

# *“Attribute Level Variety-Seeking Behavior”*

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*Apostolia Loukopoulou*

A thesis submitted for the degree of  
Doctor of Philosophy

Under the supervision of the PhD thesis committee:

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Athens, May 2020



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This research has been partially funded by the European Union (European Social Fund-ESF) and Greek National Funds via the Operational Program “Education and Life Long Learning”



## ACKNOWLEDGEMENT

Upon completion of my doctoral thesis, I owe special gratitude to all those who supported me throughout this long research journey.

First of all, I would like to express my deepest appreciation to my academic supervisor, Professor George Baltas, for his continuous support, constant guidance and contribution in stimulating suggestions and encouragement during the elaboration of the present thesis. This thesis would not exist and I would not be able to complete this project without his supervision.

Moreover, I would like to acknowledge with gratitude the crucial role and contribution of the members of the PhD committee. I would like to express my sincerest acknowledgements and gratitude to Professor Flora Kokkinaki for her kind advice and invaluable input in the design of all the experimental studies. The empirical part of the thesis was enhanced by her providing suggestions arising from her invaluable methodological expertise. I would also like to thank Associate Professor Konstantinos Indounas for his encouragement and continuous support.

Special thanks should be attributed to all members of the faculty that devoted time on stimulating discussions about arising issues and helping me overcome theoretical and practical obstacles.

Moreover, I am grateful to State Scholarship Foundation (IKY) for partially funding my doctoral studies.



Last but not least, I would like to thank my family who have helped and supported me throughout this long research journey. Special thanks I owe to my husband for always being so supportive and did his best to help me accomplish this thesis. Thanks for always believing in me.

Finally, this thesis is dedicated to my beloved father who was always so proud of my academic achievements.

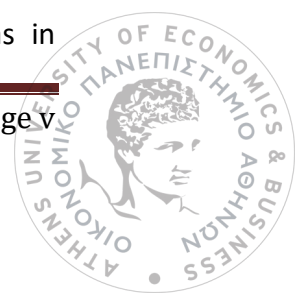


## EXECUTIVE SUMMARY

The purpose of the current thesis is twofold: first, to explore variety-seeking tendencies in hedonic and utilitarian products and indicate specific attributes that lead to variety-seeking across different product categories; second, to conceptualize variety-seeking as a behavioral consequence of choice overload and explore variety-seeking tendencies when choosing from large assortments. Five experimental studies were conducted to test the research hypotheses.

The results of **three experimental studies (Studies 1-3)** not only demonstrate that variety seeking is evident in utilitarian product categories but also show that consumers seek more variety in utilitarian products when variation is based on functional attributes, providing insights to variety-seeking research that focused mostly on hedonic products and has overlooked variety-seeking tendencies for utilitarian products.

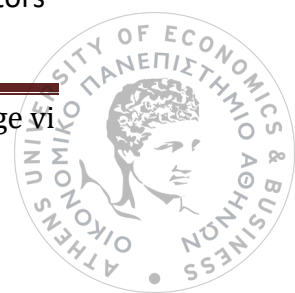
In addition, these studies contribute to the growing literature on attribute-level variety-seeking behavior by considering the attribute types that may lead to repeated purchase and those that may lead to switching, in connection with the product category type. More specifically, the results indicate that in hedonic products, variety-seeking is stimulated by sensory attributes whereas in utilitarian products variety-seeking is stimulated by utilitarian attributes. The empirical research of this thesis also shed light to the mechanism behind this effect that is attributed to the fact that in hedonic products consumers tend to perceive sensory attributes to be more repetitive, leading to greater satiation rates, whereas in



utilitarian products functional attributes are perceived as more repetitive. However, in product categories that are not clearly hedonic or utilitarian, variety seeking behavior does not differ across sensory and functional attributes. These findings offer a deeper understanding of the product-based mechanisms underlying variety-seeking behavior.

With regards to variety-seeking tendencies when choosing from extensively large assortments, the results of **two experimental studies (Studies 4 & 5)** indicate that consumers experiencing choice overload, due to difficult attribute tradeoffs they have to make, tend to engage in variety-seeking behavior as a cognitive mechanism in order to avoid making difficult trade-offs.

Specificity of satiation is suggested as a mechanism for explaining variety-seeking tendencies in the case of large assortments. Specificity effect on satiation suggests that when consumers focus on the detailed aspects of the consumption episodes they tend to perceive them to be less repetitive. The results confirm that through specificity of satiation, large assortments tend to be more satiating and consumers tend to engage in variety-seeking behavior when choosing from large assortments as a means to overcome satiation. A moderator of the effect is chooser familiarity with the choice domain. Preference matchers- consumers that are familiar with the choice domain- tend to seek more variety when asked to make choices from large assortments compared to when they choose from small assortments due to the fact that they may find more alternatives that match their ideal attribute combinations. On the other hand, preference constructors-



individuals that make decisions in areas where they lack expertise- tend to seek the same degree of variety when choosing from small or large assortments because they rely on the information found in the choice environment to determine their preferences. These findings offer a deeper understanding of the assortment-based mechanisms underlying variety-seeking behavior.

Apart from the important theoretical contributions, the findings have important practical implications and provide insights for product line management decisions such as line extensions and line pruning, for designing effective promotional offers and for effective category management in retail settings. Finally, they identify opportunities for further research that could enrich the understanding of variety-seeking behavior.



## PUBLICATIONS

This thesis has resulted in the following peer reviewed publications:

### ***In peer reviewed journals:***

Baltas, G., Kokkinaki, F., & Loukopoulou, A. (2017). Does variety seeking vary between hedonic and utilitarian products? The role of attribute type. *Journal of Consumer Behaviour*, 16(6), pp.1-12

### ***In conference proceedings:***

- Baltas, G., Kokkinaki, F., and Loukopoulou, A. (2016), “The interaction of product category and attribute type on variety-seeking behaviour”, *Proceedings of the 2016 British Academy of Management- BAM Conference*, Newcastle, England  
**(This paper received best full paper award in Marketing & Retail Track)**
- Baltas, G., Kokkinaki, F., and Loukopoulou, A. (2016),” Seeking- Simplicity: Variety-Seeking as a heuristic for solving Choice- Overload”, *Proceedings of the 2016 SABE/ IAREP Conference*, Wageningen, the Netherlands
- Baltas, G., Kokkinaki, F., and Loukopoulou, A. (2016),” Not seeing the forest for the trees: The role of specificity effect on variety-seeking behavior”, *Proceedings of the 2016 SABE/ IAREP Conference*, Wageningen, the Netherlands



- Baltas, G., Kokkinaki, F., and Loukopoulou, A. (2011), 'Does variety- seeking at the attribute level vary between utilitarian and hedonic products? An experimental study', *Proceedings of the 2011 Academy of Marketing Conference*, Liverpool, England.
- Baltas G., Kokkinaki F. and Loukopoulou L. (2012) "The effect of product category and attribute type on variety-seeking behavior", *41st European Marketing Academy Conference*, Lisbon, Portugal.



## TABLE OF CONTENTS

<b>ACKNOWLEDGEMENT</b>	<b>iii</b>
<b>EXECUTIVE SUMMARY</b>	<b>v</b>
<b>PUBLICATIONS</b>	<b>viii</b>
<b>TABLE OF CONTENTS</b>	<b>x</b>
<b>LIST OF TABLES</b>	<b>xvi</b>
<b>LIST OF FIGURES</b>	<b>xviii</b>
<b>Chapter 1: Introduction</b>	<b>1</b>
1.1. Thesis overview	2
1.2. Definitions	5
1.2.1. Variety-Seeking Behavior	5
1.2.2. Hedonic and utilitarian products	6
1.2.3. Choice overload	8
1.3. Research Questions	9
1.4. Research Methods	11
1.5. Thesis Outline	12



## **Chapter 2: Literature Review -----16**

2.1.	Chapter Overview -----	17
2.2.	Definitions for variety-seeking behavior -----	18
2.3.	Motivating factors for variety-seeking behavior -----	20
2.4.	Intrapersonal factors that motivate Variety-Seeking Behavior -----	25
2.4.1.	Utility maximization drive-----	26
2.4.2.	Need for Stimulation- Optimal Stimulation Level -----	28
2.4.3.	Desire to overcome Satiation -----	30
2.4.4.	Variety-seeking as a result of resolution of difficult decisions -----	35
2.4.5.	Personality traits that stimulate variety-seeking -----	38
2.5.	Product category related factors -----	40
2.5.1.	Variety-Seeking across product categories: Hedonic Vs Utilitarian products-----	45
2.5.2.	Trade-offs between hedonic and utilitarian products-----	47
2.5.3.	Guilt reducing justifications for hedonic consumption-----	50
2.5.4.	Attribute Level Variety-Seeking Behavior -----	53
2.6.	Interpersonal motivation -----	57
2.7.	Variety-Seeking and emotions-----	64
2.8.	Subtle or Non-conscious effects on variety-seeking behavior -----	69
2.9.	External factors: Contextual variables -----	70
2.9.1.	Social Influences on variety-seeking-----	72



2.9.2. The retail environment -----	73
2.9.3. Changes in Marketing Mix Elements -----	75
2.9.4. Temporal and Environmental effects -----	78
2.10. Choice overload-----	83
2.10.1. Moderators of choice overload-----	87
2.11. Conclusions & Research Questions-----	92

### **Chapter 3: The interaction of product type and attribute on variety-seeking -----95**

3.1 Chapter Overview -----	96
3.2. Hypotheses Development-----	97
3.2.1. Product category type and variety seeking-behavior-----	97
3.2.2. Interaction effect of product category type and attribute type on variety-seeking behavior -----	99
3.3. Study 1: Interaction of product type and attribute type on variety-seeking behavior -----	104
3.3.1. Method-----	104
3.3.2. Results-----	109
3.3.3. Discussion -----	112
3.4. Study 2: Perception of repetition and variety-seeking for specific attributes-----	114
3.4.1. Method-----	114



3.4.2. Results-----	117
3.4.3. Discussion -----	120
3.5. Study 3: Variety-Seeking in categories not clearly hedonic or utilitarian -----	121
3.5.1. Method-----	122
3.5.2. Results-----	124
3.6. General Discussion -----	125
3.6.1. Major Findings and Contribution of current research-----	125
3.6.2. Managerial Implications-----	126
3.6.3. Limitations and Directions for Future Research -----	127

## **Chapter 4: Choice Overload, Specificity, Chooser Type and Variety-Seeking----- 129**

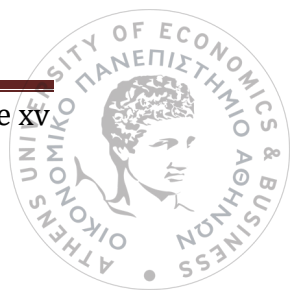
4.1. Chapter Overview -----	130
4.2. Hypotheses Development -----	131
4.2.1. Choice Overload-----	131
4.2.2. Variety-seeking as a consequence of choice overload -----	133
4.2.3. The effect of specificity on variety-seeking -----	136
4.2.4. The effect of chooser type on variety-seeking -----	138
4.3. Study 4: Variety-Seeking as a behavioral consequence of choice overload-----	141



4.3.1. Method-----	141
4.3.2. Results-----	146
4.3.3. Discussion -----	148
4.4. Study 5: Specificity effect and Variety-Seeking -----	150
4.4.1. Method-----	151
4.4.2. Results-----	155
4.4.3. Discussion -----	162
4.5. General Discussion -----	164
4.5.1. Major Findings and Contribution of current research-----	164
4.5.2. Managerial implications-----	167
4.5.3. Limitations and Directions for future research -----	168
 <b>Chapter 5: General Discussion-----</b>	 <b>170</b>
5.1. Chapter Overview -----	171
5.2. Conclusions -----	172
5.3. Theoretical Contributions -----	178
5.4. Managerial implications -----	188
5.4.1. Implications for product line management decisions -----	188
5.4.2. Implications for designing effective promotional offers -----	189
5.4.3. Implications for effective category management in retail settings -----	189



5.5. Limitations and Directions for future research -----	191
<b>References-----</b>	<b>194</b>
<b>Appendices -----</b>	<b>227</b>
APPENDIX 1: EXPERIMENTAL STIMULI FOR ALL STUDIES -----	<b>228</b>
APPENDIX 2: ALTERNATIVE SCALES FOR ALL STUDIES-----	<b>235</b>



## LIST OF TABLES

<b>Table 2.1:</b> Summary of accelerants and retardants of satiation -----	34
<b>Table 2.2:</b> A synopsis of empirical studies on Interpersonal motives for exhibiting variety-seeking behavior -----	62
<b>Table 2.3:</b> A synopsis of empirical studies on the role of emotions and affect for exhibiting variety-seeking behavior -----	67
<b>Table 2.4:</b> A synopsis of empirical studies on contextual factors that stimulate variety-seeking behavior -----	79
<b>Table 3.1:</b> Product category x attribute interaction on variety-seeking-----	111
<b>Table 3.2:</b> Product category x attribute interaction on perception of repetition-----	119
<b>Table 4.1:</b> Main Effects of Alternative OSL measures on variety seeking behavior -----	148
<b>Table 4.2:</b> An illustration of picture and verbal description of an item across the different categorization levels -----	153
<b>Table 4.3:</b> The effect of assortment size on attention to flavor and perception of repetition -----	158
<b>Table 4.4:</b> The interaction effect of categorization level and assortment size on variety-seeking -----	160



<b>Table 4.5:</b> The interaction effect of chooser type and assortment size on variety-seeking -----	161
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<b>Table 5.1:</b> Summary of research hypotheses and findings of the current thesis -----	176
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## LIST OF FIGURES

<b>Figure 2.1:</b> A conceptual framework for varied behavior adopted by an individual (Adapted from McAlister & Pessemier, 1982)-----	22
<b>Figure 2.2:</b> A conceptual framework for exploratory consumer behavior (Adapted from Hoyer & Ridgway, 1984)-----	24
<b>Figure 2.3:</b> A conceptual framework for antecedents and consequences of choice overload (Adapted from Chernev et al., 2015) -----	87
<b>Figure 3.1:</b> Product category x attribute interaction on variety-seeking-----	111
<b>Figure 3.2.:</b> The interaction of product type and attribute type on perception of repetition-----	119
<b>Figure 4.1:</b> The main effect of choice overload on variety-seeking -----	147
<b>Figure 4.2:</b> The effect of assortment size on attention to flavor and perception of repetition-----	158
<b>Figure 4.3:</b> The interaction effect of chooser type and assortment size on variety- seeking -----	162



# Chapter 1

## Introduction



## 1.1. Thesis overview

According to Francis Bacon, “nothing is pleasant that is not spiced with variety.” In the area of consumer behavior, individuals try to spice up their everyday lives by seeking diversity in their choices of goods and services (Kahn, 1995). Variety-seeking is considered a dimension of exploratory consumer behavior and has received considerable attention in the literature (Dodd et al., 1996; Herrmann et al., 2009; Huber et al., 2012; Sánchez-García et al., 2012).

Most empirical studies to date have addressed variety-seeking at the product offering level (i.e., brand switching). However, the identification of specific attributes that enhance variety-seeking may yield deeper insights into the pursuit of variety (Inman, 2001).

Identifying specific product attributes that stimulate variety-seeking across product categories can offer clear and actionable implications for retailers and manufacturers of consumer goods and help firms to optimize their product range by eliminating unneeded product variants and keeping the items that create the desired variety. It should be realized that greater variety usually means greater cost for the firm. Thus, retailers and manufacturers need to know when and where variety matters most, especially in our era of cost cutting and demand for efficiency in product assortments.



A common retail practice, in an effort to maintain optimal and efficient assortments, is that retailers often eliminate low-selling products. For example, Tesco cut product range by 30% and Volkswagen reduced vehicle variants up to 30% (Wood & Butler, 2015). However, this tactic can lead to negative results. In 2008, Walmart famously cut 15% of its Stock Keeping Units but consumer reactions and reduced sales soon followed, prompting the company to reverse the decision (Whitley, Trudel & Kurt, 2018). Such uniform cuts fail to take into account that consumers motivated by pleasure feel they have unique preferences, requiring large assortments even if some of the product variations sell poorly. A research indicating the attributes on which consumers seek and value variety across product categories can help retailers to manage assortments more effectively. The importance of this research is underpinned by recent research (Nielsen, 2017) that indicates that Millennials, the generation that is going to drive consumption, value variety in several product categories.

However, it has been also suggested that excessive variety may also have negative effects on consumer choice behavior (Huber et al., 2012). Extensive assortments, although desirable in many cases, may turn to a demotivating factor and lead consumers to choice overload. The choice overload hypothesis states that an increase in the number of options to choose from may lead to adverse consequences such as a decrease in the motivation to choose or a decrease in the satisfaction with the finally chosen option (Diehl & Poynor, 2010; Iyengar & Lepper, 2000; Mogilner, Rudnick, & Iyengar, 2008). On the

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Loukopoulou A. "Attribute Level Variety-Seeking"



other hand, other studies have questioned the too-much-choice effect (e.g., Scheibehenne et al., 2009) or suggested that consumers prefer larger product assortments (Nielsen, 2014). The overall conclusion seems to be that firms need empirically-determined insights to manage their product range.

The purpose of the current thesis is twofold: first, to explore variety-seeking tendencies in hedonic and utilitarian products and indicate specific attributes that lead to variety-seeking across different product categories; second, to conceptualize variety-seeking as a behavioral consequence of choice overload and explore variety-seeking tendencies when choosing from large assortments.

The remainder of this chapter is structured as follows: In section 1.2 the terms that are used throughout this thesis are introduced as well as the aspects that will be covered are briefly identified. Section 1.3 defines the research questions that guide the work presented. This then leads to Section 1.4, which explains the research methodology applied to investigate the issues. Finally, an outline of each chapter is presented in Section 1.5, including an outline of each study conducted.



## 1.2. Definitions

This thesis covers work that is interdisciplinary and hence, although narrow in focus, the potential meanings of the terms used are wide. Consequently, it is necessary to define clearly the terms used throughout the work so as to avoid any misunderstanding regarding their interpretation.

### 1.2.1. Variety-Seeking Behavior

**Variety-seeking** is classified as an exploratory consumer behavior (Baumgartner, 2002) and is considered to be an example of low-effort decision-making, associated more with feelings rather than cognitive processing (Hoyer and Macinnis, 2001). Several definitions have been given to this kind of consumer behavior such as:

- “the desire for a new and novel stimulus” (Hoyer and Ridgway, 1984)
- “the alteration among products or brands over a series of choices” (Kahn and Isen, 1993)
- “the tendency for an individual to switch away from the item consumed on the last occasion” (Givon, 1984; Kahn et al. 1986).



- “the tendency of individuals to seek diversity in their choices of services or goods” (Kahn, 1995).

What is common in the definitions above is that variety-seeking has to do with change, switching and diversity in consumer choice of goods or services. In the context of the current doctoral thesis, since variety-seeking behavior is exhibited in simultaneous multi-item choice contexts, the definitions that are adopted are that variety-seeking has to do with alterations among products over a series of choices and characterizes the tendency of individuals to seek diversity in their choices of services or goods.

In addition, throughout the current thesis there will be references to **attribute level variety-seeking** that refers to variety-seeking exhibited not only across product attributes but also within the setting of a particular attribute (Johnson et al., 1995).

### 1.2.2. Hedonic and utilitarian products

A product that is highly dependent on neural or effective sensations is characterized as a **hedonic product** (Hoyer & Ridgway, 1984; Kahn & Lehmann, 1991; Van Trijp et al., 1996; Steenkamp & Baumgartner, 1992). Hedonic products are multisensory and provide for experiential consumption, fun, pleasure, emotions and excitement (Hirschman & Holbrook, 1982). Examples of



hedonic products are flowers, designer clothes, music, chocolate, luxury watches.

On the other hand, **utilitarian products** are primarily instrumental and accomplish a functional or practical task. Microwaves, detergents, personal computers fall in this category (Holbrook & Hirschman, 1982; Voss, Spangenberg & Grohmann, 2003).

In the relevant literature, the terms hedonic and utilitarian may be used to refer not only to products but also to product attributes (e.g. Dhar & Wertenbroch, 2000). When referring to product attributes, the terms hedonic and utilitarian are used interchangeably with the terms sensory and functional, respectively, to describe the most salient attributes in a product. According to Batra and Ahtola (1990), hedonism is linked to sensory attributes and utilitarianism is related to functional, non sensory attributes. In this thesis, the terms sensory and functional are used to refer to product attributes following the definitions given by Batra and Ahtola (1990).

Different product categories can be high or low in both hedonic and utilitarian qualities (Crowley et al., 1992), since hedonism and utilitarianism are not necessarily two ends of a one-dimensional continuum (Voss et al., 2003). It is the relative salience of the sensory and functional attributes of a product that defines its classification as hedonic or utilitarian (Chernev, 2004; Batra and Ahtola, 1990). Different products can be high or low in both hedonic and



utilitarian attributes at the same time (Crowley, Spangenberg & Hughes, 1992) which means that a hedonic product can also have functional attributes and a utilitarian product can also have sensory attributes. In the current thesis, the holistic approach proposed by Okada (2005) is adopted where a product is characterized as being primarily or relatively more hedonic (utilitarian) based on the perception of the consumers.

### 1.2.3. Choice overload

Contrary to the conventional wisdom that more choice is better, the provision of extensive choices, even though initially desirable in some cases, may be proven unexpectedly demotivating in the end resulting in **choice overload**. The choice overload hypothesis states that an increase in the number of options to choose from may lead to adverse consequences such as a decrease in the motivation to choose or a decrease in the satisfaction with the finally chosen option (Diehl & Poynor, 2010; Iyengar & Lepper, 2000; Mogilner, Rudnick, & Iyengar, 2008). The current thesis will focus is on a particular type of choice overload—one in which the decision complexity is caused, at least partially, by the (large) number of available decision alternatives (Iyengar & Lepper, 2000).

A large number of alternatives (assortment size) to be considered is associated with added cognitive costs. That happens because, in the context of larger assortments, more attributes are to be evaluated and potentially



incorporated in the decision criteria resulting in a more complicated choice process. In literature, interchangeably with the term “choice overload” several terms have been used such as “overchoice effect” (Gourville & Soman, 2005), “the problem of too much choice” (Fasolo, McClelland, & Todd, 2007; Scheibehenne, Greifeneder, & Todd, 2009), “the tyranny of choice” (Schwartz, 2000), “consumer hyperchoice” (Mick, Broniarczyk, & Haidt 2004). Common to all these accounts is the notion of adverse consequences due to an increase in the number of options to choose from. Following the nomenclature in the literature, the term adopted for the current thesis is “choice overload.”

### 1.3. Research Questions

The purpose of the current thesis is twofold: first, to explore variety-seeking tendencies in hedonic and utilitarian products and indicate specific attributes that lead to variety-seeking across different product categories; second, to conceptualize variety-seeking as a behavioral consequence of choice overload and explore variety-seeking tendencies when choosing from large assortments.

The twofold purpose of this thesis culminates in four research questions. The first research question is **RQ1: Do consumers seek variety for utilitarian products?** This question is explored by demonstrating the interaction effect of product type and attribute type on variety-seeking behavior as well the underlying mechanism behind this effect. The experiments reported in Chapter



3 present the findings that address this research question. The second research question is **RQ2: What are the attributes that stimulate variety-seeking in different product categories?** The work reported in Chapter 3 where the interaction effect of product type and attribute type on variety-seeking is demonstrated, and a study on variety-seeking tendencies in a product category that is not perceived as clearly hedonic or utilitarian provide insights with regards to the second research question.

Next in Chapter 4, a task is introduced to conceptualize variety-seeking as a behavioral consequence of choice overload which is aimed at answering the third research question, which is **RQ3: Is variety-seeking a behavioral consequence of choice overload?**

Finally, in Chapter 4 an additional experimental study is introduced that explores the fourth research question which is **RQ4: Why is variety-seeking exploited in the case of choosing from large assortments and what are the possible moderators of this behavior?** The relevant experimental study provides insights into the process behind variety-seeking tendencies in large assortments and tests two moderators of this effect, chooser expertise and level of categorization.



## 1.4. Research Methods

The empirical part of the current doctoral thesis includes five independent, yet interrelated experimental studies. The experimental method is considered to be the most appropriate in order to infer causal relationships in academic research and complies fully with the research questions that were set.

All experimental studies were conducted in a laboratory setting in order to maximize experimental control as well as ensure the internal validity of process. However, care was taken so that the studies would be as realistic as possible in order to ensure external validity as well.

The experimental designs adopted were fully- crossed factorial designs. Fully-crossed experimental designs allow testing not only main effects but also interaction effects of the factors on the dependent variable. In this way, statistical errors are minimized and statistical conclusion validity is ensured, increasing the generalisability of the findings as well as the external validity of the process (Reis and Judd, 2000).

For each study, an appropriate questionnaire was developed including measures of both dependent and independent variables. The measurement of the constructs was conducted via well established scales suggested and tested in academic literature.



## **1.5. Thesis Outline**

This section presents a summary of the content of each chapter in this thesis, including the studies and contributions where appropriate.

### **Chapter 1 - Introduction**

Chapter 1 has introduced the focus of this research, described the principal terms that are used throughout the thesis, defined the scope and aims, briefly discussed a number of topics that are explored in the following chapters as well as the methods employed in order to conduct the research.

### **Chapter 2 - Literature Review**

Chapter 2 provides the essential theoretical background for the development of the research objectives and the research hypotheses of the current thesis. This chapter provides the necessary background for further development of the current thesis by reviewing the relevant literature. Its purpose is to stimulate the discussion and introduce the reader to several issues pertaining variety-seeking behavior, the role of product type and attribute type as motivating factors for exhibiting variety-seeking as well as choice overload phenomenon and issues associated with large assortments.



### Chapter 3 – The interaction of product type and attribute type on variety-seeking

This chapter contributes to the understanding of variety-seeking tendencies in utilitarian products and the identification of specific attributes that stimulate variety-seeking across product categories. To this end, a series of three experiments that were conducted to investigate the interaction of product type and attribute type on variety-seeking behavior are presented. The experiments were developed to explore the effect of product type (hedonic vs utilitarian) and attribute type (sensory vs functional) on variety-seeking and the underlying mechanism behind this effect.

*Study 1: Interaction of product type and attribute type on variety-seeking behavior-* The first experiment explores variety-seeking tendencies in hedonic and utilitarian products and tests the hypothesis that product type (hedonic or utilitarian) and attribute type (sensory or functional) interact to determine attribute level variety-seeking behavior.

*Study 2: Perception of repetition and variety-seeking for specific attributes-* The second experimental study builds on the first and examines the theoretical argument on the mechanism of the observed effect. The proposed mechanism that underlies the interaction of product type and attributes type on variety-seeking is that in hedonic products, sensory attributes are related to higher



satiation rates. Similarly, in utilitarian products, functional attributes are related to higher satiation rates.

*Study 3: Variety-Seeking in categories not clearly hedonic or utilitarian-* The third experimental study explores variety-seeking tendencies in a product category that is not clearly perceived as hedonic or utilitarian in order to provide a more complete view of the attributes that stimulate variety-seeking across different product categories.

#### **Chapter 4 – Choice Overload, Specificity, Chooser Type and Variety-Seeking**

The second chapter of the empirical research of the current doctoral thesis contributes to both variety-seeking and choice overload literature. It includes two experimental studies that were conducted to conceptualize variety-seeking as a behavioral consequence of choice overload and explore variety-seeking tendencies in the case of extensively large assortment as well as possible moderators.

*Study 4: Variety-Seeking as a behavioral consequence of choice overload-* The fourth experimental study of this thesis is designed to assess the effect of assortment size on variety-seeking behavior and conceptualize variety-seeking as a behavioral consequence of choice overload. This study focuses on a particular type of choice overload where decision difficulty is caused by the



large number of available decision alternatives (Iyengar & Lepper, 2000) in a multi-item simultaneous choice context.

*Study 5: Specificity effect and Variety-Seeking-* The fifth experimental study explores variety-seeking tendencies in the case of extremely large assortments and tries to explain the process under which large assortments lead to greater variety-seeking as well as possible moderators of this effect, such as chooser familiarity with the choice domain and categorization of the consumption episodes.

## **Chapter 5– General Discussion**

The final chapter provides a review of the main findings with regards to the research questions and discusses the theoretical contributions of this thesis. This discussion is followed by the managerial implications posed by the research findings providing significant insights for marketing practitioners. Finally, the limitations of the research are identified and significant directions for future research are pointed out.



## Chapter 2

### Literature Review

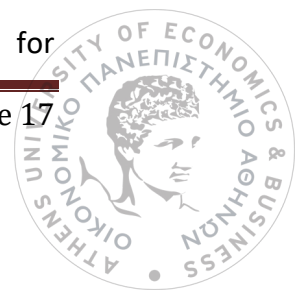


## 2.1. Chapter Overview

This chapter provides the necessary background for further development of the current thesis by reviewing the relevant literature. Its purpose is to stimulate the discussion and introduce the reader to several issues pertaining variety-seeking behavior, the role of product type and attribute type as motivating factors for exhibiting variety-seeking as well as the choice overload associated with large assortments.

In addition, this chapter provides the essential theoretical background for the development of the research objectives and the research hypotheses of the current thesis. The purpose of the current thesis is twofold: first, to explore variety-seeking tendencies in hedonic and utilitarian products and indicate specific attributes that lead to variety-seeking across different product categories; second, to conceptualize variety-seeking as a behavioral consequence of choice overload and explore variety-seeking tendencies when choosing from large assortments. In order to address these issues, it is necessary to examine the motives of exhibiting variety-seeking behavior, as well as provide a critical review on the choice overload phenomenon.

This chapter reviews literature and empirical studies relevant to the concerns of this thesis, being organized as follows. In Section 2.2, variety-seeking behavior is being defined and several types of this exploratory behavior are identified. In Section 2.3, the motivating factors that stimulate variety-seeking are discussed. After analyzing and comparing the proposed theoretical frameworks on motives for



variety-seeking behavior, those factors are organized into intrapersonal motives, interpersonal motives, product category related factors and external or contextual factors. Finally, in section 2.10 of the literature review the choice overload phenomenon is analyzed focusing on its antecedents, its behavioral consequences and factors moderating the negative effects of large assortments on choice. The last section summarizes the chapter, presents the main conclusions arising from the literature review that lead to the research questions.

## **2.2. Definitions for variety-seeking behavior**

Variety seeking as a research topic has received considerable attention in the consumer behavior literature due to its importance as a key factor in consumer choice (see reviews by McAlister & Pessemier, 1982; Van Trijp, 1995; Kahn, 1995). Several definitions have been given to this kind of consumer behavior such as:

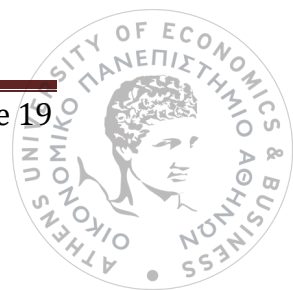
- “the desire for a new and novel stimulus” (Hoyer & Ridgway, 1984)
- “the alteration among products or brands over a series of choices” (Kahn & Isen, 1993)
- “the tendency for an individual to switch away from the item consumed on the last occasion” (Givon, 1984; Kahn, Kalwani & Morrison, 1986).



- “the tendency of individuals to seek diversity in their choices of services or goods” (Kahn, 1995).

Variety-seeking is classified as one type of exploratory consumer behavior, characterized as hedonic purchase behavior associated with feelings and psychosocial motivations rather than thinking and functional benefits (Baumgartner, 2002). Moreover, variety-seeking is considered to be an example of low-effort decision-making, associated more with feelings rather than cognitive processing (Hoyer & Macinnis, 2001) and is manifested due to hedonic rather than utilitarian shopping motivations (Dhar & Wertenbroch, 2000).

Several types of variety-seeking have been suggested. Raju (1984) distinguishes between instrumental and exploratory variety-seeking behavior. The first emerges as a result of consumer’s dissatisfaction with a specific brand whereas the latter is a result of consumer’s inherent need for variety and change. These two terms correspond to McAlister and Pessemier’s (1982) direct and derived variety-seeking respectively. When exerting direct variety-seeking, consumers switch because of an internal desire for change due to satiation or need for stimulation, whereas in the case of derived variety-seeking, consumers seek variety due to external constraints rather than due to an immediate internally derived need for variety. However, there is also the case where consumers may buy several variations of the same product at the same purchase occasion, a behavior that is characterized as horizontal variety-seeking behavior (Kim, Alleby & Rossi, 2002).



Variety-seeking is manifested behaviorally with various ways including brand switching and innovating (Price & Ridgway, 1982; Steenkamp & Baumgartner, 1992). Recent research has suggested that the variety-seeking tendency extends beyond the choice of items to the choice of choice rules themselves: independent of problem characteristics, the use of a particular choice rule on one occasion leads to decreased use of that rule on a subsequent occasion (Drolet, 2002).

