eat more before reaching satiation when offered larger portions (Rolls, Morris and Roe 2002). And as counterintuitive as it might seem, research done so far suggests that larger portion sizes have an effect of increasing amount eaten regardless the taste of food (Wansink and Park 1996).

As we can see, much of the research has concentrated on the effects that package or portion size has on consumption and energy intake. Thus, we identify as an important gap in the literature the lack of connection between the perceived size of a product and the impact on desirability, quality or willingness to pay. In the following sections the possible reasons for choosing a larger item will be discussed in order to better understand the decision making mechanisms in terms of size related issues.

Functional reasoning: utilitarian consumption

Why do some people build large houses, buy huge LCDs or SUVs? Is it a cultural influence or a desire for affirmation? Or on the contrary, simple objective reasons (like the need for more space) back up these decisions? Statistics show that some populations have a preference for larger houses. In a study presented by NationMaster.com countries like Canada, New Zealand, United Kingdom, United States and Australia are shown to have over 70% proportion of houses with five rooms or more.

Khan, Dhar and Wertenbroch (2005) define the utilitarian products as the products that are primarily instrumental and their purchase is motivated by functional product aspects. These products are rational driven purchases and provide cognitively oriented benefits. Strahilevitz and Myers (1998, 436) explain that “*a utilitarian, goal-oriented consumption* is motivated mainly by the desire to fill a basic need or accomplish a functional task”.

People might be influenced to buy larger products because they believe they are more in line with their needs. For example a couple that has recently decided to have children might consider moving in a larger apartment because they need more space for the toddlers. They might also need a larger car, since they will have to transport more things. The preference for larger items can also come from other objective reasons. The Insurance Institute for Highway Safety (IIHS) states that the size of the car and the weight are crucial factors in protecting people in accidents. Figures show that for example in 2007 there were 96 fatalities per million registered vehicles for the small car category but 64 per million for large sedans.

Emotional reasoning: Conspicuous and Hedonic Consumption

In 1849 Karl Marx said that satisfaction with one's own house is determined by how big the surrounding houses are referred to the signalling qualities of consumption statement: “a house may be large or small; as long as the neighbouring houses are likewise small, it satisfies all social requirements for a residence. But let there arise next to the little house a palace, and the little house shrinks to a hut. The little house now makes it clear that its inmate has no social position at all to maintain, or but a very insignificant one” (Relation of Wage-

Labour to Capital, Chapter 6). With this statement we introduce a new concept in the present research: *conspicuous consumption*. In the literature, conspicuous consumption is referred as the ostentatious display of wealth for the purpose of acquiring or maintaining status or prestige (Page 1992).

A great contribution to the study of conspicuous consumption and to much of the research developed in this field is based on Thorstein Veblen's theories. Veblen provided a first behavioural explanation for conspicuous consumption in his famous theory of "the leisure class" (1899, 29) "In order to gain and hold the esteem of men, it is not sufficient merely to possess wealth or power. The wealth or power must be put in evidence, for esteem is only rewarded on evidence". In other words, Veblen stated that one possible way to show wealth was through conspicuous consumption. The "Veblen effect," is the act of conspicuously consuming and displaying a good purchased at a significantly higher price than the producer's marginal cost. Shukla, Shukla and Sharma (2009) mention that this type of consumption differs from mainstream consumption of regularly purchased goods as it satisfies not just material needs but also social needs, such as social status and prestige.

From another perspective, Trigg (2001) argues that Veblen ignores the fact that those from the bottom of the hierarchy can also make conspicuous consumption and that this type of consumption should not be seen as only a tool for the rich people. The extent to which consumers are exerting a conspicuous behaviour depends on several other factors like: culture, the development of the country they live in, gender and personality. For example, in a study conducted in 2007 by Tai Shan Au, it is shown that many Chinese people buy vehicles because they want to show off their wealth rather than for the functional benefits of the vehicles. For those people, owning a car is for improving self-image, rather than purely for transportation. Tai Shan Au (2007) also points out four main reasons for which the Chinese people have this conspicuous behaviour: the values that are emphasized in the Chinese culture (an important one being the "face"), the desire of following a trend and getting into a social group, the need of the wealthy social class of being distinguished from the other social classes and the Chinese people belief that a conspicuous consumption would benefit their careers.

Reasons for consuming or purchasing a certain product can come as discussed earlier, from the need to display wealth and power but sometimes the reasons lack an explainable motivation and the consumption experience emerges simply from the sensual pleasure that the product offers. This type of consumption has been named in the literature as *hedonic consumption*.

Woods (1960) defines hedonic consumption as representing the products that are primarily consumed for sensory gratification and affective purposes or for fun and enjoyment. A hedonic consumption often arouses emotions and produces benefits that emphasize on the total sensory experience of the consumption process. It has been broadly discussed the symbolic aspect of a product and as Levy (1959, 118) noted, "people buy products not only for what they can do, but also for what they mean". For example, when thinking about smelling a perfume we can say that this may cause the consumer not only to perceive and encode its scent but also to generate internal imagery containing sights, sounds and tactile sensations (Hirschman and Holbrook 1982). Examining the different research papers written on this topic so far, it can be argued that hedonic consumption refers to consumers' multisensory images, fantasies and emotional arousal in using products (Hirschman and Holbrook 1982) and that this consumption is "motivated mainly by the desire for sensual pleasure, fantasy and fun" (Strahilevitz and Myers 1998).

Due to the fact that hedonic purchases are more difficult to justify, Okada (2005) argues that people prefer to pay in the currency that is easier to justify spending: time. For example with the launching of the limited LeBron James's signature shoes (from Nike), Okada suggests that those who want the shoes for primarily utilitarian reasons (i.e., basketball playing) are more likely to pay in money and bid up the price on the Internet; those who want the shoes for primarily hedonic reasons (i.e., fashion) are more likely to pay in time and wait in line to buy at the store when it opens. Most of the studies show a tendency for making distinctions between hedonic and utilitarian consumption, however these two concepts should not necessarily represent two ends of a one-dimensional scale (Voss, Spangenberg and Grohmann 2003). A holistic approach can be taken when discussing the concepts. There are products that can be high or low in both hedonic and utilitarian attributes.

Quality, Desirability and Willingness to Pay

By *quality* we understand and refer to the quality that is perceived by the consumer, thus the perceived quality. Zeithaml (1988, 3) defines the concept as “the consumer’s judgment about the superiority or excellence of a product”. Research has identified competence, knowledge, reliability and performance level as factors used to measure perceived quality (Kapferer 2008). Dawar and Parker (1994) show that heuristics are used to assess a product’s quality when there is a need to reduce the perceived risk of purchase, the consumer is not knowledgeable with regards to the objective features of the product, when it is from a low involvement category or simply when the objective quality is too difficult to be assessed.

The *desirability* of a product refers to the appeal, the attractiveness and the interest for a certain product. It can be argued that the degree of desirability is a very subjective measure as it takes into consideration different attributes that form an overall perception. One of the attributes that has an important contribution is the physical appearance of the product. For the purpose of this study the physical size of the product will be manipulated in order to determine the influence that it has on evaluating a preference for a larger and/or smaller item.

The *willingness to pay (WTP)* is defined as the maximum amount of money a customer is willing to spend for a product or service (Krishna 1991). From an economic perspective the WTP represents a monetary measurement of the value that a consumer assigns to the consumption of a product or service (Homburg, Koschate and Hoyer 2005). This decision has important managerial implications as the willingness to pay can influence the pricing policy which has a direct impact on the profitability. The willingness to pay can be considered as an outcome of the previously discussed variables: perceived quality and desirability. However, it can also be accounted separately because a customer can be willing to pay more for a product when using other cues in his judgment. One of the aims of the present study is to determine if customers are willing to pay more for a larger version of the product.

The Conceptual Model and Hypotheses

Considering the gap in the literature in terms of size heuristics we conclude that there is a need to analyze the link between the size of a product and its influence on consumers' evaluations on quality, desirability and willingness to pay. For an easier overview of the suggested effect we have constructed the following conceptual model that also incorporates the explanatory factors utilitarian, conspicuous and hedonic consumption.

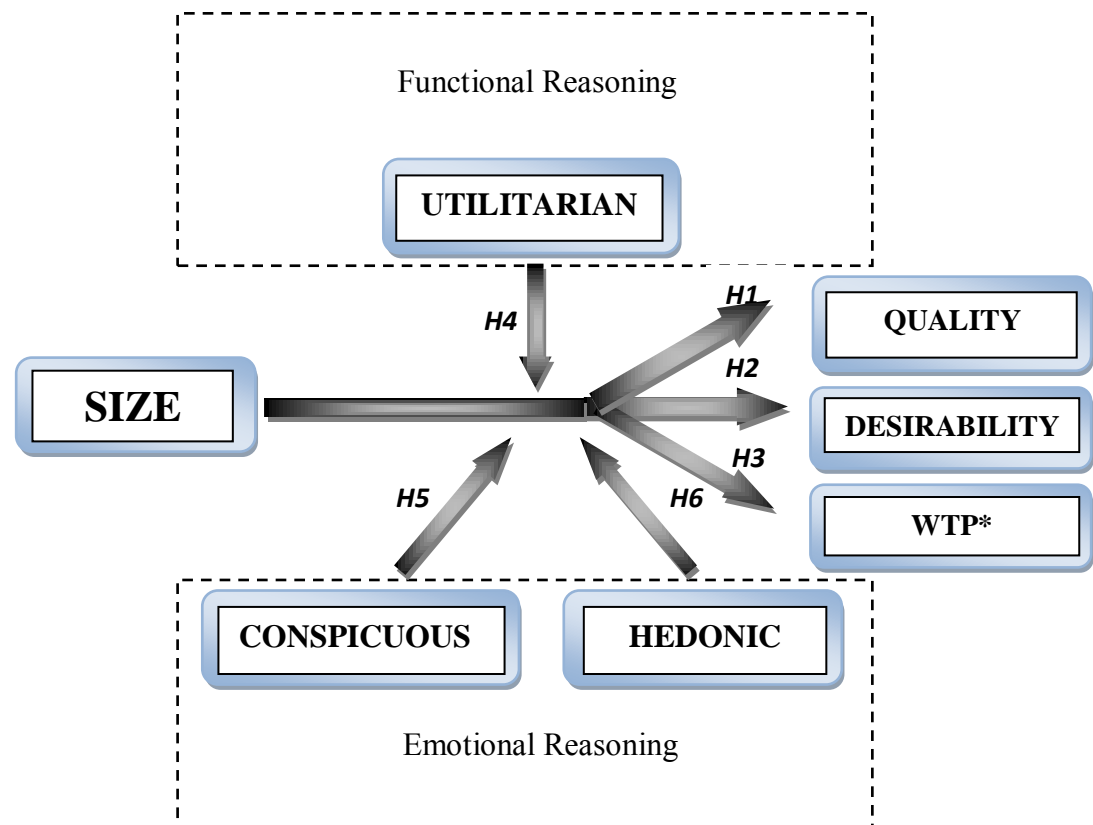


Figure 1: The conceptual model

*WTP refers to Willingness to Pay

The conceptual model contains the six hypotheses that have been proposed following the literature review and are meant to address the identified gap in the literature.

