

HOW CONSUMER PARTICIPATION ENHANCES SATISFACTION AND  
CONSUMER OUTCOMES: A VALUE CREATION AND TRANSFER PERSPECTIVE

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# HOW CONSUMER PARTICIPATION ENHANCES SATISFACTION AND CONSUMER OUTCOMES: A VALUE CREATION AND TRANSFER PERSPECTIVE

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This dissertation examines the experiential value transfer mechanism—a process through which consumer’s self-involvement in product production or service delivery enhances consumer outcomes. In particular, this dissertation proposes and shows that consumer participation can create experiential value. Drawing on consumer participation and psychological well-being research, this dissertation seeks to answer three questions: 1) what are the components of experiential value, 2) how consumer participation creates experiential value, and 3) how experiential value transfers to consumer outcomes. Seven studies are conducted to address these questions. Collectively, these studies contribute to our understanding of the effects of consumer participation as well as raise questions for future research.

## **BIOGRAPHICAL SKETCH**

Elisa K. Chan graduated from the Sauder School of Business at the University of British Columbia, Canada with a Bachelor's of Commerce in Marketing. She also obtained a Master's in Hospitality Management at the University of Angers, France and a Master's of Philosophy in Marketing at the Chinese University of Hong Kong, China. After working in higher education and research for a few years, Elisa joined the School of Hotel Administration at Cornell and graduated in 2014 with a PhD in Hotel Administration (Marketing). Her research interest includes experiential marketing, health marketing, and social influence.

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## TABLE OF CONTENTS

|  |      |
|--|------|
| LIST OF FIGURES .....  | viii |
| LIST OF TABLES .....   | ix   |
| CHAPTER ONE: AN OVERVIEW .....   | 1    |
| INTRODUCTION .....   | 2    |
| Experiential Value Creation through Consumer Participation.....                              | 3    |
| METHODOLOGY OVERVIEW AND SUMMARY OF RESULTS.....   | 6    |
| Scale Development: Item Generation, Reduction, Content Adequacy, and Criterion-Validity..... | 6    |
| Hypotheses Testing: Model Validation.....  | 8    |
| CHAPTER TWO: LITERATURE REVIEW .....   | 11   |
| WHAT ARE THE DIFFERENT KINDS OF CONSUMER VALUE?.....   | 12   |
| The Theory of Consumption Value (Seth, Newman and Gross) .....                               | 12   |
| Application.....   | 13   |
| The Typology of Customer Value (Holbrook).....   | 15   |
| Application.....   | 17   |
| WHAT IS MISSING FROM CONSUMER VALUE LITERATURE? .....  | 18   |
| What Kinds of Value are Created by Consumer Participation? .....                             | 20   |
| TWO PROCESSES OF EXPERIENTIAL-VALUE TRANSFER.....  | 22   |
| Universal Experiential Value Transfer .....  | 23   |
| Contingent Experiential Value Transfer .....   | 23   |
| PROPOSITIONS .....   | 24   |
| CHAPTER THREE: METHODOLOGY .....   | 26   |
| STUDY 1: EXPERIENTIAL VALUE SCALE DEVELOPMENT .....  | 27   |
| Item Generation .....  | 27   |
| Content Adequacy.....  | 29   |
| Method .....   | 29   |
| Analysis.....  | 30   |
| Results and Discussion .....   | 31   |
| STUDY 2: A FACTOR-ANALYTIC TEST OF DISCRIMINANT VALIDITY .....                               | 34   |
| Samples and Procedures.....  | 34   |

|   |    |
|---|----|
| Analysis and Results .....  | 35 |
| Discussion .....  | 45 |
| STUDY 3: A TEST OF NEW SCALE CRITERION VALIDITY .....   | 45 |
| Purpose and Hypotheses .....  | 45 |
| Method .....  | 46 |
| Analysis.....   | 47 |
| Results.....  | 48 |
| Discussion .....  | 51 |
| STUDY 4: A FURTHER CRITERION-RELATED VALIDITY TEST FOR THE NEW<br>EXPERIENTIAL VALUE SCALE .....                | 52 |
| Method .....  | 53 |
| Analysis.....   | 54 |
| Results.....  | 55 |
| Discussion .....  | 62 |
| STUDY 5: CUSTOMIZED MENU AND FOOD EVALUATION .....  | 64 |
| Purpose and Hypotheses .....  | 64 |
| STUDY 5A: PIZZA AND SALAD .....   | 66 |
| Method .....  | 66 |
| Analyses and Results .....  | 67 |
| Discussion .....  | 77 |
| STUDY 5B: UNHEALTHY VS. HEALTHY SANDWICHES .....  | 78 |
| Method .....  | 78 |
| Analyses and Results .....  | 79 |
| Discussion .....  | 86 |
| STUDY 6: EXPERIENTIAL VALUE VS. SERVICE QUALITY IN DRIVING CUSTOMER<br>SATISFACTION AND REVISIT INTENTION ..... | 86 |
| Method .....  | 88 |
| Analysis.....   | 89 |
| Results.....  | 89 |
| Discussion .....  | 96 |
| STUDY 7: EXPERIENTIAL VALUE VS. GAME QUALITY IN DRIVING SATISFACTION AND<br>REVISIT INTENTION .....             | 97 |
| Method .....  | 98 |