### 2.3. Motivating factors for variety-seeking behavior

One noteworthy contribution is the body of research on explanations of variety-seeking (e.g., McAlister & Pessemier, 1982; Kahn, 1995; Van Trijp, Hoyer, & Inman, 1996; Inman, 2001; Tang & Chin, 2007). They have provided research evidence on a number of drivers of such behavior from both the psychological and consumer behavior disciplines: (1) individual factors, for example, satiation, need for stimulation, and uncertainty about future preferences; (2) external factors, for example, a price change, introduction of a new product, and marketing mix elements; and (3) product category factors, for example, involvement, perceived risk, and interpurchase frequency.

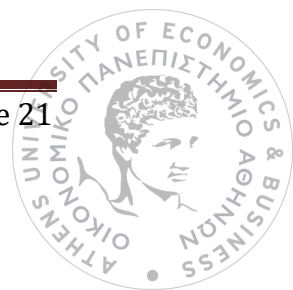
McAlister and Pessemier (1982) made one of the first attempts to organize the relevant literature on variety-seeking and identify motives that stimulate this type of exploratory behavior. In their theoretical framework, varied behavior is distinguished between direct and derived varied behavior: direct varied behavior is manifested



due to an inherent need for change whereas derived varied behavior results from external and internal forces that have nothing to do with a desire for change.

Direct varied behavior is attributed to interpersonal and intrapersonal motives. Intrapersonal motivation has been related to the existence of an optimal level of stimulation and satiation with existing attributes constructs and is driven consumers' desire for the unfamiliar, consumers' desire for alteration among familiar products and information seeking. On the other hand, interpersonal motivation has to do with consumers' desire for group affiliation or for maintaining one distinct identity compared to the group.

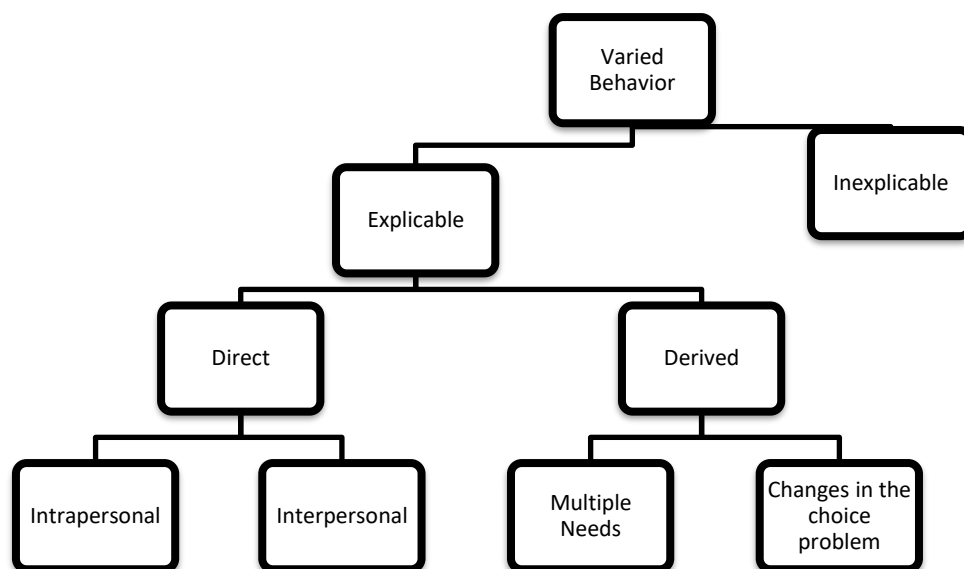
Derived varied behavior is attributed to changes in the choice problem such as changes in the marketing mix of an existing product or the introduction of a new product. Moreover, it can be stimulated due to multiple needs of the consumers. Multiple needs are decomposed into multiple users, multiple uses and multiple situations. Multiple users refer to cases where multiple consumers within a household prefer different products. On the other hand multiple uses have to do with different applications of the same product. For instance, soda can be used in cooking and cleaning. Finally, multiple situations refers to those cases in which the behavior is dictated by changes in the choice context such as: the social context of consumption, the location of consumption, time constraints on consumption, the quantity consumed, usage convenience (e.g.. individual packages of cereal when humidity is high), variables dependent on emotional reactions, concurrent activities



(Laurent, 1978). In Figure 2.1, the main motives for varied behavior as proposed by McAlister and Pessemier (1982) are summarized.

**Figure 2.1:**

A conceptual framework for varied behavior adopted by an individual (Adapted from McAlister & Pessemier, 1982)



Hoyer and Ridgway (1984) also organized and classified the relevant research on variety-seeking behavior into a theoretical framework where the dominant motives for variety-seeking are:

- (1) individual difference characteristics,
- (2) product characteristics,



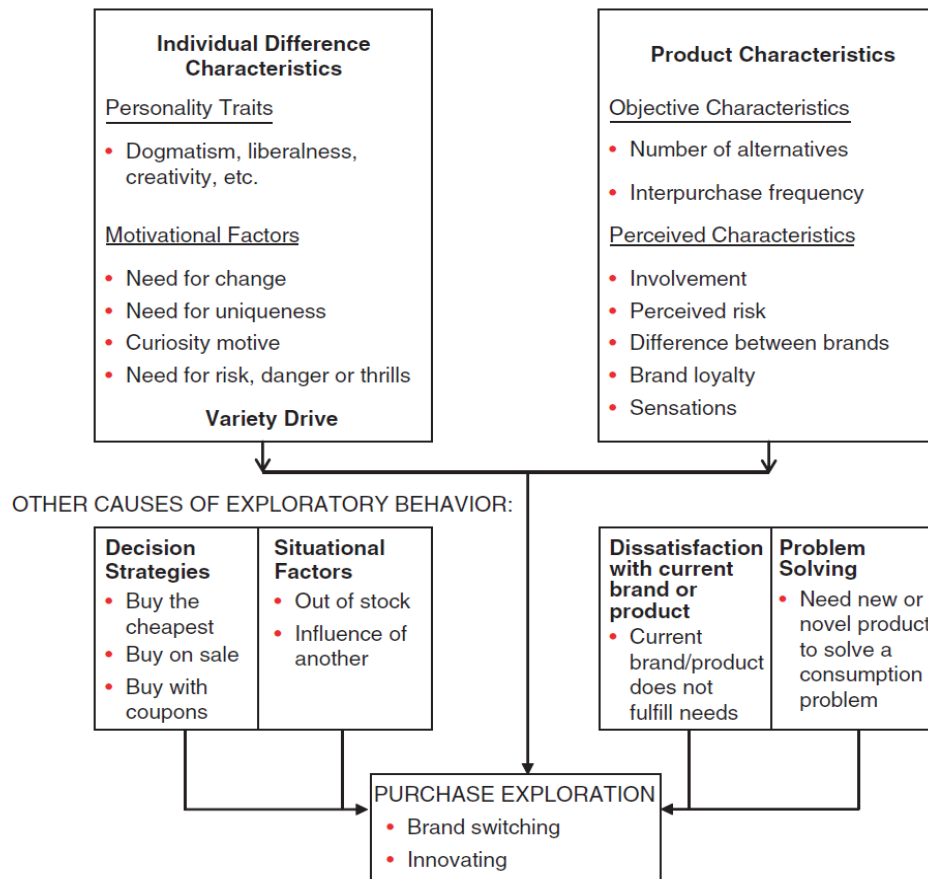
- (3) decision strategies,
- (4) problem solving,
- (5) dissatisfaction with current brand or product,
- (6) situational factors.

All factors are analyzed in figure 2.2. Both Hoyer and Ridgway's and McAlister and Pessemier's frameworks include intrapersonal factors such as need for change, situational factors and interpersonal factors (influence of another). However, Hoyer and Ridgway (1984) separate product characteristics from the choice problem and they suggest that variety-seeking is exhibited only for specific products, highlighting in this way the paramount importance of product category related factors in exhibiting variety-seeking behavior.



**Figure 2.2:**

A conceptual framework for exploratory consumer behavior (Adapted from Hoyer & Ridgway, 1984)



Kahn (1995), in her theoretical framework, classifies the motivating factors for variety-seeking behavior into three major categories: satiation/ stimulation, external situation and future preference uncertainty. The first factor corresponds to McAlister and Pessemier's direct variety-seeking, in which consumers switch because of an internal desire for change due to satiation or need for stimulation. The second factor is similar to McAlister and Pessemier's derived variety-seeking where



consumers seek variety due to external constraints rather than due to an immediate internally derived need for variety.

Compared to the previous theoretical frameworks, Kahn (1995) suggests an additional motivation for variety-seeking, namely future preference uncertainty. When variety-seeking is initiated due to future preference uncertainty, consumers seek variety so that they will have a portfolio of options as a hedge against future uncertainties or as a means to protect their continued interest in favorite options. This type of motivation corresponds either to choices made in a portfolio or choices that consumers make at one purchase occasion for later consumption and thus issues of future preference uncertainty arise.

#### **2.4. Intrapersonal factors that motivate Variety-Seeking Behavior**

The two most profound intrapersonal factors that lead to variety-seeking behavior are the inherent need for stimulation and the satiation for specific attributes. As discussed earlier, variety-seeking that derives from these factors has been characterized as “direct varied behavior” (McAlister & Pessemier, 1982) or just “satiation/stimulation” (Kahn, 1995). However, several additional individual motives for exerting variety-seeking have been suggested such as utility maximization drive (Givon, 1981; Kahn, Ratner & Kahneman, 1997) and future preference uncertainty (Kahn, 1995).



### 2.4.1. Utility maximization drive

One could argue that from an evolutionary perspective, the pursuit of variety is necessary for growth and adaptation to a changing environment (Foxall, 1993). Certainly, from a multi-disciplinary point of view (e.g., psychology, economics and nutrition) the consumer's desire for variety has been considered a natural and utility-maximizing motivation for behavior. In this context, Givon (1981) defines variety-seeking behavior as the phenomenon where a consumer switches brands as result of the utility derived by the switch itself, irrespectively of the chosen brands. Consequently, when exerting variety-seeking in product choices, consumers enjoy utility produced by the consumption of a brand and by the switch itself.

Kahn et al. (1997) suggest that consumers switch products because the utility derived by the change itself is higher than the utility derived by a repeated purchase. In fact, consumers try to maximize the utility derived from their consumption either globally or locally. When maximizing their utility locally, consumers do not take into account how their current choice will exert an effect on their future consumption. On the other hand, global maximization suggests that consumers consider the overall choice sequence and choose items across the sequence that would maximize their overall enjoyment, even though this may lead to choosing less-pleasing items. There is a stream of literature that suggests people indeed attempt to maximize utility globally rather than locally if the sequence is identified.



Moreover, research that incorporates real-time ratings of enjoyment across the complete choice sequence suggests that individuals making a series of choices often fail to maximize either locally or globally because they include so many less-pleasing items (Kahn et al., 1997; Ratner et al., 1999). In this case, the assumption about a rational consumer is violated.

There are several reasons postulated as to why the identification of a “sequence” changes the items chosen and increases the overall variety such that the consumption sequence ends up including less-pleasing choices. First, people prefer to spread out pleasurable things (Loewenstein & Prelec, 1993). Thus, when offered the opportunity to choose something less good or even bad in between good things, people might seize the opportunity so that the pleasures are spread out. Second, people tend to prefer improving sequences and this can dictate the desire to add in less-liked items in the early parts of a sequence. For example, participants in one series of experiments overwhelmingly preferred the sequences that ended with a gain rather than with a loss (Ross & Simonson, 1991). This has been found in other contexts as well: for example, people typically prefer increasing wage profiles to ones that are declining or flat (Loewenstein & Sicherman, 1991). One possible reason for consumers’ preference for improving sequences is that this format allows them to savor their reward for longer, whereas consuming an unavoidable, unpleasant item early eliminates feelings of dread (Loewenstein, 1987).



### 2.4.2. Need for Stimulation- Optimal Stimulation Level

The concept of an optimal level of stimulation (OSL) is central to theories that have been proposed to explain variety-seeking tendencies in consumers (McAlister & Pessemier, 1982; Raju, 1980). OSL refers to the ideal amount of stimulation a person prefers, in general, from all possible internal and external sources across all possible situations and over time (Zuckerman, 1979). Several psychologists have suggested that a person may engage in exploration of the environment (e.g., variety-seeking or novelty-seeking behaviors) in order to achieve a satisfactory level of stimulus intensity (see Kahn & Ratner, 2005 for a review). These theories indicate that when an environment provides low stimulation (below the optimal level), the individual is bored and the desire for increased stimulation rises. In that case, variety-seeking is exhibited in order to provide the proper arousal to the individual and restore the stimulation close to the optimal level (Jeuland, 1978; McAlister, 1979, 1982). Conversely, if the environment provides very high stimulation (above the optimal level), the individual seeks more moderate situations by reducing or simplifying input from the environment by means such as avoidance of novelty or variety.

Need for stimulation is considered as an intrapersonal motive in the sense that there is heterogeneity with regard to how much stimulation an individual may feel is optimal; some people have greater needs for stimulation and are more likely to engage in exploratory or variety-seeking behavior—or to innovate and try new things—and others have lower needs for stimulation and thus are less likely to pursue these types of activities (Raju, 1980). By comparing individuals with a low OSL



to individuals with high OSL, Raju (1984) indicated that they are different on three dimensions: desire for the unfamiliar (for instance desiring an unfamiliar brand), desire for variation in brand choice and information seeking.

By exhibiting variety-seeking behavior, the individual acquires the proper stimulation in consumer behavior by switching among familiar items (brands or stores etc.) in pursuit of the change per se (Steenkamp & Baumgartner, 1992). Consumers, when simplifying their decision making process (i.e. by purchasing the same product repeatedly), may find themselves in a state of boredom. Variety-seeking behavior in that case will make decision making process complex again and in this way will provide the proper stimulation to the consumers.

Consistent with the notion that variety-seeking behavior can be driven by a desire to maintain an optimal stimulation level, research suggests that when the drive for variety on one dimension is satisfied, the desire for variety on other dimensions diminishes. For example, if consumers select choice environments that are more stimulating, they may try to simplify their purchase behavior and choose less variety because their desire for stimulation is satisfied through the more complex environment (Menon & Kahn, 2002). Similarly, if the drive for stimulation is satisfied in one product category through increased variety seeking, variety seeking in a subsequent or parallel product category is diminished (Menon & Kahn, 1995). The implication of these results is that in some regards, the stimulation derived from seeking variety across different dimensions is similar (or at least substitutable).



Several scales have been proposed for measuring optimum stimulation level. Zuckerman (1979) developed Sensation Seeking Scale (SSS), while Raju (1980) used Arousal Seeking Tendency Scale that was developed by Mehrabian and Russell (1974). One of the most important scales for measuring OSL is Change Seeking Index (CSI) developed by Garlington and Shimota (1964). CSI is conceptualized as a one-dimensional scale of 95-items that gauges "the need for variation in one's stimulus input in order to maintain optimal functioning" (Garlington & Shimota, 1964, p. 919). Steenkamp and Baumgartner (1995) proposed a short form of the CSI scale that had even higher scores of nomological validity compared to the 95-item scale.

Moreover, Baumgartner and Steenkamp (1996, p.124) developed the Exploratory Acquisition of Products Scale (EAP) that "reflects a consumer's tendency to seek sensory stimulation in product purchase through risky and innovative product choices and varied and changing purchase and consumption experiences". Previous research has shown that these scales are highly reliable and that they converge to indicate the underlying construct of OSL (Steenkamp & Baumgartner, 1992).

### 2.4.3. Desire to overcome Satiation

Consumers frequently consume products and experiences to the point where they no longer enjoy them, a process commonly referred to as "satiation" (Coombs & Avrunin, 1977). A core finding in the satiation literature is that satiation is greatest for the stimulus consumed and less for stimuli not consumed. This characteristic has been extensively studied as a phenomenon called sensory-specific satiety (Rolls,



Rolls, Rowe, & Sweeney, 1981). This research paradigm involves first eating and rating liking of several samples from a range of different foods, next eating only one of those foods until choosing to stop, and then eating and rating liking for each of the sample foods again. The key finding is that liking drops much more for the food eaten in the middle step than any of the other samples. In fact, this increased drop also extends to other foods that share the same flavor (Johnson & Vickers, 1993), texture (Guinard & Brun, 1998), shape (Rolls, Rowe, & Rolls, 1982), or odor (Rolls & Rolls, 1997).

The core notion of sensory-specific satiety is that people satiate on a particular aspect of an experience. For food, this aspect is often flavor (Epstein et al., 1993; Johnson & Vickers, 1993), perhaps because flavor is highly salient. More generally, satiation appears to be greatest for the particular aspects garnering focal attention. For instance, eating jellybeans with labels that focused on the specific flavor (e.g., cherry or lemon) rather than the general candy type (e.g., jellybean), resulted in significantly less satiation with the specific labels (Redden, 2007). Although everyone ate the same exact assortment of jellybeans, the more specific categorization made the experience seem less repetitive within that category. This finding is consistent with the notion that satiation occurs not only as a result of physiological mechanism and indicates that the satiation specificity depends on the focus of attention and the framing of an experience.

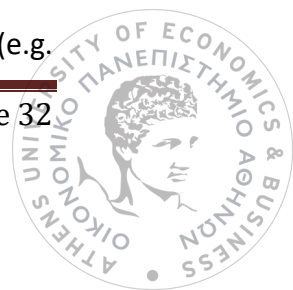
Even though satiation could be attributed to physiological mechanisms, especially in the food domain (Rolls et al., 1984), satiation could also be the result of non-



physiological mechanisms and might occur for non-ingested stimuli such as music (Ratner et al., 1999), television programs (Nelson et al., 2009), art (Berlyne, 1971), homes (Hsee et al., 2009) and cars (Frank, 1999). Consequently, satiation is not just a physiological effect but it seems to be in many cases non-physiological (Redden, 2014).

Desire to overcome satiation is considered to be one of the most important intrapersonal motives for variety-seeking. When consumers become satiated with the attributes of a given product, they need or desire products that offer a range of other attributes. Therefore, variety-seeking is stimulated because consumers feel satiation on attributes provided by a specific brand and are less likely to choose the same brand repeatedly (Jeuland, 1978; McAlister, 1979, 1982). In this way, variety-seeking is a means of managing the satiation that occurs after initial consumption. Other research suggests that individuals are inclined to seek variety not only because of actual physiological and stimulation needs, but also because they hold a (sometimes mistaken) belief that they will satiate on favored items quickly. Thus, one reason why people switch away from their favored options is that they think about the consumption sequence in terms of the satiation that will result from repetition, whereas their actual satiation level is often less than anticipated (Read & Loewenstein, 1995).

Satiation may lead to variety-seeking not only across attributes but also within the setting of a particular attribute (Johnson et al., 1995). This means that consumers may satiate and seek variety in a particular attribute to recover from satiation (e.g.



buy a different flavor). More generally, satiation appears to be greatest for the particular aspects of a stimulus where we focus our attention (Redden, 2014). Consumers tend to elaborate and process the most salient attributes in each product category. This elaboration elicits higher satiation rates with these attributes. Kahn (1995) suggests that consumers are more likely to be satiated by particular attributes of a good if they relate them to the primary aspect being consumed. For instance, if bread is thought of as a food by itself (primary product), then consumers are more likely to satiate on attributes related to bread and seek variety among the breads. On the other hand, if bread is thought of as the outside of a sandwich, the attributes of the filling in the sandwich (the primary product) are more likely to cause satiation. Satiation on specific attributes will stimulate variety-seeking so that stimulation will be optimized at the preferred level.

The construct of satiation has been extensively examined and several external factors that influence satiation rates have been proposed. For instance, satiation can be affected by consumers' mood (Chien-Huang & Hung-Chou, 2012; Kahn & Isen, 1993), store environment (Mitchell, Kahn, & Knasko, 1995), consumption settings (e.g., private versus public consumption) (Ratner & Kahn, 2002), active desires of the consumers (Goukens et al., 2007), exposure to relevant stimuli (Maimaran & Wheeler, 2008). Satiation can also be triggered unconsciously by the activation of concepts related to negative frames of repetition such as boredom (Fishbach et al., 2011). This range of external factors seem to exert an influence on variety-seeking by stimulating the desire to overcome satiation which is a basic variety-drive and are going to be presented separately in next sections of the current chapter.



Redden (2015), in his review paper on satiation, summarized all factors that influence satiation rates.

**Table 2.1**

Summary of accelerants and retardants of satiation

(Adapted from Redden, 2015)

<u><b>Accelerants of satiation</b></u>	<u><b>Retardants of satiation</b></u>
<ul style="list-style-type: none"><li>✓ Salient sensory aspect.</li><li>✓ Greater stimulus complexity</li><li>✓ Greater stimulus strength</li><li>✓ Faster consumption rate.</li><li>✓ Comparatively frequent consumption</li><li>✓ Increased attention on consumption.</li></ul>	<ul style="list-style-type: none"><li>✓ Increased variety.</li><li>✓ Cues of variety</li><li>✓ Less encoding</li><li>✓ Less attention to quantity consumed</li></ul>



#### 2.4.4. Variety-seeking as a result of resolution of difficult decisions

Consumers also choose variety for a number of reasons that reflect their belief that variety seeking will help them resolve a decision that is otherwise difficult. For example, when choosing among unfamiliar items, consumers may choose a set of varied options to acquire information about the items in the set (Brickman & D'Amato, 1975; McAlister, 1982).

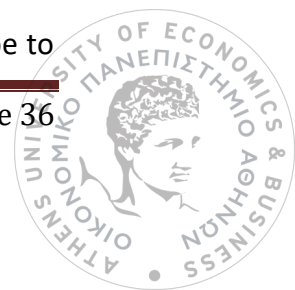
An explanation that is provided for variety-seeking is that consumers seek variety as a means to construct a diverse portfolio of options as a hedge against future preferences uncertainty (Kahn, 1995). There are certain cases where consumer develops a product portfolio for future consumption. First of all, there is the case where consumers buy bundles of products for future consumption such as the case where in a single shopping occasion multiple products are purchased. Read and Lowenstein (1995) refer to this motive for variety-seeking as “diversification bias” and suggest that if consumers make combined choices of quantities of goods for future consumption, they choose more variety than if they make separate choices immediately preceding consumption. They suggest that consumers make different decisions if they are thinking about them as isolated choices than if they are thinking about them as items within a sequence or in other words, consumers tend to treat choices that are bracketed or framed together differently from those that are framed apart.



The diversification bias is attributable to 2 mechanisms: time contraction, which is the tendency to compress time intervals and treat long intervals as if they were short, and choice bracketing, which is the tendency to treat choices that are framed together differently from those that are framed apart. Of course, this behavior in many cases violates rationality assumptions and cannot be explained by traditional accounts of utility maximization.

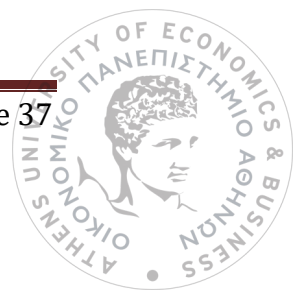
Simonson (1990) and Kahn and Lehmann (1991) suggest that people seek variety not only because they have to make combined choices but because they are risk averse and uncertain about their future preferences. This uncertainty can be due to the inherent riskiness of the alternatives, the uncertainty in consumers' anticipated preference for the alternatives (Kahneman & Snell, 1992), or changes in needs or personal goals (Simonson 1990). Consequently, a related advantage of variety-seeking behavior is that it provides a mechanism for hedging one's bets since by choosing a portfolio of options a consumer can hedge against future uncertainty (Pessemier, 1978). An implication of this approach is that variety seeking should decline if the uncertainty or risk is reduced (Read & Loewenstein, 1995).

Further, consumers may use variety seeking as a choice heuristic to resolve conflict in difficult choice situations (Kahn & Ratner, 2005). Simonson (1990) suggests that sometimes consumers have difficulty choosing among familiar alternatives and are uncertain about their relative preferences for the different items. This kind of decision making can incur discomfort, conflict and even pain. One way to resolve that conflict without requiring too much cognitive effort would be to



choose a variety of options. Thus this explanation for variety seeking suggests that consumers use it as a conscious cognitive mechanism to avoid having to make more difficult trade-offs.

Simonson (1990) studied this particular motive for exhibiting variety-seeking in a series of snack experiments. In these experiments two consumer strategies employed when purchasing multiple items of a product were contrasted. In one strategy (simultaneous choices/sequential consumption), the consumer buys several items on one shopping trip and consumes the items over several consumption occasions. In the other strategy (sequential choices/sequential consumption), the consumer buys one item at a time, just before each consumption occasion. The results indicated that consumers exerted more variety-seeking when buying multiple items for future consumption. The greater variety seeking is attributed to forces operating in the simultaneous choices/sequential consumption strategy, including uncertainty about future preferences and a desire to simplify the decision (Simonson, 1990; Simonson & Winer, 1992). However, this effect is moderated by the regulatory focus of the individual. Regulatory focus theory offers a perspective on the issue of gains and losses as promotion focus centers on acquiring maximum gains, whereas prevention focus is concerned with minimizing losses. In this context, when consumers engage in a sequential choice task, promotion-focused consumers tend to select a greater variety of items than prevention-focused consumers. In contrast, in the simultaneous choices condition, prevention-focused consumers tend to select a greater variety of items than promotion-focused consumers (Wu & Kao, 2011).



In the same context, but not focusing on time delay but rather the choice process and more particularly the number of choice acts, Mittelman et al. (2014) introduce the “offer framing effect”. The offer framing effect suggests that the bare arrangement of products, and consequently, whether consumers have to perform one (for example selection of one bundle of three chocolates involves one act) or multiple choice acts (for example selection of three chocolates involves three acts) when choosing multiple items, impacts the decisions they make. The results of four experiments consistently show that consumers are more likely to seek variety when they perform one act (single offering frame) compared to when they perform multiple acts (bundled offering frame) (Mittelman et al. ,2014).

#### 2.4.5. Personality traits that stimulate variety-seeking

Variety seeking is recognized as a way to express independence and individuality (Kim & Drolet, 2003). Indeed, consumers seek high variety when they are motivated to restore the **sense of control** (Inesi et al., 2011; Yoon & Kim, 2017). Specifically, it is found that when deprived of a source of control, consumers tend to choose a large assortment over a smaller one (Inesi et al., 2011). Moreover, poor consumers who perceive low economic mobility and thus low sense of control will seek more variety in consumption (Yoon & Kim, 2017).

What is more, **consumers’ pessimism or optimism** about a future outcome can have a significant effect on variety-seeking behavior (Yang & Urminsky, 2015). More specifically, consumers that feel optimistic about a future outcome tend to seek



consistency in their choices whereas consumers that feel pessimistic about a future outcome tend to exert variety-seeking in their product choices.

Another personality trait that has been found to correlate positively with variety-seeking is chronically indecisiveness. Individuals that find nearly all choices hard to make, are characterized as **chronically indecisive** (Frost & Shows, 1993). When indecisive consumers experience negative emotions that arise from the difficulty to make a choice, they employ variety-seeking as a strategy in order to handle the stress they face when making choices (Jeong & Drolet, 2006).

**Self-monitoring** is one of the important variables that moderate the relative influence of traits and/or situations (Bearden et al. ,1989; Darley & Lim ,1992; Hogg et al. ,2000). High self monitors are willing to adapt their behavior to enact clearly defined roles appropriate to different situations. Low self-monitors are less willing to put on a show to please those around them, preferring instead to be true to their own attitudes and values across different situations. Public pressure to appear interesting will induce more variety seeking among high self-monitors than low self-monitors. For example, high self-monitors seek more variety in public to depict themselves as more interesting and creative people (Ratner & Kahn, 2002).



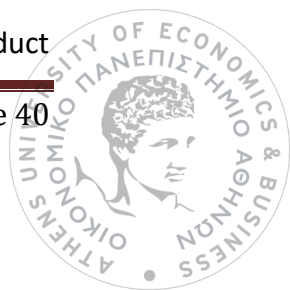
## 2.5. Product category related factors

Besides interpersonal differences in variety seeking behavior, there are intrapersonal differences in the way that the same individual seeks variety for specific product categories whereas exhibiting brand inertia for other. Apart from Optimal Stimulation Level (OSL), every person has an actual stimulation level (ASL). OSL refers to the level of stimulation that a person prefers in general, from all possible internal and external sources across all possible situations and over time whereas ASL refers to the amount of stimulation from all sources that a person experiences at a specific time (Steenkamp, Baumgartner & Van der Wulp, 1996; Wahlers & Etzel, 1985). Variety-seeking behavior connects the two stimulation levels by offering the necessary stimulation to restore the correspondence between ASL and OSL. In this way, consumers with high OSL who are expected to seek variety in all their choices, will exhibit variety seeking behavior only for specific product categories where the actual stimulation is lower than the optimal.

This observation has led many researchers to link variety-seeking behavior with the product category that the consumer is about to purchase. VanTrijp *et al.* (1996) suggest that variety-seeking behavior is related partially to product characteristics, whereas Hoyer and Ridgway (1984) characterize it as a product category specific phenomenon.

According to Hoyer and Ridgway (1984), certain product characteristics are likely to mediate brand switching in a specific product class. Objective product

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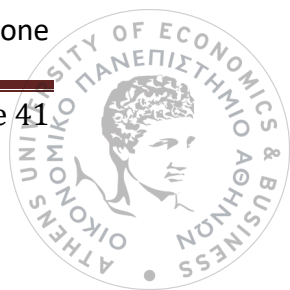


characteristics such as interpurchase frequency and the number of choice alternatives are said to determine the product category in which brand switching is likely to occur. For example, brand switching is likely to occur in a product class with many alternative brands and types and where inter-purchase frequency is relatively short. Perceived characteristics, which include involvement, perceived risk, brand loyalty, brand similarity and hedonism, are based on subjective consumer perceptions which vary across consumers in a particular product context.

Van Trijp, Hoyer and Inman (1996) in a seminal research distinguish six product category factors that stimulate variety-seeking behavior namely (1) involvement, (2) purchase frequency, (3) perceived brand difference, (4) strength of preference, (5) hedonic feature, (6) purchase history.

**Involvement:** Variety-seeking behavior is more likely to occur for products that evoke lower rather than higher levels of involvement. Involvement is typically defined as the subjective perception of the personal relevance of an object, activity, or situation (Park & Mittal, 1985). Involvement provides arousal and stimulation, consequently low involvement choice contexts are by nature likely to produce lower levels of stimulation, thereby creating a greater discrepancy between actual stimulation level and optimal stimulation level.

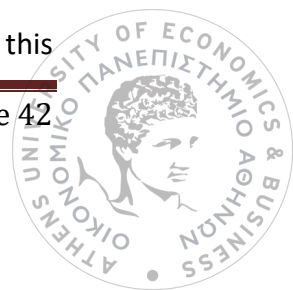
The literature is inconclusive regarding the relationship between involvement and the hedonic and utilitarian dimensions of attitude. Kapferer and Laurent (1985) introduce a five-dimensional conceptualization of involvement in which one



dimension is labeled hedonic. VanTrijp *et al.* (1996) suggest that hedonic features and involvement are two different factors that interpret the occurrence of variety-seeking behavior. This approach is the one that we adopt here and thus we contend that the involvement construct is distinct from the hedonic and utilitarian attitude dimensions.

**Purchase frequency:** variety-seeking behavior is more likely to occur for products that have higher rather than lower purchase frequencies (VanTrijp *et al.*, 1996). Frequently purchasing a product, results in satiation with the product's attributes which stimulates variety-seeking behavior. Frequently purchasing a product over time leads to repetitive decision processes that can contribute to boredom with the choice task, thereby stimulating variety-seeking behavior (Howard & Sheth ,1969). Furthermore, in terms of the product's attributes, frequent consumption implies that the inventories for the attributes build up quickly, whereas the short interconsumption time implies that the attribute inventories decline less between consumption occasions (McAlister, 1982).

**Perceived brand difference:** The perceived difference between brands (substitutability) is also a product characteristic that could affect purchase exploration (Hoyer & Ridgway, 1984; VanTrijp *et al.*, 1996). Variety-seeking behavior is more likely to occur in situations in which perceived differences among the alternatives are smaller rather than larger. When differences between brands are perceived to be low, brands may be perceived as substitutes in the sense that these products will meet the consumer's needs in the same satisfactory manner. In this



case, brand/product switching would be more likely to occur since it will not result in less need fulfillment.

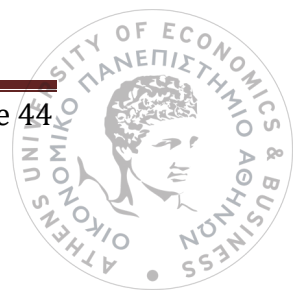
**Hedonic products:** Many researchers (Hoyer & Ridgway, 1984; Kahn & Lehmann, 1991; Van Trijp et al., 1996; Steenkamp & Baumgartner, 1992) suggest that products that are highly dependent on neural or effective sensations facilitate a variety drive. The hedonic dimension results from sensations derived from the experience of using products whereas the utilitarian dimension is derived from functions performed by products (Voss, Spangenberg & Grohmann, 2003). Consequently, utilitarian products are perceived as more functional whereas hedonic products are linked to experiential consumption (Hirschman & Holbrook, 1982; Babin et al., 1994; Childers et al., 2002). Variety-seeking behavior might be explained by experiential or hedonic motives rather than by utilitarian aspects of consumption (Hirschman & Holbrook, 1982). Hedonic products stimulate variety-seeking because products that are highly dependent on neural or effective sensations accommodate a variety drive (Kahn & Lehmann, 1991; Van Trijp et al., 1996; Van Trijp, 1994). This occurs because repeated consumption of these products is likely to lead to satiation or boredom (Rolls, 1986). The hypothesis tested was that variety seeking behavior is more likely to occur for products that are higher rather than lower in hedonic characteristics. Their research was based on computerized panel data and they used a scale consisting of two items that could measure only the perception of the participants on the hedonic characteristics of the products, without taking into account the overall perception of the consumers on the nature (utilitarian or hedonic) of the products.