Hypothesis 1: Size effect on perceived quality

Even though the perceived quality is a global assessment of attributes and assumes a higher level of abstraction, we believe that people who prefer larger items will also rate the large version of the products as having a higher quality than the smaller version of the same product. Thus, we hypothesize that:

H1: A preference for larger products will be positively associated with a higher level of perceived quality for those products.

Hypothesis 2: Size effect on desirability

We expect that a preference for the larger versions of the product will also lead to an increase in the desirability for these products. Specifically, we expect that:

H2: A preference for larger products will lead to a higher level of desirability for those products.

Hypothesis 3: Size effect on willingness to pay

According to our third hypothesis, we expect that a preference for the larger items will be followed by the willingness to pay more for an increased size of the product. Thus, we hypothesize that:

H3: The price that customers are willing to pay increases with the preference for larger products.

Hypothesis 4: Utilitarian needs and size preferences

We propose that when showing a preference for larger items, consumers will base their preference on utilitarian needs. Specifically, we expect that they will consider space related issues, future family expansions, quality construction, financial costs or/and environmental concerns when deciding upon a specific size that fits their needs. Support for H4, implies that an increase in the size preference will be explained by an increase in utilitarian needs. Thus, we hypothesize that:

H4: Utilitarian needs will be positively associated with large size preferences.

Hypothesis 5: Conspicuous needs and size preferences

We expect that a conspicuous behaviour will be the reason for consumers presenting a preference for larger items. More specifically, we believe that they will consider elements such as displaying a high social status or success and

showing a predilection for luxury and wealth when choosing the larger products.

Therefore, we propose that:

H5: Conspicuous needs will be positively associated with large size preferences.

Hypothesis 6: Hedonic needs and size preferences

A third reason that can form the basis for showing a preference for the larger items is assumed to be connected with the feeling of inviting friends over or/and consumers' desires and aspirations. In this context, we expect that:

H6: Hedonic needs will be positively associated with large size preferences.

Methodology

Churchill and Iacobucci (2005) describe three different types of research designs: exploratory, descriptive and casual design. The purpose of the present thesis signifies the use of a *descriptive design method*. The relationship between the physical size of a product and several different variables is to be studied. Previous studies that took into consideration the influence of size (effects on packaging or food intake) used quantitative methods like experiments in order to examine the cause-effect relationships. For testing the hypotheses, a quantitative method is going to be used, more specifically, an inferential survey.

Validity and Reliability

When discussing the errors that might have an influence upon the results of a study, validity and reliability are critical factors, reason why a careful approach in overcoming the threats to validity and increasing the reliability of the measurements has been taken.

Internal validity relates to whether the changes in the depended variable are really caused by the manipulated variables. Otherwise, those changes could be attributed to other variables (Shadish, Cook and Campell 2002). Having decided to use an online survey as a method of collecting the data, ensures that the threats are easily overcome due to the lack of control/experimental groups, different treatments or

multiple data collection periods of time. When the size factor was manipulated for the two different scenarios, the participants had to answer the same questions. What differed from one scenario to another were the questions that captured the manipulated stimuli (willingness to purchase/pay for a larger version vs. willingness to purchase/pay for a smaller version).

External validity refers to the extent to which the results found in a study are expected to be true for the entire target population (Shadish, Cook and Campell 2002; Hair, Bush and Ortinau 2006a). The highest threat to external validity in this specific study comes from the interaction between selection and stimulus treatment. As the present questionnaire design is conducted with a student sample (both Norwegian and International) from the BI Norwegian Business School, University of Oslo and The Academy of Economic Studies Bucharest, the results are only to be generalized on the level of the target population, which is the student mass. In order to increase external validity, the survey used to collect the data is available on a public platform to which any of the student sample can have access to.

Construct validity is defined as the extent to which the studied variables are completely accurately identified prior to formulating the hypothesis (Hair, Bush and Ortinau 2006a). As previously mentioned, due to the lack of research on the size heuristics topic, the hypotheses did not use already tested constructs. Thus, threats to construct validity can come from “construct underrepresentation” but also from “surplus construct irrelevancies” (Shadish, Cook and Campell 2002). Having in mind every possibility of increasing the construct validity we made use of a broad literature review based on a good selection of Academic Journals before building the hypotheses.

Reliability is the extent to which a variable or scale produces consistent results if repeated and measures the degree to which a set of indicators of a latent construct is internally consistent in their measurement (Hair et al 2006b). Due to the fact that the scales used in the present study had not been used and/or tested in previous studies, their reliability is evaluated by measuring the Chronbach's Alpha coefficients. A rule of thumb is that reliability estimates over .70 suggests good

reliability, while values between .60 and .70 indicates acceptable reliability, given that other indicators of the model's construct validity are decent (Hair et al. 2006b).

Quantitative Study: Web-based Questionnaire (Appendix 1)

The data in the present study is quantitative data and it is collected using the *survey method*. The primary data of the study is collected through a *web-based questionnaire*. The questionnaire for this study involves few factual questions in order to provide background information about the respondents, while the main part of it is consistent with questions about subjective opinions. The questionnaire includes many close-ended questions. However, in order to determine "a more personal" approach some simple open-questions with regards to the respondents' willingness to pay are used.

Each respondent is given two products (apartments and cars) in which size is manipulated in order to capture the possible variation in answers when applying the proposed directions. *Apartments* and *cars* were selected due to the easiness of manipulating the size of the products in a realistic and imaginable manner. Furthermore, the reason for choosing a sample of students is motivated by the desire this category might have at a certain point in life on both of these products, thus they can portrait themselves in a purchasing situation.

Response rate is a great concern in the web-based questionnaires in general. In order to maximize the response rate we have used Dillman's approach (2006) of social exchange when inviting people to respond to our survey: we showed a positive regard towards potential respondents, verbal appreciation and expressed our need for help. Social validation was suggested by saying that many students are filling in surveys these days in order to help their colleagues. No tangible rewards were given, however the possibility to help respondents with their own studies or a copy of our final results were presented. One important aspect is that we minimized the requests for personal information to gender and age. No e-mail addresses, names or other personal data were required.

With regards to the *measurement scales*, gender and whether the respondent owns an apartment/car are example of nominal variables. In order to measure

respondents' agreement or disagreement towards several statements as well as the willingness to purchase, a nine point Likert scale is being used, 1 being strongly disagree and 9 being strongly agree, thus we make use of ordinal scales. Ratio variables are the age of the respondent as well as the prices they allocate to different product sizes and to their extra features.

Pre-testing of the Questionnaire

The purpose of the pre-test was to verify if the questions are thoroughly understood by the respondents as well as to identify any possible problems regarding the proposed product category (apartments). The pre-test consisted in manually distributing the questionnaire to 15 students at BI Norwegian Business School, who completed it in private. The pre-test revealed some errors. For example, question number 1 asked respondents to rank the different sizes of apartments/cars. Most of the respondents were confused with the ranking range: 1 – least preferred to 3 – most preferred. Instead, they were ranking the items on a range: 1 – most preferred to 3 – least preferred. Thus, the ranking was replaced with “the willingness to pay” for the three sizes. In this manner both the preference and the willingness to pay would be captured in the question. Also, the statement “Showing my wealth would be a reason for purchasing a large apartment” was found to be uncomfortable for most of the respondents. The statement was reformulated into “I associate luxury and status with ownership of a large apartment”.

Because the respondents did not use as much time as expected in answering the pre-test questionnaires, we included a second category of products (cars) in the same questionnaire in order to capture more relevant data. Therefore, the final questionnaire incorporated all the errors the pre-test revealed.

Sampling

The sample in the present study is obtained by using a nonprobability sampling method called *convenience sampling*. According to Bernard (2000, 178), convenience sampling “is useful for exploratory research, to get a feel for <<what's going on out there>> and for pretesting questionnaires to make sure that the items are unambiguous and not too threatening”. Furthermore, some of the respondents were asked to pass the questionnaire forward in order to get enough

answers and a more representative population. This method is identified in Bernard (2000, 180) as the *snowball sampling*: “if the study is dealing with a relatively small population of people who are likely to be in contact one with each other, then snowball sampling is an effective way”.

The aim of the present study was to collect data from minimum 200 respondents. The *target group* consisted of students from three large universities: BI Norwegian Business School, University of Oslo and Academy of Economic Studies, Bucharest. The age range of the sample was between 20 and 32 years old. The survey was constructed on a *web-based platform* called “Confermit”. In collecting the data, the social network Facebook, Yahoo Messenger, Msn Messenger and LinkedIn have been used.

The participants received the *two versions* of the questionnaire by using their birth month in order to *randomize the distribution*. The first version – consisting in the combination larger apartment and smaller car - was available for the respondents born in January, March, May, July, September and November. The second version - smaller apartment and larger car - was administrated to respondents born in February, April, June, August, October and December.

Data Analysis and Results

In total 380 participants were registered as respondents for our web-based questionnaire comprising the two versions. However, 169 cases were excluded due to excessive missing data, leading to a final sample of 211 valid results. Out of the total valid cases, 103 answered the first version of the survey (larger apartment and smaller car) and 108 the second one (smaller apartment and larger car). For the questions measuring conspicuous, utilitarian and hedonic reasons for both products, the results were analyzed using the entire sample of 211 as there were no variations in the questions from one version to another.

Age was assessed for both versions of the questionnaire and results show that respondents were aged between 20 and 32 years old, with 23 and 24 years old accounting for the largest number of responses 24.6% respectively 22.7%.

Both genders were invited to fill in the questionnaire, the distribution showing that 40% of the respondents were males and 60% females.

Factor Analysis

Factor analysis is a technique that is commonly used in statistical analysis in order to identify factors that could explain the variation and covariation among measures (Green and Salkind, 2011). In other words, the main purpose of a factor analysis is to define dimensions for an existing variable. Our study proposed three possible explanatory variables: conspicuous consumption, hedonic reasons and utilitarian reasons. The literature studied so far showed us that none of these three variables was found to be measured by clear and pre-defined constructs. Thus, we decided to run a factor analysis to find the most relevant and significant measures of each variable. After completing the first step of the analysis we choose the number of factors we want to use further in the process. The choice can be done, according to Green and Salkind (2011, 318), using two criterias: one criterion is to retain all the factors that show an eigenvalue greater than 1 and another criterion is to examine the plot of eigenvalues (scree plot) and to retain all the factors with eigenvalues in the “sharp descent part of the plot before the eigenvalues start to level off”. It is believed that this last criterion leads to more accurate results than the first one.

When analysing the Scree Plot for *apartments* we concluded that two factors should be rotated. After running the Rotation, using the Maximum Likelihood extracting method, items with higher scores were chosen for both factors (see Appendix 2). The two factors accounted for 24.171% and 20.152% of the explained variance.

The first factor extracted has higher values for the following items: “family expansions”, “social activities”, “aspire to own”, “invite friends” and “space”. When building the survey, the aforementioned items were related to *utilitarian reasons*: easiness to deal with future family expansions, possibility to make recreational and social activities easier, likelihood to invite friends over for dinners and parties and more space for their belongings. After running the Reliability Analysis a Cronbach’s Alpha value of 0.841 was found and accepted to describe a utilitarian consumption.