|   |     |
|---|-----|
| Structural Equation Modeling Analysis .....   | 98  |
| Results.....  | 99  |
| Discussion .....  | 104 |
| CHAPTER FOUR: GENERAL DISCUSSION .....  | 106 |
| What Kind of Value is Unique to Consumer Participation? .....                       | 107 |
| How Does Consumer Participation Create Experiential Value?.....                     | 108 |
| Does Experiential Value Transfer to Products, Services, Companies, and Brands?..... | 108 |
| Theoretical Implications .....  | 110 |
| Managerial Implications .....   | 115 |
| Limitation and Future Studies.....  | 116 |
| Conclusion .....  | 118 |
| APPENDICES .....  | 119 |
| Appendix 1: Typology of Customer Value (Holbrook 1999).....                         | 120 |
| Appendix 2: Summary of Consumer Participation Research Findings .....               | 121 |
| Appendix 3: Initial List of Items for Experiential Value and Engagement .....       | 129 |
| Appendix 4: Final List of Items for the Experiential Value Scale .....              | 130 |
| Appendix 5: Vans Custom Made Shoes Design Palette (Study 3 and 4).....              | 131 |
| Appendix 6: Other Measures (Study 4) .....  | 132 |
| Appendix 7: Pizza and Salad Menus (Study 5a).....                                   | 133 |
| Appendix 8: Unhealthy and Health Sandwiches Menus (Study 5b).....                   | 135 |
| Appendix 9: Other Measures (Study 5) .....  | 137 |
| Appendix 10: Sample Poster and Flyer (Study 6).....                                 | 138 |
| Appendix 11: Other Measures (Study 6) .....   | 139 |
| Appendix 12: Other Measures (Study 7) .....   | 141 |
| REFERENCES .....  | 142 |



## LIST OF FIGURES

|  |     |
|--|-----|
| Figure 1: Conceptual Framework.....  | 6   |
| Figure 2: Mediation Path Model (Study 4) – Overall Model.....                        | 58  |
| Figure 3a: Moderation Path Model (Study 4) – Low Need for Uniqueness.....            | 61  |
| Figure 3b: Moderation Path Model (Study 4) – High Need for Uniqueness.....           | 61  |
| Figure 4a: MANOVA Results of Taste Perception (Study 5a).....                        | 69  |
| Figure 4b: MANOVA Results of Restaurant Evaluation (Study 5a).....                   | 70  |
| Figure 5a: Mediation Results Salad Condition – Taste Perception (Study 5a).....      | 72  |
| Figure 5b: Mediation Results Salad Condition – Restaurant Evaluation (Study 5a)..... | 73  |
| Figure 6a: Mediation Results Salad Condition – Autonomy/Competence (Study 5a).....   | 74  |
| Figure 6b: Mediation Results Salad Condition – Hedonic (Study 5a).....               | 75  |
| Figure 7a: MANOVA Results of Taste Perception (Study 5b).....                        | 80  |
| Figure 7b: MANOVA Results of Restaurant Evaluation (Study 5b).....                   | 81  |
| Figure 8a: Mediation Results Healthy Condition – Autonomy/Competence (Study 5b)..... | 83  |
| Figure 8b: Mediation Results Healthy Condition – Hedonic (Study 5b).....             | 84  |
| Figure 9: Structural Equation Modeling Results (Study 6).....                        | 92  |
| Figure 10: Moderation Path Models (Study 6).....                                     | 95  |
| Figure 11: Structural Equation Modeling Results (Study 7).....                       | 103 |