**Strength of preference:** If consumers have a strong preference over a specific brand within a product category, extrinsic motivations are high and variety seeking is inhibited. On the other hand, if consumers do not possess a strong preference for one or more brands (i.e., when extrinsic motivations are weak), variety-seeking tendencies are more likely to be exploited (VanTrijp *et al.*, 1996).

**Purchase History:** Variety-seeking behavior is more likely to occur if the previous purchase in the product category were a repeat purchase than if it were a variety switch (VanTrijp *et al.*, 1996). In this way, variety-seeking will facilitate the correspondence between actual and optimal stimulation level. In a recent research, it is interesting that Galak, Redden and Kruger (2009) suggested that consumers exhibit “variety amnesia” in that they do not spontaneously recall this past variety despite the fact that it would result in a desirable decrease in satiation.

In summary, variety-seeking seems to be a product specific phenomenon since the variety drive will not be expressed in every product category. Rather, each of the product characteristics discussed earlier seem to play a role of paramount importance in determining whether variety-seeking tendencies will be initiated. In particular, variety-seeking is more likely to occur when interpurchase time is relatively short, involvement with the product or brand is low, there is high substitutability between brands, and especially for hedonic products.



### 2.5.1. Variety-Seeking across product categories: Hedonic Vs Utilitarian products

Several streams of literature have focused on examining tradeoffs among goods that are chosen and consumed to induce pleasure and make consumers feel good or to achieve an instrumental purpose. Within this context, the hedonic-utilitarian paradigm is a major conceptualization that has been suggested. Hedonic goods are multisensory and provide for experiential consumption, fun, pleasure and excitement (Hirschman & Holbrook, 1982). Examples of hedonic goods are flowers, designer clothes, music, chocolate, luxury watches. On the other hand, utilitarian goods are primarily instrumental and accomplish a functional or practical task. Microwaves, detergents, personal computers fall in this category.

The hedonic dimension results from sensations derived from the experience of using products and is associated with pleasure, emotions, and a sensation-seeking motivation whereas the utilitarian dimension is motivated by the need for accomplishment of a functional task through the practical and instrumental characteristics of the product (Holbrook & Hirschman, 1982; Voss et al., 2003). Consequently, utilitarian products are perceived as more functional whereas hedonic products are linked to experiential consumption (Hirschman & Holbrook, 1982; Babin et al., 1994; Childers et al., 2002).

A similar but different pair of constructs to hedonism and utilitarianism is the distinction between vice and virtues. The main difference between these two pairs

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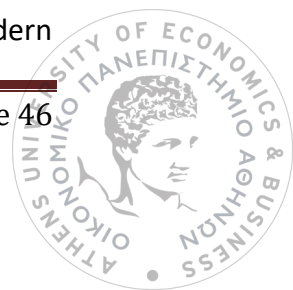


of constructs is that the hedonic-utilitarian paradigm tends to focus on barriers to choosing the hedonic option whereas the vice-virtue paradigm has focused on the impulsivity of vice choices (Werthenbroch, Dhar & Kahn, 2004). Hedonic products are associated with greater guilt and therefore require greater justification whereas vice products are automatically chosen for immediate consumption by appealing to consumers' impulsive preferences.

The hedonic versus utilitarian distinction is not a between good and bad option which means that hedonic and utilitarian alternatives could both be good but on different dimensions (for instance, one shampoo cleans better whereas another one makes the consumer feel sexy). Consequently, a fundamental difference with the vice and virtue distinction is that the pay-offs from both hedonic and utilitarian consumption lie in the gain domain. On the other hand, the consumption of a virtue versus a vice product explicitly entails into a gain and loss domain.

Different product categories can be high or low in both hedonic and utilitarian attributes (Crowley, Spangenberg & Hughes, 1992) since hedonism and utilitarianism are not necessarily two ends of a one-dimensional scale (Voss *et al.*, 2003). It is the relative salience of the sensory and functional attributes of a product that defines its classification as hedonic or utilitarian (Batra & Ahtola, 1990; Chernev, 2004). This means that a hedonic product can have functional attributes as well.

Yet few consumers choose simply between pure hedonic and pure utilitarian products, especially in the food industry. Rather, expanded choice sets in modern



markets mean consumers often consider mixed products, such as such as ice cream, a pure hedonic product that offers low fat or extra calcium, which constitutes utilitarian attributes. The type of the health claim influences the extent of the consumption of the healthful indulgence. Health claims that stress a functional attribute (for instance, anti-oxidants, cholesterol) result in high levels of health-goal accessibility. However, since they come together with simultaneously accessible indulgence goals attached to the indulgence, goal conflict arises. On the other hand, health claims that stress a hedonic attribute (for instance, fat) make health-goals less accessible and, thus, result in lower levels of goal conflict. Goal conflict is an aversive state that consumers try to resolve by dissociating themselves from the object causing the conflict. Consequently, functional health claims in indulgences create goal conflict that results in consumption regulation and lower level of consumption whereas hedonic claims in indulgencies stimulate increased consumption of the indulgence due to lower levels of goal conflict. (Belei *et al.*, 2012)

### 2.5.2. Trade-offs between hedonic and utilitarian products

Because experiential and functional considerations map onto independent product attributes, these distinctions have important implications for how consumers make tradeoffs between these attributes depending upon the choice task or context. Consequently, a related stream of research has examined consumer trade-offs and choices between hedonic and utilitarian items (e.g., Chandon, Wansink & Laurent, 2000; Dhar & Wertenbroch, 2000; Hirschman & Holbrook, 1982; Strahilevitz & Myers, 1998).



**Attribute numerosity** is one of the variables that has been examined in the context of trade-offs between hedonic and utilitarian products. Attributes serve as a cue for usefulness and it is not only the content of the attributes but also the number of attributes listed that influences option choice. Consequently, increasing attribute numerosity enhances product usefulness and tends to shift choice towards products that are considered inferior in this dimension. Hedonic products are perceived as relatively less useful whereas utilitarian products are perceived as useful or practical. Consequently, increasing attribute quantity tends to shift choice toward hedonic options. This effect is evident regardless of whether the attributes are hedonic, utilitarian, or mixed in nature (Sela & Berger, 2012).

The **sense of guilt** associated with hedonic consumption is another factor that explains the tradeoffs between hedonic and utilitarian products. This guilt makes hedonic goods harder to justify in comparison with utilitarian goods. In joint evaluations (when consumers evaluate simultaneously two options) the need of justification is heightened resulting in a relative preference for the utilitarian option, whereas in single evaluations, a situation where need for justification is not heightened, the hedonic product tends to be preferred. Need of justification also moderates the combination of time and money people are willing to spend to buy hedonic and utilitarian products. People have a need to justify monetary expenditures and that is why they are willing to pay in money for a utilitarian product, whereas they are willing to pay in time for a hedonic product since expenditures in time are easier to justify. (Okada, 2005; Kivetz & Zheng, 2006)



Moreover, **assortment size** is a variable that could lead to preference reversals between hedonic and utilitarian products. Because choosing from larger assortments is often more difficult, it leads people to select options that are easier to justify. Utilitarian products are generally easier to justify than hedonic products; consequently, choosing from larger assortments often shifts choice from hedonic to utilitarian options. However, when situational factors provide accessible reasons to indulge (the consumers “earn” their right to indulge through volunteerism or effort), choosing from larger assortments will have the opposite effect, increasing the share of vices or hedonic choices (Sela, Berger & Liu, 2008)

What is more, situations increasing reliance on available justifications, such as deciding publically rather than privately generally favor options that are higher on utilitarian aspects. This effect is attributed to the fact **that public decisions** are associated with a higher need for justification due to the public scrutiny and consequently favor utilitarian options that are easy to justify compared to hedonic ones (Böhm & Pfister, 1996).

Consumers tend to overweight attributes that are compatible with their active goals and select options that are superior on these attributes. **Goal- attribute compatibility** describes the consumers’ tendency to overweight attributes that are compatible with their active goals relative to their regulatory mechanism (promotion or prevention focus). In the context of goal compatibility with hedonic and utilitarian attributes, promotion focus offers a better fit with hedonic attributes, whereas prevention focus is likely to be more compatible with the more practical and



conservative utilitarian attributes. Consequently, promotion-focused consumers are more likely than prevention-focused consumers to select the option that is superior on hedonic attributes. (Chernev, 2004)

Moreover, the effect of hedonic or utilitarian dimensions on consumer choice depends on the **nature of the decision task**. The salience of utilitarian dimensions is more evident in conditions where consumers decide which option to acquire (acquisition condition). Acquisition conditions are a context that fosters justifications and utilitarian features are easy to justify. On the other hand, in forfeiture decision tasks (where consumers decided which option to give up), the hedonic features are more salient due to the fact that hedonic features are easier to imagine and elaborate on and this type of decision task relates with more spontaneous elaboration (Dhar & Wertenbroch, 2000).

### 2.5.3. Guilt reducing justifications for hedonic consumption

Both hedonic and utilitarian products offer benefits to the consumers. Hedonic products offer experiential benefits to the consumers whereas utilitarian products offer benefits in the form of practical functionality. Because of this difference hedonic consumption is associated with more guilt. Consequently, the purchase of hedonic products can be enhanced by reducing the guilt associated with their purchase. This can be attained by guilt-reducing justifications. On the other hand, there are certain contexts activate more guilt than do others and therefore lead to



the choice of less hedonic products, in a sort of balance-seeking strategy (Zemack-Rugar et al, 2007).

Hedonic consumption is associated with a sense of guilt. This guilt makes hedonic goods harder to justify in comparison with utilitarian goods. Especially in cases of joint evaluations, where consumers evaluate simultaneously a hedonic and a utilitarian option, the need of justification is heightened resulting in a relative preference for the utilitarian option, whereas in single evaluations, a situation where the need for justification is not heightened, the hedonic product tends to be preferred (Okada, 2005).

Several guilt reducing justifications that facilitate the choice of the hedonic option have been proposed. The basic idea is that when consumers are offered with justifications that mitigate their sense of guilt, hedonic consumption increases. Prior work shows that bundling hedonic products with charitable donations could serve as a guilt-reducing justification. In this case, the promised contribution to charity reduces the sense of guilt and facilitates hedonic purchases (Strahilevitz & Myers, 1998). On the other hand, monetary discounts on a hedonic product could also offer guilt reducing justification that increases the likelihood of hedonic purchases (Khan & Dhar, 2010). This effect is evident in cross-category bundles (consisting of both hedonic and utilitarian products) where the purchase of the bundle is more probable when discount is framed as savings on the hedonic component. What is more, consumers tend to construct stronger preferences for hedonic rewards in the face of



greater effort since higher effort helps justify and alleviate the guilt associated with choosing luxuries over necessities (Kivetz & Simonson, 2002; Kivetz & Zheng, 2006)

Moreover, response modes that decrease the need for justification favor hedonic choices. For instance, hedonic products seem to be more popular as prizes than as purchases, whereas utilitarian products seem to be more popular as purchases than as prizes. This effect is attributed to the fact that passively receiving a reward does not require as much justification as does actively purchasing the same reward. (O'Curry & Strahilevitz, 2001)

Another guilt reducing mechanism that has been suggested in the relevant literature is the “functional alibi”, that is adding a small utilitarian feature to a hedonic product (Keinan, Kivetz, & Netzer, 2016). Utilitarian additions to hedonic products provide additional utility from serving as a justification for the hedonic purchase. The utilitarian additions justify the wastefulness of the hedonic options and make their purchase seem “rational”. In this way, they serve as a functional alibi, justifying the indulgent purchase and reducing guilt. However, this overvaluation of the utilitarian dimension is more likely to occur when the purchase seems wasteful and frivolous.

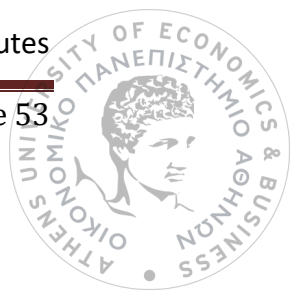


#### 2.5.4. Attribute Level Variety-Seeking Behavior

McAlister (1979, 1982) with her “Dynamic Attribute Satiation Model” extends exploratory behavior to the level of the product feature or attribute through her concept of attribute satiation. Especially for consumer behavior, variety-seeking is exhibited because consumers feel satiated on specific attributes offered by a product and, consequently, are less likely to choose the same product again, especially if it has been recently chosen (Jeuland, 1978; McAlister 1979, 1982). The underlying notion is that consumers satiate on the attributes provided by a chosen alternative and therefore are less likely to repurchase immediately.

Consequently, variety-seeking behavior at the attribute level is related to the level of satiation on desired attributes at a given point in time. Satiation on the product attributes offered by a specific brand could be occurring because consumers may not find a single option that satisfies all of the attributes of an ideal point. Consumers may seek a “balance” of attributes to maximize utility where balance of a subset refers to the notion of homogeneity of items with respect to some attributes and heterogeneity with respect to other attributes (Farquhar & Rao, 1976).

Another explanation provided for attribute level variety-seeking is that consumers need to balance current consumption according to the impact of past consumption (Lattin, 1987); this means that as the individual tires of the features or characteristics provided by a recent choice, different alternatives become relatively more appealing leading to switching behavior. When consumers become satiated with the attributes



of a given product, they need or desire products that offer a range of other attributes. In this way, variety-seeking is a means of managing the satiation that occurs after initial consumption.

Other research suggests that individuals are inclined to seek variety not only because of actual physiological and stimulation needs, but also because they hold a (sometimes mistaken) belief that they will satiate on favored items quickly. Thus, one reason why people switch away from their favored options is that they think about the consumption sequence in terms of the satiation that will result from repetition, whereas their actual satiation level is often less than anticipated (Read & Loewenstein, 1995).

However, satiation may lead to variety-seeking not only across attributes but also within the setting of a particular attribute (Johnson et al., 1995). In the same product category (for instance soft-drinks), consumers can distinguish products according to the degree that each one of them accumulates a specific attribute (for instance sweetness). When consumers feel satiated on this specific attribute, then they can switch to a product of the same category that accumulates the same attribute to a lesser degree (for instance soft degree with a less sugar content).

This means that consumers may satiate and seek variety in a particular attribute to recover from satiation (e.g. buy a different flavor). More generally, satiation appears to be greatest for the particular aspects of a stimulus where we focus our attention (Redden, 2015). Consumers tend to elaborate and process the most salient

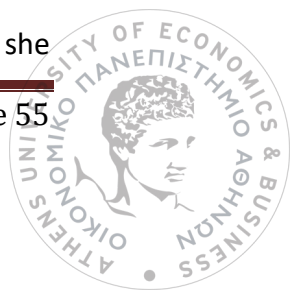


attributes in each product category. This elaboration elicits higher satiation rates with these attributes. Product attributes are divided into primary (core) and secondary (non-core) based on the need that the consumer wants to fulfill (Brechan, 2006). Kahn (1995) suggests that consumers are more likely to be satiated by particular attributes of a good if they relate them to the primary aspect being consumed. For instance, if bread is thought of as a food by itself (primary product), then consumers are more likely to satiate on attributes related to bread and seek variety among the breads. On the other hand, if bread is thought of as the outside of a sandwich, the attributes of the filling in the sandwich (the primary product) are more likely to cause satiation. Satiation on specific attributes will stimulate variety-seeking so that stimulation will be optimized at the preferred level.

A thorough review of the relevant literature yielded only three studies that have directly examined varied behavior at the attribute level (Erdem, 1996; Lattin, 1987; Inman, Park & Sinha, 2008). Lattin (1987) develops a model of “balanced choice behavior” in which consumers are posited to balance their current choices against the influence of past choices. He argues that as a consumer becomes satiated with the attributes of a recent choice, the appeal of different alternatives increases accordingly. However, Lattin does not consider heterogeneity among consumers in terms of variety seeking and reinforcement at the attribute level, nor does his model consider the effect of marketing-mix variables on choice.

Erdem (1996) demonstrates the usefulness of considering attribute satiation in generating maps of market structure. Using a factor-analytic specification, she

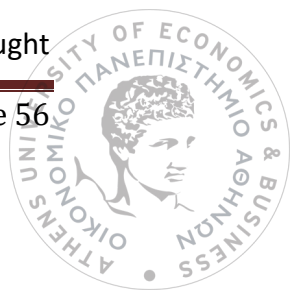
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estimates the utility of products in terms of two “superattributes” (unobservable to the analyst), which can be interpreted as factors. In contrast with the model of Lattin, Erdem allows for heterogeneity in consumers’ state dependence of the unobservable factors and finds evidence of derived varied behavior in both the margarine and liquid detergent categories.

Inman, Park and Shinha (2008) propose a model for attribute level varied behavior that considers choice dynamics in the market structure. In addition this model assumes that latent components (attribute levels), rather than attributes, influence consumers’ SKU choice behavior. These latent components are possessed across all attribute levels (e.g., all brands or flavors), thus allowing researchers to understand competition among attributes. In general, this model seems to be useful in identifying segments that exhibit reinforcement behavior versus those that exhibit derived varied behavior.

Inman (2001) examines the relevance between variety seeking behavior at the attribute level and sensory specific satiety. Sensory specific satiety refers to the fact that the pleasantness of a food drops significantly just after it is eaten while the pleasantness of uneaten foods is either unchanged or increases. He found that consumers sought variety more intensively on sensory attributes such as flavor than on nonsensory attributes such as brand. Moreover, Kahn (1995), in her theoretical framework, suggests that consumers are more likely to be satiated by particular attributes of a service or good if they relate to the primary aspect being consumed, rather than the secondary aspect being consumed. For instance, if bread is thought



of as the primary product, consumers are more likely to be satiated on specific attributes and to seek variety among different types of breads. On the other hand, if bread is thought of as the outside of a sandwich (secondary aspect), the attributes of the filling in the sandwich (the primary product) are more likely to cause satiation.

To conclude, although several models of attribute level variety-seeking behavior have been proposed (McAlister, 1982; Erdem, 1996; Inman, Park & Sihna, 2008), these models offer little guidance on what product attributes are likely to stimulate and satisfy the consumer's need for variety. However, attribute-level analysis is important to gain a deeper understanding of the product-based mechanisms underlying the observed behavior. Consumers could exhibit reinforcement behavior toward some product attributes and derived varied behavior toward other attributes.

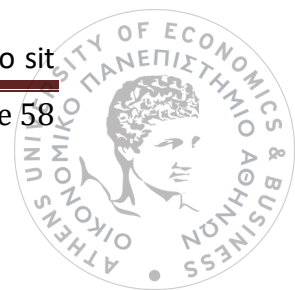
## **2.6. Interpersonal motivation**

In many occasions, consumers choose to switch despite the fact that they have not felt satiated with their choice. Besides satiation, an important motive for exerting variety-seeking is interpersonal motives that are associated with either that individuals want to express their individuality and distinguish themselves from the group or that they want to assimilate with the groups by following social norms. In a nutshell, interpersonal motivation has to do with consumers' desire for group affiliation or for maintaining one distinct identity compared to the group



Research on variety-seeking in interpersonal contexts has shown that individuals try to make different choices from other people's, because individual choices in an interpersonal context are aimed at satisfying goals of portraying oneself as unique in the eyes of others rather than risking the appearance of imitation by making the same choices as others (Ariely & Levav, 2000). In a group choice context (e.g., groups at a restaurant), individuals may tend to choose options different from options previously chosen by other individuals in their group and engage in variety-seeking. In particular, group variety seeking is expected when information gathering is considered of paramount importance which means that group members seek to diversify their choices in order to gain more information through interaction with other group members. In this way, individuals accomplish their goal of self-expression in the form of seeking uniqueness. This behavior may be exhibited despite the fact that it may undermine individual happiness and increase regret (Ariely & Levav, 2000).

On the other hand, individuals might make more varied and unique choices as a way to self-express and assert freedom (Kim & Drolet, 2003). Building on this notion, Levav and Zhu (2009) found that a relative confining space (for instance a narrow aisle in a retail environment), may prompt consumers to exhibit more variety-seeking as means to reassert their freedom. Not only a narrow space but also physical proximity with others may lead to preference for more distinct and varied products. Xu, Shen and Wyer (2012) discussed about the effect of physical proximity on affiliation motivation and suggested that consumers' physical closeness to others can motivate them to reassert their individuality. When consumers are forced to sit



close to another person, they feel that they lose control and their personal space is violated. Consequently, their motivation to express their individuality and distinguish themselves from the group is evident.

Mathras *et al.* (2016), in their theoretical framework, suggest that religion and more specifically the religious beliefs about external control (i.e. whether there is a loving or controlling God) is a factor that moderates many of the previous findings in which consumers want to cope with lack of personal freedom or control. Many of the previously established effects will be weaker for consumers from religions with a strong belief in a supreme being (e.g., Christianity, Islam, other monotheistic religions), as these beliefs provide comforting thoughts that “someone” (i.e., God) is in control, thereby rendering personal control as less necessary. However, the effect of religion on variety-seeking behavior has not been empirically tested until today.

From a cultural perspective, different cultural assumptions of choice and uniqueness affect the likelihood of variety-seeking in the use of choice rules. Research on variety-seeking in interpersonal contexts (Ariely & Levav, 2000) has indicated that individuals try to make different, unique choices in order to portray themselves as unique in the eyes of others rather than risk the appearance of imitation by making the same choices as others. Indeed, in an examination of variety-seeking in choice rule use, Drolet (2002) found that people scoring high on the Need for Uniqueness tended not to only crave variety among items within a choice set, but they may also crave variety in the decision processes that they use to choose these items. In laboratory studies, consumers seemed to indicate a



preference merely for a variety of choice rules rather than indicating any preference for the specific rules in and of themselves. For example, if a consumer first uses a “compromise option” choice rule, they were less likely to use that choice rule in a subsequent choice set and instead chose one of the extreme options. Further, change in the use of these choice rules over time was more likely to be seen in individuals with a higher dispositional need to demonstrate their uniqueness. However, uniqueness is not valued positively in all cultural contexts. In collectivistic cultures where an interdependent self-view dominates, harmony and relatedness with others are more important than being unique. Thus, the expression of one’s individuality is discouraged and variety seeking does not have positive connotations as is the case with individualistic cultures.

Consequently, consumers from individualistic cultures tend to vary their choice rule use, whereas consumers from collectivistic cultures comply with the group norm and do not change their choice rule (Kim & Drolet, 2003). In a nutshell, the choices of individuals with collectivistic cultural backgrounds are associated with higher uniformity-seeking tendency (compliance with the group norm) compared to those of individualistic cultural backgrounds (Yoon et al., 2011).

Apart from culture, political ideology may exert an effect on variety-seeking behavior. The previous discussion on culture highlighted that variety-seeking is up to a degree expected and socially desired in individualistic cultures. Consumers expect that they will elicit more favorable impressions when they seek variety and in this way, variety-seeking becomes “consumption norm” (Ratner & Kahn, 2002). Even



though someone would consumers high in conservatism to seek consistency in their choices, in fact consumers high in conservatism seek more variety than consumers low in conservatism as a means to follow social norms (Fernandes & Mandel, 2014).

Prior research examining the antecedents of variety-seeking behaviors also suggests that preference for greater variety in product choice is often influenced by interpersonal relationships. The basic notion of this stream of research is that variety-seeking in product choice is driven by the generalized need for new options in interpersonal relationships.

In line with prior literature on goal-directed behaviors, which indicates that a desire induced in one situation can carry over to another unrelated situation (Dhar, Huber, & Khan, 2007; Huang, Dong, & Wyer, 2017; Xu, Schwarz, & Wyer, 2015), research in this area shows that decreased commitment to a social relationship can increase preference for variety in consumer choice. For example, people who feel that their relationships are less secure tend to prefer more variety in their choices (Ybarra, Lee, & Gonzalez, 2012). Short term mating cues, which tend to activate a noncommittal mindset in men, can also increase variety-seeking in consumption (Chen, Zheng, & Zhang, 2016). Similarly, when women are in a period of ovulation in which they are most fertile and have a greater desire for new options in men, they seek more variety in consumption (Durante & Arsena, 2014) as well as in rewards such as hedonic food (Faraji-Rad, Moeini-Jazani & Warlop, 2013).

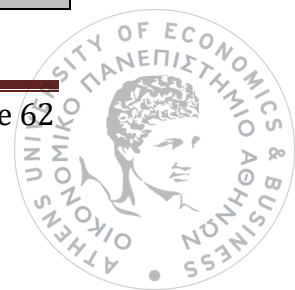


Huang and Dong (2019) suggest that beyond the increased desire for variety in mate options, the lowered sense of control induced by the lack of reciprocity in the romantic crush situation can also lead to greater variety-seeking behavior in product choice. In their research, romantic crush refers to the romantic feeling for someone that is not revealed.

**Table 2.2**

A synopsis of empirical studies on Interpersonal motives for exhibiting variety-seeking behavior

Topic	Conclusion	Studies
<b>Need for Uniqueness/ Expression of individuality and freedom</b>	Individuals try to make different, unique choices in order to portray themselves as unique in the eyes of others rather than risk the appearance of imitation by making the same choices as others	Ariely and Levav, 2000
	A relative confining space and physical proximity tend to motivate consumers to engage in variety-seeking as a means to reassert their freedom and control	Levav and Zhu, 2009 Xu, Shen and Wyer, 2012



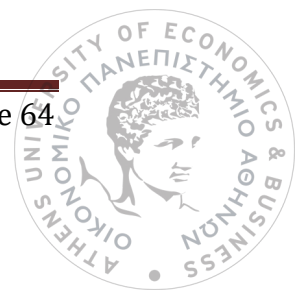
<b>Group Affiliation/ Following social norms Culture</b>	Individuals with collectivistic cultural backgrounds are associated with higher uniformity-seeking tendency (compliance with the group norm) compared to those of individualistic cultural backgrounds	Drolet ,2002 Kim and Drolet, 2003 Yoon et al., 2011
<b>Political Ideology</b>	Consumers high in conservatism seek more variety than consumers low in conservatism as a means to follow social norms	Fernandes & Mandel, 2014
<b>Religion</b>	Consumers from religions with a strong belief in a supreme being render control as less necessary as these beliefs provide comforting thoughts that “someone” (i.e., God) is in control	Mathras et al., 2016



<b>Interpersonal relationships</b>	Variety-seeking in product choice is driven by the generalized need for new options in interpersonal relationships	Ybarra, Lee, & Gonzalez, 2012 Chen, Zheng, & Zhang, 2016 Durante & Arsena, 2014 Faraji-Rad, Moeini-Jazani & Warlop, 2013 Huang & Dong, 2019
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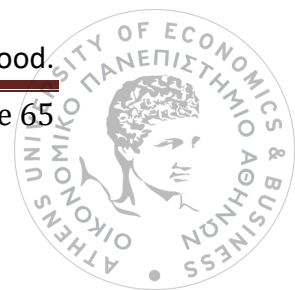
## 2.7. Variety-Seeking and emotions

A specific stream of research focused on the effect of positive or negative emotions on variety-seeking behavior. The earlier studies of this stream focused on positive emotions. The basic notion was that variety-seeking behavior increases in the presence of positive mood. The induction of positive emotions in consumers carrying out brand-choice tasks may lead to their showing a greater preference for exploration and trying new things in safe and enjoyable contexts. In this way, positive feelings induced by mild, everyday positive events (such as a small gift) may lead to greater variety-seeking in a choice task (Kahn & Isen, 1993). However, in cases of extreme positive mood consumers do not tend to engage in variety-seeking because extreme mood heightens the stimulation preference, and the moderate stimulation potential of variety-seeking is not enough to reach the desired level (Roehm & Roehm, 2005).



Another important question in the context of the effect of emotions on variety-seeking is whether variety seeking can lead to happiness. Happiness as a construct is different from positive mood since it is defined as the “experience of positive affect coupled with high life satisfaction” (Diener, 1984). Etkin and Mogilner (2016) suggest that whether variety exerts an influence on happiness depends on the perceived duration of the time within which the activities occur. For longer time periods (like a day), variety does increase happiness. However, for shorter time periods (like an hour), variety instead decreases happiness. This reversal stems from people’s sense of stimulation and productivity during that time. Whereas filling longer time periods with more varied activities makes the time feel more stimulating (which increases happiness), filling shorter time periods with more varied activities makes the time feel less productive (which decreases happiness). These effects are robust across actual and perceived variety, actual and perceived time duration, and multiple types of activities.

More recent studies (such as Chien- Huang & Hung-Chou, 2012; Jeong & Drolet, 2016) have indicated that variety-seeking can also be employed when negative emotions are induced and focused on the individual differences that moderate this effect. Jeong and Drolet (2016) argue that chronically indecisive consumers tend to exhibit variety-seeking behavior when experiencing negative emotions. When indecisive consumers experience negative emotions that arise from the difficulty to make a choice, they employ variety-seeking as an emotional coping strategy in order to handle the stress they face when making choices. What is more, for indecisive consumers, variety-seeking is a tool with which they can repair their mood.



Specifically, if indecisive consumers are used to coping with negative emotions arising from indecision by variety-seeking, they may cope with negative emotions arising from other sources by variety-seeking as well.

The effect of negative mood on variety-seeking behavior is moderated by a number of individual difference variables. Chien- Huang and Hung-Chou (2012) investigated how the effect of mood state on variety-seeking is moderated by variables such as optimal stimulation level, self-monitoring and need for cognition. Their basic notion is that sad consumers tend to incorporate more variety-seeking in their product choices. However, this effect is valid only for consumers with low optimal stimulation level, for high self-monitors and for consumers with low need for cognition.

Not only positive or negative mood but also differences in emotion regulation may have diverse effects on variety-seeking behavior. In general, older adults tend to regulate more their emotions compared to younger adults (Mather & Carstensen, 2003). Consequently, when asked to make choices for future consumption, older adults tend to focus more on emotion regulation and are less likely to take the emotional risks associated with variety seeking (for instance, choosing their favorite option repeatedly rather than sampling less preferred options as well). However, when asked to make present, real time-choices, their generally good mood may make them willing to sample. On the other hand, younger adults tend to select similar levels of variety when choosing what to consume immediately and what to consume later (Novak & Mather, 2007).



**Table 2.3**

A synopsis of empirical studies on the role of emotions and affect  
for exhibiting variety-seeking behavior

Topic	Conclusion	Studies
<b>Positive Emotions/ Mood</b>	Variety-seeking behavior increases in the presence of mild positive mood In case of extreme positive mood, variety-seeking is inhibited	Kahn & Isen, 1993  Roehm & Roehm, 2005
<b>Happiness</b>	Pursuing a variety of activities for a long period (for instance, for a day) can increase happiness	Etkin & Mogilner, 2016
<b>Negative emotions</b>	Variety-seeking can also be employed when negative emotions are induced. This effect is evident for chronically indecisive consumers, for consumers with low optimal stimulation level, for high self-monitors and for consumers with low need for cognition.	Chien- Huang & Hung-Chou, 2012  Jeong & Drolet, 2016



<b>Emotion Regulation</b>	Older adults tend to focus more on emotion regulation and are less likely to take the emotional risks associated with variety seeking However, when asked to make present, real time-choices, their generally good mood may make them willing to sample.	Mather & Carstensen, 2003 Novak & Mather, 2007
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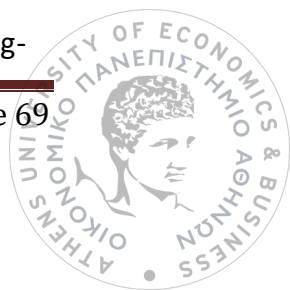


## 2.8. Subtle or Non-conscious effects on variety-seeking behavior

Recent research suggests that variety seeking can be initiated due to factors outside of conscious awareness. Variety-seeking can be affected by the accessibility of semantic concepts. Activating death related concepts without inducing death anxiety increased the variety of options that individuals chose in a multiple-option decision situation whereas inducing death anxiety decreased the variety of their choices (Huang & Wyer, 2015). The accessibility of death-related semantic concepts spontaneously increases the range of acceptable choice alternatives in a variety-seeking task, whereas inducing death anxiety (mortality salience- thinks his own death) creates a desire for stability and leads to a decrease in variety-seeking.

Variety-seeking behaviors can also be stimulated by several cues that increase the perceptual salience of diversity and possibly affect how people construe their choice. Activating specific choice rules that relate to loyalty and commitment has been shown to decrease variety-seeking behavior in consumption choices. Subtle cues that activate a positive attitude towards repetition (such as loyalty) encourage consistency seeking, whereas cues that activate a negative attitude towards repetition (such as boredom or satiation) increase variety-seeking (Fishbach, Ratner, & Zhang, 2011).