The second factor extracted proved to score high for items like: “social status”, “signal success”, “luxury and status” and “quality construction”. *Conspicuous reasons* are shown within the associations made between a larger apartment and the social status of its owner, the success of the owner and the luxury and status brought by owning a large apartment. The association between larger apartments and higher quality construction was initially believed to be connected with utilitarian reasons, however it can also be associated with a conspicuous one as people in general like to show others that their items are not only larger but they also have a higher quality construction. The Reliability Analysis again showed a good level of Cronbach’s Alpha of 0.822.

In the *cars* product category, according to the Scree Plot, two factors are on the steep portion of the graph, thus only two will be selected and rotated. After running the factor rotation and examining the Factor Matrix, items with higher scores were chosen for both factors (see Appendix 2). The two factors accounted for 31.581% and 15.021% of the explained variance.

For the first factor, high values for “social status”, “signal success”, “luxury and status” and “aspire to own” were found. The assumptions that a larger car gives social status to its owner, it signals success and is associated with luxury and status for its owner, all clearly describe a *conspicuous consumption* behaviour. Aspiration to own a large car was assumed to describe a rather hedonic need, however it can also be associated with a conspicuous behaviour because one could easily aspire to a higher social status by displaying a larger car. A Reliability Analysis using Cronbach’s Alpha was again used and displayed a level of 0.709. Even if this level is lower than the ones found so far, we believe it is high enough to support the reliability of this item.

The variables “less environmentally friendly”, “financial burden”, “family expansion” and “space” were found to describe the second rotated factor. Reasons connected to thoughts about space for belongings or for future family expansions, financial spending that comes with the ownership of a larger car, as well as its impact on the environment are altogether associated with *utilitarian consumption*. When running the Reliability Analysis, Cronbach’s Alpha level of 0.884 showed a

good reliability for this factor, 0.884 being the highest value from the proposed set of factors.

Since a value of Alpha above 0.70 suggests good reliability, the values obtained throughout the four factors describing a utilitarian and a conspicuous behaviour, indicate a high reliability of the measured constructs and strong internal consistency among the selected items.

As we can see for both product categories, after running Factor Analysis, none of the proposed items proved to be associated with the third explanatory variable *hedonic reasons*. So far the literature did not provide clear concepts that would describe hedonic consumption behaviour, thus no theoretical or statistical proof can be brought into discussion in the present study. To conclude, this variable will no longer make the object of our discussion.

Hypotheses testing

Our sample was divided according to the willingness to purchase a larger respectively a smaller version of each product category – apartments/cars. Their willingness to purchase a larger version was measured on a 1-9 scale. The participants with a willingness to purchase <5 were all grouped together as well as the participants with a willingness to purchase >5 . The cases in which the participants used a value = 5 (indifferent attitude in the purchase decision) were excluded from the analysis. A dummy variable named “Bigger” was thus created, where 0 = not willing to purchase bigger and 1 = willing to purchase bigger allowing us to make a thorough analysis for two of our most important concepts “Desirability” and “Willingness to Pay”.

Apartments category

The first hypothesis assumed that the consumers who will prefer larger apartments will in generally associate these apartments with a higher quality. In order to test this hypothesis we performed a one - way ANOVA analysis. Our dependent variable was “Quality Construction” measured on a 1-9 scale while the independent variable was the categorical one Size Preference. The output showed

that we do not have a statistically significant difference between our groups as the significance level is 0.214 ($p = 0.214$) is larger than 0.05. Therefore **we do not find support for H1** in this product category.

The second hypothesis stated that the consumers who will show a preference for larger items will perceive them as being more desirable. An Independent Samples T-test with the dummy variable “Willingness to purchase bigger” was performed in order to test this hypothesis. When analyzing the apartment sample, the results show (Figure 2) that the group who preferred the larger apartments display a statistically significant higher desirability for a larger version than the groups who preferred the small and medium apartments (mean = 5.14 vs. mean = 7.11), ($p = 0.04$). Thus **we find support for H2** in this product category.

		Size Preferences		
		Small	Medium	Large
Willingness to purchase bigger	Not willing	3.29 (2.61) N = 14	8.07 (0.82) N = 14	5.14 (2.31) N = 14
	Willing	4.05 (1.94) N = 73	7.33 (1.42) N = 73	7.11 (2.27) N = 73
Difference and Sig. levels		t = -1.28 p = 0.20	t = 1.88 p = 0.06	t = - 2.95 p = 0.04

The values from each cell represent the mean the standard deviation in the brackets

Figure 2: Willingness to purchase bigger version (desirability) – Apartment category

In order to test H3, an Independent Samples T-Test was conducted, using the dummy variable “Bigger” respectively “Smaller” as independent variable (according to the two scenarios) and the price the respondents would be willing to pay for larger vs. smaller version of the apartment as dependent variable. As it can be seen from Figure 3, the mean difference is not showing a statistical significant difference in terms of price between the participants willing to purchase a larger apartment and the ones that are not willing to (mean = 116 520.55 vs. mean = 100 857.14), ($p = 0.40$) . This pattern can also be observed in the scenario in which the

participants are asked to state their willingness to purchase a smaller version of the apartment (mean = 65 009.26 vs. mean = 50 262.50), ($p = 0.08$). What is interesting with regards to the means, is the fact that in both scenarios the participants' willingness to pay for the larger or for the smaller version of apartments varies with approximately 15 000 no matter the direction of the manipulated size - increasing or decreasing the size of the apartments. In the light of the results, **we find no support for H3**.

	Willingness to purchase <i>bigger</i>			Willingness to purchase <i>smaller</i>	
	Not Willing	Willing		Not Willing	Willing
<i>Price for Bigger Apartment</i>	100 857.14 (36 301.84) N = 14	116 520.55 (67 260.29) N = 73	<i>Price for Smaller Apartment</i>	50 262.50 (38 370.82) N = 40	65 009.26 (41 745.01) N = 54
Sig. levels	p = 0.40			p = 0.08	

The values from each cell represent the mean the standard deviation in the brackets

Figure 3: Price for bigger/smaller version (Willingness to Pay) – Apartments category

Participants were also asked to assign prices for different *extra features*. When comparing the mean values between the two scenarios (when exposed to a larger version vs. a smaller version of the apartment) it can be observed that the participants who received the scenario with the larger version of apartment were less willing to pay for the extra features than the ones who received the scenario with the smaller version of apartment (mean = 10 053.80 vs. mean = 14 254.69). This shows that consumers who would purchase a smaller apartment would choose more extra features to compensate with the size than the ones who would purchase a bigger apartment. It also worth mentioning that the most desired extra features were: “balcony with nice view” and “energy saving solar powered water heater and interior lighting”, while the least preferred was “granite countertops”.

Extra Features		Sample	Mean
	Larger Apartment	N = 103	10 053.80
	Smaller Apartment	N = 108	14 254.69

Figure 4: Mean values for Extra Features in both scenarios – Apartments category

The last hypotheses of our study focus on two identified explanatory reasons: utilitarian and conspicuous consumption. As mentioned in the factor analysis section, we could not find specific factors to load with the hedonic consumption, thus the final hypothesis **H6 will no longer be tested**.

H4 proposed that a positive association between utilitarian needs and large size preferences is to be found. Once again, we ran a one – way ANOVA analysis in order to confirm or reject this hypothesis. Results show that there is a significant difference between the groups as a whole ($p = 0.001$). Conducting the Tukey Post Hoc test reveals that there is a significant difference in the utilitarian needs between the group that preferred a large apartment and the one who preferred small (mean = 7.30 vs. mean = 5.11, $p = 0.006$) as well as between the group that preferred large and the one that favoured a medium apartment (mean = 7.30 vs. mean = 6.09, $p = 0.007$) (Figure 5). This confirms our suppositions that a preference for a large size is positively associated by utilitarian needs; therefore **H4 is supported** in the apartments category.

		Sig.
Preference for Large 7.30 (2.03)	Preference for Small 5.11 (1.55)	0.006
	Preference for Medium 6.09 (1.83)	0.007

Figure 5: Utilitarian consumption means with significant differences between groups and in the brackets standard deviation – Apartments category

The same type of analysis a one – way ANOVA with Tukey Post Hoc Test, was used in order to determine if there is indeed a positive association between a preference for large size items and a conspicuous consumption (H5). The analysis shows that there are significant differences between the groups as a whole ($p = 0.014$), however the Tukey Post Hoc test reveals a statistically significant difference only between the group that showed a preference for large apartments and the one that preferred the small apartments (mean = 5.29 vs. mean = 3.55, $p =$

0.018) (Figure 6). Given the results, **we find only partial support for H5** in this product category. We will further return to this finding in the discussion section.

		Sig.
Preference for Large 5.29 (2.10)	Preference for Small 3.55 (1.56)	0.018
	Preference for Medium 4.62 (1.34)	0.146

Figure 6: Conspicuous consumption means with significant differences between groups and in the brackets standard deviation – Apartments category

Cars category

In order to be able to generalize the results our study focused on two product categories. The procedure for the cars scenario was similar to the one conducted in the apartments scenario, thus we conducted a similar analysis on the same hypotheses.

For H1, the one – way ANOVA analysis did not find any statistical significant difference between our groups. The significance level of 0.969 ($p = 0.969$) is larger than 0.05 leading to a **rejection of H1**.

Using an Independent Samples T- Test like in the apartment category we want to see if the participants who prefer large cars display a higher desirability for a larger version of the cars. In the cars sample, the results show (Figure 7) that the group who preferred the large cars display a statistically significant higher desirability for a larger version than the groups who preferred the small and medium cars (mean = 5.71 vs. mean = 3.55), ($p = 0.00$). A statistical significance of $p = 0.04$ is observed also in the category of participants who show a high preference for medium cars, however the mean values are not significantly different (mean = 6.55 vs. mean = 7.41). This leads to a **confirmation of H2** in the cars category as well.

The values from each cell represent the mean the standard deviation in the brackets

For the testing of H3 an Independent Samples T-Test was conducted with the dummy variable “Bigger” respectively “Smaller” as independent variable and as dependent variable the price the respondents would be willing to pay for larger vs. smaller version of the car. Similar to the apartment category, in the car category we find no statistical significant difference between the mean values of the prices the participants are willing to pay for the larger respectively for the smaller version of the car (mean = 14 950 vs. mean = 14 166.25, $p = 0.74$) and (mean = 8808.16 vs. mean = 9000, $p = 0.89$) (Figure 8). **We do not find support for H3** in this product category either.

The values from each cell represent the mean the standard deviation in the brackets

24

An important conclusion is to be drawn after analysing both product categories that even if consumers evaluate the larger items as more desirable (H2) they are not willing to pay more for them (H3).

In terms of extra features for the car category, the mean values do not display a significant difference between the two assigned scenarios (Figure 9), showing that irrespective of the size of the car, participants would chose to pay almost the same price for the extra features (mean = 4 487.11 vs. mean = 4 774.83). The most popular extra features chosen by the respondents were: “engine with 50% more power versus the basic engine” and “extra airbags”, while the least desired was “metallic paint”.