## LIST OF TABLES

|   |     |
|---|-----|
| Study 1   |     |
| Table 1a: Content Validity Results (Hedonic Value).....                     | 32  |
| Table 1b: Content Validity Results (Psychological Value).....               | 33  |
| Table 1c: Content Validity Results (Absorption and Dedication).....         | 33  |
| Study 2   |     |
| Table 2: Confirmatory Factor Analysis Results.....                          | 38  |
| Table 3a: Discriminant Validity Analysis Results (Sample 1).....            | 39  |
| Table 3b: Discriminant Validity Analysis Results (Sample 1).....            | 40  |
| Table 4a: Discriminant Validity Analysis Results (Sample 2).....            | 41  |
| Table 4b: Discriminant Validity Analysis Results (Sample 2).....            | 42  |
| Table 5a: Discriminant Validity Analysis Results (Sample 3).....            | 43  |
| Table 5b: Discriminant Validity Analysis Results (Sample 3).....            | 44  |
| Study 3   |     |
| Table 6: Correlation Results.....   | 48  |
| Table 7: MANOVA Results.....  | 49  |
| Study 4   |     |
| Table 8: Correlation Results.....   | 55  |
| Table 9a: Confirmatory Factor Analysis Results (Measurement Model).....     | 56  |
| Table 9b: Confirmatory Factor Analysis Results (Model Fit Statistics).....  | 57  |
| Table 10: Multi-group Alternative Models Test Results.....                  | 60  |
| Study 6   |     |
| Table 11: Correlation Results.....  | 89  |
| Table 12a: Confirmatory Factor Analysis Results (Measurement Model).....    | 90  |
| Table 12b: Confirmatory Factor Analysis Results (Model Fit Statistics)..... | 91  |
| Table 13: Multi-group Alternative Models Test Results.....                  | 94  |
| Study 7   |     |
| Table 14: Correlation Results.....  | 99  |
| Table 15a: Confirmatory Factor Analysis Results (Measurement Model).....    | 101 |
| Table 15b: Confirmatory Factor Analysis Results (Model Fit Statistics)..... | 102 |

## **CHAPTER ONE: AN OVERVIEW**

## **INTRODUCTION**

Imagine the following scenarios:

- *You are shopping for a pair of shoes on Nike's webpage. You can either select a Nike design "off-the-rack" or use the Nike design palette to "design your own." Which do you think would make you more satisfied with the shoes? With Nike? Which would make you more likely to purchase the shoes?*
- *You are getting a salad for lunch at a restaurant. You can either choose a salad (e.g., Caesar Salad) off the menu or create your own. Which do you think would make you like your salad more? Which would make you more satisfied with the restaurant?*

Most people like themselves (Bosson, Swann, and Pennebaker 2000; Greenwald and Farnham 2000) and this liking for the self is extended to objects and things associated with the self (Greenwald and Banaji 1995; Troye and Supphellen 2012). Associations between the self and objects can be achieved by physical (e.g., do-it-yourself products) and psychological (e.g., product research and development) self-involvement with objects (Bendapudi and Leone 2003; Bosson, Swann, and Pennebaker 2000). Perhaps it is not too surprising then that consumers tend to be more satisfied with products or services they help create because these products or services represent themselves (e.g., Chan, Yim, and Lam 2010; Norton, Mochon, and Ariely 2012; Troye and Supphellen 2012). But if the self-object association is the only explanation for increased liking, it is unclear whether or not the positive effect of self-involvement might be extended to the company or brand offering the opportunities for self-design, customization, etc. Arguably, the associations between the self and the product and service may overshadow the company's or brand's role in the production or delivery process. In fact, some researchers found evidence of the self-serving bias (i.e., a tendency for people to attribute success to the self and failure to others; Curren, Folkes, and Steckel 1992) such that when consumers liked a product or service

they helped created, they actually evaluated the company less favorably (Bendapudi and Leone 2003).

This dissertation examines a different mechanism through which consumer's self-involvement in product production or service delivery (consumer participation hereafter) can enhance consumer outcomes including product and service satisfaction as well as company and brand evaluation and behavioral intention. This mechanism explains why if you designed your own Nike shoes and were very satisfied with your design, you would also view Nike more favorably; if you custom-made your salad and thought it tasted better, you would also think more positively of the restaurant. In particular, this dissertation proposes and shows that consumer participation can create experiential value. Experiential value is positive experiences derived from consumer participation—not attached to any product or service—which can enhance consumer outcomes such as customer satisfaction, company/brand evaluation, and purchase intention.