In a mating context, Chen, Zheng and Zhang (2016) found that short-term mating cues activate concepts related to un-commitment mind set and in this way increase men's variety-seeking behavior in product choices. At the same time, because long-



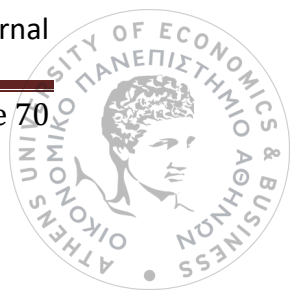
term mating cues tend to activate a commitment mind-set, long-term cues tend to decrease women's variety-seeking behavior in product choices.

In addition, the existing literature about nonconscious effects on choice behavior suggests that consumers' real choices are affected by exposure to novel subtle stimuli that do not have any previous associations. Following this stream of research, Maimaran and Wheeler (2008) found that variety-seeking can be also stimulated by exposure to novel visual arrays of various geometrical shapes. Participants exposed to arrays of different shapes incorporated more diversity into their own subsequent choices and exhibited more variety-seeking compared to participants that were exposed to homogeneous arrays.

## 2.9. External factors: Contextual variables

Variety-seeking has also been shown to occur if the external environment changes, owing to consumers' responses to these changes (Kahn, 1995). External situations may result in variety-seeking through exerting cognitive or affective influences on consumers. For instance, external situations may result in mood state swings and alter consumers' internal need for stimulation, which acts as a direct variety-seeking driver.

External situations' effect on variety-seeking, due to its prevalence in daily life and potential use in practice, has attracted longstanding interest from both practitioners and researchers. A review of the extant literature shows that a number of external



situational factors have been investigated, including in-store environment, price promotion, purchase timing, and products characteristics (Ha & Jang, 2013; Kahn & Raju, 1991; Mohan et al., 2012; Menon & Kahn, 1995; Shukla, 2009; Simonson, 1990).

McAlister and Pessemier (1982) characterize variety-seeking that is attributable to external factors as derived varied behavior. Derived variety-seeking is a behavior that results mostly as a means for the consumer to adapt to changes of the external environment instead of exerting consumer's need for change and variety. Kahn (1995) refers to derived variety-seeking with the term external conditions.

Changes in choice context that could motivate variety-seeking behavior could include changes in the set of feasible alternatives, changes in consumers' tastes or changes in the constraints that the consumers were due in seeking variety.

The set of feasible products changes as new products are introduced in the market and older products are withdrawn. Changes in the marketing mix of a product could be considered as a withdrawal of the product and introduction of a new product in its place. It is worth noting that price promotions could lead to variety-seeking behavior. Apart from changes in marketing mix, variety-seeking could be manifested as a result of changes in consumers' tastes. External factors such as advertising (Givon & Horsky, 1990) or internal factors such as age (Novak & Mather, 2007) could lead to changes in tastes.

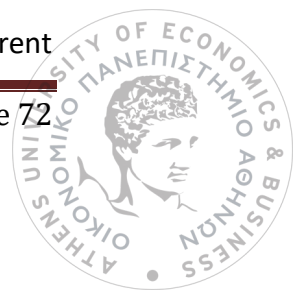


In addition, a change in choice constraints could lead to brand switching. These changes could include a sudden increase or decrease of the disposable income, or an increase in leisure time that could affect individual choices.

### 2.9.1. Social Influences on variety-seeking

**Public consumption** is a contextual variable that has an impact on variety-seeking behavior. Consumers expect satiation with repeated consumption to occur more quickly for others than for self. In this way, they tend to believe that other individuals prefer variety to a greater extent than they do and that they will be evaluated more favorably if they choose variety. This expectation leads individuals to incorporate more variety into their public than private decisions (Ratner & Kahn, 2002).

The aforementioned effect is mitigated by individual differences in the extent to which people are willing to adapt their behavior to please others. Self-monitoring is the tendency to modify or adapt one's behavior in response to others' presence or behavior (Becherer & Richard, 1978). Several researchers have demonstrated that self-monitoring is one of the important variables that moderate the relative influence of traits and/or situations (Bearden et al. ,1989; Darley & Lim, 1992; Hogg, Cox, & Keeling, 2000). High self monitors are willing to adapt their behavior to enact clearly defined roles appropriate to different situations. Low self-monitors are less willing to put on a show to please those around them, preferring instead to be true to their own attitudes and values across different situations. These different

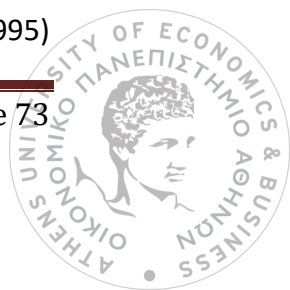


orientations lead low and high self-monitors to show different behaviors in various consumer behavior contexts. Public pressure to appear interesting will induce more variety seeking among high self-monitors than low self-monitors. For example, high self-monitors seek more variety in public to depict themselves as more interesting and creative people (Ratner & Kahn, 2002).

Social effects on variety-seeking behavior are even more evident when consumers make choices for other consumers for which they are held accountable and have to justify their choices (Choi et al., 2006). When making choices for others, individuals tend to mispredict future satiation due to focalism. Focalism describes a state where consumers focus so much on consumption itself while ignoring other life events. Hence, people become afraid of rapid satiation, avoid consuming the same item again, and instead switch to a different, sometimes less preferred, alternative in order to maximize their satisfaction.

### 2.9.2. The retail environment

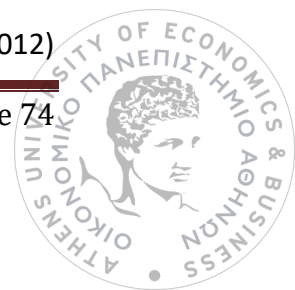
Retailers can affect variety-seeking behavior through the **external retail environment**. Laboratory experiments (Menon & Kahn, 1995) have shown that if a retailer made the retail environment more stimulating, by incorporating changes over time, consumers would exhibit less variety in the product choices than if the retail environment was static over time. These changes in the environment include changing locations of items within a store or changing the layout-specifically, changes that would not increase positive affect. In addition, Menon and Kahn (1995)



also showed that if a consumer was given sufficient variety in one product class, he or she exhibited less variety-seeking than usual in another product class than if the first product class had offered no opportunity for variety. In other words, the degree of variety-seeking in choice that a consumer exhibits may not be a function only of category-specific needs. The desire for variety could be satisfied either from variation within the category through brand switching or from variation across product categories or across purchase situations.

Another series of experiments (Mitchell et al, 1995) found that pumping odors into the retail environment could affect choice behavior and variety-seeking. Specifically, they found that when the odor matched the items in the choice set (for instance, flower smells when choosing flowers, chocolate smells when choosing between candies), subjects chose more variety in their choice sets than subjects in the conditions when the odor did not match. This suggests that perhaps retailers could pump congruent odors into the retail environment to stimulate consumers to seek more variety in their choices. On the other hand, the laboratory studies showed that conflicting odors seem to inhibit variety-seeking behavior and induce more brand loyalty.

An additional external factor that impacts variety-seeking is spatial confinement. Spatially constraining people—by crowding them with others or using architectural elements—leads them to feel confined and consequently to exhibit reactance. In that case, consumers will demonstrate a heightened tendency to seek variety as a means to reassert their freedom (Levav & Zhu, 2009). Mohan et al. (2012)



investigate the impact of several aspects of retail environment on variety-seeking behavior. Adopting a holistic view of the environment, they demonstrated that layout (design factors), scent, music and lighting (ambient factors); and presence and effectiveness of salespersons (social factors) of an environment stimulate variety-seeking behavior.

What is more, visual cues that relate to the consumption item tend to enlarge the consideration set of the consumer, and, in this way, enhance variety-seeking. First, research shows that when a desire is activated by visual cues (e.g. showing pictures of sandwiches in hungry consumers), more items from a choice set (e.g., different kinds of sandwiches) become attractive, and therefore people tend to choose a greater variety of items (Goukens *et al.*, 2007).

### 2.9.3. Changes in Marketing Mix Elements

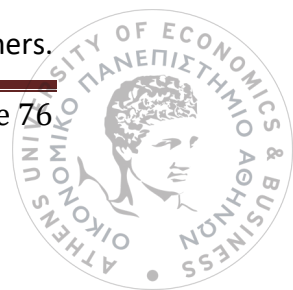
Another external factor, that influences consumer's decision to buy a different product compared to the one consumed in the last purchase occasion is the effect of the **company name** that produces the particular product. Consumers are willing to buy an unfamiliar brand and engage in variety-seeking when this brand comes from a company they find superior in the production of this specific product type and when the perceived risk associated with the purchase decision is high (Chen & Paliwoda, 2004).



**Packaging uniformity** is another driver for the pursuit of variety when making multiple choices. High packaging uniformity provides relatively low stimulation within a store context. In this case, variety seeking is exhibited as an alternative means of adding arousal and restores the correspondence between actual and preferred stimulation. By contrast, the opposite prediction may be made for product categories with low packaging uniformity. In those instances, sufficient stimulation may arise from the diversity and heterogeneity of the product display and relatively little variety seeking may be expected (Roehm & Roehm, 2010).

Another stream of literature on external factors motivating variety-seeking behavior investigated the effect of **price and price promotions** on variety-seeking behavior by comparing the effect of these variables on variety-seekers and reinforcement (or last-purchase loyal) consumers. The basic notion is that variety-seekers use price promotions strategically in order to experiment with different brands over time and they seem to be more price sensitive, willing to buy a more-preferred brand when it is at a lower-than-usual price (Krishnamurthi, Mazumdar & Raj, 1992; Trivedi & Morgan, 2003). Building on prospect theory where perceived losses weight more in consumer choice compared to perceived gains, researchers suggest that variety-seekers are less sensitive to losses compared to loyal consumers. In simple words, variety-seekers are less worried when buying a discounted, smaller brand.

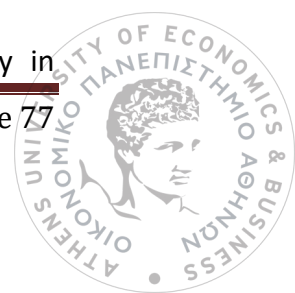
Kahn and Raju (1991) examined the effects of changes in frequency of price discounts on the choice behavior of variety-seeking and reinforcement consumers.



The results indicated that for a minor brand, price discounts have a relatively larger effect for the reinforcement segment than for the variety-seeking segment. Conversely, for a major brand, price discounts have a relatively larger effect for the variety-seeking consumers than for the reinforcement consumers. In a nutshell, the aforementioned results indicate that the gains from promoting more preferred brands come from variety-seekers where the gains from promoting less preferred brands come from loyal consumers.

Seetharaman and Che (2009) introduce an econometric model for variety-seeking where they incorporated the effect of variety-seeking in price competitions in a duopoly market. Kahn and Louie (1990) examined the effect of retraction of price promotions on variety-seekers and loyal consumers and they found that for last-purchase-loyal subjects, a promoted brand's share decreased after the promotions were retracted when it was the only brand being promoted. In addition, promotions that were timed to coincide with the natural choice pattern of the loyal subjects were used more and were more likely to decrease postpromotion brand share. In contrast, the promoted brand's share did not decline on postpromotion choice occasions when subjects tended to switch among brands or when all national brands were promoted equally. Gönül and Srinivasan (1997) examined the impact of price reductions and coupon offers on brand switching behavior and they found that variety-seekers tend to prefer coupon offers compared to price reductions. In addition, Lin and Lin (2009) investigated included price promotions as a moderator to investigate the effect of mood on variety-seeking. They found that consumers who are sad demonstrate more variety-seeking than those who are happy in

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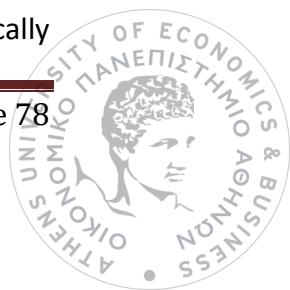
absence of price promotion. However, consumers in both mood states demonstrate similar level of variety-seeking in presence of price promotion.

#### 2.9.4. Temporal and Environmental effects

Roehm and Roehm (2004) investigated the relationship between variety-seeking behaviors and the time of day at which choices are made. The results of their research indicated that more variety-seeking will typically occur during times of day when people are experiencing arousal lows rather than arousal peaks (in relation to the circadian rhythms of each consumer). This finding comes in accordance, with the notion that variety-seeking provides the proper stimulation when needed to restore actual stimulation close to the optimal level.

Recent research by Gullo et al. (2018) provided more insights into the effect of time of the day on variety-seeking by providing additional mediators and moderators of the effect of circadian rhythm on variety-seeking tendencies. More specifically, the researchers found that variety-seeking tends to be lower in the morning than other times of day. However, the aforementioned effect seems to be mediated by a physiological measure of arousal (i.e., body temperature) and moderated by factors that shape physiological arousal (i.e., sunlight and individual differences in circadian preferences).

Not only time of the day but also the weather seems to exert an influence on variety-seeking behavior. Research based on big data that were electronically

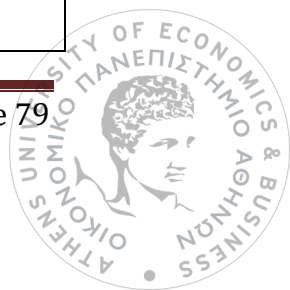


generated, indicated that variety-seeking is enhanced on days with weather conditions such as low sunlight, high temperature or bad air quality (Tian, Zhang, & Zhang, 2018).

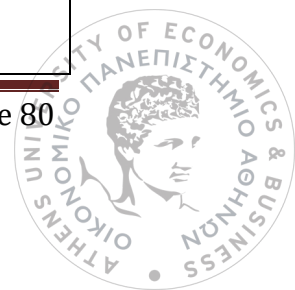
**Table 2.4**

A synopsis of empirical studies on contextual factors that stimulate variety-seeking behavior

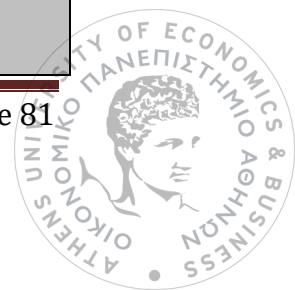
Topic	Conclusion	Studies
<b>Social Influences</b>	<p>Consumers incorporate more variety into their public than private decisions</p> <p>Consumers tend to exhibit more variety-seeking when making choices for other consumers for which they are held accountable and have to justify their choices</p>	<p>Ratner &amp; Kahn, 2002</p> <p>Choi et al., 2006</p>
<b>Retail Environment</b>		
<b>Changes in the layout</b>	If a retailer made the retail environment more stimulating, by changing locations of items within a	<p>Menon &amp; Kahn, 1995</p> <p>Mitchell et al, 1995</p>



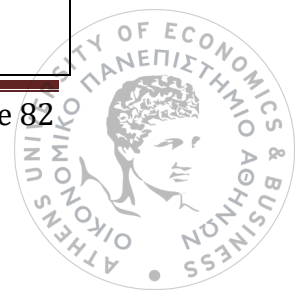
	store or changing the layout-specifically, consumers would exhibit less variety in the product choices	Levav & Zu, 2009
<b>Odors</b>	When the odor matches the items in the choice set, subjects chose more variety in their choice sets	
<b>Spatial confinement</b>	Spatially constraining people—leads them to feel confined and consequently to exhibit reactance. In that case, consumers will demonstrate a heightened tendency to seek variety as a means to reassert their freedom	Goukens et al., 2007
<b>Visual Cues</b>	Visual cues that relate to the consumption item tend to enlarge the consideration set of the consumer, and, in this way, enhance variety-seeking.	



<b>Integration of store atmospherics</b>	Layout (design factors), scent, music and lighting (ambient factors); and presence and effectiveness of salespersons (social factors) of an environment stimulate variety-seeking behavior	Mohan, Sivakumaran & Sharma, 2012
<b>Marketing Mix Elements</b>		
<b>Company name</b>	Consumers are willing to buy an unfamiliar brand and engage in variety-seeking when this brand comes from a company they find superior in the production of this specific product type	Chen & Paliwoda, 2004
<b>Package Uniformity</b>	High packaging uniformity provides relatively low stimulation within a store context. In this case, variety seeking is exhibited as an alternative means of adding arousal	Roehm & Roehm, 2010



<p><b>Price and Price Promotions</b></p>	<p>Variety-seekers use price promotions strategically in order to experiment with different brands over time and they seem to be more price sensitive, willing to buy a more-preferred brand when it is at a lower-than-usual price</p>	<p>Krishnamurthi, Mazumdar &amp; Raj, 1992 Trivedi and Morgan, 2003 Kahn and Raju, 1991 Seetharaman &amp; Che, 2009 Gönül &amp; Srinivasan, 1997 Lin &amp; Lin, 2009</p>
<p><b>Temporal and Environmental effects</b></p>	<p>More variety-seeking will typically occur during times of day when people are experiencing arousal lows rather than arousal peaks.</p> <p>Variety-seeking tends to be lower in the morning than other times of day.</p> <p>Variety-seeking is enhanced on days with weather conditions such as low sunlight, high temperature or bad air quality</p>	<p>Roehm &amp; Roehm, 2004 Gullo et al. ,2018</p> <p>Tian, Zhang, &amp; Zhang, 2018</p>



## 2.10. Choice overload

The term choice overload—also referred to as overchoice— is typically used in reference to a situation in which the complexity of the decision problem faced by an individual exceeds the individual's cognitive resources (Simon, 1955). Several antecedents of the choice overload have been proposed:

1. Decision task difficulty which reflects the structural properties of the decision task operationalized in terms of time constraints, decision accountability, number of attributes describing each option, and the complexity of the presentation format;
2. Choice set complexity which reflects the value-based relationships among the choice alternatives, including the presence of a dominant option, as well as the overall attractiveness, alignability, and complementarity of the choice options
3. Consumers' preference uncertainty, which reflects the degree to which consumers can evaluate the benefits of the choice options and have an articulated ideal point;
4. Consumers' decision goal, which reflects the degree to which individuals aim to minimize the cognitive effort involved in making a choice among the options contained in the available assortments.

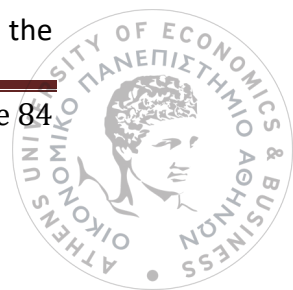


5. Assortment size/ Number of options

The current thesis will focus is on a particular type of choice overload—one in which the decision complexity is caused, at least partially, by the (large) number of available decision alternatives (Iyengar & Lepper, 2000).

Contrary to the conventional wisdom that more choice is better, the provision of extensive choices, even though initially desirable in some cases, may be proven unexpectedly demotivating in the end resulting in choice overload. The choice overload hypothesis states that an increase in the number of options to choose from may lead to adverse consequences such as a decrease in the motivation to choose or a decrease in the satisfaction with the finally chosen option (Diehl & Poynor, 2010; Iyengar & Lepper, 2000; Mogilner, Rudnick, & Iyengar, 2008).

A large number of alternatives (assortment size) to be considered is associated with added cognitive costs. That happens because, in the context of larger assortments, more attributes are to be evaluated and potentially incorporated in the decision criteria resulting in a more complicated choice process. In literature, interchangeably with the term “choice overload” several terms have been used such as “overchoice effect” (Gourville & Soman, 2005), “the problem of too much choice” (Fasolo, McClelland, & Todd, 2007; Scheibehenne, Greifeneder, & Todd, 2009), “the tyranny of choice” (Schwartz, 2000), “consumer hyperchoice” (Mick, Broniarczyk, & Haidt, 2004). Common to all these accounts is the notion of adverse consequences due to an increase in the number of options to choose from. Following the

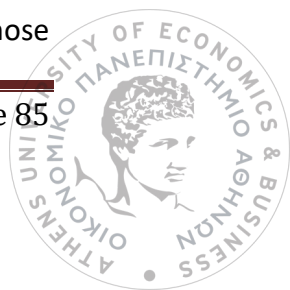


nomenclature in the literature, the term adopted for the current thesis is “choice overload.”

Several researchers have tried to identify preconditions of the effect of the assortment size on consumer choice. One important such precondition is lack of familiarity with, or prior preferences for, the items in the choice assortment so that choosers will not be able to rely merely on selecting something that matches their own preferences (Iyengar & Lepper, 2000). Comparable results were obtained by Mogilner et al. (2008), who found a negative relationship between assortment size and satisfaction only for those people who were relatively less familiar with the choice domain.

Another necessary precondition for choice overload is that it can occur only if there is no obviously dominant option in the choice set and if the proportion of nondominated options is large, because otherwise the decision will be easy regardless of the number of options (Dhar, 1997; Dhar & Nowlis, 1999; Hsee & Leclerc, 1998; Redelmeier & Shafir, 1995). For this reason, experiments on choice overload have typically used options that decision makers are not very familiar with to prevent strong prior preferences for a specific option and consequently a highly selective search process that would allow participants to ignore most of the assortment.

Choice overload has been associated with several behavioral consequences. In particular, compared to individuals not experiencing choice overload, those



experiencing overload are less motivated to choose, to commit to a choice and less likely to make a choice from a particular assortment (Iyengar, Huberman, & Jiang, 2004; Iyengar & Lepper, 2000). In a series of experiments, using small or extensive assortments of jams and chocolates, Iyengar & Lepper (2000) showed that an extensive array of options can at first seem highly appealing to consumers, yet can reduce their subsequent motivation to purchase the product.

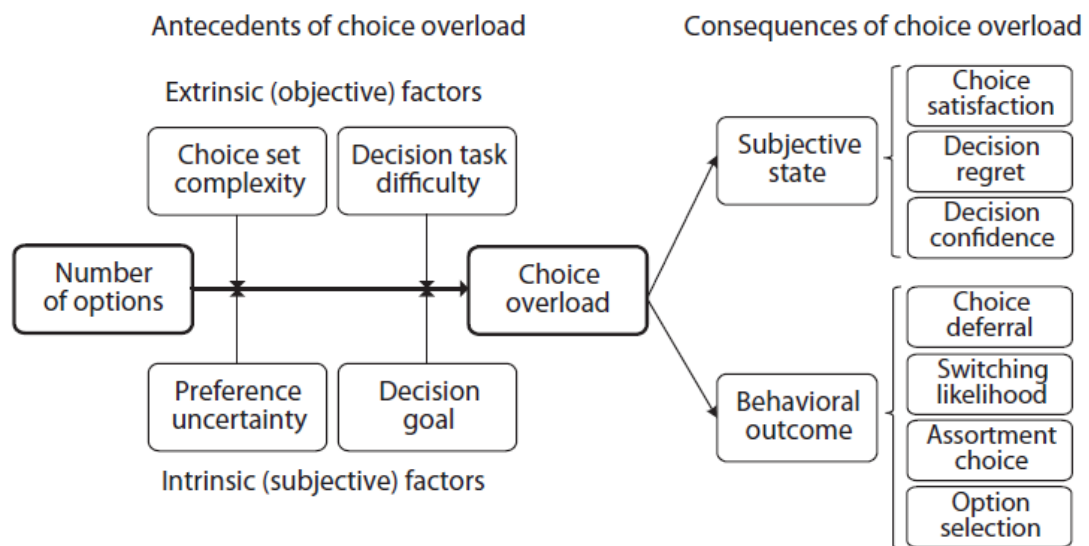
In addition, consumers experiencing overload are more likely to reverse their initial choice (Chernev, 2003a), less likely to display a preference for larger assortments (Chernev, 2006), more likely to choose an option that can be easily justified (Sela et al., 2009) and more likely to select a status-quo option that involves no change or the same product previously consumed (Anderson, 2003). Moreover, the proposed adverse effects of extensive assortments include a decrease in preference strength and satisfaction with the chosen option (Chernev 2003b; Iyengar & Lepper, 2000); and an increase in negative emotions, including disappointment and regret (Schwartz 2000). The antecedents and consequences of choice overload are summarized on the theoretical framework proposed by Chernev et al. (2015)



**Figure 2.3:**

A conceptual framework for antecedents and consequences of choice overload

(Adapted from Chernev et al., 2015)



### 2.10.1. Moderators of choice overload

A significant stream of literature focused on identifying moderators of the negative effect choice overload. The moderators that have been proposed include attribute alignability (Gourville & Soman, 2005), consumer expectations (Diehl & Poynor, 2010), availability of an ideal point (Chernev, 2003b), personality traits and cultural norms (Iyengar, Wells, & Schwartz, 2006), option attractiveness (Chernev & Hamilton, 2009), decision focus (Chernev, 2006), psychological distance (Goodman & Malkoc, 2012), time pressure (Haynes, 2009), product type (Sela, Berger, & Liu, 2009), consumer expertise (Mogilner, Rudnick, & Iyengar, 2008), effort minimisation



(Oppewal & Koelemeijer, 2005), the visual or verbal description of an assortment (Townsend & Kahn, 2003) and positive affect (Spassova & Isen, 2013).

Chernev (2003a, 2003b) suggests that **ideal point availability** moderates the aforementioned effect. Ideal point is defined as a combination of attributes and attributes values describing the ideal choice alternative. When choosing from larger assortments, consumers who have articulated an ideal point tend to have stronger preferences for the chosen option than consumers without an available ideal attribute combination. On the other hand, when choosing from a smaller assortment consumers with an available ideal point tend to have weaker preferences for the chosen option than consumers without an available ideal attribute combination. When consumers have not an articulated ideal point, **option attractiveness** is another moderator of the effect of assortment size on choice (Chernev & Hamilton, 2009). The results of a series of experimental studies indicate that as option's attractiveness within an assortment increases, so does the perceived difference between the options, resulting in additional cognitive costs for the consumer. Consequently, the consumer preference for retailers offering larger assortments tends to decrease as the attractiveness of the options in their assortments increases and can even lead to a reversal of preferences in favor of retailers offering smaller assortments.

Gourville and Soman (2005) distinguish between alignable and nonalignable assortments and suggest that **attribute alignability** is another moderator of the effect of assortment size on choice overload. An alignable assortment is a set define



an alignable assortment to be a set of product variants that differ along a single, compensatory dimension, such that each variant has a specific quantity of that attribute (for instance different fat content of the same milk variant). When confronted with an alignable assortment consumer makes trade-offs within a specific attribute, such as quantity, capacity or amount of an ingredient. On the other hand, nonalignable assortments involve product variants that differ along multiple non-compensatory dimensions where consumers have to make trade-offs across distinct product attributes. Specifically, assortment size was found to positively impact brand choice in the case of an alignable assortment, but negatively impact brand choice in the case of a nonalignable assortment.

Similar but focusing on several attributes, is **attribute complementarity** that is also proposed as moderator of the effect of assortment size on consumer choice (Chernev, 2005). Complementary features are characterized by the additivity of their utilities (for instance cavity and tartar control in toothpaste) whereas noncomplementary features are characterized by nonadditive utilities (such as different colors of a package). In this context, it is argued that assortments in which options are differentiated by noncomplementary features are likely to be associated with a greater probability of purchase than assortments with options differentiated by complementary features.

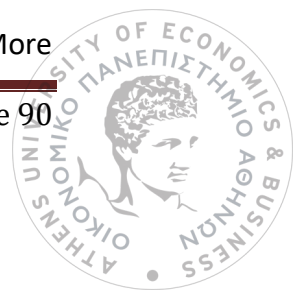
Another moderator to the effect of assortment size on choice is **product type** of the items of the assortment. More specifically, extensive assortments tend to favor utilitarian products. When faced with difficult decisions, consumers often search



reasons to justify their choices. Hedonic consumption is harder to justify, whereas choice of utilitarian products is easier to justify. Thus, the conflict when choosing within assortments of utilitarian products will be milder due to the justification ease associated with utilitarian choices (Sela, Berger, & Liu, 2009).

Diehl and Poynor (2010) propose an **expectation-based process** as an additional mechanism to explain choice overload and demonstrate why larger assortments tend to lead to weaker preferences and lower post-decision satisfaction. Consumers may experience greater negative expectation disconfirmation or less positive expectation disconfirmation when a chosen item comes from a larger rather than a smaller set. That happens due to the fact when assortments are small consumers have low expectations about their ability to match their preferences. As assortment size increases, so do consumers' expectations of the degree of preference match they can achieve.

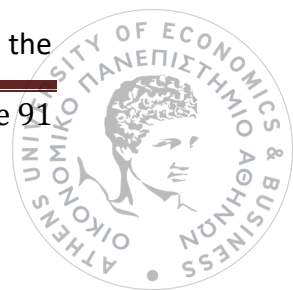
Goodman and Malkoc (2012) introduce **psychological distance** as a moderator of the negative effect of assortment size on consumer preferences. More specifically, they demonstrate that while consumers prefer larger assortments when the choice pertains to close locations and times whereas they are more likely to prefer small assortments when choices take place to distant locations and times. This decrease in preference for large assortments is due to the fact that psychological distance increases the similarity of the options in a category, making them appear more substitutable. Not only temporal distance but also **time pressure** is proposed to moderate the negative effect of large assortments on choice (Haynes, 2009). More



specifically, a limited amount of time to choose with a larger set of alternatives increases choice difficulty and provokes frustration with decision-making process. On the other hand, when a sufficient amount of time is provided to consumers, a larger set of alternatives may lead to less satisfaction, but not provoke emotions of regret. In addition, Chernev (2008) introduces the “**quantity matching heuristic**” to discuss the empirical finding that an assortment tends to be more preferred when the number of available options (assortment size) matches the number of items-to-be purchased.

On the other hand, Spassova and Isen (2013) suggest that **positive affect** should mitigate the negative consequences of large assortments on consumer choice. They propose that positive affect moderates the aforementioned effect as it shifts consumer’s focus away from the difficulty of the decision and the relative cognitive costs to the quality of the assortment.

Research by Mogilner et al. (2008) examines how **the existence of categories** and **consumers’ expertise** moderates the impact of assortment size on choice overload. They divide consumers into “preference constructors” and “preference matchers”. Preference constructors have limited knowledge on the products and they rely on information found in the choice environment to determine their preferences, which makes display cues highly influential (Dodd, Pinkleton, & Gustafson, 1996). On the other hand, for preference matchers the choice process is just a matching between their articulated preferences and the products of the assortments, consequently categorization does not exert an influence on their satisfaction. Consequently, the



number of product categories within an assortment will have a positive effect only for preference constructors.

Townsend and Kahn (2014) suggested **presentation format** as a moderator of the impact of assortment size on choice overload. They introduce the term “visual preference heuristic” to suggest that consumers prefer visual to verbal depiction of information in a product assortment. Images produce greater perceptions of variety than text, which is appealing in assortment selection, but can result in choice complexity and overload when choice sets are large and preferences are unknown. While the less systematic processing that results from visual presentation feels easier, it is not ideal for larger assortments resulting in higher complexity ratings and choice overload than with text depiction.

## 2.11. Conclusions & Research Questions

The review of the relevant variety-seeking and choice overload literature in the preceding sections provided the essential theoretical background for the development of the research questions of the current thesis. In this section, the main conclusions arising from the literature review are presented and how they lead to the research questions of the current thesis is discussed.

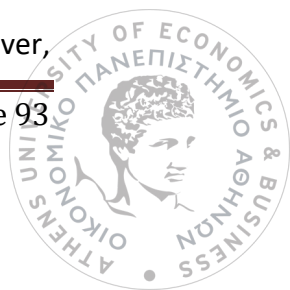
An important conclusion is that the existing literature on variety-seeking behavior has dealt mainly with hedonic products and paid very little attention to variety-seeking behavior in utilitarian products. This gap leads to the first research



question **(RQ1: Do consumers seek variety for utilitarian products?)** that aims to investigate variety-seeking tendencies in utilitarian products.

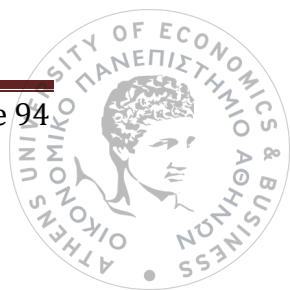
In addition, there seems to be a gap in the growing literature on attribute-level variety-seeking behavior regarding the specific attribute types that may lead to repeated purchase and those that may lead to switching. Although several models of attribute level variety-seeking behavior have been proposed, these models offer little guidance on what product attributes are likely to stimulate and satisfy the consumer's need for variety. The thorough review of the relevant literature yielded only one study that suggests specific attribute types that lead to variety-seeking behavior, even though attribute level seems to be a proper level of analysis for consumer choice and decision making models are moving to this level. This research focused mostly on sensory attributes while variety-seeking tendencies for other attribute types (such as functional) have not been explored. This observation leads to the second research question **(RQ2: What are the attributes that stimulate variety-seeking in different product categories?)** that aims to explore variety-seeking tendencies for sensory and functional attributes in hedonic, utilitarian and not clearly hedonic or utilitarian product categories.

Moreover, choice overload literature seems to be inconclusive with regards to whether larger assortments lead to greater variety-seeking. The results on previous studies on choice overload indicated when consumers experience choice overload, they are likely either to reverse their initial choice or exhibit an even higher propensity of selecting a status quo option that includes no change. Moreover,



research on choice overload included studies where participants had to choose either among assortments or involved choosing one option from an assortment but there is no research related to choice overload where participants had to choose multiple items simultaneously from a single assortment. This leads to the third research question **(RQ3: Is variety-seeking a behavioral consequence of choice overload?)**.