		Sample	Mean
Extra Features	Larger Car	N = 108	4 487.11
	Smaller Car	N = 103	4 774.83

Figure 9: Mean values for Extra Features in both scenarios – Cars category

A one – way ANOVA with a Tukey Post Hoc test was conducted similar to the apartments category, in order to determine if H4 is supported in the cars category as well. However, in this product category we could not find a significant difference between groups as a whole ($p = 0.23$). Moreover, the means were not statistically different from each other with significance levels of $p = 0.74$ and $p = 0.69$ (Figure 10). Consequently, **we do not find support for H4** in the car category.

		Sig.
Preference for Large 6.14 (1.91)	Preference for Small 5.78 (1.71)	0.747
	Preference for Medium 6.49 (1.74)	0.693

Figure 10: Utilitarian consumption means with significance levels between groups and in the brackets standard deviation – Cars category

Last, an analysis to determine if the preference for large size products is positively associated with a conspicuous consumption (H5) was conducted. The one – way ANOVA revealed a statistical significant difference between the groups as a whole with a significance level $p = 0.003$. Furthermore we can see from the table that there is a statistical significant difference in terms of conspicuous consumption decisions between the group that preferred large cars and the group that preferred small cars (mean = 6.16 vs. mean = 4.65, $p = 0.027$) as well as between the group that preferred large cars and the group that preferred medium cars (mean = 6.16 vs. mean = 4.44, $p = 0.002$) (Figure 11). We can conclude that we **have statistical support to confirm H5** in the car category.

		Sig.
Preference for Large 6.16 (2.00)	Preference for Small 4.65 (2.25)	0.027
	Preference for Medium 4.44 (2.03)	0.002

Figure 11: Conspicuous consumption means with significance levels between groups and in the brackets standard deviation – Cars category

Discussion and Implications

The purpose of this paper was to investigate whether size preferences affect consumers' perceptions of quality, desirability and willingness to pay. In order to better capture the overall connection between a favoured size and the effects it can have on the aforementioned concepts, three explanatory factors were incorporated in the analysis (utilitarian, conspicuous and hedonic consumption). Findings that both support and reject our hypotheses emerged and through our discussion we will argue the importance and the implications of these results.

Two product categories were chosen, apartments respectively cars, for a better generalization of the effects, but as expected the results differed from one category to another. These differences might also be an effect of the two product categories chosen, an apartment requiring a higher involvement in the decision process.

Direct effects

Firstly, even though we expected that a preference for large products will increase the perceived quality, desirability and willingness to pay, the results supported this association only with regards to the desirability of the products. We observed an increase in the desirability in both product categories when the size was increased. The scenario in which the size was decreased showed a reduction in the rating of desirability. In this manner, these findings are supported by previous studies that showed that there is indeed a preference for larger stimuli (Silvera, Josephs and Giesler 2002).

Quality has not been associated with size issues until now. We proposed that consumers will perceive the larger products as having a higher quality; however we did not find support for this statement in none of the product categories. Therefore, size is not an indicator used in establishing the quality level of products, at least not for the product categories that we proposed.

The pricing policy is one of the most important decisions for marketers because it is connected with the profitability that the product can bring. It is essential to know which factors consumers consider when forming a price they would be willing to pay. A highly relevant outcome of the present study is the fact that even if people showed a clear desirability for large sized items, when it comes to paying a higher price for these items they are not willing to increase their spending. This pattern was also observed in the scenario in which size was reduced. Likewise, consumers seem to have already established a price level and are not willing to change this level significantly. An interesting finding is the idea that consumers were more likely to buy extra features when the size of the apartment was small rather than when they already opted for the large apartment. For cars, no such pattern was discovered as our participants were willing to buy the same amount of extra features no matter the size of the car.

Reasons behind preferences

The different results obtained for the two product categories were visible when analyzing the explanatory factors for which consumers would chose a larger sized apartment or car. Utilitarian needs were found to be predictors of the preference for larger apartments but not for larger cars. Reasons like having more space for personal belongings, possible family expansion or encouraging recreational and social activities drove participants in opting for a larger apartment. On the other hand, a larger car was not seen as offering more utility. These results might seem to contradict the general supposition that a larger car would also offer additional space for carrying more belongings or dealing with future family expansions, however, our results might be influenced by the chosen sample (students who usually have other reasons than size when purchasing a car).

Even though as mentioned throughout the paper, it is hard to capture reliable information with regards to a conspicuous behaviour due to the sensitivity of the subject, we found statistical evidence to conclude that participants showed a conspicuous behaviour when preferring a bigger car. This behaviour could only be partially observed in the apartment category.

Although we proposed the hedonic consumption as a third possible reason for preferring a larger product, we could not find statistical support for associating items with this variable. Mainly, this was caused by the lack of research on this topic and by the high level of subjectivity that this concept involves.

Implications

As emphasized in the previous sections, the literature has mainly focused on examining the relationship between the perceived physical size and the packaging industry (Krider, Raghurir and Krishna 2001; Wansink, Painter and North 2005) as well as its effect on food intake (Fisher and Kral 2008; Fisher, Rolls and Birch 2003; Diliberti et al. 2004). The closest approach to the size heuristics topic addressed only the effect of physical size on aesthetic judgements (Silvera, Josephs and Gielser 2002). Our study however, takes an essential step forward in connecting the physical size of the product with key concepts such as desirability, quality and willingness to pay, that enable marketers to base their decisions on this simple contextual cue. More and more attention is placed on capturing what

really matters for consumers in the buying decision process. So far, the marketing literature has not considered size as an important factor in this process, nevertheless our study shows that size does have an influence on the desirability of the products and should be taken into account.

One of the most significant contributions to managerial decisions is to be found in the positive association between a larger product and its impact on desirability. Managers should take advantage of this finding and use size as a way to increase the desirability of their products. At the same time, according to our results, they should focus on other elements when establishing the pricing strategy rather than on size.

Moreover, marketing campaigns should focus on presenting utilitarian aspects when promoting products such as large apartments, while a more conspicuous approach is desired when addressing other product categories such as large cars.

Studies in which brand names (Maheswaran, Mackie and Chaiken 1992) or country of origin (Chang 2004) have been found to serve as important heuristic cues were brought into attention in the marketing literature, but to our knowledge no other study focused on size as a heuristic cue. In this sense, we believe this study brings a new contribution to the literature.

Limitations and Further Research

Although the present study revealed significant findings in the consumer behaviour area as well as key implications for marketing managers, the results are subject to limitations that are going to be discussed.

Firstly, the respondent sample is comprised by students with ages between 20 and 32 years old. This implies a difficulty in generalizing the results across other samples with different characteristics. Moreover, when using a web – based questionnaire, one does not have complete control over the respondents, which may lead to a weaker representativeness of the student sample. It is also worth mentioning the fact that for some of the participants it might have been difficult to place themselves in the process of purchasing the proposed items, reason why the sample was not as large as expected (169 cases were excluded due to excessive

missing data). In spite of this, we do not believe that the collected data was affected.

Secondly, when running the analysis some of the main variables were transformed into categorical or dummy variables. This eventually led to using small samples for some of the groups, for example when dividing according to the willingness to purchase a larger version only 14 participants were not willing to compared with 73 willing to. Future research should consider this aspect and make sure their final sample size is sufficient for obtaining valid findings.

Another limitation of the study is represented by the difficulty to provide reliable scales from previous literature. Most of the studies focusing on physical size aspects or on utilitarian, conspicuous or hedonic reasons, considered a more qualitative approach. This required a more in-depth reasoning when selecting representative items. However, the reliability analysis ensured the representativeness of the factors.

Future research should consider the results provided in this study and go further in analyzing the size heuristics topic while overcoming the aforementioned limitations. Additionally, future studies should consider not only a more representative sample but also more complex product categories that would allow a better generalization of the effects that size can have on consumer evaluations. New studies should use other methods in their observations such as controlled experiments in which participants would be confronted with different product sizes.

Other possible reasons for preferring different sizes besides the ones proposed in this study – utilitarian, conspicuous and hedonic - should also be investigated in the future. Moreover, reliable indicators of a hedonic consumption should be further approached in order to establish whether there is a link between this type of consumption and physical size.

References

Adams, Anthony C, di Benedetto Anthony and Rajan Chandran .1991. Can You Reduce Your Package Size Without Damaging Sales?. *Long Range Planning*, 24 (4): 86-96.

Bernard, Russell H.. 2000. *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage Publications.

Chang, Chingching. 2004. Country of Origin as a Heuristic Cue: The Effects of Message Ambiguity and Product Involvement. *Media Psychology*, 6: 169-192.

Churchill, Jr Gilbert A. and Iacobucci Dawn. 2005. *Marketing Research: Methodological Foundations*, 9th Edition, Mason, Ohio: Thomson South-Western.

Dawar, Niraj and Philip Parker. 1994. Marketing Universals: Consumers' Use of Brand Name, Price, Physical Appearance, and Retailer Reputation as Signals of Product Quality. *Journal of Marketing*, 58(2): 81-95.

Diliberti Nicole, Peter L. Bordi, Martha T. Conklin, Liane S. Roe and Barbara J. Rolls. 2004. Increased portion size leads to increased energy intake in a restaurant meal. *Obesity a Research Journal*, 12:562-568.

Dillman, Don, A. 2006. *Mail and Internet surveys: the tailored design method*. New York: Wiley.

Fisher, Jennifer O. and Tanja Kral V.E. 2008. Super-size me: Portion size effects on young children's eating" *Physiology & Behavior*, 94: 39–47.

Fisher, Jennifer O., Barbara J. Rolls and Leann L Birch. 2003.Children's bite size and intake of an entree are greater with large portions than with age-appropriate or self-selected portions. *American Journal of Clinical Nutrition*, 77:1164–70.

Folkes, Valerie, Ingrid Martin and Kamal Gupta. 1993. When to say when: effects of supply on usage. *Journal of Consumer Research*, 20:467–77.

Gigerenzer, Gerd. 1991. How to Make Cognitive Illusions Disappear: Beyond Heuristics and Biases. *European Review of Social Psychology*, 2: 83–115.

Hair, Joseph F. Jr; William C. Black, Barry J. Babin, Rolph E. Anderson and Ronald L. Tatham 2006b. *Multivariate Data Analysis*. 6th edition. Upper Saddle River, NJ: Pearson Prentice Hall.

Hair, Joseph F. jr., Robert P. Bush and David J. Ortinau. 2006a. *Marketing Research: Within a Changing Environment*. 3rd edition. New York: McGraw-Hill Irwin.

Hendon, Donald W. 1986. *Battling for Profits: How to Win Big on the Marketing Battlefield*. Jonesboro AR: Business Consultants International.

Hirschman, Elizabeth C. and Morris B. Holbrook. 1982. Hedonic Consumption: Emerging Concepts, Methods and Propositions. *Journal of Marketing*, 46 (3): 92-101.

Homburg, Christian, Nicole Koschate and Wayne D. Hoyer. 2005. Do Satisfied Customers Really Pay More? A Study of the Relationship Between Customer Satisfaction and Willingness to Pay. *Journal of Marketing*, 69 (April): 84–96.