### ***Experiential Value Creation through Consumer Participation***

Consumers purchase products, services, or experiences for the value (benefits) they afford (Holbrook 1999; Vargo and Lusch 2008; Grönroos and Voima 2013). Consumer value has been equated with bundles of attributes in products and services (e.g., product design, service comprehensiveness, etc.) (Cronin and Taylor 1992; Parasuraman, Zeithaml, and Berry 1988). Conventional consumer value research generally shows that consumers base consumption choices on perceived value of a product or service by evaluating attributes (Bettman and Park 1980; Green and Srinivasan 1978; Guadagni and Little 1983; Seth, Newman, and Gross 1991a,

1991b; Sweeney and Soutar 2001). As a result, when businesses try to enter new markets, improve satisfaction, and retain customers, they often resort to creating value by adding products and services. For examples, McDonald's introduced McCafé which carries a larger coffee selection to compete in the premium coffee market (Patton 2014); Nike remains the market leader and sustains growth by continuously designing new shoes (Drejer 2002). Moreover, restaurants are segmented based on the extent of service provided and menu options: from quick-service restaurants (self-service with limited, generic menu selections like McDonald's) to casual dining restaurants (full-service with wider menu selections like Applebee's).

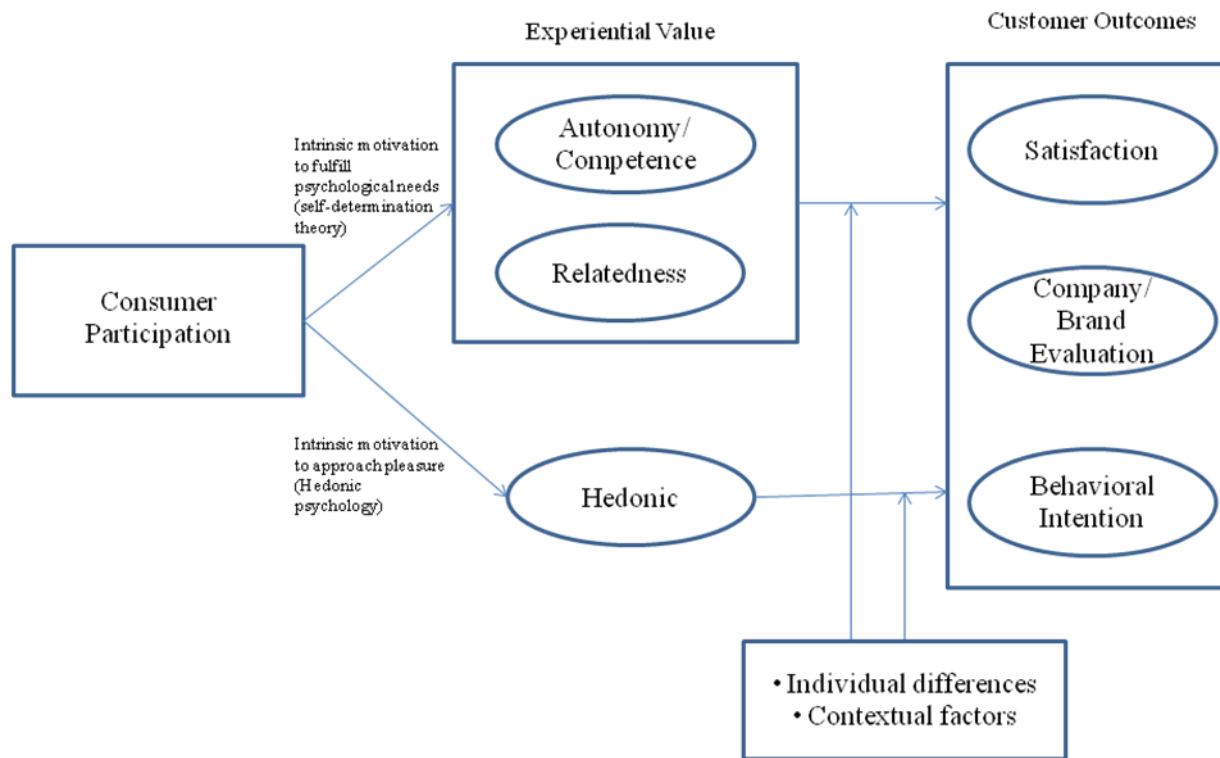
Marketing research and established business practice seem to agree that more products and services translate to more consumer value. However, the market has recently seen some companies and brands gain customers by cutting back aspects of product and service. For examples, Nike and other leading sports shoes brands now delegate to customers what used to be their core service—design—by letting customers design their own shoes (e.g., NIKEiD and Vans Custom Shoes); restaurants (e.g., Chipotle) in the rapidly growing fast-casual segment charge higher prices than their quick-service counterparts without providing extra services—they even reduce the number of standardized menu items and ask customers to create their own dishes (Rockwell 2014). These examples of consumers valuing their own involvement in product production and service delivery and they are supported by research which shows that customer's own effort increases satisfaction with the focal product and service (e.g., Bendapudi and Leone 2003; Prahalad and Ramaswamy 2004). Do these recent developments in practice and literature defy our understanding of consumer value creation?