Finally, the thorough study of the relevant literature highlighted that in variety-seeking literature, even though resolution of difficult decisions is suggested as a motive for choosing variety, there is no research that correlates specifically choice overload with variety-seeking and examines moderators of this relationship. Moreover, research on variety-seeking has focused on smaller, more manageable assortments and variety-seeking tendencies in extensively large assortments have not been thoroughly investigated. These two observations lead to the fourth research question **(RQ4: Why is variety-seeking exploited in the case of choosing from large assortments and what are the possible moderators of this behavior?)**.



## **Chapter 3**

### **The interaction of product type and attribute type on variety-seeking**



### **3.1 Chapter Overview**

This chapter presents a series of three experiments that were conducted to investigate the interaction of product type and attribute type on variety-seeking behavior. The experiments were developed to explore the effect of product type (hedonic vs utilitarian) and attribute type (sensory vs functional) on variety-seeking and the underlying mechanism behind this effect.

This first chapter of the empirical research of this thesis tries to address two gaps that were identified in academic research. First of all, past research has focused primarily on hedonic products and variety-seeking tendencies on utilitarian products have not been thoroughly explored. Secondly, the objective of this empirical part is to suggest specific attributes that stimulate variety-seeking behavior, providing a more thorough examination of attribute level variety-seeking. The thorough review of the relevant literature yielded only one study that suggests specific attribute types that lead to variety-seeking behavior, even though attribute level seems to be a proper level of analysis for consumer choice and decision making models are moving to this level. This research focused mostly on sensory attributes while variety-seeking tendencies for other attribute types (such as functional) have not been explored.



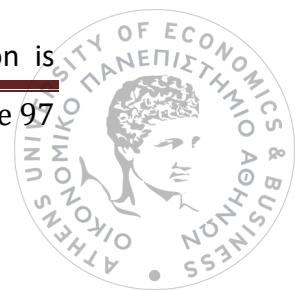
## **3.2. Hypotheses Development**

### **3.2.1. Product category type and variety seeking-behavior**

The need for variety describes consumers' inherent need for change (Vázquez-Carrasco & Foxall, 2006) and accounts for the observed interpersonal differences in variety-seeking behavior. However, there are also interesting intrapersonal differences in exhibiting variety-seeking behavior as there are instances where the same individual seeks variety in specific product categories and consistency in others.

Interpersonal differences in variety-seeking behavior are related to the construct of Optimal Stimulation Level (OSL). OSL refers to the ideal amount of stimulation a person prefers, in general, from all possible internal and external sources across all possible situations and over time (Zuckerman, 1979). Variety-seeking as an exploratory behavior, tends to provide high stimulation through the exploration of different products and brands. Consequently, individuals with high optimal stimulation level, tend to engage more in variety-seeking as a means to gain the stimulation they desire from the choice context.

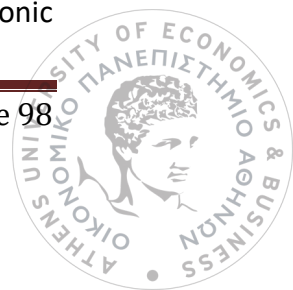
However, apart from the optimal stimulation level (OSL), every consumer in each purchase occasion experiences an actual stimulation level. Actual Stimulation Level (ASL) refers to the amount of stimulation that a person experiences at a specific point in time (Wahlers & Etzel, 1985) and is related to intrapersonal differences in exhibiting variety-seeking behavior. More specifically, when actual stimulation is



lower than the optimal (for instance due to situational factors), variety-seeking is initiated to offer the necessary stimulation to restore the correspondence between ASL and OSL. Thus, consumers with high OSL who are expected to seek variety in all their choices, will exhibit variety-seeking behavior only in the product categories where the actual stimulation is lower than the optimal.

In addition, one of the most important intrapersonal motives for variety-seeking is the desire to overcome satiation that occurs from the repeated consumption of the same product. Variety-seeking is a means of managing the satiation that occurs after initial consumption since when consumers become satiated with the attributes of a given product, they need or desire products that offer a range of other attributes. Therefore, variety-seeking is stimulated because consumers feel satiation on attributes provided by a specific brand and are less likely to choose the same brand repeatedly (Jeuland, 1978; McAlister, 1979, 1982).

A major classification of products in the relevant literature is the distinction between hedonic and utilitarian products. The hedonic dimension results from sensations derived from the experience of using products whereas the utilitarian dimension is derived from functions performed by products (Voss *et al.*, 2003). Consequently, utilitarian products are perceived as more functional whereas hedonic products are linked to experiential consumption (Babin *et al.*, 1994; Chaudhuri, 2002; Childers *et al.*, 2002; Hirschman & Holbrook, 1982). As noted in the literature review, consumers seek more variety in hedonic product categories (Ratner *et al.*, 1999; VanTrijp *et al.*, 1996). Variety-seeking behavior is associated more with hedonic

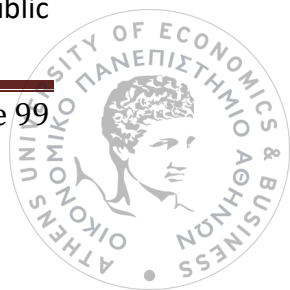


products because it is driven mostly by experiential or hedonic motives rather than by utilitarian aspects of consumption (Hirschman & Holbrook, 1982). Hedonic products stimulate variety-seeking because products that are highly dependent on neural or affective sensations accommodate a variety drive (Kahn & Lehmann, 1991; Van Trijp et al., 1996). This occurs because repeated consumption of these products is likely to lead to satiation or boredom (Rolls, 1986)

### **3.2.2. Interaction effect of product category type and attribute type on variety-seeking behavior**

Consumers frequently consume products and experiences to the point where they no longer enjoy them, a process commonly referred to as “satiation” (Coombs & Avrunin, 1977). Satiation could be the result of physiological mechanisms, especially in the food domain (Rolls et al., 1984). However, satiation could also be attributed to non-physiological mechanisms and might occur for non-ingested stimuli such as music (Ratner et al., 1999), television programs (Nelson et al., 2009), art (Berlyne, 1971), homes (Hsee et al., 2009) and cars (Frank, 1999). Consequently, satiation is not just a physiological effect but it seems to be in many cases non-physiological (Redden, 2015).

The construct of satiation has been extensively examined and several factors that influence satiation rates have been proposed. For instance, satiation can be affected by consumers’ mood (Chien-Huang & Hung-Chou, 2012; Kahn & Isen, 1993), store environment (Mitchell et al., 1995), consumption settings (e.g., private versus public



consumption) (Ratner & Kahn, 2002), active desires of the consumers (Goukens et al., 2007), exposure to relevant stimuli (Maimaran & Wheeler, 2008). Satiation can also be triggered unconsciously by the activation of concepts related to negative frames of repetition such as boredom (Fishbach et al., 2011).

When consumers become satiated with the attributes of a given product, they need or desire products that offer a range of other attributes. Therefore, variety-seeking is stimulated because consumers feel satiation on attributes provided by a specific brand and are less likely to choose the same brand repeatedly (Jeuland, 1978; McAlister, 1979, 1982). In this way, variety-seeking is a means of managing the satiation that occurs after initial consumption. Other research suggests that individuals are inclined to seek variety not only because of actual physiological and stimulation needs, but also because they hold a (sometimes mistaken) belief that they will satiate on favored items quickly. Thus, one reason why people switch away from their favored options is that they think about the consumption sequence in terms of the satiation that will result from repetition, whereas their actual satiation level is often less than anticipated (Read & Loewenstein, 1995).

Satiation may lead to variety-seeking not only across attributes but also within the setting of a particular attribute (Johnson et al., 1995). This means that consumers may satiate and seek variety in a particular attribute to recover from satiation (e.g. buy a different flavor). More generally, satiation appears to be greatest for the particular aspects of a stimulus where we focus our attention (Redden, 2015). Consumers tend to elaborate and process the most salient



attributes in each product category. This elaboration elicits higher satiation rates with these attributes. Product attributes are divided into primary and secondary based on the need that the consumer wants to fulfill (Brechan, 2006). Kahn (1995) suggests that consumers are more likely to be satiated by particular attributes of a good if they relate them to the primary aspect being consumed. For instance, if bread is thought of as a food by itself (primary product), then consumers are more likely to satiate on attributes related to bread and seek variety among the breads. On the other hand, if bread is thought of as the outside of a sandwich, the attributes of the filling in the sandwich (the primary product) are more likely to cause satiation. Satiation on specific attributes will stimulate variety-seeking so that stimulation will be optimized at the preferred level.

The hedonic and utilitarian characteristics of consumers' experience can also be defined at an attribute-specific level (Adaval, 2001; Dhar & Wertenbroch, 2000; Kivetz & Simonson, 2002). According to Batra and Ahtola (1990), hedonism is linked to sensory attributes and utilitarianism is related to functional, non sensory attributes<sup>1</sup>. However, different product categories can be high or low in both hedonic and utilitarian attributes (Crowley et al., 1992), since hedonism and utilitarianism are not necessarily two ends of a one-dimensional continuum (Voss et

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<sup>1</sup>In the literature, the terms hedonic and utilitarian may be used to refer not only to products but also to product attributes (e.g. Dhar and Wertenbroch, 2000). These terms are used interchangeably in the literature with the terms sensory and functional respectively to describe the most salient attributes in hedonic and utilitarian products. In this study, we adopt the definitions given by Batra and Ahtola (1990) and we use the terms sensory and functional to refer to attributes.



al., 2003). It is the relative salience of the sensory and functional attributes of a product that defines its classification as hedonic or utilitarian (Chernev, 2004; Batra & Ahtola, 1990). This means that a hedonic product can also have functional attributes. Extending the notion that consumers tend to seek variety in hedonic products at an attribute specific level, Inman (2001) suggests that consumers seek more variety in sensory attributes due to sensory specific satiety.

Hedonic products and sensory attributes are related to higher satiation rates. It remains unclear however whether there is a case where utilitarian products could foster higher satiation rates and consequently lead to increased variety-seeking behavior. The purpose of the present study is to examine the interaction of product category and attribute type on variety-seeking at the attribute level and investigate whether variety-seeking tendencies can be exploited for utilitarian products as well. As mentioned earlier, consumers tend to become satiated on the attributes on which they focus their attention. Hedonic products are primarily related to sensory attributes whereas utilitarian products are primarily related to functional attributes. Satiation on specific attributes might stimulate variety-seeking so that stimulation will be optimized to the preferred level.

Therefore, it is possible that product type (hedonic vs. utilitarian) and attribute type (sensory vs. functional) interact to determine attribute level variety-seeking behavior in a way such that sensory attributes stimulate variety-seeking in hedonic product categories whereas functional attributes drive variety-seeking in utilitarian product categories:



**H1: In hedonic product categories, consumers seek more variety in sensory than in functional attributes**

**H2: In utilitarian product categories, consumers seek more variety in functional than in sensory attributes**

The above hypotheses are tested in Studies 1, 2 and 3. Study 1 focuses on the interaction effect of product type and attribute type on variety seeking-behavior. Study 2 tries to shed more light on the underlying mechanism behind the interaction effect of product type and attribute type on variety-seeking whereas Study 3 explores attribute level variety-seeking in a product category that is not clearly classified as hedonic or utilitarian.



### **3.3. Study 1: Interaction of product type and attribute type on variety-seeking behavior**

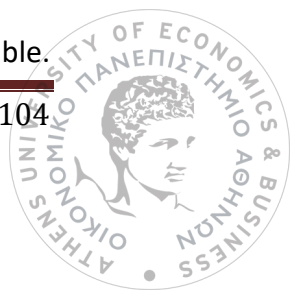
Although several models of attribute level variety-seeking behavior have been proposed, they do not suggest specific product attributes that are more likely to stimulate and satisfy the need for variety. On the other hand, the existing literature on variety-seeking has focused mostly on hedonic products because of the fact that they are associated with higher satiation rates. Past research has not provided specific insights on the instances under which variety-seeking can be exhibited for utilitarian products as well.

The objective of Study 1 is to test the hypothesis that product type (hedonic or utilitarian) and attribute type (sensory or functional) interact to determine attribute level variety-seeking behavior: it is expected that in the hedonic product category, participants will seek more variety in sensory attributes (H1), whereas in utilitarian product categories, they will seek more variety in functional attributes (H2).

#### **3.3.1. Method**

##### **Participants and design**

One hundred postgraduate students (44% male; Mage=29.67 years; SD=5.54) were randomly assigned to a 2 (product category: hedonic vs. utilitarian) x 2 (attribute type: sensory vs. functional) mixed factorial design. Product category was the within-subjects variable while attribute type was the between-subjects variable.



The degree of variety sought at an attribute level in each product category was the dependent variable.

## **Materials and Procedure**

Two product categories were used in the experiment: yogurts (hedonic product) and dish detergents (utilitarian product). Both product categories have been used in past research on variety-seeking behavior (Crowley et al., 1992; Simonson & Winer, 1992; Wertenbroch, 1998) and were thought to represent a hedonic and a utilitarian product category, respectively.

The selection of the attributes was based on a pretest where 25 participants rated different attributes associated with the above product categories as sensory or functional. The aim of the pretest was to ensure that these pairs of attributes differed in their hedonic and utilitarian content and that the most salient attributes in each category were equally important, following the process employed by Dhar and Wertenbroch (2000). The attribute type ratings were anchored by 1=sensory and 7=functional, where participants were presented with definitions of the terms sensory and functional. Sensory attributes were defined as pleasant and fun, something that is enjoyable and appeals to the senses whereas functional attributes were defined as useful, practical and performing a specific operation. The importance ratings were anchored by 1=very important and 7=not at all important. In the pretest, we also measured consumer involvement with product category and



brand attitude to account for confounding effects of other product related factors that stimulate variety-seeking behavior (Van Trijp et al., 1996; Bauer et al., 2006).

In the pretest, participants distinguished clearly between sensory and functional attributes. In yogurts (hedonic product category), nutrient content was rated as a highly functional attribute ( $M= 5.28$ ;  $SD=1.75$ ) whereas flavor was seen as a highly sensory attribute [ $M=1.36$ ;  $SD=1.22$ ;  $t(24)=8.36$ ,  $p<0.001$ ]. These results are in accordance with previous research that has manipulated sensory and functional attributes in yoghurts (Roy & Ng, 2012). In dish detergents (utilitarian product category), cleansing action was seen as a highly functional attribute ( $M=5.84$ ;  $SD=1.89$ ) whereas odor was rated as a highly sensory attribute [ $M= 1.80$ ;  $SD=1.58$ ;  $t(24)=8.85$ ,  $p<0.001$ ].

Secondly, the pretest results were instructive to ensure that the most salient attributes in each category (i.e. the sensory attributes in the hedonic category and the functional attributes in the utilitarian category) would be equally important. Indeed, there was no significant difference between flavor importance ( $M=1.52$ ;  $SD=1.33$ ) and cleansing action importance ( $M=1.60$ ;  $SD=1.53$ ;  $t(24)=-.32$ ,  $p<0.80$ ). Even the “secondary” attributes in each category (i.e. nutrients in the hedonic category and odor in the utilitarian category) were equally important [ $M_{\text{nutrients}}=2.40$ ;  $SD=1.47$  vs  $M_{\text{odor}}= 2.60$ ;  $SD=1.41$ ;  $t(24)=-0.56$ ,  $p<0.60$ ]. Finally, between the two product categories, there were no statistical significant differences in brand attitude (at  $p<0.51$ ) and involvement (at  $p<0.48$ ). In this way, the



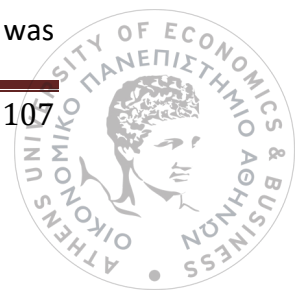
aforementioned selection of product categories and attributes ensured that these product-related factors that stimulate variety-seeking could be controlled.

In the main study, yoghurts varied in flavor (sensory attribute) or nutritional content (functional attribute), whereas detergents varied in odors (sensory attribute) or cleansing action (functional attribute). We adopted an attribute-based information presentation where consumers focus on the attributes that are not identical between competing options (Pizzi et al., 2014). The alternative attribute levels were the following:

In the case of yoghurts (hedonic product), choice included three different flavors (sensory attribute with three levels: peach, strawberry, cherry) or between three different nutrients (functional attribute with three levels: calcium, probiotics, sterols).

In the case of dish detergents (utilitarian product), choice included three different odors (sensory attribute with three levels: lime, bergamot, vinegar) or between three different cleaning actions (functional attribute with three levels: against fat, against odors, antibacterial).

The data collection process was based on Simonson's (1990) studies on variety-seeking behavior. Subjects were told to imagine they were going to the supermarket with a shopping list that included yoghurts (hedonic product) and dish detergents (utilitarian product). Subjects were then asked to choose a bundle of three products for each product category that they would consume themselves. This remark was



made in order to rule out interpersonal effects such as accountability on variety-seeking behavior (Choi et al., 2006).

Participants were presented with a booklet that contained all the possible bundles for each category and were instructed to make their choice, after taking into consideration all the possible combinations-bundles. They made three choices in a simultaneous choice task (Read et al., 2001; Read & Lowenstein, 1995). Finally, they were asked to fill in a questionnaire which included manipulation check items and control variables such as OSL and demographic variables.

## Measures

The degree of variety sought for each product category (low, medium or high) was the dependent variable. Variety seeking was operationalized as the number of different items in the chosen bundle. The choice of three different items was rated as high variety-seeking. The choice of two different items within the bundle was rated as medium variety-seeking. Finally, when participants chose a bundle with the same item, their choice was rated as low-variety seeking.

The HED/UT scale developed by Voss, Spangenberg and Grohmann (2003) was used to check product type manipulation. It includes two subscales (ranging from -3 to +3), one measuring the hedonic dimension ( $\alpha=0.80$ ) and one measuring the utilitarian dimension ( $\alpha=0.78$ ).



The OSL scale ( $\alpha=0.82$ ) developed by Raju (1980) was also used to measure OSL and intrinsic desire for variety (Raju, 1984). It was important to include a measure of OSL, as this is a personality trait that cannot be experimentally controlled. In this way, interpersonal differences in variety-seeking can be ruled out and all possible differences observed can be attributed to product and attribute related factors.

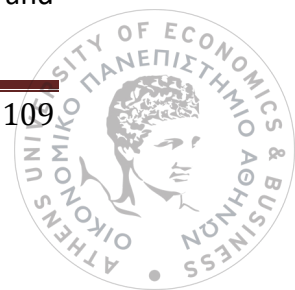
### **3.3.2. Results**

#### **Manipulation check**

The product-type manipulation was assessed by asking the respondents to rate the product categories according to their hedonic or utilitarian nature. In this study we adopted the holistic approach proposed by Okada (2005) and characterized an alternative as being more hedonic or utilitarian based on consumer perceptions. It was found that the mean hedonic perception of yogurts was significantly higher than the mean hedonic perception of detergents [ $M_{h/y}=-0.07$ ;  $SD=1.25$ ,  $M_{h/d}=-1.44$ ;  $SD=1.22$ ,  $t(99)=9.55$ ,  $p<0.001$ ]. Similarly, the mean utilitarian perception of dish detergents was significantly higher [ $M_{u/d}=2.29$ ;  $SD=0.84$ ,  $M_{u/y}=0.90$ ;  $SD=1.03$ ,  $t(99)=11.63$ ,  $p<0.001$ ] than the mean utilitarian perception of yogurts.

#### **Variety- Seeking Behavior**

The main hypothesis was tested by conducting a mixed factorial ANOVA to examine the differences in the degree of variety sought between the hedonic and



the utilitarian product when they varied in a sensory attribute and when they varied in a functional attribute (Goukens et al., 2007; Read and Lowenstein, 1995).

The nature of the product category (hedonic or utilitarian) had no main effect on variety-seeking behavior [ $F(1,98)=0.99$ , *ns*]. Moreover, attribute type (sensory or functional) did not have a significant main effect on variety-seeking behavior [ $F(1,98)=1.27$ , *ns*]. However, there was a statistically significant attribute x product category interaction effect [ $F(1,98)=24.82$ ,  $p<0.001$ ].

In the hedonic product category, the mean variety sought in the sensory attribute ( $M_{h/s}=2.20$ ;  $SD=0.57$ ) was greater than the mean variety sought in the functional attribute ( $M_{h/f}=1.84$ ;  $SD=0.71$ ). In the utilitarian product category, the mean variety sought in the functional attribute ( $M_{u/f}=2.38$ ;  $SD=0.73$ ) was greater than the mean variety sought in the sensory attribute ( $M_{u/s}=1.84$ ;  $SD=0.74$ ).

As the previous results indicate, in the conditions where the bundles varied in functional attributes, the mean variety sought for the utilitarian product ( $M_{u/f}=2.38$ ;  $SD=0.73$ ) was greater than the mean variety sought for the hedonic product ( $M_{h/f}=1.84$ ;  $SD=0.74$ ).

The above results are summarized in Table 3.1. Figure 3.1 illustrates the interaction effects.



**Table 3.1**

Product category x attribute interaction on variety-seeking

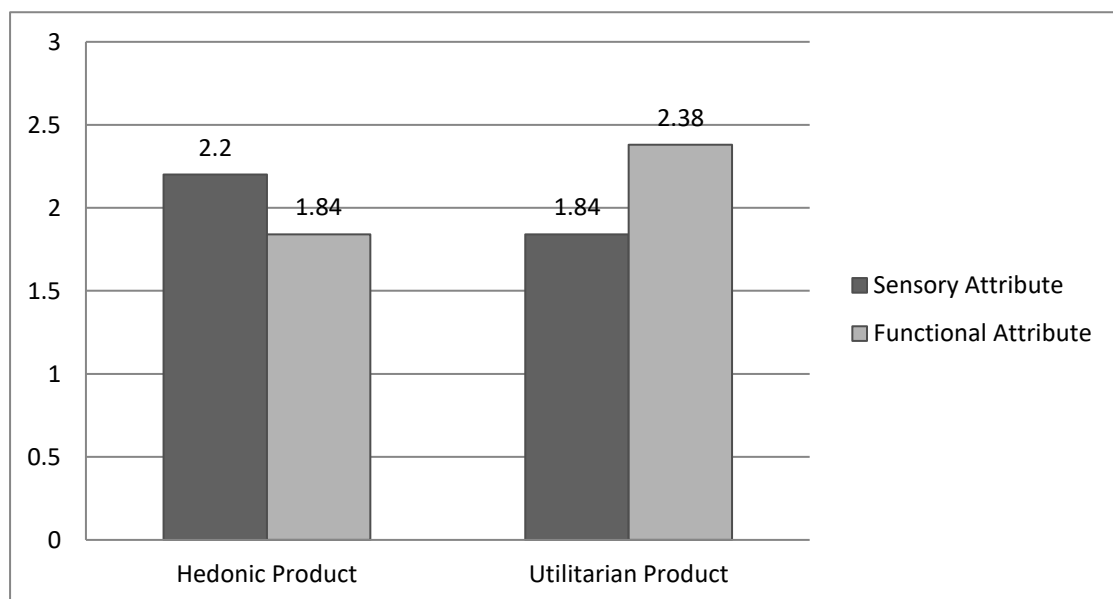
Product Type	Attribute Type	Mean	t
Hedonic	Sensory	2.20	2.73*
	Functional	1.84	
Utilitarian	Sensory	1.84	-3.76*
	Functional	2.38	

N in each condition is 50

\* $p < 0.001$

**Figure 3.1**

Product category x attribute interaction on variety-seeking



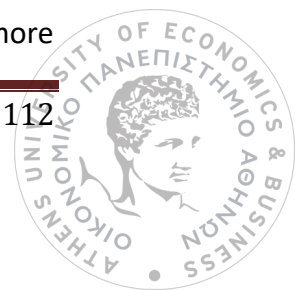
### **Covariate analysis**

The purpose of the covariate analysis was to ensure that the interaction effect of product category and attribute type on variety-seeking holds despite interpersonal differences in variety-seeking tendencies that are related to different Optimal Stimulation Levels across participants.

A mixed factorial ANCOVA with the OSL measure as a covariate was conducted. OSL was found to have a significant main effect [ $F(1,97)=4.71$ ,  $p=0.03$ ]. However, the statistically significant attribute x product category interaction effect [ $F(1,97)=23.74$ ,  $p<0.001$ ] remained significant; the mean variety sought in sensory attributes of the hedonic product ( $M_{h/s}=2.18$ ;  $SD=0.57$ ) was higher than the mean variety sought in sensory attributes of the utilitarian product ( $M_{u/s}=1.83$ ;  $SD=0.71$ ) and the mean variety sought in functional attributes of the utilitarian product ( $M_{u/f}=2.39$ ;  $SD=0.73$ ) was higher than the mean variety sought in functional attributes of the hedonic product ( $M_{h/f}=1.86$ ;  $SD=0.74$ ).

#### **3.3.3. Discussion**

The purpose of Study 1 was to test the hypothesis that the nature of the product category (hedonic or utilitarian) interacts with the attribute type (sensory or functional) in attribute level variety-seeking behavior. The results indicate that a) in hedonic product categories consumers tend to seek more variety in sensory attributes, and b) in utilitarian product categories consumers tend to seek more



variety in functional attributes. What is more, when comparing variety-seeking tendencies across product categories, we have found that consumers tend to seek more variety in a) sensory attributes of hedonic products, and b) functional attributes of utilitarian products.

This study provides a new perspective for studying attribute level variety-seeking behavior by relating consumers' hedonic or utilitarian perception of a product category with variety-seeking behavior at the attribute level. In addition, this study represents a first attempt to explore variety-seeking tendencies in utilitarian product categories. More specifically, despite the fact that consumers generally seek more variety in hedonic products, the results indicate that variety-seeking in utilitarian products is enhanced when products differ on functional rather than sensory attributes, confirming that variety-seeking can be also exploited for utilitarian products.



### **3.4. Study 2: Perception of repetition and variety-seeking for specific attributes**

Study 1 demonstrated the interactive effect of product type and attribute type on variety-seeking behavior. A theoretical explanation for this interaction effect might be that consumers tend to become satiated on attributes on which they focus their attention because they tend to perceive them as more repetitive (Redden, 2008). Variety-seeking emerges when consumers seek to manage the satiation that follows initial consumption and is exhibited mostly for sensory attributes of hedonic products and functional attributes of utilitarian products. However, Study 1 did not include any measures of satiation. Study 2 builds on Study 1 and examines our theoretical argument on the mechanism of the observed effect. If satiation underlies the interaction of product type and attribute type on variety-seeking, then in hedonic products, sensory attributes should be related to higher satiation rates. Similarly, in utilitarian products, functional attributes should be related to higher satiation rates. Such differences would provide support for the proposed process.

#### **3.4.1. Method**

##### **Participants and design**

Ninety two postgraduate and undergraduate students (40.2 % male; Mage=25.26 years, SD= 5.4) were randomly assigned to a 2 (product category:



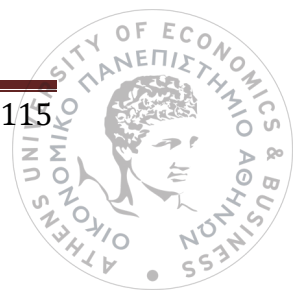
hedonic vs. utilitarian) x 2 (attribute type: sensory vs. functional) between-subjects design. Satiation rate was the main dependent variable.

## **Materials and Procedure**

Two product categories were used in the experiment: chocolate (hedonic product) and toothpaste (utilitarian product). Both product categories have been used in past research (Crowley et al., 1992; Khan and Dhar, 2010; O'curry and Strahilevitz, 2001) and were thought to represent a hedonic and a utilitarian product category, respectively. Chocolates varied in flavor (sensory attribute) or nutritional content (functional attribute), whereas toothpastes varied in odors (sensory attribute) or active ingredients (functional attribute). Respondents were presented with the following alternatives:

In the case of chocolates (hedonic product) participants were presented with three different flavors (sensory attribute with three levels: with hazelnut, with praline or with caramel) or with three different nutrients (functional attribute with three levels: with sweeteners from stevia, rich in proteins, rich in anti-oxidants).

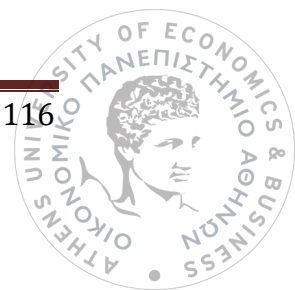
In the case of toothpastes (utilitarian product) participants viewed three different flavors (sensory attribute with three levels: mint, peppermint or lemon) or three different active ingredients (functional attribute with three levels: whitening, against plague, against decay). As in Study 1, an attribute-based information presentation was adopted where participants focus on the attributes that are not identical between competing options (Pizzi et al., 2014).



In the beginning of the experiment, the respondents were presented with three products and were asked to rate their enjoyment of each one of these products. Then, three different bundles of these products were presented to them. The bundles consisted either of three identical products (low variety bundle), or two identical products and one different (medium variety bundle) or three different products (high variety bundle). After presented with each bundle respondents were asked to rate their enjoyment of each product of the bundle. Then they completed a filler task and they continued to rate their enjoyment of the products in the next bundle. The reason why a filler task was included was to avoid carry-over effects between the enjoyment ratings. Finally, respondents were asked to indicate how repetitive they considered the product attributes (perception of repetition) and filled in questions assessing control variables such as OSL and manipulation checks.

## Measures

Satiation was conceptualized in terms of repetition of the consumption episodes ( $\alpha=0.77$ ) and was measured by asking the respondents about redundancy (“Seeing the chocolates felt like the same thing over and over,” “seeing the chocolates was very boring”) and similarity (“The chocolates were very similar to each other,” “Each chocolate had aspects that made it different [reverse coded]”) on 7-point scales (Redden, 2008). The enjoyment ratings were assessed by asking “How much do you enjoy this product?” on 11-point scales (where 1 equals not at all, 11 equals very much).



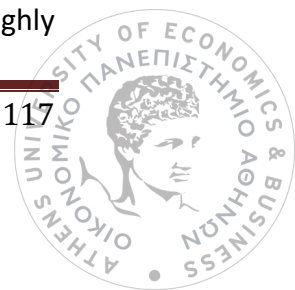
As in Study 1, the HED/UT scale (Voss et al., 2003) was used to check product type manipulation ( $\alpha = 0.91$  for hedonic subscale and  $\alpha = 0.92$  for utilitarian subscale). We also used the OSL scale ( $\alpha = 0.84$ ) developed by Raju (1980) to measure OSL and intrinsic desire for variety (Raju, 1984).

### **3.4.2. Results**

#### **Manipulation checks**

The product-type manipulation was assessed by asking respondents to rate the product categories according to their hedonic or utilitarian nature. The mean hedonic perception of chocolates ( $M_{h/c} = -1.68$ ;  $SD = 1.11$ ) was significantly higher [ $t(90) = 8.42$ ,  $p < .001$ ] than the mean hedonic perception of toothpastes ( $M_{h/t} = -0.40$ ;  $SD = 1.26$ ) whereas the mean utilitarian perception of toothpastes ( $M_{u/d} = 2.30$ ;  $SD = 0.85$ ) was significantly higher [ $t(90) = 10.94$ ,  $p < .001$ ] than the mean utilitarian perception of chocolates ( $M_{u/c} = -0.31$ ;  $SD = 1.38$ ).

In order to assess the attribute-type manipulation, respondents were asked to rate each attribute as sensory or functional on a continuous scale anchored by 1=sensory and 7=functional. In the case of chocolate (hedonic product), flavor was rated as a highly sensory attribute ( $M = 1.95$ ;  $SD = 1.59$ ) whereas nutrient content was rated as a highly functional attribute [ $M = 5.40$ ;  $SD = 1.29$ ;  $t(44) = -8.10$ ,  $p < 0.001$ ]. In the case of toothpastes (utilitarian product), flavor was rated as a highly sensory attribute ( $M = 1.65$ ;  $SD = 1.30$ ) whereas active ingredients were rated a highly



functional attribute [ $M=5.70$ ;  $SD=1.55$ ;  $t(44)=-9.58$ ,  $p<0.001$ ]. Participants readily distinguished between sensory and functional attributes in each product category and the manipulation was therefore successful.

### **Effect of product type and attribute type on perception of repetition**

At the first stage of the analysis, an ANCOVA on the perception of repetition was performed. The model included product and attribute type as between-subjects factors and the initial enjoyment rating and OSL as covariates. This analysis revealed statistically significant main effects of product type [ $F(1,92)=6.63$ ,  $p<0.05$ ] and OSL [ $F(1,92)=7.03$ ,  $p<0.05$ ]. What was even more interesting was the significant interaction of product type and attribute type [ $F(1,92)=4.14$ ,  $p<0.05$ ]. A closer inspection of this interaction with pairwise comparisons indicated that in the hedonic product category, the mean perception of repetition of the sensory attributes ( $M=3.46$ ;  $SD=1.37$ ) was significantly higher than the mean perception of repetition of functional attributes [ $M=2.97$ ;  $SD=3.03$ ;  $t(1,92)=3.56$ ,  $p<0.05$ ]. In contrast, in the utilitarian product category, the mean perception of repetition of the functional attributes ( $M=4.22$ ;  $SD=1.35$ ) was significantly higher than the mean perception of repetition of sensory attributes [ $M=3.61$ ;  $SD=1.42$ ;  $t(1,92)=3.59$ ,  $p<0.05$ ].