IIHS – Insurance Institute for Highway Safety. 2009. *Status Report, Vol. 44, No. 4, April*: <http://www.iihs.org/externaldata/srdata/docs/sr4404.pdf> (accessed 6th of April 2011).

Josephs, Robert A., Brian R. Giesler and David H Silvera. 1994. Judgment by quantity. *Journal of Experimental Psychology: General*, 123:21-32.

Kapferer, Jean-Noel. 2008. *New strategic brand management: creating and sustaining brand equity long term*, 4th ed. MPG Books Ltd, Bodmin, Cornwall.

Kilbourne, William, Pierre McDonagh and Andrea Prothero. 1997. Sustainable consumption and the quality of life: a macromarketing challenge to the dominant social paradigm. *Journal of Macromarketing*, 17(1):4–24.

Kilbourne, William and Gregory Pickett. 2008. How materialism affects environmental beliefs, concern, and environmentally responsible behaviour. *Journal of Business Research*, 61: 885–893.

Khan, Uzma, Ravi Dhar and Klaus Wertenbroch. 2005. A behavioral design theory perspective on hedonic and utilitarian choice. *Inside Consumption: Frontiers of Research on Consumer Motives, Goals and Desires*, 144-165.

Krider, Robert E, Pryia Raghubir and Aradhna Krishna. 2001. Pizzas: pi or square? Psychophysical biases in area comparisons. *Marketing Science*, 20:405–25.

Krishna, Aradhna. 1991. Effect of Dealing Patterns on Consumer Perceptions of Deal Frequency and Willingness to Pay. *Journal of Marketing Research*, 28(Nov): 441-51.

Leonard-Barton, Dorothy. 1981. Voluntary simplicity lifestyles and energy conservation. *Journal of Consumer Research*, 8(3):243–52.

Levy, Sidney J. 1959. Symbols for Sale. *Harvard Business Review*, 37 (July-August): 117-119.

Maheswaran, Durairaj, Diane M. Mackie and Shelly Chaiken. 1992. Brand Name as a Heuristic Cue: The Effects of Task Importance and Expectancy Confirmation on Consumer Judgments. *Journal of Consumer Psychology*, 1(4): 317-336.

Marx, Karl. 1849. *Relation of Wage-Labour and Capital*. Chapter 6. August 2004. <http://eserver.org/marx/1849-wage.labor.capital/6-labor.and.capital.txt> (accessed Feb.5, 2011).

Menon, Ajay and Anil Menon. 1997. Enviropreneurial marketing strategy: the emergence of corporate environmentalism as market strategy. *Journal of Marketing*, 61(1):51–67.

Mother Jones. Fox Nathan. 2005.. *This new house*. March/April Issue
<http://motherjones.com/politics/2005/03/new-house> (accessed April 6, 2011)

NationMaster.com, *People Statistics - Size of houses (most recent) by country*
http://www.nationmaster.com/graph/peo_siz_of_hou-people-size-of-houses
(accessed April 5, 2011).

Okada, Erica Mina. 2005. Justification Effects on Consumer Choice of Hedonic and Utilitarian Goods. *Journal of Marketing Research*, XLII(Feb): 43-53.

Page, Christine. 1992. A History of Conspicuous Consumption. *Advances in Consumer Research*, 82-87.

Pelham, Brett W., Tin Tin Sumarta and Laura Myaskovsky. 1994. The easy path from many to much: the numerosity heuristic. *Cognitive Psychology*, 26: 103-133.

Raghubir, Pryia and Aradhana Krishna. 1999. Vital dimensions in volume perception: Can the eye fool the stomach? *Journal of Marketing Research*, 36: 313–26.

Rolls, Barbara J., Erin L. Morris and Liane S. Roe. 2002. Portion size of food affects energy intake in normal-weight and overweight men and women. *American Journal of Clinical Nutrition*, 76:1207– 13.

Shadish, William R., Cook, Thomas D. and Campbell, Donald T. 2002. *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Belmont: Wadsworth, Cengage Learning

Shai, Tan Au. 2007. A Study of Conspicuous Consumption in the Chinese Automobile Market. The University of Nottingham.

<http://edissertations.nottingham.ac.uk/1255/1/07MALixtsa.pdf.pdf>(accessed Feb.3, 2011).

Shapiro, Eben. 1993. Portions and Packages Grow Bigger and Bigger. *Wall Street Journal*. (October 12): B1.

Shukla, Paurav, Ekta Shukla and Sangeeta Sharma. 2009. Conspicuous Consumption in Cross-national Context: Psychological and Brand Antecedents, *Asia-Pacific Advances in Consumer Research*, 2-5 Jan: 16-18.

Silvera, David H., Robert A. Josephs and Brian R. Giesler. 2002. Bigger is better: The Influence of Physical Size on Aesthetic Preference Judgments. *Journal of Behavioral Decision Making*, 15(3) : 189-202.

Simonson, Itamar. 1990. The Effect of Purchase Quantity and Timing on Variety-Seeking Behavior. *Journal of Marketing Research*, Vol. 28(May): 150-62.

Stewart, Brad. 1994. *Can you trust a tomato in January?* New York, Bantaam Books.

Strahilevitz, Michael and John G. Myers. 1998. Donations to Charity as Purchase Incentives: How Well They Work May Depend on What You are Trying to Sell. *Journal of Consumer Research*, 24(4): 434-446.

Trigg, Andrew B. 2001. Veblen, Bourdieu, and conspicuous consumption. *Journal of Economic Issues*, 35(1): 99-115.

Tversky, Amos and Daniel Kahneman. 1974. Judgment under uncertainty: Heuristics and biases. *Science*, 185: 1124–1131.

Veblen, Thorstein. 1899 *The Theory of the Leisure Class*. Reprint 1965 .MacMillan, NewYork.

Voss, Kevin E., Eric R. Spangenberg and Bianca Grohmann. 2003. Measuring the Hedonic and Utilitarian Dimensions of Consumer Attitude. *Journal of Marketing Research*, 40 (August): 310-20.

Wansink, Brian and Se-Bum Park. 1996. At the movies: how external cues and perceived taste impact consumption volume. *Journal of Database Marketing*, 60:1-14.

Wansink Brian, James E. Painter and Jill North. 2005. Bottomless bowls: why visual cues of portion size may influence intake. *Obesity Research*, 13:93-100.

Whittlesea, Bruce A. 1993. Illusions of familiarity. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 19(6):1235-1253.

Woods, Walter A. 1960. Psychological dimensions of consumer decision. *Journal of Marketing*, 24:15-9.

Zeithaml, Valerie A. 1988. Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. *Journal of Marketing*, 52(3): 2-22

Appendices

Appendix 1: Questionnaire

This questionnaire (one way of manipulating the size variable) is one of the two questionnaires we distributed. This section will provide an indication of how the questionnaire looked like. We will also make references to what were the specific differences between this version and the second version.

Instructions

Dear participant,

In the following questionnaire you will be asked to answer several questions regarding your preferences, desirability and willingness to pay with regards to the purchase of a new apartment/car.

Please assume that you are actually in the market for this type of product and can afford to buy it, but answer with the values that the product has for YOU, and NOT with answers on what the actual prices might be.

Important! All your personal data and information provided in this questionnaire will remain confidential and will only be used for the purpose of this study. The survey should not take more than 10 minutes.

Thank you!

This section is meant to evaluate the respondents' preferences towards the different apartment sizes as well as the willingness to pay for these specific sizes. Also the respondents were asked to express their willingness to pay concerning different extra features available for the preferred apartment size.

Imagine you are considering the purchase of an apartment in a brand new building in a nice neighbourhood that is convenient for your work, school, shopping, and recreation needs. Assuming that all the following size options are in the same apartment building and that affordable financing is available, please list the price you would be willing to pay for each of the following. Put a price of 0 (zero) if you would not be interested in a particular size because it was too big or too small.

NOTE: The currency is not important so fill in with the one that you feel comfortable with (e.g. NOK, EUR, USD, etc.)

SMALL APARTMENT (approximately 40 square meters)	<input type="text"/>
MEDIUM APARTMENT (approximately 70 square meters)	<input type="text"/>
LARGE APARTMENT (approximately 100 square meters)	<input type="text"/>

Please rate your willingness to purchase these three apartment sizes.

From 1-Would Never Buy to 9-Would Definitely Buy.

	1	2	3	4	5	6	7	8	9
SMALL APARTMENT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MEDIUM APARTMENT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LARGE APARTMENT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Now assume you are considering some extra cost options for your most preferred size apartment. How much would the following extra features be worth to you? (NOTE: please write zero down if you would not be interested in the feature, again currency is not important).

all season climate control	<input type="text"/>
granite kitchen countertops	<input type="text"/>
solid hardwood and/or stone floors	<input type="text"/>
water jet (Jacuzzi) bathtub	<input type="text"/>
fully-tiled bathroom	<input type="text"/>
balcony with nice view	<input type="text"/>
fireplace	<input type="text"/>
garage parking	<input type="text"/>
energy saving solar powered water heater and interior lighting	<input type="text"/>

In this next set of questions the size variable was manipulated in order to capture the respondent's judgments with regards to a larger version of the same product.

Note that in the second version of the questionnaire the size variable is manipulated by capturing the respondent's judgments with regards to a smaller version of the product.

Now assume that your favourite apartment size is not available and you are offered an apartment in the same building that is 22% larger than your preferred size.

Please rate your willingness to purchase this bigger apartment.

	1	2	3	4	5	6	7	8	9
From 1-Would Never Buy to 9-Would Definitely Buy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please state how much would you be willing to pay for this larger version of apartment?

This part of the questionnaire is evaluating the functionality or the emotional reasoning when owning/purchasing a large apartment.

Please express your agreement/disagreement with regards to the statements.

From 1- Strongly Disagree to 9-Strongly Agree.

	1	2	3	4	5	6	7	8	9
A larger apartment makes it easier to find space for all my belongings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger apartment creates a difficult financial burden on its owner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger apartment makes it easier to deal with future family expansions (i.e. marriage, children, pets).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A large apartment sends a signal that the owner is a successful person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger apartment is less environmentally friendly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger apartment makes recreational and social activities easier.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger apartment is more difficult to keep clean.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A large apartment gives social status to its owner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I associate larger apartments with higher quality construction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be more likely to invite friends over for dinners and parties if my apartment was large.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I associate luxury and status with ownership of a large apartment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I personally aspire to one day own a large home or apartment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you currently own an apartment or house?

☐ YES

☐ NO

If yes, approximately how many square meters is your home/apartment? (If you do not own one, please write down "0")

The respondents are now asked to evaluate another product, in this case cars. The questions have the same structure as the ones used for apartments.

Note that for the second version of the questionnaire the size variable is manipulated by capturing the respondent's judgments with regards to a smaller version of the product (car).

Now imagine you are considering the purchase of a car. Assuming that all the following size options are accessible and that affordable financing is available, please list the price you would be willing to pay for each of the following. Put a price of 0 (zero) if you would not be interested in a particular size because it was too big or too small.

NOTE: The currency is not important, so fill in with the one that you are more comfortable with for e.g. NOK, EUR, USD, etc.