I build on consumer participation research to examine how companies and brands are letting consumers create their own value—experiential value. Unlike consumer value already identified in literature, experiential value is positive experiences not attached to any product or service. Consumer participation can enhance satisfaction (e.g., Bendapudi and Leone 2003; Prahalad and Ramaswamy 2004) when experiential value is created during the participation activity (e.g., designing, building, etc.). Two kinds of experience are universally valued—hedonic experience (Dubé and Le Bel 2003; Kahneman, Diener, and Schwarz 1999) and psychological experience (self-determination theory; Deci and Ryan 1985; Schüler, Sheldon, and Fröhlich 2010; Sheldon and Schüler 2011). Hedonic experience arises whenever people are having fun and feeling pleasure; psychological experience arises when fundamental human needs to feel competence, autonomous, and related are fulfilled (Deci and Ryan 2001). Taken together, consumer participation affords experiential value derived from hedonic and psychological experiences. More importantly, the hedonic and psychological experiences obtained from consumer participation can be carried over to the focal product or service as well as the company or brand.

Figure 1 depicts the conceptual model for this dissertation; this model's theoretical underpinnings will be discussed in detail in Chapter Two.

The research questions this dissertation seeks to answer are as follows: 1) what are the components of experiential value, 2) how consumer participation creates experiential value, and 3) how experiential value transfers to products, services, company, and brands, and enhances behavioral intentions such as purchase intention and revisit intention.

Figure 1: Conceptual Framework



## ***METHODOLOGY OVERVIEW AND SUMMARY OF RESULTS***

This dissertation has seven studies. Each study's methodology, analyses, and results are discussed in detail in Chapter Three. Here, a brief description of the purpose of each study and its results are provided as an overview to facilitate reading and understanding.

### ***Scale Development: Item Generation, Reduction, Content Adequacy, and Criterion-Validity***

One research question this dissertation seeks to answer is what kind of value consumer participation affords? Two kinds of experiential value are identified: hedonic value and



psychological value. There is no existing scale which captures both aspects in consumer value literature; therefore, one objective of this dissertation is to develop a scale that reflects both the hedonic and psychological aspects of value.

The scale is developed following the procedures and guidelines discussed in Hinkin (1995, 1998). **Study 1** documents the procedures and results of the initial steps in scale development: from item generation to content adequacy analysis. Using a deductive approach, 38 items were generated and 23 were retained after initial item reduction conducted based on a subjective assessment of agreeableness between theoretical definitions and items (Appendix 3). A content adequacy test was done using an analysis of variance procedure (Hinkin and Tracey 1999). The ANOVA results further reduced the number of items to 15 (Appendix 4).

The next step is to determine the factor structure and discriminant validity of the scale. **Study 2** reports confirmatory analysis procedures and results from three independent data samples all collected for the purpose of this dissertation. Sample size ranges from 82 to 315 and participants are recruited online and at a local restaurant. Results across three samples further reduce items to 14 and converge on a 3-factor model as the best-fitting structure. This study establishes that experiential value is a multidimensional scale consisting three subdimensions: hedonic value, autonomy/competence value, and relatedness value. Each subscale has internal consistency (i.e., Cronbach's alphas  $> .70$ ; Nunnally 1978) and discriminant validity (i.e., proportion of variance extracted from each construct is greater than the squared correlation between two constructs; Fornell and Larcker 1981).