The above results are summarized in Table 3.2. Figure 3.2 illustrates the interaction effects.



**Table 3.2**

Product category x attribute interaction on perception of repetition

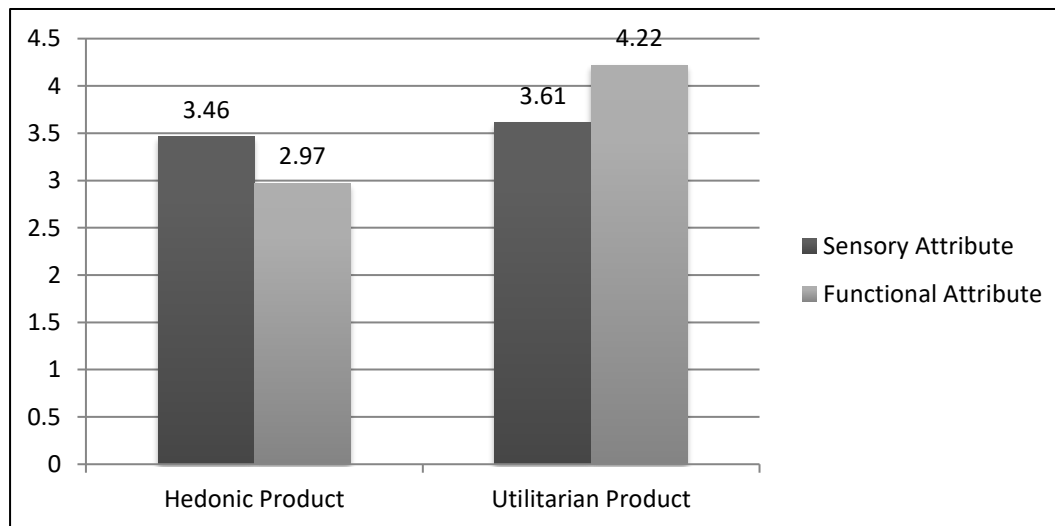
Product Type	Attribute Type	Mean	t
Hedonic	Sensory	3.46	3.56*
	Functional	2.97	
Utilitarian	Sensory	3.61	-3.61*
	Functional	4.22	

N in each condition is 50

\* $p < 0.01$

**Figure 3.2.**

The interaction of product type and attribute type on perception of repetition



### **3.4.3. Discussion**

Study 2 tried to shed light on the underlying mechanism behind the interaction effect of product type and attribute type on variety-seeking. Including explicit measures of satiation, the interaction effect is attributed to different satiation levels associated with specific attribute types in each product category. The results confirm that in hedonic product categories, consumers tend to consider the product variants to be more similar and repetitive when variation is based on sensory attributes compared to when it is based on functional attributes. In utilitarian product categories, product variants seem to be more similar and repetitive when variation is based on functional rather than sensory attributes. These findings provide support for a satiation mechanism behind the interactive effect of product category and attribute type on variety-seeking behavior observed in Study 1.



### **3.5. Study 3: Variety-Seeking in categories not clearly hedonic or utilitarian**

The utilitarian–hedonic distinction between products is rather gradual in the sense that many products cannot be classified as being entirely hedonic or utilitarian and may contain both hedonic and utilitarian aspects. The classification of a product as hedonic or utilitarian may depend on product attribute perceptions, which may be assessed empirically (Antonides and Cramer, 2013; Cramer and Antonides, 2011). There are products such as the “healthful indulgencies” that combine pleasure with healthful benefits and simultaneously satisfy consumers’ hedonic and utilitarian goals (Belei et al., 2012). We remind our reader that the product categories in Study 1 were perceived as either hedonic or utilitarian.

The purpose of Study 3 was to test whether there are differences in attribute level variety-seeking in a product category that is not clearly perceived as hedonic or as utilitarian. Specifically, in the case of a product that is not clearly hedonic or utilitarian, we expect that the attribute type (sensory or functional) variation will not elicit any differences in satiation rates since consumers will tend to focus equally on those attributes. Therefore, we expect that there will be no differences in variety seeking tendencies for sensory and functional attributes.



### **3.5.1. Method**

#### **Participants and design**

Forty three undergraduate students (26% male; Mage=22.02, SD=1.96) were randomly assigned to one of the two experimental conditions (sensory vs. functional attributes) for course credit. The degree of attribute-level variety sought was the dependent variable.

#### **Materials and Procedure**

Healthy breakfast snacks were used as stimuli for Study 2. They varied in flavor (sensory attribute) or nutritional content (functional attribute). The selection of product category and attribute levels was based on two pretests.

In the first pretest, 27 participants rated different product categories as relatively more hedonic or utilitarian. The two subscales of HED/UT (Voss et al., 2003) was used in order to measure the hedonic ( $\alpha=0.87$ ) and utilitarian dimension ( $\alpha=0.74$ ) of each product category (ranging from -3 to +3). Healthy breakfast snacks were the only product category where no differences between the perceived hedonic and utilitarian nature of healthy breakfast snacks were detected. The mean utilitarian perception of healthy breakfast snacks ( $M_u=1.68$ ;  $SD=0.81$ ) was not significantly [ $t(26)= 2.14$ ] higher than the mean hedonic perception ( $M_h=1.14$ ;  $SD=1.32$ ). In all other categories, statistically significant differences at  $p<0.01$  were



observed. Consequently, healthy breakfast cereals were selected as a category that is neither hedonic nor utilitarian.

Following the selection of the product category, in the second pretest (27 participants) attribute importance was measured to ensure that both attribute types (sensory and functional) were equally salient. The importance ratings were anchored at 1(very important) to 7 (not at all important). The results of the second pretest indicated that there was no significant difference between flavor importance and nutritional content importance (at  $p < 0.19$ ).

As in study 1, the procedure of data collection was based on Simonson (1990).

## Measures

The degree of attribute-level variety sought was the dependent variable. The dependent variable was operationalized, as in Study 1, by means of the number of different items in the chosen bundle. As in study 1, the OSL scale (Raju, 1980) was used to measure OSL and intrinsic desire for variety ( $\alpha = 0.76$ ). In order to check attribute type manipulation, participants were asked to rate attributes relatively to their sensory or functional nature [where 1 (sensory), 7 (functional)].



### **3.5.2. Results**

Participants clearly distinguished between sensory and functional attributes; specifically flavor was rated as a highly sensory attribute ( $M=2.10$ ) whereas nutritional content was seen as a highly functional attribute [ $M=5.32$ ;  $t(41)=-7.66$ ,  $p<0.001$ ].

The mean variety sought when the bundles varied in sensory attributes ( $M_s=2.14$ ;  $SD=0.73$ ) was not significantly higher than the mean variety sought when the bundles varied in functional attributes [ $M_f=2.00$ ;  $SD=0.54$ ;  $t(41)=0.73$ ,  $p<0.47$ ]. This effect remains non-significant even when conducting a factorial ANCOVA with the OSL measure as a covariate [ $M_s=2.13$  vs.  $M_f=2.01$ ;  $F(1,42)=0.37$ ,  $p<0.55$ ].

This finding indicates that in a product category that is neither clearly hedonic nor utilitarian there are no significant differences in variety-seeking behavior when variation stems from sensory or functional attributes. This finding might be explained by the fact that attribute type (sensory or functional) does not elicit any differences in satiation rates and variety seeking behavior does not differ between sensory and functional attributes.

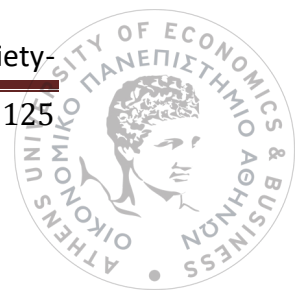


## **3.6. General Discussion**

### **3.6.1. Major Findings and Contribution of current research**

Even a cursory look through the research literature shows that several studies have addressed variety-seeking in hedonic product categories, yet very little about variety seeking in utilitarian product categories is known (Ratner et al., 1999; Van Trijp et al., 1996). The results not only demonstrate that variety seeking is evident in utilitarian product categories but also show that consumers seek more variety in utilitarian products when variation is based on functional attributes. It is important to emphasize that although previous research focuses on sensory effects as the source of variety-seeking (Inman et al., 2008; Inman, 2001) the findings of the current thesis indicate that variety-seeking behavior may also derive from functional, non-sensory attributes.

The present research also contributes to the growing literature on attribute-level variety-seeking behavior by considering the attribute types that may lead to repeated purchase and those that may lead to switching, in connection with the product category type. Previous research focuses on modeling attribute level variety-seeking behavior (Erdem, 1996; Inman et al., 2008; McAlister, 1982). Past studies however do not offer guidance on the specific product attributes that are more likely to stimulate variety-seeking. The first study shows that in hedonic products variety-seeking is stimulated by sensory attributes whereas in utilitarian products variety-

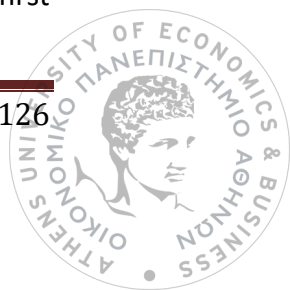


seeking is stimulated by utilitarian attributes. The second study illustrates the process behind the interaction effect of product category and attributes type on variety-seeking behavior. Specifically, it demonstrates that in hedonic products consumers tend to perceive sensory attributes to be more repetitive whereas in utilitarian products they perceive functional attributes as more repetitive. The third study shows that variety seeking behavior does not differ across sensory and functional attributes in product categories that are not clearly hedonic or utilitarian. These findings offer a deeper understanding of the product-based mechanisms underlying variety-seeking behavior.

### **3.6.2. Managerial Implications**

The identification of specific attributes that stimulate variety-seeking in connection with the nature of the product category has important practical implications for strategic decisions such as product line extensions, product line pruning, category management in retail settings, and designing promotional offers such as product bundles and combined offers.

For example, if the product is perceived as hedonic, extending the product line with products that vary in sensory attributes will be an appropriate strategy while the opposite would hold in the case of utilitarian products. In a similar vein, the determination of specific attributes that stimulate variety-seeking could help to decide upon which SKUs to withdraw when line pruning decisions are necessary. In utilitarian product categories, products that vary in sensory attributes are the first

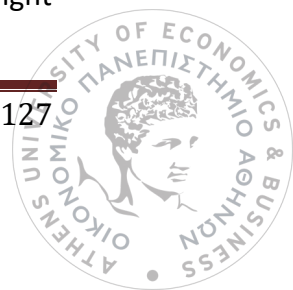


elimination candidates. In hedonic product categories, products that vary in functional attributes are the first candidates for elimination. In this manner, line pruning and more generally rationalization of excessive product variety may have the least possible impact on consumer satisfaction and loyalty.

In retail settings, the findings can assist the determination of merchandise variety. In hedonic product categories, retailers should offer their customers a product line with greater variety in sensory attributes. In utilitarian product categories however, retailers should offer their customers items with different functional attributes. Given the prevalence of product bundles in supermarkets and other retail stores, our findings are instructive for designing effective promotions and, in particular, combined offers. More specifically, if the product category is perceived as hedonic, sensory variation among the items of the bundle is more likely to stimulate variety-seeking, whereas if the product category is perceived as utilitarian, functional variation among the items of the bundle is more likely to stimulate variety-seeking.

### **3.6.3. Limitations and Directions for Future Research**

However, this research is subject to several limitations. Even though a non-physiological view of satiation -where satiation is the result of psychological attributions (and not of the accumulation of ingested stimuli)-was adopted, all measurements were taken at one point of time, simultaneously and not sequentially at different points of time, as in previous research. Consequently, consumers might



not have enough time and put enough “effort” to satiate. Secondly, even though the holistic approach of Okada (2005) was adopted, yoghurts seem not to be the most optimal representation of a hedonic product. In addition, the collected data were only laboratory data, with all the limitations relevant to the external validity of the laboratory experiments.

Despite those limitations, the present research might stimulate further research. Future studies could focus on the effect of other attribute types on variety-seeking in hedonic and utilitarian products. For instance, it has been found that abstract product attributes communicate hedonic motives for product acquisition and use in comparison with concrete attributes (Snelders & Schoormans, 2004). In addition, this study could be extended by considering variables that prevent or delay satiation such as the categorization level of the consumption episodes (Raghunathan & Irwin, 2001; Redden, 2008), recalling past variety (Galak et al., 2009) or the perceived variety of an assortment being consumed (Kahn & Wansink, 2004). It would be interesting to test whether satiation reducing mechanisms elicit different effects in variety-seeking for hedonic and utilitarian products. It is hoped that the preceding discussion might provide the stimulus for new research in this important area of consumer behavior.



## **Chapter 4: Choice Overload, Specificity, Chooser Type and Variety-Seeking**



## **4.1. Chapter Overview**

This chapter presents two studies (Study 4 and Study 5) that were conducted to investigate the effect of choice overload, specificity and chooser familiarity on variety-seeking behavior. Study 4 aims to conceptualize variety-seeking as a behavioral consequence of choice overload, whereas Study 5 examines moderators of this effect such as chooser familiarity with product category (chooser type) and categorization level.

This second chapter of the empirical research of this thesis tries to address two gaps that were indicated in the variety-seeking and choice overload literature. The first gap is that, even though several behavioral consequences of choice overload have been identified in literature, variety-seeking has not been conceptualized as a behavioral response of this phenomenon. This is important, as in choice overload literature there is conflicting evidence on whether larger assortments lead to greater variety-seeking. On one hand, switching likelihood has been used as a measure of the strength of preference for the selected option when choosing from large assortments but, on the other hand, research has indicated that when faced with choosing from a large relative to a small assortment, consumers are expected to exhibit an even higher propensity of selecting a status quo option that includes no change.

Moreover, past research on choice overload included studies where participants had to choose either among assortments or involved choosing one option from an



assortment but there is no research related to choice overload where participants had to choose multiple items simultaneously from a single assortment.

Finally, in variety-seeking literature, even though resolution of difficult decisions is suggested as a motive for choosing variety, there is no research that correlates specifically choice overload with variety-seeking and examines moderators of this relationship. In addition, research on variety-seeking has focused on smaller, more manageable assortments and variety-seeking tendencies in extensively large assortments have not been thoroughly investigated.

## **4.2. Hypotheses Development**

### **4.2.1. Choice Overload**

Extensive assortments, although desirable in many cases, may turn to a demotivating factor and lead consumers to choice overload. The choice overload hypothesis states that an increase in the number of options to choose from may lead to adverse consequences such as a decrease in the motivation to choose or a decrease in the satisfaction with the finally chosen option (Diehl & Poynor, 2010; Iyengar & Lepper, 2000; Mogilner, Rudnick, & Iyengar, 2008; Scheibehenne, Greifeneder, & Todd, 2010). There are several types of choice overload but the current thesis will focus on the type of choice overload where the decision difficulty is caused by the (large) number of available decision alternatives (Iyengar & Lepper, 2000).



In order to experience the negative consequences of choice overload, several preconditions must occur. The most profound precondition is that consumers lack familiarity with, or prior preferences for, the items in the choice assortment (Iyengar & Lepper, 2000; Mogilner et al., 2008). In addition, several empirical studies have indicated that choice overload is experienced if there is no obviously dominant option in the choice set and if the proportion of nondominated options is large, because otherwise the decision will be easy regardless of the number of options (Dhar, 1997; Dhar & Nowlis, 1999; Hsee & Leclerc, 1998; Redelmeier & Shafir, 1995).

However, the negative effects of choice overload on consumer choices are not experienced equally on all cases. Several factors have been empirically found to moderate the negative effect of extensive number of options on consumer choice. The moderators include attribute alignability (Gourville & Soman, 2005), consumer expectations (Diehl & Poynor, 2010), availability of an ideal point (Chernev, 2003a), personality traits and cultural norms (Iyengar, Wells, & Schwartz, 2006), option attractiveness (Chernev & Hamilton, 2009), decision focus (Chernev, 2006), psychological distance (Goodman & Malkoc, 2012), time pressure (Haynes, 2009), product type (Sela, Berger, & Liu, 2009), consumer expertise (Mogilner et al., 2008), effort minimisation (Oppewal & Koelemeijer, 2005), the visual or verbal description of an assortment (Townsend & Kahn, 2003) and positive affect (Spassova & Isen, 2013).

Finally, choice overload has been associated with a number of behavioral responses. Individuals experiencing overload are more likely to defer choice or feel



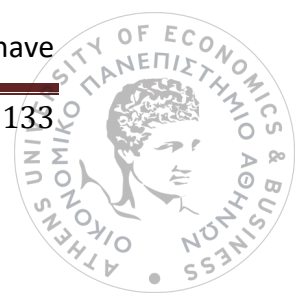
less satisfied with their chosen alternative (Iyengar & Lepper, 2000), more likely to select a status-quo option that involves no change or the same product previously consumed (Anderson, 2003), more likely to reverse their initial choice (Chernev, 2003b), less likely to display a preference for larger assortments (Chernev, 2006) and more likely to choose an option that can be easily justified (Sela *et al.*, 2009).

#### 4.2.2. Variety-seeking as a consequence of choice overload

Variety seeking behavior- defined as the desire for a new and novel stimulus (Hoyer & Ridgway, 1984) or the tendency of individuals to seek diversity in their choices of services or goods (Kahn, 1995) - has received considerable attention in the consumer behavior literature due to its importance as a key factor in consumer choice (see reviews by McAlister & Pessemier, 1982; Van Trijp, 1995; Kahn, 1995).

Several motives have been suggested for exhibiting variety-seeking such as the need for stimulation, the desire to overcome satiation (McAlister & Pessemier, 1982). In addition, consumers choose variety for a number of reasons that reflect their belief that variety seeking will help them resolve a decision that is otherwise difficult (Kahn, 1995).

As the complexity of making choices rises, consumers tend to simplify their decision making processes by relying on simple heuristics (Payne, 1982; Payne, Bettman & Johnson, 1993; Timmermans, 1993). In the case of difficult decisions, consumers may use variety seeking as a choice heuristic to resolve conflict in difficult choice situations (Kahn & Ratner, 2005). For instance, when consumers have



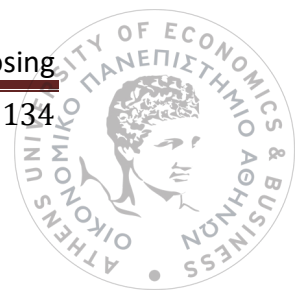
difficulty in choosing among familiar items such as in the case of multiple purchases for future consumption, they tend to incorporate more variety in their decisions (Simonson, 1990). Consequently, consumers may engage in variety-seeking as a conscious cognitive mechanism to avoid having to make more difficult trade-offs (Kahn, 2005).

Choice from extensive large assortments is a complex decision task that could lead to choice overload. As discussed earlier, a number of behavioral consequences are associated with choice overload. When consumers experience choice overload, they are more likely to reverse their initial choice. Switching likelihood has been used as a measure of the strength of preference for the selected option (Chernev, 2003a). However, to the best of author's knowledge, variety-seeking has not been conceptualized as a behavioral consequence of choice overload.

Moreover, past research on choice overload included studies where participants had to choose either among assortments (such as Bown, Read & Summers, 2003; Broniarczyk, Hoyer & McAlister, 1998; Kahn & Lehmann, 1991; Oppewal & Koelemeijer, 2005; Pan & Zinkhan, 2006; Richards & Hamilton, 2006; Chernev, 2005) or involve choosing one option from an assortment (such as Goodman & Malkoc, 2012; Iyengar & Lepper 2000; Chernev, 2003a) but there is no research related to choice overload where participants had to choose multiple items simultaneously from a single assortment.

In addition, it is not straightforward that extremely large assortments increase switching likelihood and lead to greater variety-seeking. When faced with choosing

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from a large relative to a small assortment, consumers are expected to exhibit an even higher propensity of selecting a status quo option (Anderson, 2003). Status quo-option selection indicates the preference for an alternative that involves no change or to select the same product previously consumed and could serve as a mechanism to cope with the choice complexity associated with large assortments. Consequently, there is conflicting evidence on whether larger assortments lead to greater variety-seeking.

Simonson (1990) suggests that future preferences uncertainty (intrinsic factor that generates choice overload) creates decision conflict that could be resolved by exhibiting variety-seeking behavior. Decision conflict could arise not only from intrinsic factors (preference uncertainty) but also from extrinsic factors, i.e. the general structural characteristics of the problem, such as decision task difficulty (number of attributes describing each item, presentation format etc). Chernev, Böckenholt and Goodman (2015) in their conceptual framework on choice overload connect decision task difficulty with the effect of assortment size on consumer decision-making. Larger assortments cause greater decision difficulty and generate greater choice overload. In this case, variety-seeking behavior could be initiated as a heuristic to simplify the decision process.

Variety-seeking behavior could serve as a heuristic to resolve conflict in difficult choice situations such as choosing from large assortments. This explanation for variety-seeking is in line with previous research that suggests that consumers may



use it as a conscious cognitive mechanism to avoid has to make more difficult trade-offs (Kahn, 2005). Consequently, it could be hypothesized that:

**H3: Consumers tend to seek more variety when they choose from extensively large assortments compared to when they choose from smaller, more manageable assortments**

#### **4.2.3. The effect of specificity on variety-seeking**

Specificity effect on satiation suggests that when consumers focus on the detailed aspects of the choice episodes they tend to perceive them to be less repetitive (Redden 2008, 2014). Choices from large assortments are associated with higher cognitive load and greater decision difficulty (Iyengar & Lepper, 2000; Huffman & Kahn, 1998). As the number of options and the information about options increases, consumers consider fewer choices and process a smaller fraction of the overall information available (Iyengar & Lepper, 2000). The increased salience of the common rather than the distinctive features makes the episodes seem more similar to each other. This results in perceptions of more repetition over the course of many episodes. In their effort to simplify their decision process when they choose from large assortments, consumers are expected to focus less on the aspects that differentiate the consumption episodes and consequently consider them to be more repetitive. In this way, choice from large assortments is expected to elicit higher satiation rates compared to choice from small assortments.



Desire to overcome satiation is considered to be one of the most important intrapersonal motives for exhibiting variety-seeking (Kahn, 1995; Kahn & Ratner, 2005). Consequently, consumers are expected to exert greater variety-seeking when choosing from large assortments as -compared to when choosing from smaller assortments- they focus less on the aspects differentiating the items and perceive the process to be more repetitive.

**H4: When choosing from large assortments, consumers tend to focus less on the aspects that differentiate the items of the assortment compared to when they choose from small, more manageable assortments**

**H5: When choosing from large assortments, consumers tend to perceive the choice process to be more repetitive compared to when they choose from smaller, more manageable assortments.**

If consumers satiate on specific and noticeable aspects, then the level of categorization may affect satiation. The presentation of categories helps consumers to infer differences between the available options (Redden, 2008; Mogilner et al., 2008). When subcategorizing episodes, people pay more attention to the aspects that differentiate a set of generally similar episodes. The increased focus on the distinctive rather than the common features makes the episodes seem less similar to each other. This results in perceptions of less repetition over the course of many episodes. Since repetition leads to satiation, subcategorization seems to reduce satiation (Redden, 2008). This finding is consistent with the notion that satiation occurs not only as a result of physiological mechanism and indicates that the

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satiation specificity depends on the focus of attention and the framing of an experience.

In addition, as the number of categories partitioning an assortment increases, consumers tend to be more satisfied with their chosen option, even when those categories are not informative about the options in the assortment. This finding reveals that the positive effect of categorization is not only a cognitive process in which the content of category labels helps consumers identify their preferred option but is also a perceptual process in which consumers infer differences in the available options through the mere presence of categories (Mogilner et al., 2008).

As the number of categories decreases, the consumption episodes seem to be more repetitive resulting in higher satiation that could be overcome through variety-seeking behavior (Kahn, 1995; Kahn & Ratner, 2005).

**H6: Consumers tend to seek more variety when choice episodes are categorized generally compared to when they are categorized more specifically.**

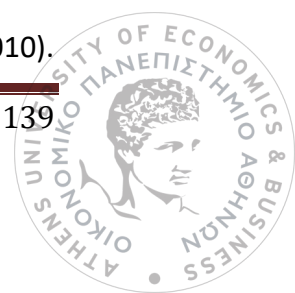
#### **4.2.4. The effect of chooser type on variety-seeking**

A factor that seems to moderate the aforementioned effects is familiarity with the choice domain. Based on this criterion, a distinction can be made between preference constructors and preference matchers (Chernev, 2003a, 2012; Mogilner et al., 2008).



Preference constructors make choices without having articulated their preferred attribute combinations. They must construct their attribute preferences during the choosing process based on the information found in the choice environment (Bettman, Luce, & Payne, 1998; Carpenter & Nakamoto, 1989). This task is profoundly more easily accomplished in the case of small assortments compared to larger assortments since when they choose from larger assortments, they have to evaluate a larger number of attributes or attribute levels in order to form a preference and make a choice (Chernev, 2003b). Preference constructors lack expertise to distinguish between alternatives (Alba & Hutchinson, 1987) and focus less on the aspects differentiating the episodes irrespectively of the size of the assortment they have to choose from. Consequently, based on the specificity effect of satiation, preference constructors are expected to seek the same degree of variety when choosing from small or large assortments because they cannot focus on the differentiating aspects of the consumption episodes and they consider small and large assortments to be equally satiating.

On the other hand, preference matchers, consumers that are familiar with the choice domain, have articulated preferences and the process of choosing for them is less cognitively burdensome (Chernev 2003a). For a preference matcher, choosing only entails either the item located previously as most favorable or choosing the item that best matches with one's ideal attribute combination. Preference matchers perceive the variety of a choice set to be independent of the structure of the choice set (Mogilner et al., 2008) and as assortment size increases, so do their expectations of the degree of preference match they can achieve (Diehl & Poynor, 2010).



Consequently, large assortments represent an opportunity for them to find more alternatives that match their preferences, leading us to the hypothesis that:

**H7: Preference matchers are expected to seek more variety when making choices from large assortments because they may find more alternatives that match their ideal attribute combinations.**



### **4.3. Study 4: Variety-Seeking as a behavioral consequence of choice overload**

The objective of the current study is to assess the effect of assortment size on variety-seeking behavior and conceptualize variety-seeking as a behavioral consequence of choice overload (H3). As discussed earlier, when confronted with difficult decision tasks, consumers are led to choice overload. This study focuses on a particular type of choice overload where decision difficulty is caused by the large number of available decision alternatives (Iyengar & Lepper, 2000) in a multi-item simultaneous choice context.

#### **4.3.1. Method**

##### **Participants and design**

The data were collected through a computerized laboratory experiment (MediaLab software). One hundred forty-nine undergraduate students (63% female) were randomly assigned to a single factor 2 (Assortment size: small vs large assortment) between subjects design in exchange for course credit. The degree of variety sought was the dependent variable.

##### **Materials and Procedure**

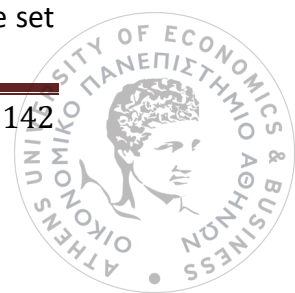
Product assortment was manipulated by varying the number of alternatives in the choice set. There were two types of sets: a small assortment with four alternatives



and a large assortment consisting of sixteen alternatives. The choice of four and sixteen alternatives to represent the small and large assortments is consistent with the research on cognitive overload, which demonstrates that individuals can optimally process a maximum of up to six alternatives (Bettman, 1979; Malhotra, 1982). This manipulation is also consistent with the findings in cognitive psychology that the processing capacity of the short-term memory is approximately seven chunks of information. Finally, in order to decide upon the size for small and large assortment previous research on choice overload was taken into account (Chernev, 2003a, 2003b, 2008; Iyengar & Lepper, 2000).

The assortment of 'Godiva' chocolates was used as experimental stimulus as suggested by prior research (Chernev, 2003a, 2003b, 2008; Iyengar & Lepper, 2000). Godiva is a brand with a very extensive product portfolio that facilitates the construction of an extensively large assortment. The selection of the stimuli for the experiment was based on a pretest where 21 participants indicated their familiarity with Godiva brand and their preference for 26 different Godiva chocolates.

The purpose of the pretest was twofold. First of all, it was to provide insights in order to ensure low familiarity with the Godiva brand. Since actual products were to be used, it was important to ensure that participants were not familiar with the brand as it is a precondition for choice overload (Iyengar & Lepper, 2000; Mogilner et al., 2008). The second objective was to provide insights in selecting items of equal preference to the participants. This is essential in choice overload studies since if there is an obviously dominant option in the choice set, choosing items from the set



will be an easy task regardless of the number of options (Dhar, 1997; Dhar & Nowlis, 1999; Hsee & Leclerc, 1998; Redelmeier & Shafir, 1995). For this reason, experiments on choice overload have typically used options that decision makers are not very familiar with to prevent strong prior preferences for a specific option and consequently a highly selective search process that would allow participants to ignore most of the assortment.

The results of the pretest ensured low familiarity with the brand and contributed to the selection of alternatives of equal preference. The majority of the respondents did not know the brand (only 9 out of 21 know the brand). Of those who knew the brand, the vast majority consumed it seldom, indicative of low familiarity.

Participants were asked to indicate their preference for 26 Godiva chocolates using a 7 point scale anchored by 1: Not at all to 7: Very much. Since the large assortment would consist of 16 alternatives, attention was given to construct an assortment of 16 items where there would be no significant differences in the preference ratings between the most and least preferred item. In the following table, the final cluster of Godiva chocolates that were selected as experimental stimuli is presented. A t-test analysis indicated there were no statistical significant differences [ $t(20)=1.79$ ;  $p>0.05$ ] between the most preferred ( $M=5.29$ ;  $SD=1.88$ ) and the least preferred option ( $M=4.05$ ;  $SD=2.11$ ).

In the main study, respondents had to select 3 chocolates simultaneously from either an assortment of 4 chocolates (small assortment) or an assortment of 16 chocolates (large assortment). All options in the small assortment sets were also



available in the large assortment sets; there were no identical options (replicates) in either of the sets. The options both in the small set and the large set were described on three attributes:

- Cocoa content (dark chocolate, milk chocolate, white chocolate)
- Flavor (original, vanilla, strawberry, orange)
- Nut content (no nuts, almonds, hazelnuts)

Both selections consisted of chocolates described by a picture and verbal description. The names and pictures were of actual chocolates sold by Godiva, an upscale chocolate manufacturer. The large assortment was the same for all participants, whereas the items presented in the small assortment were selected randomly and counterbalanced between participants.

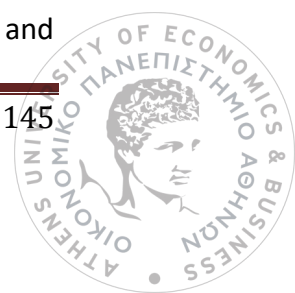
The data collection process was based on Simonson's (1990) studies on variety-seeking behavior. Subjects were told to imagine they were going to the supermarket with a shopping list that included chocolates. Subjects were asked to choose a bundle of three chocolates, after reading carefully the verbal description of each chocolate. Participants made three choices in a simultaneous choice task (Read & Lowenstein, 1995; Read, Antonides, Van den Ouden & Trienekens, 2001). Finally, they were asked to provide answers regarding manipulation check items and control variables such as Optimal Stimulation Level and demographic variables.



## Measures

The degree of variety sought (low, medium or high) was the dependent variable. Variety seeking was operationalized as the number of different items in the chosen bundle. The choice of three different items was coded as high variety-seeking. The choice of two different items within the bundle was coded as medium variety-seeking. Finally, when participants chose a bundle consisting of the same item, their choice was rated as low-variety seeking.

In order to rule out interpersonal differences in variety-seeking, Optimal Stimulation Level was measured with three different scales. First of all, the food specific VARSEEK scale developed by Van Trijp and Steenkamp (1992) was used. It is a scale that measures consumers' intrinsic desire for variety in food consumption (variety seeking tendency). It is worth noting that, although VARSEEK is related to Zuckerman's (1979) SSS, it has discriminant validity and a predictive advantage when the purpose is to predict variation in food consumption such as in the case of the experimental stimuli of this study. In addition, the Change-Seeking-Index (CSI) short form was employed (Steenkamp & Baumgartner, 1995). CSI short form appears to be an attractive alternative to the original 95-item scale for researchers who want to study the role of OSL in human behavior in general and in consumer behaviors with strong exploratory elements in particular. Finally, the Exploratory Acquisition of Products (EAP) scale was used for the purposes of this study (Baumgartner & Steenkamp, 1996). EAP reflects a consumer's tendency to seek sensory stimulation in product purchase through risky and innovative product choices and varied and



changing purchase and consumption experiences. Consumers who are high on EAP enjoy taking chances in buying unfamiliar products, are willing to try out new and innovative products, value variety in making product choices, and change their purchase behavior in an effort to attain stimulating consumption experiences.