SMALL CAR such as Toyota Yaris, Ford Fiesta, Opel Corsa, VW Polo	<input type="text"/>
MEDIUM CAR such as Toyota Auris, Ford Focus, Opel Astra, VW Golf	<input type="text"/>
LARGE CAR such as Toyota Avensis, Ford Mondeo, Opel Insignia, VW Passat	<input type="text"/>

**Please rate your willingness to purchase these three car sizes.
(From 1-Would Never Buy to 9-Would Definitely Buy)**

	1	2	3	4	5	6	7	8	9
SMALL CAR:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MEDIUM CAR:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LARGE CAR:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Now assume you are considering some extra cost options for your most preferred size car. How much would the following extra features be worth to you? (NOTE: please write 0 (zero) down if you would not be interested in the feature, again currency is not important).

Air conditioning	<input type="text"/>
Electronic stability control	<input type="text"/>
Engine with 10% more power versus basic engine	<input type="text"/>
Engine with 25% more power versus basic engine	<input type="text"/>
Engine with 50% more power versus basic engine	<input type="text"/>
Automatic transmission	<input type="text"/>
Electric windows	<input type="text"/>
Metallic paint	<input type="text"/>
Leather seats	<input type="text"/>
GPS navigation system	<input type="text"/>
Sunroof	<input type="text"/>
Extra airbags	<input type="text"/>

Now assume that your favourite car size is not available and you are offered a car that is 17% smaller than your preferred size

Please rate your willingness to purchase this smaller car.

	1	2	3	4	5	6	7	8	9
From 1-Would Never Buy to 9-Would Definitely Buy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please state how much would you be willing to pay for this smaller version of car?

Please express your agreement/disagreement with regards to the statements.
(From 1-Strongly Disagree to 9-Strongly Agree)

	1	2	3	4	5	6	7	8	9
A larger car makes it easier to carry all my belongings on trips.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger car creates a difficult financial burden on its owner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger car makes it easier to deal with future family expansions (i.e. marriage, children, pets).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A large car sends a signal that the owner is a successful person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger car is less environmentally friendly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger car makes it easier to attend activities with friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A larger car is more difficult to keep clean.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A large car gives social status to its owner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I associate larger cars with higher quality construction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be more likely to volunteer to drive my friends around if my car was large.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I associate luxury and status with ownership of a large car.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I personally aspire to one day own a large car.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you currently own a car?

- ☐ YES
☐ NO

If yes, what kind of car do you own? (If you do not own one, please write down "0" - zero)

Car type:

Age:

Gender:

- ☐ MALE
☐ FEMALE

Appendix 2: Factor Analysis - Rotated Factor Matrix

Rotated Factor Matrix: Apartments

	Factor	
	1	2
SPACE_AP	.546	-.009
FINANCIAL_BURDEN_AP	.182	-.130
FAMILY_EXPANSIONS_AP	.833	.028
SIGNAL_SUCCESS_AP	.176	.771
LESS_ENVIRON_FR_AP	-.316	.218
SOCIAL_ACTIVITIES_AP	.783	.226
DIFFICULT_CLEAN_AP	.340	.084
SOCIAL_STATUS_AP	.249	.871
QUALITY_CONSTRUCTION_AP	-.059	.546
INVITE_FRIENDS_AP	.641	.225
LUXURY_STATUS_AP	.123	.735
ASPIRE_TO_OWN_AP	.724	.228

Rotated Factor Matrix: Cars

	Factor	
	1	2
SPACE_CAR	.049	.377
FINANCIAL_BURDEN_CAR	-.102	.676
FAMILY_EXPANSIONS_CAR	.120	.602
SIGNAL_SUCCESS_CAR	.855	.180
LESS_ENVIRON_FR_CAR	-.060	.771
SOCIAL_ACTIVITIES_CAR	.451	.167
DIFFICULT_CLEAN_CAR	.418	.319
SOCIAL_STATUS_CAR	.866	.163
QUALITY_CONSTR_CAR	.684	-.045
DRIVE_FRIENDS_CAR	.498	-.199
LUXURY_STATUS_CAR	.839	-.005
ASPIRE_TO_OWN_CAR	.692	-.131

Appendix 3: Preliminary Thesis Report

Student name and ID no:

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Assignment in GRA 19002

Preliminary Thesis Report

**Size Heuristics: how does size influence
consumers' evaluations?**

Hand-in-date

17.01.2011

Campus:

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Programme:

Master of Science in Strategic Marketing Management

Table of contents

1.1. INTRODUCTION. IMPORTANCE OF THE TOPIC	0
1.2. RESEARCH QUESTIONS	3
2.0. LITERATURE REVIEW	3
2.1. HEURISTICS: CONCEPTUALIZATION.....	3
2.2. SIZE PERCEPTIONS	4
2.2.1. Size effects on packaging	52
2.2.2. Size effects on food consumption.....	53
2.3. EXPLANATORY FACTORS.....	55
2.3.1. Conspicuous consumption.....	55
2.3.2. Utilitarianism and utilitarian consumption.....	11
2.4. ENVIRONMENTAL CONCERNS	57
3.0. HYPOTHESIS	59
4.0. METHODOLOGY.....	59
5.0. POSSIBLE LIMITATIONS	60
REFERENCES	61

1.0. Introduction. Importance of the topic

This paper represents a preliminary thesis proposal through which the authors wish to introduce the topic of interest, possible research questions and hypothesis and a literature review of previous research on the topic. We also include a section about methodology. The methodological part is not entirely established reason why the proposal will focus less on this part. The authors would also like to point out the fact that to their knowledge the topic presented has not been researched and linked to the marketing field. Since there is no previous research to contribute to, it is possible that some parts of this preliminary thesis could change in the final thesis.

The final thesis is meant to explore a part in the marketing literature that has not yet been covered – size heuristics. Even if some aspects of this topic have been analyzed in cognitive psychology (though even here still providing inconsistent results) it has not received any attention in the marketing literature. To our knowledge size heuristics represent a gap in the marketing literature.

It has been shown that humans use simple contextual cues to make aesthetic decisions (Silvera et al. 2002). The literature on choice heuristics states that decision makers want to reduce the cognitive effort while keeping reasonable levels of decision accuracy (Simonson 1990). The objective of this paper is to prove the influence of a simple contextual cue like physical size on consumer decision making process. We expect that people will have a preference for larger objects over smaller one, thus, their aesthetic judgments will be influenced by the “larger is better” heuristics.

Furthermore, social studies link size to other factors like power, attractiveness, income and occupational status (Josephs et al. 1994, Silvera et al. 2002). Clothing and apparatuses but also political success, are found to have a positive correlation with size by applying the “bigger is better” rule.

Individual human features were also analyzed in the size context. Studies illustrate that larger eyes might be viewed as more attractive but when referring to noses we cannot make the same assumptions (Berry and McArthur 1985). Nonetheless, attractiveness in faces is found to be determined by the good balance of all characteristics and not by the individual dimension of a single characteristic

(Langlois et al 1990). In the same context certain height to width ratios seem to be often preferred over others, for example the “golden ratio”.

In an era in which people are fascinated by the technological capabilities of designing smaller and smaller electronic items (cell phones, computers, mp3 players), it might seem at least bizarre to suggest that people actually prefer the larger objects. Furthermore, the environmental sustainability promoters advocate for the use of smaller items in consumption over the larger ones, by referring to the damage that the larger objects have on the environment. However, there is evidence suggesting that size plays a significant role in the decision making process.

Additionally, we will investigate two possible explanatory variables, conspicuous consumption and utilitarian reasons, to predict the influence of size heuristics on evaluating the quality, desirability and purchase willingness of products.

However, as other predictor variables might come out as significant in the present study, the paper will have flexibility in including these variables in the final thesis.

Knowing how size influences consumers' judgments would have important managerial implications for product manufacturers. If size does have influence on product choice, managers would know how to design their products in order to appeal to customers and thus increase their profit using this simple aspect. Deciding on the size of products also has implications in the pricing and communication strategies. Research should also consider different product categories in order to decide where and how physical size is used as a heuristic cue. In the context of sustainability, these issues have an even larger impact due to the psychological conflicts between a desired environmental friendly behavior and actual purchase behavior.

1.1. Research questions

Based on the discussion presented above and the literature review that is going to be exposed in the next section, the following research questions have been developed:

- (1) Do consumers use the size factor of a product to evaluate its quality and/or its desirability?*
- (2) Is the physical size of a product influencing consumers' willingness to pay?*
- (3) If there is a positive correlation between the size, the perceived quality and the desirability of a product, can this correlation be explained by a conspicuous consumption or a utilitarianism behavior?*
- (4) If there is a positive correlation between the size, the perceived quality and the desirability of a product, in what proportion is an environmental friendly behavior taken into consideration?*

2.0. Literature Review

Considering the lack of previous studies on the topic of size heuristics, this literature review will focus on presenting the stream of research that has so far emerged in other subject areas and connect it to the focus of this present study. Size perceptions, the explanatory factors that could determine the purchase behavior as well as the context of sustainability will be analyzed. However, the concept of “heuristics” will firstly be introduced in order to better understand the process.

2.1. Heuristics: conceptualization

The concept of a “heuristic” is a complex concept and, as Gigerenzer (1991) various meanings and a long history: from Descartes’ 21 heuristic rules for the direction of the mind to Duncker’s heuristic methods that guide the stepwise reformulation of a problem until it is solved.

The work of Herbet Simon introduced the concept of a heuristic in psychology. Simon argued that, because of limited information-processing abilities, humans have to construct simplified models of the world. The results of these models are the heuristics. They are short cuts that can produce efficient decisions. Simon understood heuristics such as satisfying (i.e., selecting the first option available that meets minimal standards) as adaptive strategies in a complex environment, where alternatives for action are not given but must be sought out (Gigerenzer1991).

In further studies, the term “heuristics” was borrowed from artificial intelligence to explain “errors” in probabilistic reasoning. “People rely on a limited number of heuristic principles which reduce the complex tasks of assessing probabilities and predicting values to simpler judgmental operations. In general, these heuristics are quite useful, but sometimes they lead to severe and systematic errors” (Tversky and Kahneman1974).

The article of Tversky and Kahneman (1974) describes three heuristics that are employed in making judgments under uncertainty: (1) representativeness, which is usually employed when people are asked to judge the probability that an object or event A belongs to class or process B; (2) availability of instances or scenarios, which is often employed when people are asked to assess the frequency of a class

or the plausibility of a particular development; and (3) adjustment from an anchor, which is usually employed in numerical prediction when a relevant value is available. Anyway, these heuristics lead to systematic and predictable errors but a better understanding of them could improve judgments and decisions in situations of uncertainty.

However, the literature so far argued that heuristics are meant to explain what does not exist. Rather than explaining a deviation between human judgment and allegedly “correct” probabilistic reasoning, future research has to get rid of simplistic norms that evaluate human judgment instead of explaining it (Gigerenzer 1991).

2.2. Size perceptions

Starting from Piaget’s (1960) observations that when visualizing a cylindrical object people tend to focus more on the vertical dimension than on the horizontal one, Krider et al. (2001) explore the implications of shape or size related biases on purchase likelihood and purchase quantity. These two biases have strong inferences in the package design industry, showing that tall rectangular boxes that have equal volumes to square boxes are perceived as having a larger volume (Krider et al. 2001).

Size biases appear to have influence also in businesses in which displaying information about size has a direct implication on consumer’s willingness to pay. Such an example is provided by pizzerias where, as the study shows (Krider et al. 2001) customers can compute more easily the overall size if they are given a picture rather than when they are given the diameter using numbers.

Taking into consideration the perceived volume biases Raghubir and Krishna (1999) prove that the height of the container is used as a shortening visual heuristic in appreciating the volume. Thus, in line with other studies (Krider, 2001; Wansink 2004), it is shown that an elongated package shape is perceived to have a larger volume than a squared package of the same volume.

On the other hand, perceived consumption is inversely associated to height. Since they are perceived to be bigger they can also be consumed faster (Raghubir and Krishna 1999).

From a consumption perception, Folkes et al. (1993) show through a series of experiments that usage decreases as supply diminishes due to the usage decisions

made before pouring the amount, the supply being firstly considered visually. The portion used depended directly on the total amount available, subjects pouring more if they perceived having a rather full container than if they perceived that the supply might soon finish.

However, in an age in which corporate success can be measured by the ability to build the smallest laptop computer, the smallest cellular phone, or the smallest microchip, it seems counterintuitive to suggest that people actually prefer larger objects over smaller ones. Silvera et al.(2002) show that the size of an object can act as heuristic cue for preference judgments. Considering that physical size is both easily observable and easy to apply to judgments, it is ideally suited for this usage.

Most of the existing literature referring to the effects that size might have in product purchase or consumption are related to packaging or food intake. Packaging has always represented an important concern for brand managers from the logistics point of view as well as from the consumer's perceptions and expectations point of view. At the same time more and more research concerned with diets and balanced nutrition, find a link between the size of the portions and the energy intake.

2.2.1. Size effects on packaging

There is clear evidence in the literature proving that the different size packages affect consumers' usage volume and their perceptions. Although no research has shown that package size directly influences usage volume, there is much folk wisdom and many anecdotes as to why researchers expect such a relationship (Wansink 1996). Such notions range from suggesting that large-size packages are more difficult to control and are subject to over pouring (Stewart 1994) to suggesting that people are more willing to "finish-up" large-size packages because they take up too much space in household inventory (Hendon 1986).

However, Wansink (1996) explains that although some managers assume that larger package sizes encourage consumers to use more (per usage occasion) than smaller package sizes, the support is only anecdotal and these assumptions are becoming a source of controversy. Managers are interested in selling more of a product, whereas public policy officials are interested in decreasing the amount

that a consumer wastes (Shapiro 1993). At the center of this issue is the relationship between package size and usage volume.

Folkes, Martin, and Gupta (1993) suggest that compared to small packages, one reason large packages might be expected to encourage greater use is because consumers would be less concerned about moving out of the product. They also suggest that the container size itself might be used as a cue for product effectiveness and so influence usage. Experience with products may have taught consumers that large bottles generally contain weaker or more diluted forms of products, whereas small bottles contain more concentrated forms. If so, then consumers might use less from small containers because the product within the small container would be perceived as more effective compared to the one from a large container.

Adams et al (1991) analyzes 25 cases to measure the effects of reducing the packaging size. The general conclusions are that consumers do not see the change in size if this reduction is not totally obvious. However, they seem to be more aware of these modifications in product categories in which this tactic is commonly used like candy bars and cereals. In cases in which downsizing was offered as a strategy that was supposed to better satisfy the needs of packaging for customers (like bottled water), customers appreciated this change and actually increased their purchase frequency. Nevertheless, it is emphasized that unless this tactic is correlated to the benefits brought to the customers through this new packaging, it can actually lead to a decreasing market share.

Understanding why package size might accelerate usage has important marketing mix implications. If any usage-related differences are caused by unit cost perceptions, there are pricing and promotion implications; if they are instead caused by supply perceptions, there are package size and multipack implications.

2.2.2. Size effects on food consumption

In a research designed to measure the response of bite size and intake when exposed to larger portions, children were found to increase their consumptions by 25% and to have a bite size with 15% larger. When allowed to serve themselves, children consumed 25% less food than when they were served a large portion (twice the size of the reference portion). These results show the effects that portion size has on food intake on children (Fisher 2003). In a later study (Fisher

and Kral 2008) it is shown that large portions influence energy intake and encourage obesity for 2 years old children.

Adults were also tested to see if an increase in the portion size affects food intake (Rolls et al. 2002) and results showed that there is indeed a direct effect of the food offered on the energy intake. Portion size also affected the development of hunger and satiety; people ate more before reaching satiation when offered larger portions. However, in contrast with the previous study (Fisher 2003) portion intake was not influenced by the possibility of serving themselves versus being served, thus portion size had an equivalent effect in both cases.

The literature so far shows that the size of food packaging and portions has a great impact on consumption. A more recent study by Rolls et al (2008) tested how adults responded to meals on different days of four different portion sizes of macaroni and cheese. They found that the bigger the portion, the more participants ate. Participants consumed 30% more energy (162 cal) when offered the largest portion (1000g) compared to the smallest portion (500g). They also reported similar ratings of hunger and fullness after each meal despite the intake differences. After the study, only 45% of the subjects reported noticing that there were differences in the size of the portions served.

The same results were found in a study by Diliberti et al.(2004) in a restaurant setting. He showed that when a pasta entrée was served in different portion sizes on different days, people ate larger amounts when they were given larger portions.

Moreover, research done so far suggests that larger portion sizes have an effect of increasing amount eaten regardless the taste of food. Wansink and Park (1996) studied the consumption behavior of the people in a movie theater. They were given a medium (120g) or large (240g) bucket of popcorn. Subjects were divided into two groups based on whether they thought the taste was favorable or unfavorable. The results showed that the ones that had larger popcorn portions ate more even though their ratings related to the taste of popcorn were low.

Studies show that, often, people are unable to tell the differences in portion size when offered different sizes on different days. Although the ability to accurately determine appropriate amounts of food to eat is important, there is little research to suggest which methods would be most successful in helping people estimate appropriate serving sizes.

For example, Young and Nestle (1995) concluded that characteristics of people (gender, age, body weight, level of education) cause differences in the way they estimate portion size, and error in estimating becomes greater as portions increase. In addition, physiologic satiety cues are readily overridden by food cues, such as large portions, easy access, and the sensory attractiveness of food (Pudel and Oetting 1977).

Wansink (2004) suggests that portion size increases consumption regardless of a food's favorability. Although container or package size can be used to downwardly adjust portion size and consumption, it can also be used to increase consumption among populations (children and the elderly) for which healthful yet possibly less palatable foods (such as fruits and vegetables) are important for continued health.

Many people do not carefully monitor how much they eat and can easily be influenced by consumption norms suggested by larger packages and portions. Without knowing how much is appropriate to eat or how much one has eaten, the amount of food left in a container can provide a biasing consumption norm. Over-reliance on such cues may, in turn, influence how much food people consume in distracting or engaging situations. A study conducted by Wansink (2005) showed that people who were served soup from "bottomless," refillable soup bowls ate 73% more soup than those eating from conventional bowls, but they did not rate themselves any more full.

2.3. Explanatory factors

As mentioned in the introduction of this paper, two explanatory variables will be considered at this stage: conspicuous consumption and utilitarian consumption. In the following parts we will review these two concepts that could explain the correlation between size and desirability and quality.

2.3.1. Conspicuous consumption

There is a strong probability that consumers' preference for larger products and their association with quality and desirability could be explained by a concept called "conspicuous consumption". Conspicuous consumption refers to the ostentatious display of wealth for the purpose of acquiring or maintaining status or prestige (Page 1992).

More than one hundred years ago, Thorstein Veblen (1899) provided a behavioral explanation for conspicuous consumption, in his famous theory of “the leisure class”. In his words, “In order to gain and hold the esteem of men, it is not sufficient merely to possess wealth or power. The wealth or power must be put in evidence, for esteem is only rewarded on evidence”. In other words, Veblen stated that one possible way to show wealth was through conspicuous consumption. The “Veblen effect,” hereafter also referred to as conspicuous consumption, is the act of conspicuously consuming and displaying a good purchased at a significantly higher price than the producer’s marginal cost. This type of consumption differs from mainstream consumption of regularly purchased goods as it satisfies not just material needs but also social needs, such as social status and prestige (Shukla et al 2009)

Although the first one that provided a formal documentation of the concept was Veblen, conspicuous consumption or spending money to tout one’s success is not new. In the primitive society, men possessed women and slaves as trophies of their status. Also, the aristocratic Romans spent outrageous sums of money on expensive gladiator fights. In these societies, the underlying dynamic of ostentation was described by a coexistence of money, military, and political strengths (Chaudhuri and Majumdar 2006).

Additionally, maybe one of the most significant ideas describing the concept of conspicuous consumption is brought by Karl Marx in 1849. He referred to the signaling qualities of consumption in his often quoted statement that satisfaction with one’s own house is determined by how big the surrounding houses are: “a house may be large or small; as long as the neighboring houses are likewise small, it satisfies all social requirements for a residence. But let there arise next to the little house a palace, and the little house shrinks to a hut. The little house now makes it clear that its inmate has no social position at all to maintain, or but a very insignificant one...”

As Chaudhuri and Majumdar (2006) suggest, the conspicuous consumption construct need not remain restricted to its original meaning. This concept could be expanded by incorporating more generalized and broader dimensions of “being

seen or identified by others,” “public consumption”, “self-concept” and “uniqueness”.

However, McCracken (1987) cited in Page (1992) notes that "conspicuous consumption is especially important to the study of the history of consumption because plays such an important role in the growth of a consumer society”.

2.3.2. Utilitarianism and utilitarian consumption

Utilitarianism is a philosophical line of thought whose aim was defined by Bentham (1815) as “maximizing the utility or happiness of the greatest possible number of people” (Renouard 2011). This concept has had many important consequences on reflection about morality: it is a perspective which focuses on the outcomes of an action and has little regard for its intentions. This philosophy has led to economic and political choices focused on economic growth.

The literature so far has been discussing the different types of motives that the consumption can have. It has been established that there are two types of motives: utilitarian or hedonic.

Woods (1960) defines hedonic consumption as representing the products that are primarily consumed for sensory gratification and affective purposes or for fun and enjoyment. Thus, hedonic consumption often arouses emotions and produce benefits that emphasis on the total sensory experience of the consumption process. In contrast, Khan, Dhar and Wertenbroch (2005) define the utilitarian products as the products that are primarily instrumental and their purchase is motivated by functional product aspects. These products are rational driven purchases and provide cognitively oriented benefits.

Consumers that base their purchase decisions on utilitarian reasons might chose certain product types or product categories exclusively because of their functional characteristics. Opposite with the previous concept, conspicuous consumption, this type of behavior might play an explanatory role in the present study.