### **4.3.2. Results**

#### **Manipulation Check**

The effectiveness of the product assortment manipulation was measured by comparing respondents' perceptions of variety in the choice alternatives across the experimental conditions. Perceived variety was assessed by asking respondents to rate the variety offered on a 5 points scale where 1= overwhelming, 2=rather extensive, 3= adequate, 4= somewhat narrow and 5=very limited (Chernev, 2003a, 2003b). Respondents' variety perceptions indicated significant differences between the small and the large assortment sets. The mean perceived variety for the small set was significantly smaller ( $M=3.57$ ;  $SD=0.77$ ) than the mean perceived variety for the large assortment set [ $M=2.12$ ;  $SD=0.78$ ;  $F(1,15)=128.60$ ,  $p<0.001$ ]. These data show that consumers did perceive the larger assortment to offer more variety, and that the variety offered in both experimental conditions was not perceived to be extreme in either direction.

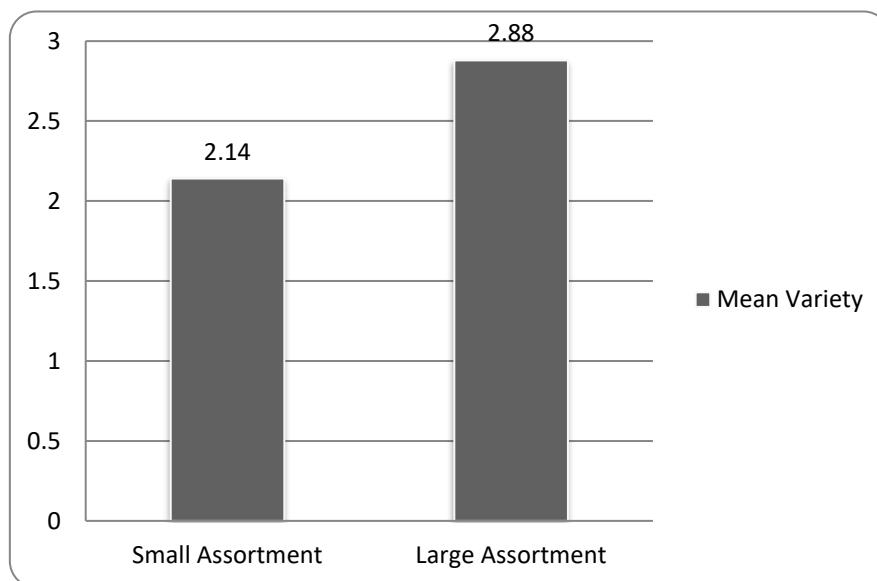


### Variety-Seeking Behavior as a consequence of choice overload

The main hypothesis was tested by conducting a factorial ANOVA to examine the differences in the degree of variety sought between the small assortment set and the large assortment set. The results supported the main hypothesis that consumers tend to seek more variety when they choose from large assortments compared to when they choose from small assortments. Assortment size was found to have a statistically significant main effect on variety-seeking [ $F(1,147)=93.7$ ,  $p<0.001$ ]: the mean variety sought in the small assortment condition ( $M=2.14$ ;  $SD=0.56$ ) was significantly smaller than the mean variety sought in the large assortment condition ( $M=2.88$ ;  $SD=0.33$ ).

**Figure 4.1:**

The main effect of choice overload on variety-seeking



## Covariate Analysis

The differences in variety-seeking could be also attributed to interpersonal differences (different levels of stimulation) in the pursuit of variety-seeking that were not possible to be experimentally controlled. In order to rule out the effect of intrinsic motives on variety-seeking (desire to seek variety) an Analysis of Covariance (ANCOVA) was conducted. Alternative OSL measures did not have a statistically significant main effect on variety-seeking, which rules out a confounding explanation that intrinsic motives (desire to seek variety) accounts for differences in variety-seeking when selecting from extensively large assortments.

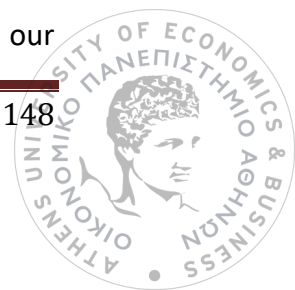
**Table 4.1:**

Main Effects of Alternative OSL measures on variety-seeking behavior

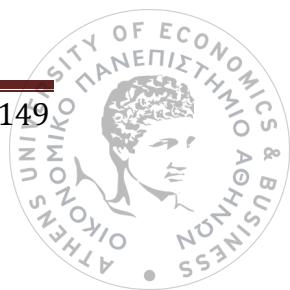
	F	P
EAP_mean	0.47	0.495
OSL_csi	1.13	0.290
OSL_Varseek	0.10	0.750

### 4.3.3. Discussion

The objective of Study 4 was to test the hypothesis that consumers tend to seek variety in their choices when they choose from large assortments in a simultaneous multi-item purchase context. The findings from the present study confirm our



hypothesis and suggest that consumers tend to seek variety when they have to choose from extensively large assortments. This effect might be caused by the use of variety-seeking as a heuristic in order to cope with the decision difficulty arising from choice overload. It is really interesting that interpersonal differences (exploratory tendencies) do not have an effect on variety-seeking behavior which suggests that the results can be attributed to the characteristics of the assortment and especially assortment size.



#### **4.4. Study 5: Specificity effect and Variety-Seeking**

In Study 4 variety-seeking was conceptualized as a behavioral consequence of choice overload. However, Study 4 did not shed light on the specific mechanism that stimulates variety-seeking in the case of large assortments. The first objective of Study 5 is to suggest specificity of satiation as a mechanism for explaining variety-seeking tendencies in the case of large assortments. Specificity of satiation suggests that when consumers focus on the detailed aspects of the consumption episodes they tend to perceive them to be less repetitive. However, in the case of extensively large assortments, due to the higher cognitive load and the greater decision difficulty, consumers want to simplify their decision process and are expected to focus less on the aspects that differentiate the consumption episodes (H4) and perceive the consumption episodes to be more repetitive (H5).

The second objective is to test the effect of categorization of consumption episodes on variety-seeking. As the number of categorization decreases, the consumption episodes seem to be more repetitive resulting in higher satiation that could be overcome through variety-seeking behavior. Consequently, one could expect that consumers tend to seek more variety when consumption episodes are categorized generally compared to when they are categorized more specifically (H6).

Finally, the third objective of this study is to investigate moderators of this effect and more specifically chooser expertise. Larger assortments tend to be more confusing for preference constructors, individuals that make decisions in areas



where they lack expertise, because of the larger number of attributes or attribute levels that must be evaluated in order to form a preference and make a choice. On the other hand, preference matchers, consumers that are familiar with the choice domain, have articulated preferences and when choosing from large assortments have the opportunity to find more alternatives that match their preferences (H7).

#### **4.4.1. Method**

##### **Participants and design**

One hundred twenty one students (Mean age= 21.79 years; SD=1.64) were randomly assigned to a 2 (Assortment Size: Small Vs Large) X 3 (Categorization Level: Single general category Vs Chocolate Type subcategory Vs Flavor based subcategory) between subjects design. The dependent variable was variety seeking in a simultaneous choice context (3 choices made simultaneously by the respondents).

##### **Materials and Procedure**

Assortment size was manipulated by varying the number of alternatives in the choice set. There were two types of sets: a small assortment with four alternatives and a large assortment consisting of sixteen alternatives. The choice sets consisted of exactly the same items of the assortment of 'Godiva' chocolates as in Study 4. All options in the small assortment sets were also available in the large assortment sets; there were no identical options (replicates) in either of the sets. The large assortment set was the same for all participants, whereas the items presented in the






small assortment were selected randomly and counterbalanced between participants.

Categorization level was manipulated by varying the information provided to the participants and more specifically the verbal description next to each available chocolate. Both assortments consisted of chocolates described by a picture and verbal description. In the general category condition, each product was labeled as “Chocolate” followed by a distinct number. In the chocolate type subcategory condition, each product was labeled based on the chocolate type (for instance milk, dark, white chocolate) followed by a distinct number. In the flavor based subcategory, each product was labeled based on chocolate type and its flavor (for instance milk strawberry chocolate) followed by a distinct number. In order to enlighten further the categorization level manipulation, a set of the same experimental stimulus in the various labeling conditions is provided in the table below:



**Table 4.2:**

An illustration of picture and verbal description of an item across the different categorization levels

Level of categorization	Picture and Verbal Description of the Item
Single General Category	<p><b>Chocolate #1</b></p>  <p>Dark chocolate with 50% cocoa and raspberry</p>
Chocolate Type Subcategory	<p><b>Dark chocolate #1</b></p>  <p>Dark chocolate with 50% cocoa and raspberry</p>
Flavor based Subcategory	<p><b>Dark chocolate with raspberry #1</b></p>  <p>Dark chocolate with 50% cocoa and raspberry</p>

The data collection process was based on Simonson's (1990) studies on variety-seeking behavior such as in Study 4. Subjects were told to imagine they were going to the supermarket with a shopping list that included chocolates. Subjects were asked to choose a bundle of three chocolates, after reading carefully the verbal description of each chocolate. The participants were then asked to rate their familiarity with the product category. After these measures, several measures of demographic variables were included.

## Measures

**Variety Seeking:** The degree of variety sought (low, medium or high) was the dependent variable. Variety seeking was operationalized as the number of different items in the chosen bundle. The choice of three different items was coded as high variety-seeking. The choice of two different items within the bundle was coded as medium variety-seeking. Finally, when participants chose a bundle consisting of the same item, their choice was rated as low-variety seeking.

**Attention to flavor:** Attention to the flavor was captured by asking about flavor discriminability ("I could identify the specific flavor of each jellybean", "The flavor of each jellybean was obvious") and flavor salience ("I really noticed the specific flavor of each jellybean", "I did not pay much attention to the different flavors of the jellybeans [reverse coded]" on 7-point scales ( $\alpha=0.83$ ) anchored agree or disagree (Redden, 2008).



**Perception of repetition:** Satiation was conceptualized in terms of repetition of the consumption episodes ( $\alpha=0.78$ ) and was measured by asking the respondents about redundancy (“Seeing the chocolates felt like the same thing over and over,” “seeing the chocolates was very boring”) and similarity (“The chocolates were very similar to each other,” “Each chocolate had aspects that made it different [reverse coded]”) on 7-point scales (Redden, 2008).

**Chooser type:** This study classified preference matchers as those participants who were more familiar than average with the choice domain and preference constructors as those participants who were less familiar than average with the choice domain. Familiarity was measured with three items ( $\alpha= 0.83$ ). One indicated the extent of participants’ exposure to the product category by asking on a 7-point scale (1 anchored not at all frequently to 7 anchored very frequently), “How frequently do you drink coffee?”. The other two items measured participants’ expertise by asking on 7-point scales (where 1 equals not at all and 7 equals very much), “To what extent do you consider yourself a coffee drinker?” and “To what extent can you distinguish between types of coffee?” (Mogilner et al., 2008)

#### 4.4.2. Results

##### Manipulation Checks

For the purposes of a manipulation check, respondents’ perceptions of the assortment size were measured on a 5 point scale where 1= very extensive and 5=very limited (Chernev, 2003a). The data show that respondents perceived the

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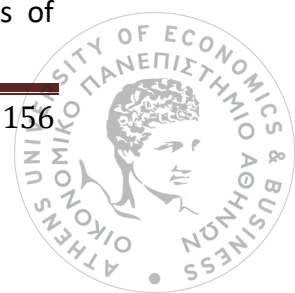


larger set to offer significantly greater assortment compared to the smaller set [ $M=2.47$ ;  $SD= 0.99$  vs.  $M=3.69$ ;  $SD=0.62$ ;  $F(1,119) =66.91$ ,  $p < 0.001$ ]. These results indicate that respondents indeed perceived the choice sets to vary in terms of assortment size and that the experimental manipulation was successful.

### **The underlying mechanism behind the effect of Assortment Size on Variety- Seeking**

The effect of assortment size on variety-seeking was tested by conducting a factorial ANOVA to examine the differences in the degree of variety sought between the small assortment set and the large assortment set. The results supported the hypothesis that consumers tend to seek more variety when they choose from large assortments compared to when they choose from small assortments. Assortment size was found to have a statistically significant main effect on variety-seeking [ $F(1,120)=19.59$ ,  $p<0.01$ ], replicating the results of Study 4 and providing support for H3.

The proposed mechanism behind this effect is that depending on assortment size participants do not pay the same level of attention on the aspects differentiating the items and consequently perceive different levels of repetition of the items (H4 and H5). In order to test the effect of assortment size on attention to flavor and perception of repetition a multivariate factorial ANOVA was conducted with assortment size as a factor and attention to flavor and perception of repetition as dependent variables. The results revealed statistically significant main effects of



assortment size on attention to flavor [ $F(1,120)=6.59$ ,  $p<0.01$ ] and perception of repetition [ $F(1,120)=17.21$ ,  $p<0.001$ ].

A post-hoc analysis of these effects with pairwise comparisons indicated that in the small assortment conditions, the mean attention to flavor (the aspect that differentiates the set of episodes) was significantly higher ( $M_{a/s}=5.55$ ;  $SD=1.21$ ) compared to the mean attention to flavor that participants exerted when choosing from large assortments [ $M_{a/l}=5.01$ ;  $SD=1.09$ ;  $t(120)=2.57$ ,  $p<0.05$ ]. Moreover, the mean perception of repetition of the consumption episodes was significantly lower in the small assortment conditions ( $M_{r/s}=2.49$ ;  $SD=0.96$ ) compared to the large assortment conditions [ $M_{r/l}=3.30$ ;  $SD=1.17$ ;  $t(120)=-4.14$ ,  $p<0.01$ ]. What is evident from the above is that, in the large assortment conditions, participants perceived the process to be more repetitive.

The above results are summarized in Table 4.3. Figure 4.2 illustrates the interaction effects.



**Table 4.3**

The effect of assortment size on attention to flavor and perception of repetition

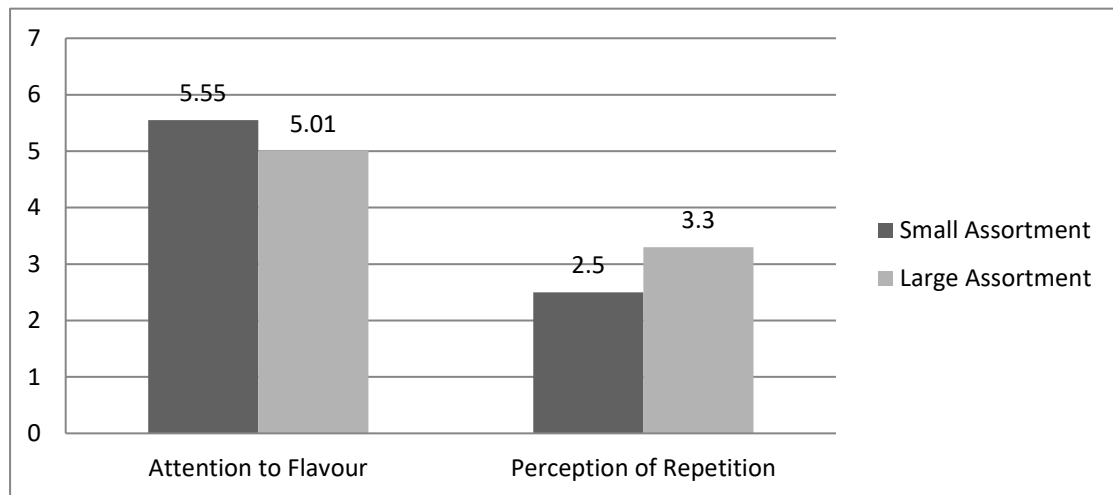
	Assortment Size	Mean	t
Attention to Flavor	Small	5.55	2.57*
	Large	5.01	
Perception of Repetition	Small	2.49	-4.15**
	Large	3.30	

\*  $p < 0.05$

\*\*  $p < 0.01$

**Figure 4.2:**

The effect of assortment size on attention to flavor and perception of repetition



## The effect of Categorization level on Variety-Seeking

The effect of categorization level on variety-seeking was tested via a univariate factorial ANOVA where variety-seeking was the dependent variable and categorization level, assortment size and chooser type were factors. The results indicated a non-significant main effect of categorization level on variety-seeking [ $F(2,119)=0.14$ , ns], not providing support for H6. However, there is a statistically significant interaction effect of categorization level and assortment size on variety-seeking behavior [ $F(2,119)=12.52$ ,  $p=0.074$ ]. A post-hoc analysis with pairwise comparisons of this interaction effect indicated that in all categorization levels, participants exhibited more variety-seeking when they had to choose from large assortments compared to when they chose from small assortments. The results are summarized in Table 4.4.



**Table 4.4**

The interaction effect of categorization level and assortment size on variety-seeking

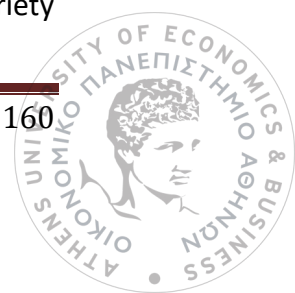
Level of categorization	Assortment Size	Mean	t
Single General Category	Small	2.32	2.74**
	Large	2.75	
Chocolate based Subcategory	Small	2.29	1.99*
	Large	2.63	
Flavor based Subcategory	Small	2.21	3.10**
	Large	2.75	

\*p<0.05

\*\*p<0.01

### The effect of Chooser Type and Assortment size on Variety-Seeking

In order to test the effect of chooser type on variety-seeking, a factorial ANOVA with variety-seeking as dependent variable and chooser type and assortment size as factors was conducted. The results indicated a non-significant main effect of chooser type on variety-seeking [ $F(1,119)=0.27$ , ns]. However, there is a statistically significant interaction effect of chooser type and assortment size on variety-seeking behavior [ $F(1,119)=49.61$ ,  $p<0.01$ ]. A closer inspection of this interaction effect with pairwise comparisons indicated that preference matchers tend to seek more variety



when choosing from large assortments ( $M=2.76$ ;  $SD=0.44$ ) compared to when they choose from small assortments [ $M=2.19$ ,  $SD=0.59$ ;  $t(73)=4.60$ ,  $p<0.01$ ], providing support for H5. On the other hand, preference constructors sought the same degree of variety irrespectively of the size of the choice set [ $t(44)=1.27$ , ns].

The above results are summarized in Table 4.5. Figure 4.3 illustrates the interaction effects.

**Table 4.5**

The interaction effect of chooser type and assortment size on variety-seeking

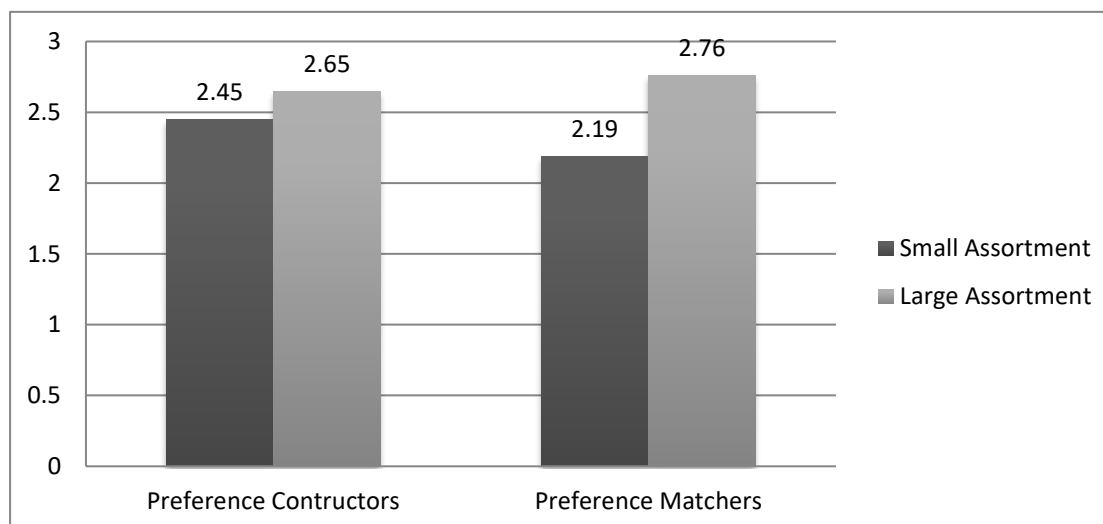
	Assortment Size	Mean	t
Preference Constructors	Small	2.45	NS
	Large	2.65	
Preference Matchers	Small	2.19	-4.60**
	Large	2.76	

\*\* $p<0.01$



**Figure 4.3:**

The interaction effect of chooser type and assortment size on variety-seeking



In trying to explain why preference matchers tend to seek more variety in the case of large assortments, a t-test analysis revealed that the mean attention to flavor they paid when they chose from large assortments ( $M=5.28$ ;  $SD=1.13$ ) was not significantly different compared to the mean attention to flavor when they chose from small assortments [ $M=5.59$ ;  $SD=1.12$ ;  $t(1,73)=1.18$ ; ns].

#### 4.4.3. Discussion

What is evident from the above is that, large assortments tend to lead to higher satiation rates as participants focus less on the aspects (attributes) that differentiate the consumption episodes and perceive the process to be more repetitive. This finding is noteworthy, as it indicates that participants perceived the process of being presented with an assortment of 16 unique items more repetitive compared to the



process of being presented with an assortment of 4 unique items. The above results provide support for H4 and H5.

However, this effect is not evident for all consumers. The results show that preference constructors tend to exert the same level of variety-seeking irrespectively of the size of the assortment. On the other hand, preference matchers tend to seek more variety when choosing from large assortments, as due to their expertise they can find more alternatives that match their preferences. A further analysis of this effect indicated that preference matchers pay the same level of attention to flavor when choosing from either small or large assortments since their expertise expedites the differences between the alternatives. These results provide support for H7. Finally, the results do not provide support for H6 as the level of categorization did not have a statistically significant main effect on variety-seeking.



## **4.5. General Discussion**

### **4.5.1. Major Findings and Contribution of current research**

Even though choice overload is a well established phenomenon in consumer behavior literature and numerous papers have focused on its behavioral consequences, there is no research that conceptualizes variety-seeking as a behavioral consequence of this phenomenon. The notion that extensively large assortments lead to greater variety-seeking is not straightforward as choice overload may also lead to the selection of a status-quo option that includes no change (Anderson, 2003). In addition, variety-seeking literature has focused on smaller, more manageable assortments and variety-seeking tendencies in extensively large assortments have not been thoroughly investigated.

The results of Study 4 indicate that consumers experiencing choice overload tend to engage in variety-seeking behavior as a cognitive mechanism in order to avoid making difficult trade-offs. These findings are different from relevant research that measures switching likelihood as a consequence of choice overload (Chernev, 2003b) since in our study consumers were engaged in a simultaneous multi-item choice task compared to the sequential choice task of the previous study. In addition, in the previous studies switching likelihood was measured as an index for strength of preference for the chosen item and not as a variety-seeking index.

Study 5 not only replicates the results of Study 4 but also suggests specificity of satiation as a mechanism for explaining variety-seeking tendencies in the case of

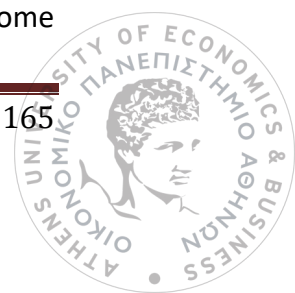
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large assortments. Specificity effect suggests that when consumers focus on the detailed aspects of the consumption episodes, they tend to perceive them to be less repetitive; consequently they feel less satiated with the choice process. The thorough review of the relevant literature yielded only one research that examines the effect of specificity on variety-seeking (Kim and Yoon, 2016). This research focuses on variety-seeking across product categories and on whether the options are categorized in a specific or abstract manner. The research presented in the current thesis is different in the sense that examines variety-seeking tendencies within a product category and we manipulated the number of categorization levels and not whether categories exist or not. In addition, there was not only experimental manipulation of categorization as in similar studies but the constructs related to specificity (focus to the details and perception of repetition) were measured separately as suggested by Redden (2008, 2014).

In contrast with the results of Kim and Yoon (2016), categorization level did not seem to have a statistically significant main effect on variety-seeking. This finding could be attributed to the fact that we manipulated a rather small number of product categorization levels (up to 3) whereas in previous studies (such as Mogilner et al., 2008) researchers manipulated a significantly bigger number of categories (more than ten categories).

The results of Study 5 confirm that through specificity of satiation, large assortments tend to be more satiating and consumers tend to engage in variety-seeking behavior when choosing from large assortments as a means to overcome



satiation. More specifically, in the small assortment conditions, the participants paid more attention to flavor (the aspect that differentiates the set of episodes) compared to the attention to flavor that participants exerted when choosing from large assortments. Moreover, they perceived the choice task to be more repetitive when choosing from small assortments compared to when they chose from large assortments. Since a major motive for exhibiting variety-seeking behavior is the desire to overcome satiation (Kahn, 2005), this mechanism explains why subjects tend to seek less variety when they have to choose from small assortments compared to when they have to choose from large assortments. This finding is particularly interesting, as it indicates that participants perceived the process of being presented with an assortment of 16 unique items more repetitive compared to the process of being presented with an assortment of 4 unique items.

A moderator of the effect is chooser familiarity with the choice domain. The results of the study confirm that preference matchers- consumers that are familiar with the choice domain- tend to seek more variety when asked to make choices from large assortments compared to when they choose from small assortments due to the fact that they may find more alternatives that match their ideal attribute combinations. On the other hand, preference constructors- individuals that make decisions in areas where they lack expertise- tend to seek the same degree of variety when choosing from small or large assortments because they rely on the information found in the choice environment to determine their preferences.

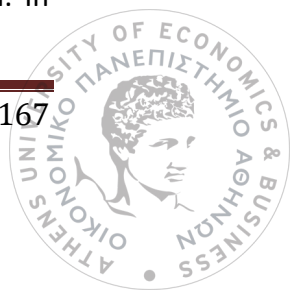


#### **4.5.2. Managerial implications**

The findings of the current research provide guidance to retailers who need to decide upon the optimal assortment size for a product category. If a retailer's strategy is to offer value to the customer through a large assortment of items (rather than competing on price, for example), then the retailer may want to stimulate consumers' variety-seeking for instance with subtle variety-cues (Fishbach, Ratner, & Zhang, 2011; Maimaran & Wheeler, 2008) or by providing stimulation from the choice context (Kahn & Mehnon, 1995; Kahn & Wansink, 2004). In this way, the large assortment would be appreciated and help keep the consumer loyal.

On the other hand, some retailers may be looking to keep costs down and reduce the size of the offered assortment. In these cases, the retailer would want to encourage loyal behavior and satisfy consumers' potential needs for variety in ways other than through product or service variability such as through the assortment organization (Kahn & Wansink, 2004) or by increasing option distinctiveness (focusing on attributes) within the assortment (Hoch, Bradlow, & Wansink, 1999; Van Herpen & Pieters, 2002; van Herpen & Pieters, 2007; Ryzin & Mahajan, 1999).

In addition, in relation to chooser type it is important for retailers offering large assortments to find ways to help preference constructors articulate their ideal attribute combinations. Since preference constructors do not engage in variety-seeking when choosing from large assortments, they may turn to other behaviors associated with choice overload such as choice deferral and lower satisfaction. In

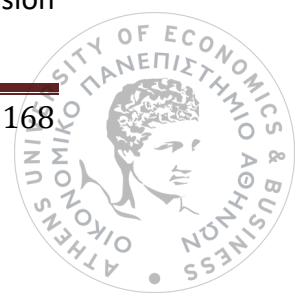


general, having more developed preferences increases the likelihood of consumers choosing a product from a large assortment (Chernev, 2003a). This could be attained via in-store promotions, communication as well as improving the organization of the assortment in order to reduce the cognitive costs associated with the decision process. However, the results indicate different implications for specialty stores that seem to attract mostly preference matchers.

#### **4.5.3. Limitations and Directions for future research**

There are clearly some limitations to the current research that could indicate paths for future research. This research tested assortment effects for only one product category. This is not unlike previous research (such as Broniarczyk et al, 1998; Oppewal and Koelmeijer, 2005). However, replication of our tests and comparisons in more product categories are obviously topics that require further research.

One particular area in need of further investigation is the impact of the decision maker's goals on choice overload. The current research has focused on a hedonic product category which is common as much of the assortment research to date has used hedonic product categories where consumers are likely to be promotion-focused and attracted to assortments. Limited research has examined the effect of assortment for utilitarian product categories. Utilitarian product categories are associated with different goals and goal orientation. Accordingly, further research might seek to identify whether and how other goal-related factors such as decision



accuracy, effort minimization, and purchase quantity influence variety-seeking tendencies for extensively large assortments (Kahn et al., 2014).

A related issue for further investigation is the effect of assortment display cues on variety-seeking. The items in the photographed experimental assortments were lined up in rows as was shown in table 4.2, consequently assortment display effects were only partially controlled. Further investigation of display effects is a high relevant issue for future research as there are several assortment display elements such as assortment structure (Kahn and Wansink, 2004) that seem to affect perceived variety.

A final issue for further investigation would be to replicate the current research in a sequential choice strategy. Sequential choices is a context that has been utilized in many studies on variety-seeking and involves increased temporal distance on behalf of the consumer that has been found to moderate the effect of assortment size on consumer preferences (Goodman and Malkoc, 2012).



## Chapter 5

### General Discussion



## 5.1. Chapter Overview

In the preceding two chapters (*Chapter 3- The interaction of product category and attribute type on variety seeking* and *Chapter 4-Choice overload, specificity, chooser type and variety-seeking*), the empirical part of the doctoral thesis was presented. In Chapter 3, three experimental studies were presented to explore the effect of product type (hedonic or utilitarian) and attribute type (sensory or functional) on variety-seeking and the underlying mechanism behind this effect. In Chapter 4, two experimental studies were discussed that were conducted to investigate variety-seeking tendencies in the case of extensively large assortments as well as possible moderators of this behavior.

In the current chapter, the work presented throughout the thesis is summarized and discussed as follows. Firstly, the findings from the empirical studies are reviewed regarding the main research questions. In addition, some possible connections between these empirical results are drawn together. Having described the findings from the experimental studies, the discussion then turns to the thesis theoretical contributions that are discussed in relation to the main research questions. This discussion is followed by the managerial implications posed by the research findings providing significant insights for marketing practitioners. Finally, the limitations of the studies as well as directions for future research are discussed.



## 5.2. Conclusions

The purpose of the current thesis is twofold: first, to explore variety-seeking tendencies in hedonic and utilitarian products and indicate specific attributes that lead to variety-seeking across different product categories; second, to conceptualize variety-seeking as a behavioral consequence of choice overload and explore variety-seeking tendencies when choosing from large assortments. For the purposes of this doctoral thesis, five independent, yet interrelated experimental studies were conducted. The twofold purpose of this thesis culminated in four research questions:

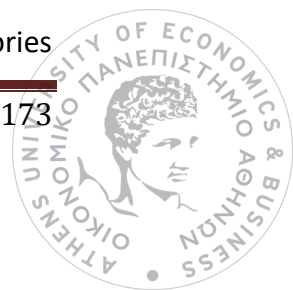
- **RQ1: Do consumers seek variety for utilitarian products?**
- **RQ2: What are the attributes that stimulate variety-seeking in different product categories?**
- **RQ3: Is variety-seeking a behavioral consequence of choice overload?**
- **RQ4: Why is variety-seeking exploited in the case of choosing from large assortments and what are the possible moderators of this behavior?**

To begin with, a literature review was conducted to examine the factors that stimulate variety-seeking, analyze choice overload and examine its possible moderators. It was found that the existing literature on variety-seeking behavior has dealt mainly with hedonic products and was rather impoverished in terms of



research on variety-seeking behavior in utilitarian product categories. The first research question (**RQ1: Do consumers seek variety for utilitarian products?**) was devised with the aim to investigate variety-seeking tendencies in utilitarian products. The results of Study 1 indicate that, despite the fact that consumers generally seek more variety in hedonic products, variety-seeking in utilitarian products is enhanced when products differ on functional rather than sensory attributes, confirming that variety-seeking can be also exploited for utilitarian products. Study 2 builds on Study 1 and examines whether satiation underlies the interaction of product type and attribute type on variety-seeking. The results of the study provide support for the proposed process and confirm that in hedonic products, sensory attributes are related to higher satiation rates whereas in utilitarian products, functional attributes should be related to higher satiation rates.

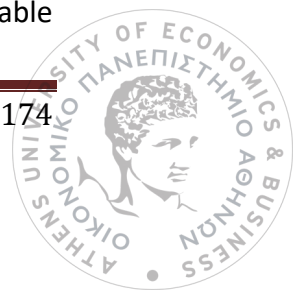
In addition, the thorough study of variety-seeking literature indicated that there is a gap in the growing literature on attribute-level variety-seeking behavior regarding the specific attribute types that may lead to repeated purchase and those that may lead to switching. Although several models of attribute level variety-seeking behavior have been proposed, these models offer little guidance on what product attributes are likely to stimulate and satisfy the consumer's need for variety. The interaction effect of product type and attribute type on variety-seeking provides insights with regards to the second research question (**RQ2: What are the attributes that stimulate variety-seeking in different product categories?**). More specifically, the results of Study 1 indicate that a) in hedonic product categories consumers tend to seek more variety in sensory attributes, and b) in utilitarian product categories



consumers tend to seek more variety in functional attributes. Moreover, Study 3 was essential in order to examine attribute level variety-seeking in a product category that was not clearly hedonic or utilitarian and provide a full understanding of the effect. The results indicated that in a product category that is neither clearly hedonic nor utilitarian there are no significant differences in variety-seeking behavior when variation stems from sensory or functional attributes.