2.4. Environmental concerns

The role of the environment in market behaviour went through different changes in the last 30 years (Kilbourne and Picket 2008). Kinnear et al. showed in 1974 that “an ecologically concerned segment may exist in a size large enough to

warrant exploitation” (p.23) and that detergent, petroleum and water supply companies were already investigating ecology-related marketing strategies. Later studies introduced behavioural indexes to measure an individual’s tendency towards a lifestyle of voluntary simplicity driven by ecological awareness, need to feel more self-sufficient and efforts to decrease personal consumption of goods (Leonard - Barton 1981). Nevertheless, green marketing strategies started to emerge as researchers showed how important it is to align the social performance goals and the corporate entrepreneurship orientations with the environmental concerns (Menon and Menon 1997).

More and more nongovernmental organizations, worldwide conferences and seminars, social media channels, books and public persons sustain environmental friendly causes. However, there seems to be a discrepancy between a declared environmental concerned behaviour and a consistent preference for buying environmental friendly products (Kilbourne and Picket 2008). Even consumers who admit to be supporters of the Fair Trade products do not buy at all or more regularly this kind of products (Chatzidakis et al. 2007).

In the light of environmental concerns, scholars started advocating for a sustainable consumption. Killbourne et al. (1997) argues that sustainable consumption reduces environmental effects, takes into consideration the needs of future generations and is for the fulfilment of needs that generate a better quality of life.

It seems that efficiency gains and technological advance are not powerful enough to accomplish a sustainable level of consumption. A proper change in consumers’ lifestyle, in the way they purchase and use products, is absolutely required.

The United Nations Environment Programme (UNEP) uses the concept of sustainable consumption to define “a number of key issues, such as meeting needs, enhancing quality of life, improving efficiency, minimizing waste, taking a lifecycle perspective and taking into account the equity dimension; integrating these component parts in the central question of how to provide the same or better services to meet the basic requirements of life and the aspiration for improvement, for both current and future generations, while continually reducing environmental damage and the risk to human health” (UNEP, 2001).

As argued earlier, there seems to be a gap between consumers' declared behaviour and their actual behaviour. Consumers advocating for a sustainable consumption should have a preference for smaller products as the resources used and the waste that it eventually brings along should be smaller than for a larger object. One of the paper's objective is to establish if the declared behaviour is confirming the actual behaviour.

3.0. Hypothesis

Considering the literature review and the proposed research questions, the following section presents possible hypothesis:

H1: Consumers who will use size when evaluating a product, will perceive the larger products as having a better quality and/or a higher desirability.

H2: Consumers who will use the size factor when evaluating a product, will be willing to pay more for a larger product.

H3 (a): Consumers who will show a preference for larger products, will in general exert a conspicuous consumption behavior.

H3 (b): Consumers who will show a preference for larger items, will in general have utilitarian reasons.

H4: Consumers who exert an environmental friendly behavior, will show a preference for smaller items.

4.0. Methodology

To be able to test our hypothesis we are going to conduct a controlled experiment among the students from BI Norwegian School of Management using booklets.

The study is based on the theoretical propositions that were constructed in the introduction, the research questions and the literature review.

Since we want to determine if conspicuous or utilitarian consumption can be explanatory variables, associations between size and functionality will probably

emerge. However, through a set of specific questions we should be able to determine the influence of each factor.

We hypothesize that participants would generally prefer larger stimuli over smaller stimuli.

We will conduct a series of 4 experiments in which participants will be asked to make preference judgments among pairs of stimuli that vary in size and informational complexity.

The purpose of Study 1 will be to demonstrate that larger objects would be preferred over smaller objects in pair wise preference judgments.

The purpose of Studies 2 and 3 will be to determine if the preferences for larger objects are predicted by conspicuous consumption, respectively utilitarian consumption.

The purpose of study 4 will be to examine to which extent a declared environmental friendly behaviour will actually determine a preference for smaller items.

Possible stimuli that are going to be referred in the booklets: television sets, cars and houses. We have chosen to address these three stimuli, as from our experience they are often subject to size decisions.

5.0. Possible limitations

Firstly we have to refer to sample that the experiment is using. Even though we chose 30 -50 students for each group, conclusions are still hard to generalize. Our sample is only from BI Norwegian School of Management, meaning that the age, life style and economic status might lead to a too deep homogeneity and to a non representative population as a whole.

Secondly, the stimuli used (television sets, cars and houses) might be limited in variety and to not encompass too many product categories.

Furthermore, as mentioned earlier, the specified stimuli have been chosen due to the correlations that are often made with physical size in the decision making process. Thus, the results of the present study might not have a high degree of generalization.

References

Adams, Anthony, C. Anthony di Benedetto, and Rajan Chandran .1991. "Can You Reduce Your Package Size Without Damaging Sales?" *Long Range Planning*.24 (4), 86-96.

Berry, Diane S, McArthur LelsieZ. 1985. "Some components and consequences of a babyface" *Journal of Personality and Social Psychology* 48: 312-323.

Chatzidakis, Andreas; Hibbert, Sally; Smith, Andrew P. 2007. "Why People Don't Take their Concerns about Fair Trade to the Supermarket: The Role of Neutralisation". *Journal of Business Ethics*. 74:89–100

Chaudhuri, Himadri Roy and SitanathMajumdar. 2006. "Of Diamonds and Desires: Understanding Conspicuous Consumption from a Contemporary Marketing Perspective", *Academy of Marketing Science Review*, 11

Diliberti N, Bordi, PL, Conklin MT, Rolls BR. 2004."Increased portion size leads to increased energy intake in a restaurant meal". *Obesity Res*, 12:562-568.

Fisher, Jennifer O, Kral, Tanja V.E. 2008. "Super-size me: Portion size effects on young children's eating" *Physiology & Behavior*, 94, 39–47

Fisher, Jennifer O.; Rolls Barbara J; Birch Leann L. 2003."Children's bite size and intake of an entree are greater with large portions than with age-appropriate or self-selected portions". *Am. J. Clin. Nutr.*77:1164–70

Folkes, Valerie; Martin, Ingrid; Gupta, Kamal. 1993."When to say when: effects of supply on usage". *Journal of Consumer Research*.20:467–77

Gigerenzer.Gerd. 1991."How to Make Cognitive Illusions Disappear: Beyond Heuristics and Biases" Published in: W. Stroebe& M. Hewstone (Eds.).*European Review of Social Psychology* (Vol. 2, pp. 83–115).Chichester: Wiley.

Hendon, Donald W. 1986. "Battling for Profits: How to Win Big on the Marketing Battlefield", Jonesboro AR: Business Consultants International

Josephs, Robert A.; Giesler, Brian R.; Silvera David H. 1994. "Judgment by quantity". *Journal of Experimental Psychology: General* 123:21-32.

Kilbourne, William; McDonagh, Pierre; Prothero, Andrea. 1997. "Sustainable consumption and the quality of life: a macromarketing challenge to the dominant social paradigm" *Journal of Macromarketing*. 17(1):4-24.

Kilbourne, William; Pickett, Gregory. 2008. "How materialism affects environmental beliefs, concern, and environmentally responsible behaviour". *Journal of Business Research* 61. 885-893

Kinnear, Thomas C.; Taylor, James R; Ahmed, Sadrudin A. 1974. "Ecologically concerned consumers: who are they?" *Journal of Marketing*. 38(2):20-4.

Khan, Uzma, Ravi Dhar and Klaus Wertenbroch. 2005. "A behavioral design theory perspective on hedonic and utilitarian choice", *Inside Consumption: Frontiers of Research on Consumer Motives, Goals and Desires*, 144-165

Krider, Robert E.; Raghurir, Priya; Krishna, Aradhna. 2001. Pizzas: pi or square? Psychophysical biases in area comparisons. *Marketing Science*. 20:405-25

Langlois, Judith H; Roggman, Lori ;, Reiser-Danner Loretta, A. 1990. "Infants' differential social responses to attractive and unattractive faces". *Developmental Psychology*. 26: 153-159

Leonard-Barton, Dorothy. 1981. "Voluntary simplicity lifestyles and energy conservation" *Journal of Consumer Research*. 8(3):243-52

Marx, Karl. 1849. Wage-Labour and Capital. (<http://eserver.org/marx/1849-wage.labor.capital/6-labor.and.capital.txt>, August 2004)

Menon, Ajay; Menon, Anil. 1997." Enviropreneurial marketing strategy: the emergence of corporate environmentalism as market strategy". *Journal of Marketing*. 61(1):51–67.

Page, Christine. 1992. "A History of Conspicuous Consumption", *Advances in Consumer Research*: 82-87.

Piaget, Jean; Inhelder, B, Szeminska A..1960. "The Child's Conception of Geometry". New York. Basic Books

Pudel VE, Oetting M. 1977). "Eating in the laboratory: behavioral aspects of the positive energy balance", *International Journal of Obesity*, 1:369-386.

Raghubir, Priya; Krishna, Aradhna. 1999. "Vital dimensions in volume perception: Can the eye fool the stomach?" *Journal of Marketing Research* 36: 313–26

Renouard, Cecile. 2011. "Corporate Social Responsibility, Utilitarianism, and the Capabilities Approach", *Journal of Business Ethics*, Vol. 98 Issue 1, p85-97

Rolls, Barbara J; Morris, Erin L; Roe, Liane S. 2002. "Portion size of food affects energy intake in normal-weight and overweight men and women". *Am. J. Clin. Nutr.* 76:1207– 13

Shapiro, Eben. 1993. "Portions and Packages Grow Bigger and Bigger", *Wall Street Journal*, (October 12), B1

Shukla, Paurav, Shukla, Ekta and Sharma, Sangeeta. 2009. "Conspicuous Consumption in Cross-national Context: Psychological and Brand Antecedents", *Asia-Pacific Advances in Consumer Research*, 2-5 Jan, 16-18

Silvera, David H., Josephs, Robert A. and Giesler, R. Brian. 2002. "Bigger is better: The Influence of Physical Size on Aesthetic Preference Judgments", *Journal of Behavioral Decision Making*, Vol. 15 Issue 3 (July), 189-202

Simonson, Itamar. 1990. "The Effect of Purchase Quantity and Timing on

Variety-Seeking Behavior”.*Journal of Marketing Research* .Vol. XXVII (May), 150-62

Stewart, Brad. 1994. “Can you trust a tomato in January?”, New York, Bantaam Books

United Nations Environment Programme: “Sustainable consumption”
<http://www.unep.org/themes/consumption/index.asp>

Tversky, A., and Kahneman, D. 1974. “Judgment under uncertainty: Heuristics and biases”,*Science*, 185, 1124–1131

Veblen, Thorstein. 1899.“The Theory of the Leisure Class”, Reprint 1965, MacMillan, NewYork.

Wansink B, Painter JE, North J. 2005. “Bottomless bowls: why visual cues of portion size may influence intake”, *Obesity Research*, 13:93-100

Wansink B and Park SB. 1996. “At the movies: how external cues and perceived taste impact consumption volume”, *Journal of Database Marketing*, 60:1-14

Wansink, Brian. 1996. “Can package size accelerate usage volume?”,*Journal of Marketing*, 60 (July), 1-14

Woods, Walter A.1960.“Psychological dimensions of consumer decision”,*Journal of Marketing*, 24:15–9

Young LR and Nestle MS. 1995. “Portion sizes in dietary assessment: issues and policy implications”. *Nutrition Review*, 53:149-158.