With regards to the second objective of the doctoral thesis, the conflicting evidence on whether variety-seeking is a behavioral response to choice overload led to the third research question (**RQ3: Is variety-seeking a behavioral consequence of choice overload?**). The existing choice overload literature included studies indicating that when consumers experience choice overload, they are likely either to reverse their initial choice or exhibit an even higher propensity of selecting a status quo option that includes no change. These contradictory behaviors suggest conflicting evidence on whether larger assortments lead to greater variety-seeking. The results of Study 4 confirm that consumers tend to seek variety when they have to choose from extensively large assortments and exploit variety-seeking as a cognitive mechanism in order to cope with the decision difficulty arising from choice overload.

Finally, the thorough study of the relevant literature highlighted that in variety-seeking literature, even though resolution of difficult decisions is suggested as a motive for choosing variety, there is no research that correlates specifically choice overload with variety-seeking and examines moderators of this relationship. Moreover, research on variety-seeking has focused on smaller, more manageable



assortments and variety-seeking tendencies in extensively large assortments have not been thoroughly investigated. These two observations led to the fourth research question (**RQ4: Why is variety-seeking exploited in the case of choosing from large assortments and what are the possible moderators of this behavior?**). The results of Study 5 confirm that large assortments are associated with higher satiation rates as participants focus less on the aspects (attributes) that differentiate the consumption episodes and perceive the process to be more repetitive providing insights into the process behind variety-seeking tendencies in large assortments. Study 5 also tested two moderators of this effect, chooser expertise and level of categorization. The results confirmed that preference constructors tend to exert the same level of variety-seeking irrespectively of the size of the assortment. On the other hand, preference matchers tend to seek more variety when choosing from large assortments, as due to their expertise they can find more alternatives that match their preferences. With respect to the categorization level, the results of Study 5 indicated that the level of categorization did not have a statistically significant main effect on variety-seeking.

In Table 5.1 the research hypotheses and the findings of the doctoral thesis are summarized.



**Table 5.1.**

Summary of research hypotheses and findings of the current thesis

Hypothesis	Study (-ies) Testing the Hypothesis	Findings
H1: In hedonic product categories, consumers seek more variety in sensory than in functional attributes	Study 1 & Study 2	Supported
H2: In utilitarian product categories, consumers seek more variety in functional than in sensory attributes	Study 1 & Study 2	Supported
H3: Consumers tend to seek more variety when they choose from extensively large assortments compared to when they choose from smaller, more manageable assortments	Study 4	Supported
H4: When choosing from large assortments, consumers tend to focus less on the aspects that differentiate the items of the assortment compared to when they choose from small, more manageable assortments	Study 5	Supported



H5: When choosing from large assortments, consumers tend to perceive the choice process to be more repetitive compared to when they choose from smaller, more manageable assortments.	Study 5	Supported
H6: Consumers tend to seek more variety when choice episodes are categorized generally compared to when they are categorized more specifically.	Study 5	Not supported
H7: Preference matchers are expected to seek more variety when making choices from large assortments because they may find more alternatives that match their ideal attribute combinations.	Study 5	Supported



### 5.3. Theoretical Contributions

In this section, the findings from the five studies presented in the empirical chapters of this thesis (Chapter 3 and Chapter 4) and their theoretical contributions are discussed in relation to the main research questions.

#### **Contribution 1: Exploring variety-seeking tendencies for utilitarian products**

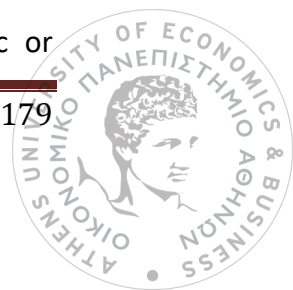
##### **Research Question 1: Do consumers seek variety for utilitarian products?**

The novel findings of the current thesis provide a deeper understanding of the product-based mechanisms underlying variety-seeking behavior. Even a cursory look at the relevant variety-seeking literature, shows that several studies have addressed variety-seeking in hedonic product categories, yet very little is known about variety-seeking in utilitarian product categories (Ratner et al., 1999; Van Trijp et al., 1996). Study 1 poses a first attempt to explore variety-seeking tendencies in utilitarian product categories. The results confirm the hypothesis that the nature of the product category (hedonic or utilitarian) interacts with the attribute type (sensory or functional) in variety-seeking behavior. More specifically, in hedonic product categories consumers tend to seek more variety in sensory compared to functional attributes, a finding in accordance with existing theories (Inman, 2001). However, a novel finding of the current thesis is that in utilitarian product categories consumers tend to seek more variety in functional than sensory attributes.



What is more, when comparing variety-seeking for specific attributes across product categories, the results of Study 1 indicate that consumers tend to seek more variety in a) sensory attributes of hedonic products, and b) functional attributes of utilitarian products. The finding that consumers tend to seek more variety in hedonic compared to utilitarian products -when products vary in sensory attributes- is in line with previous research. In the existing literature, hedonic products are considered to stimulate variety-seeking as products highly dependent on neural or effective sensations seem to accommodate a variety drive (Kahn & Lehmann, 1991; Van Trijp et al., 1996; Van Trijp, 1994). However, the finding that -when products vary in functional attributes- consumers tend to seek more variety in utilitarian compared to hedonic products is novel. Consequently, the results not only demonstrate that variety seeking is evident in utilitarian product categories but also show that despite the fact that consumers generally seek more variety in hedonic products, variety-seeking in utilitarian products is enhanced when products differ on functional rather than sensory attributes, confirming that variety-seeking can be also exploited for utilitarian products.

Moreover, the empirical research of the current thesis provides a new perspective for studying variety-seeking behavior by relating consumers' hedonic or utilitarian perception of a product category with variety-seeking for specific attributes. In Studies 1 and 3, the holistic approach proposed by Okada (2005) is adopted and an alternative is characterized as being primarily or relatively more hedonic (utilitarian) based on the perception of the consumers. In prior studies (for instance Van Trijp et al., 1996), products were a priori considered hedonic or



utilitarian without any relevant measurement. This is important as it seems that the hedonic or utilitarian nature of a product category is rather perceptual and there are categories that are perceived to have both hedonic and utilitarian qualities. For instance, there are products such as the “healthful indulgencies” that combine pleasure with healthful benefits and simultaneously satisfy consumers’ hedonic and utilitarian goals (Belei et al., 2012).

Furthermore, the findings of Study 2 provide support for a satiation mechanism behind the interactive effect of product category and attribute type on variety-seeking behavior observed in Study 1. More specifically, the interaction effect is attributed to different satiation levels associated with specific attribute types in hedonic and utilitarian products. This finding is novel as the existing literature suggested that variety seeking behavior is more likely to occur for products that are higher rather than lower in hedonic characteristics since repeated consumption of hedonic products is likely to lead to satiation or boredom (Rolls, 1986). The results of the current thesis confirm that in hedonic product categories, consumers tend to consider the product variants to be more similar and repetitive when variation is based on sensory attributes compared to when it is based on functional attributes. Nevertheless, a novel finding is that in utilitarian product categories, product variants seem to be more similar and repetitive when variation is based on functional rather than sensory attributes.



**Contribution 2: Suggesting specific attribute types that lead to variety-seeking behavior**

**Research Question 2: What are the attributes that stimulate variety-seeking in different product categories?**

The present thesis also contributes to the growing literature on attribute-level variety-seeking behavior by considering the attribute types that may lead to repeated purchase and those that may lead to switching, in connection with the product category type (hedonic or utilitarian or not clearly hedonic/utilitarian). Previous research focuses mostly on modeling attribute level variety-seeking behavior (Erdem, 1996; Inman et al., 2008; McAlister, 1982) and little guidance is offered on the specific product attributes that are more likely to stimulate variety-seeking. The thorough investigation of the relevant literature yielded only one research that suggests specific attribute types that lead to variety-seeking behavior. This research focused mostly on sensory attributes (Inman, 2001) while variety-seeking tendencies for other attribute types (such as functional) have not been explored.

Study 1 confirms that in hedonic products variety-seeking is stimulated by sensory attributes whereas in utilitarian products variety-seeking is stimulated by utilitarian attributes. Study 2 illustrates the process behind the interaction effect of product category and attributes type on variety-seeking behavior. Specifically, it demonstrates that in hedonic products consumers tend to perceive sensory attributes to be more repetitive whereas in utilitarian products they perceive



functional attributes as more repetitive. It is important to emphasize that although previous research focuses on sensory effects as the source of variety-seeking (Inman et al., 2008; Inman, 2001) the findings from Study 1 indicate that variety-seeking behavior may also derive from functional, non-sensory attributes. This finding is novel and suggests a new perspective in studying attribute level variety-seeking behavior.

However, the hedonic or utilitarian nature of a product category is rather perceptual and there are categories that are perceived to have both hedonic and utilitarian qualities. The classification of a product as hedonic or utilitarian may depend on product attribute perceptions, which may be assessed empirically (Antonides and Cramer, 2013; Cramer and Antonides, 2011). Study 3 shows that variety seeking behavior does not differ across sensory and functional attributes in product categories that are not clearly hedonic or utilitarian. The results of this study indicated that in the case of a product that is not clearly hedonic or utilitarian, the attribute type (sensory or functional) variation does not elicit any differences in satiation rates since consumers will tend to focus equally on those attributes. These findings offer a deeper understanding of the specific attributes that seem to stimulate variety-seeking behavior across different product categories.

**Contribution 3: Conceptualize variety-seeking as a behavioral consequence of choice overload**

**Research Question 3: Is variety-seeking a behavioral consequence of choice overload?**



The choice overload hypothesis states that an increase in the number of options to choose from may lead to adverse consequences such as a decrease in the motivation to choose or a decrease in the satisfaction with the finally chosen option (Diehl & Poynor, 2010; Iyengar & Lepper, 2000; Mogilner, et al., 2008). There are several types of choice overload but the current thesis focused on the type of choice overload where the decision difficulty is caused by the (large) number of available decision alternatives (Iyengar & Lepper, 2000).

Even though choice overload is a well established phenomenon in consumer behavior literature and numerous papers have focused on its behavioral consequences, there is no research that conceptualizes variety-seeking as a behavioral consequence of this phenomenon. This is important, as in choice overload literature there is conflicting evidence on whether larger assortments lead to greater variety-seeking and the notion that extensively large assortments lead to greater variety-seeking is not straightforward. On one hand, switching likelihood has been used as a measure of the strength of preference for the selected option (Chernev, 2003b) when choosing from large assortments but, on the other hand, research has indicated that when faced with choosing from a large relative to a small assortment, consumers are expected to exhibit an even higher propensity of selecting a status quo option that includes no change (Anderson, 2003). Status quo-option selection indicates the preference for an alternative that involves no change or to select the same product previously consumed and could serve as a mechanism to cope with the choice complexity associated with large assortments.



The results of Study 4 demonstrate that consumers experiencing choice overload tend to engage in variety-seeking behavior as a cognitive mechanism in order to avoid making difficult trade-offs. This effect is evident despite interpersonal differences in variety-seeking behavior (OSL- Optimal Stimulation Level). These findings are different from relevant research that measures switching likelihood as a consequence of choice overload (Chernev, 2003b) since in Study 4 of the current thesis consumers were engaged in a simultaneous multi-item choice task compared to the sequential choice task of the previous study. In addition, in the previous studies switching likelihood was measured as an index for strength of preference for the chosen item and not as a variety-seeking index.

Moreover, this research contributes to the choice overload literature as in past research participants had to choose either among assortments or had to choose one option from an assortment (such as Iyengar & Lepper, 2000; Mogilner et al., 2008) and –to the best of author’s knowledge- there is no research related to choice overload where participants had to choose multiple items simultaneously from a single assortment. The results of Study 4 confirm that in a simultaneous multi-item choice context consumers exert variety-seeking as a conscious cognitive mechanism to avoid having to make more difficult trade-offs suggesting an additional behavioral consequence of choice overload.



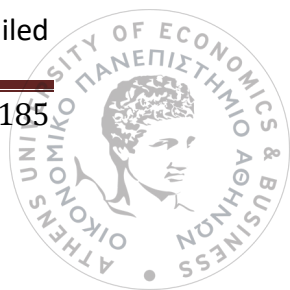
**Contribution 4: Explore variety-seeking tendencies in the case of extensively large assortments and identify possible moderators**

**Research Question 4: Why is variety-seeking exploited in the case of choosing from large assortments and what are the possible moderators of this behavior?**

In variety-seeking literature, resolution of difficult decisions is suggested as a motive for choosing variety (Kahn, 1995). For instance, Simonson (1990) suggests that the difficulty that consumers experience when choosing among familiar alternatives for future consumption creates decision conflict. One way to resolve that conflict without requiring too much cognitive effort is to choose a variety of options. However, there is no research that correlates specifically choice overload with variety-seeking resulting in a gap in literature that the present thesis tried to address.

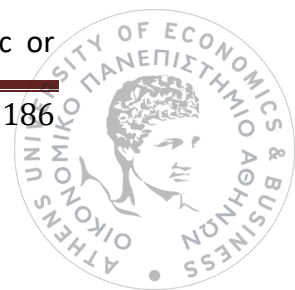
Moreover, research on variety-seeking has focused on smaller, more manageable assortments and variety-seeking tendencies in extensively large assortments have not been thoroughly investigated. This is important, as both retailers and manufacturers tend to increase the number of items within an assortment that they offer in their effort to gain customers.

Study 5 not only confirms that consumers tend to engage in variety-seeking when choosing from extensively large assortments but also suggests specificity of satiation as a mechanism for explaining variety-seeking tendencies in the case of large assortments. Specificity effect suggests that when consumers focus on the detailed



aspects of the consumption episodes, they tend to perceive them to be less repetitive; consequently they feel less satiated with the choice process. The results of Study 5 confirm that through specificity of satiation, large assortments tend to be more satiating and consumers tend to engage in variety-seeking behavior when choosing from large assortments as a means to overcome satiation. More specifically, in the small assortment conditions, the participants paid more attention to flavor (the aspect that differentiates the set of episodes) compared to the attention to flavor that participants exerted when choosing from large assortments. Moreover, they perceived the choice task to be more repetitive when choosing from small assortments compared to when they chose from large assortments. Since a major motive for exhibiting variety-seeking behavior is the desire to overcome satiation (Kahn, 2005) this mechanism explains why subjects tend to seek less variety when they have to choose from small assortments compared to when they have to choose from large assortments. This finding is novel and particularly interesting, as it indicates that participants perceived the process of being presented with an assortment of 16 unique items more repetitive compared to the process of being presented with an assortment of 4 unique items.

Apart from explaining variety-seeking tendencies in large assortments, the empirical research of the current thesis tried to investigate whether categorization level and chooser type moderate this relationship. To the best of author's knowledge, there is only one study that examines the effect of categorization on variety-seeking (Kim & Yoon, 2016). This research focuses on variety-seeking across product categories and on whether the options are categorized in a specific or



abstract manner. The present research is different in the sense that it examines variety-seeking tendencies within a product category and the number of categorization levels and not whether categories exist or not was manipulated. In addition, the constructs related to specificity (focus to the details and perception of repetition) were measured and not only experimentally manipulated, following Redden (2008, 2014).

In contrast with the results of Kim and Yoon (2016), the findings demonstrate that categorization level did not seem to have a statistically significant main effect on variety-seeking. This finding could be attributed to the fact that a rather small number of product categorization levels (up to 3) was manipulated whereas in previous studies (such as Mogilner et al., 2008) researchers manipulated a significantly bigger number of categories (more than ten categories).

However, the current research introduces chooser familiarity with the choice domain as a factor that moderates variety-seeking tendencies in large assortments. The results of Study 5 confirm that preference matchers- consumers that are familiar with the choice domain- tend to seek more variety when asked to make choices from large assortments compared to when they choose from small assortments due to the fact that they may find more alternatives that match their ideal attribute combinations. On the other hand, preference constructors- individuals that make decisions in areas where they lack expertise- tend to seek the same degree of variety when choosing from small or large assortments because they rely on the information found in the choice environment to determine their preferences. These findings are



novel and provide new insights in both variety-seeking and choice overload literature.

## 5.4. Managerial implications

### 5.4.1. Implications for product line management decisions

The identification of specific attributes that stimulate variety-seeking in connection with product category type (hedonic or utilitarian) has important practical implications for product line management decisions such as product line extensions and product line pruning.

When deciding upon product line extensions, the results of the current thesis indicate that if the product is perceived as hedonic, extending the product line with products that vary in sensory attributes will be an appropriate strategy. On the other hand, if the product is perceived as utilitarian, extending the product line with products that vary in functional attributes will be the optimal strategy. In this way, the need for variety of the consumers will be fulfilled and they will be kept satisfied and loyal.

In a similar vein, the determination of specific attributes that stimulate variety-seeking could help to decide upon which Stock Keeping Units to withdraw when line pruning decisions are necessary. In utilitarian product categories, products that vary in sensory attributes are the first elimination candidates. On the other hand, in hedonic product categories, products that vary in functional attributes are the first



candidates for elimination. In this manner, line pruning and more generally rationalization of excessive product variety may have the least possible impact on consumer satisfaction and loyalty.

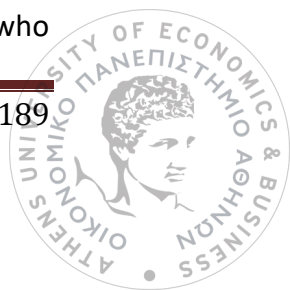
#### 5.4.2. Implications for designing effective promotional offers

Given the prevalence of product bundles in supermarkets and other retail stores, the findings of the current doctoral thesis are instructive for designing effective promotions and, in particular, combined offers and product bundles. More specifically, if the product category is perceived as hedonic, sensory variation among the items of the bundle is more likely to stimulate variety-seeking, whereas if the product category is perceived as utilitarian, functional variation among the items of the bundle is more likely to stimulate variety-seeking.

#### 5.4.3. Implications for effective category management in retail settings

In retail settings, the identification of specific attributes that stimulate variety-seeking can assist the determination of merchandise variety and lead to more efficient category management. In hedonic product categories, retailers should offer their customers a product line with greater variety in sensory attributes. In utilitarian product categories, however, retailers should offer their customers items with different functional attributes.

In addition, the finding that consumers tend to engage in variety-seeking when choosing from extensively large assortments provides guidance to retailers who



need to decide upon the optimal assortment size for a product category. If a retailer's strategy is to offer value to the customer through a large assortment of items (rather than competing on price, for example), then the retailer may want to stimulate consumers' variety-seeking for instance with subtle variety-cues (Fishbach et al., 2011; Maimaran & Wheeler, 2008) or by providing stimulation from the choice context (Kahn & Mehnon, 1995; Kahn & Wansink, 2004). In this way, the large assortment would be appreciated and help keep the consumer loyal.

On the other hand, some retailers may be looking to keep costs down and reduce the size of the offered assortment. In these cases, the retailer would want to encourage loyal behavior and satisfy consumers' potential needs for variety in ways other than through product or service variability such as through the assortment organization (Kahn & Wansink, 2004) or by increasing option distinctiveness (focusing on attributes) within the assortment (Hoch, Bradlow, & Wansink 1999; Van Herpen & Pieters 2002; van Herpen & Pieters 2007; Ryzin & Mahajan 1999).

In addition, with relation to the chooser type it is important for retailers offering large assortments to find ways to help preference constructors articulate their ideal attribute combinations. Since preference constructors do not engage in variety-seeking when choosing from large assortments, they may turn to other behaviors associated with choice overload such as choice deferral and lower satisfaction. In general, having more developed preferences increases the likelihood of consumers choosing a product from a large assortment (Chernev, 2003a). This could be attained via in-store promotions, communication as well as improving the organization of the



assortment in order to reduce the cognitive costs associated with the decision process. However, the results indicate different implications for specialty stores that seem to attract mostly preference matchers.

## 5.5. Limitations and Directions for future research

There are clearly some limitations to the current research that could indicate paths for future research. Even though a non-physiological view of satiation where satiation is the result of psychological attributions (and not of the accumulation of ingested stimuli) was adopted, all measurements were taken at one point of time, simultaneously and not sequentially at different points of time, as in previous research. Consequently, consumers might not have enough time and put enough “effort” to satiate. In addition, the collected data were only laboratory data, with all the limitations relevant to the external validity of the laboratory experiments.

Finally, this research tested assortment effects for only one product category (chocolates). This is not unlike previous research (such as Broniarczyk et al, 1998; Oppewal & Koelmeijer, 2005). However, replication of the tests and comparisons in more product categories are obviously topics that require further research.

Despite those limitations, the present research might stimulate further research. Future studies could focus on the effect of other attribute types on variety-seeking in hedonic and utilitarian products. For instance, it has been found that abstract product attributes communicate hedonic motives for product acquisition and use in comparison with concrete attributes (Snelders & Schoormans, 2004). In addition, this



study could be extended by considering variables that prevent or delay satiation such as the categorization level of the consumption episodes (Raghunathan & Irwin, 2001; Redden, 2008), recalling past variety (Galak et al., 2009) or the perceived variety of an assortment being consumed (Kahn & Wansink, 2004). It would be interesting to test whether satiation reducing mechanisms elicit different effects in variety-seeking for hedonic and utilitarian products. It is hoped that the preceding discussion might provide the stimulus for new research in this important area of consumer behavior.

An interesting implication for future research is that decisions that are subjectively perceived to be more difficult—even when the decision itself is unchanged (perhaps through manipulating the fluency with which the decision is processed, such as with a difficult-to-read font)—could produce greater variety seeking.

Another particular area in need of further investigation is the impact of the decision maker's goals on choice overload. The current research has focused on a hedonic product category which is common as much of the assortment research to date has used hedonic product categories where consumers are likely to be promotion-focused and attracted to assortments. Limited research has examined the effect of assortment for utilitarian product categories. Utilitarian product categories are associated with different goals and goal orientation. Accordingly, further research might seek to identify whether and how other goal-related factors such as



decision accuracy, effort minimization, and purchase quantity influence variety-seeking tendencies for extensively large assortments (Kahn et al., 2014).

A related issue for further investigation is the effect of assortment display cues on variety-seeking. The items in the photographed experimental assortments were lined up in rows; consequently assortment display effects could be only partially controlled. Further investigation of display effects is a high relevant issue for future research as there are several assortment display elements such as assortment structure (Kahn and Wansink, 2004) that seem to affect perceived variety.

A final issue for further investigation would be to replicate the current research in a sequential choice strategy. Sequential choices is a context that has been utilized in many studies on variety-seeking and involves increased temporal distance on behalf of the consumer that has been found to moderate the effect of assortment size on consumer preferences (Goodman and Malkoc, 2012). It is hoped that the preceding discussion might provide the stimulus for new research in this important area of consumer behavior.



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## Appendices



## APPENDIX 1: EXPERIMENTAL STIMULI FOR ALL STUDIES




### Sample Experimental Stimuli for Study 1

*“Imagine you are going to the supermarket with a shopping list that includes yoghurts and dish detergents. You want to buy three products in each category that you will consume on your own.”*

<p>A: Hedonic product- Sensory Attributes</p>  <p>‘Silhouette 1%’ yoghurt, with strawberry pieces. It is available in 200gr package.</p>	<p>B: Hedonic product- Functional Attributes</p>  <p>‘Silhouette 1%’ yoghurt with probiotics. It is available in 200gr package.</p>
<p>C: Utilitarian product- Sensory Attributes</p>  <p>‘Svelto’ dish detergent, with lime odour. It is available in 500gr package.</p>	<p>D: Utilitarian product- Functional Attributes</p>  <p>‘Svelto’ dish detergent, with cleansing action against odours. It is available in 500gr package.</p>

## Sample Experimental Stimuli for Study 2

*“How much do you enjoy each one of the following products?”*

<p>A: Hedonic product- Sensory Attributes</p>  <p>‘Cavalier’ chocolate, filled with caramel</p>	<p>C: Utilitarian product- Sensory Attributes</p>  <p>‘Elgydium’ toothpaste with mint flavour</p>
<p>B: Hedonic product- Functional Attributes</p>  <p>‘Cavalier’ chocolate rich in proteins</p>	<p>D: Utilitarian product- Functional Attributes</p>  <p>‘Elgydium’ toothpaste with active ingredients against decay</p>

### Sample Experimental Stimuli for Study 3

*“Imagine you are going to the supermarket with a shopping list that includes healthy breakfast snacks. You want to buy three products that you will consume on your own.”*

#### A: Sensory Attributes



‘Healthea’ cereal bar  
with chocolate  
pieces

#### B: Functional Attributes



‘Healthea’ cereal bar  
rich in fibres

## Sample Experimental Stimuli for Study 4

Respondents had to select 3 chocolates simultaneously from either an assortment of 4 chocolates (small assortment condition) or an assortment of 16 chocolates (large assortment condition).

The products in small assortment condition were counterbalanced across participants.

### Small Assortment Condition



1. 	Μαύρη σοκολάτα με 50% περιεκτικότητα σε κακάο και κομμάτια πορτοκάλι	2. 	Σοκολάτα γάλακτος με 31% περιεκτικότητα σε κακάο και αλατισμένα αμύγδαλα
3. 	Μαύρη σοκολάτα με 85% περιεκτικότητα σε κακάο	4. 	Μαύρη σοκολάτα με 72% περιεκτικότητα σε κακάο

### Large Assortment

1. 	Μαύρη σοκολάτα με 50% περιεκτικότητα σε κακάο και κομμάτια πορτοκάλι	2. 	Σοκολάτα γάλακτος με 31% περιεκτικότητα σε κακάο και αλατισμένα αμύγδαλα	3. 	Μαύρη σοκολάτα με 85% περιεκτικότητα σε κακάο	4. 	Μαύρη σοκολάτα με 72% περιεκτικότητα σε κακάο
5. 	Σοκολάτα γάλακτος με 41% περιεκτικότητα σε κακάο και φουντούκια	6. 	Μαύρη σοκολάτα με γέμιση πραλίνα	7. 	Μαύρη σοκολάτα με 50% περιεκτικότητα σε κακάο και κομμάτια βανίλιου	8. 	Μαύρη σοκολάτα με 72% περιεκτικότητα σε κακάο και αμύγδαλα
9. 	Σοκολάτα γάλακτος με αμύγδαλα	10. 	Σοκολάτα γάλακτος με 31% περιεκτικότητα σε κακάο	11. 	Μαύρη σοκολάτα με γέμιση soufflé σοκολάτας	12. 	Σοκολάτα γάλακτος με γέμιση καραμέλα
13. 	Σοκολάτα γάλακτος με 31% περιεκτικότητα σε κακάο και κομμάτια φράουλα	14. 	Σοκολάτα γάλακτος με γέμιση πραλίνα φουντουκιού	15. 	Σοκολάτα γάλακτος με γέμιση φράουλα	16. 	Λευκή σοκολάτα με γέμιση tiramisu

## Sample Experimental Stimuli for Study 5

An illustration of picture and verbal description of an item across the different categorization levels

Level of categorization	Picture and Verbal Description of the Item
Single General Category	<p><b>Chocolate #1</b></p>  <p>Dark chocolate with 50% cocoa and raspberry</p>
Chocolate Type Subcategory	<p><b>Dark chocolate #1</b></p>  <p>Dark chocolate with 50% cocoa and raspberry</p>

**Flavor based Subcategory**

**Dark chocolate with raspberry #1**



Dark chocolate with 50%  
cocoa and raspberry

## Small Assortment- Single General Category

<p><b>Σοκολάτα #1</b></p>  <p>Μαύρη σοκολάτα με 50% περιεκτικότητα σε κακάο και κομμάτια βανίλιου</p>	<p><b>Σοκολάτα #2</b></p>  <p>Μαύρη σοκολάτα με 50% περιεκτικότητα σε κακάο και κομμάτια πορτοκάλι</p>
<p><b>Σοκολάτα #3</b></p>  <p>Σοκολάτα γάλακτος με 31% περιεκτικότητα σε κακάο και κομμάτια φράουλα</p>	<p><b>Σοκολάτα #4</b></p>  <p>Σοκολάτα γάλακτος με 31% περιεκτικότητα σε κακάο και αλατισμένα αμύγδαλα</p>

**APPENDIX 2: ALTERNATIVE SCALES FOR ALL STUDIES****CSI short form (Steenkamp & Baumgartner, 1995)**

CSI short form appears to be an attractive alternative to the original 95-item scale for researchers who want to study the role of OSL in human behavior in general and in consumer behaviors with strong exploratory elements in particular.

The scale items are presented below. Items are rated on a five-point scale, ranging from - 2 (completely false) to + 2 (completely true).

1. I like to continue doing the same old things rather than trying new and different things. (reverse coded)
2. I like to experience novelty and change in my daily routine.
3. I like a job that offers change, variety, and travel, even if it involves some danger.
4. I am continually seeking new ideas and experiences.
5. I like continually changing activities.
6. When things get boring, I like to find some new and unfamiliar experience.
7. I prefer a routine way of life to an unpredictable one full of change. (reverse coded)



## **Varseek scale- Variety Seeking Tendency Scale with respect to food (Van Trijp & Steenkamp, 1992)**

Van Trijp and Steenkamp (1992) developed the food specific VARSEEK scale to measure consumers' intrinsic desire for variety in food consumption (variety seeking tendency). The authors showed that, although VARSEEK is related to Zuckerman's (1979) SSS, it has discriminant validity and a predictive advantage when the purpose is to predict variation in food consumption.

1. When I eat out, I like to try the most unusual items, even if I am not sure I would like them.
2. While preparing foods or snacks, I like to try out new recipes
3. I think it is fun to try out food items one is not familiar with.
4. I am eager to know what kind of foods people from other countries eat.
5. I like to eat exotic foods.
6. Items on the menu that I am unfamiliar with make me curious.
7. I prefer to eat food products I am not used to.
8. I am curious about food products I am not familiar with.



## Exploratory Acquisition of Products (EAP scale)- (Baumgartner & Steenkamp, 1996) short

*“EAP reflects a consumer's tendency to seek sensory stimulation in product purchase through risky and innovative product choices and **varied** and changing purchase and consumption experiences. Consumers who are high on EAP enjoy taking chances in buying unfamiliar products, are willing to try out new and innovative products, **value variety in making product choices**, and change their purchase behavior in an effort to attain stimulating consumption experiences.”*

Items are scored on 5-point Likert scales, with 1 = strongly disagree and 5 = strongly agree. Items marked with an asterisk are reverse coded.

1. Even though certain food products are available in a number of different flavors, I tend to buy the same flavor. ( \* )
2. I would rather stick with a brand I usually buy than try something I am not very sure of. ( \* )
3. I think of myself as a brand-loyal consumer. ( \* )
4. When I see a new brand on the shelf, I'm not afraid of giving it a try.
5. When I go to a restaurant, I feel it is safer to order dishes I am familiar with.  
(\*)
6. If I like a brand, I rarely switch from it just to try something different.
7. I am very cautious in trying new or different products. ( \* )



8. I enjoy taking chances in buying unfamiliar brands just to get some variety in my purchases.
9. I rarely buy brands about which I am uncertain how they will perform. (\*)
10. I usually eat the same kinds of foods on a regular basis. ( \* )



## Scale for measuring OSL based on Arousal Seeking Tendency

### scale- (Raju, 1980)

This scale developed by Raju (1980) measures OSL and correlates it with exploratory behavior in the consumer context. It is based on Arousal Seeking Tendency scale developed by Mehrabian and Russell (1974).

Items are scored on 5-point Likert scales, with 1 = strongly disagree and 5 = strongly agree.

1. If I like a brand, I rarely switch from it just to try something different,
2. I get bored with buying the same brands even if they are good.
3. I enjoy sampling different brands of commonplace products for the sake of comparison
4. A lot of the time I feel the urge to buy something really different from the brands I usually buy.
5. If I did a lot of flying. I would probably like to try all the different airlines, instead of flying just one most of the time
6. I enjoy exploring several different alternatives or brands while shopping



## Hedonic/ Utilitarian Scale (Voss, Spangenberg and Grohmann, 2003)

The HED/UT scale developed by Voss, Spangenberg and Grohmann (2003) was used to check product type manipulation. It includes two subscales, one measuring the hedonic dimension ( $\alpha=0.80$ ) and one measuring the utilitarian dimension ( $\alpha=0.78$ ).

**Yogurts are:**

Necessary	1	2	3	4	5	6	7	Unnecessary
Functional	1	2	3	4	5	6	7	Not functional
Exciting	1	2	3	4	5	6	7	Dull
Practical	1	2	3	4	5	6	7	Impractical
Helpful	1	2	3	4	5	6	7	Unhelpful
Delightful	1	2	3	4	5	6	7	Not delightful
Enjoyable	1	2	3	4	5	6	7	Unenjoyable