**Study 3** is an experimental-design study conducted as an initial test for the experiential value scale's external validity. Using multivariate analysis of variance (MANOVA), results show

that the experiential value scale effectively detects differences across consumption situations with low versus high consumer participation: higher hedonic value and psychological value are found when one designs (vs. selects off-the-rack) a pair of sneakers. This study also suggests that consumer participation increases experiential value which then makes people more satisfied with a product and see a brand in a more favorable light. Consequently, Study 3 suggests that the experiential value scale is indeed related to constructs to which it is theoretically connected (i.e., criterion-validity; Cronbach and Meehl 1955).

### ***Hypotheses Testing: Model Validation***

There are a few common purposes for Study 4 to 7: to establish for the experiential value scale a nomological network (i.e., “Is experiential value associated with theoretically related constructs?”) (Cronbach and Meehl 1995); external and ecological validity (i.e., “Does experiential value exist beyond the lab in a real-world setting?”) (Berkowitz and Donnerstein 1982); generalizability (i.e., “Is experiential value found in both product and service settings?”) (Lynch 1982). Study 4 through 7 utilize data collected from different domains and samples to strengthen the psychometric soundness of the scale and reliability and validity of the hypothesized relationships of experiential value and other variables through replication (Hinkin 1998). Each study tests specific hypotheses generated from the main propositions of this dissertation (refer to Chapter Two, p. 25). Collectively, Studies 4 to 7 examine whether or not consumer participation enhances outcomes by adding consumer value; specifically, a new kind of value, namely, experiential value. Moreover, this set of studies also investigates how experiential value gets transferred to products, services, brands, and other consumer outcomes.

**Study 4** and **Study 5** each utilizes data collected from U.S. participants recruited online. In each study, participants are asked to perform a consumer participation activity (e.g., designing a pair of shoes in Study 4 and customizing a dish in Study 5). Both studies converged on one consistent finding: consumers involved in creating their own product (i.e., a pair of shoes, a dish, etc.) experienced more hedonic and psychological value. A more startling conclusion is that, unlike the universal positive effects typically found in consumer participation literature, both hedonic and psychological value resulting from consumer participation enhance consumer outcomes on a need-basis. In Study 4, low need-for-uniqueness individuals see designing a pair of shoes as a fun activity, but high need-for-uniqueness individuals see it as an achievement. Subsequently, hedonic value for the former but psychological value for the latter leads to better product and brand evaluation. Similarly in Study 5, overweight individuals feel more autonomy/competence value after custom-making their own healthy foods (i.e., salad and a healthy sandwich) which make them evaluate the food as tastier and the restaurant as better. Taken together, Study 4 and 5 provide empirical support for the experiential value transfer mechanism (Figure 1, p. 6) proposed by this dissertation. More importantly, results advance our understanding of the consequences of consumer participation by introducing a boundary condition— only relevant value derived from consumer participation enhances judgment and evaluation.

**Study 6** and **Study 7** were conducted with restaurant patrons and hockey game attendees, respectively. The objective is to examine the hypothesized relationships concerning experiential value in real-world settings. These studies revealed unexpected results. Both restaurant patrons and game attendees reported that the more hedonic value they experience during a meal or game,

the happier they are with the experience. However, more autonomy/competence and relatedness value they experience actually hamper the experience or at least their evaluation of the experience. What are the implications of these results? Do they suggest that experiential value transfer operates through different processes for tangible products (Study 3, 4, and 5) versus intangible services or experiences (Study 6 and 7)? Do they imply that self-serving bias (i.e., a tendency for people to attribute success to the self and failure to others; Curren, Folkes, and Steckel 1992) is more likely to occur in service and experience consumption? Why? Do they simply reflect biased responses due to time elapsed between the felt experiential value and the time of response? These unexpected results point to limitations of this dissertation, but at the same time they generate important questions for future research.

## **CHAPTER TWO: LITERATURE REVIEW**

In this chapter, I will first review the kinds of consumer value discussed in the literature. Based on this review, I will show that the existing consumer value literature do not account for consumer value derived from consumer participation. I will then propose two psychological mechanisms through which two distinct types of value can be derived from consumer participation. Finally, I will draw on literature concerning the nature of consumer value and propose two processes through which value created from consumer participation can be transferred to a product, service, company, or brand.

### ***WHAT ARE THE DIFFERENT KINDS OF CONSUMER VALUE?***

Two conceptual frameworks classify different types of consumer value—the theory of consumption value (Seth, Newman and Gross 1991a, 1991b) and the typology of customer value (Holbrook 1994). These frameworks have served as the basis for the majority of studies which examined consumer value. In the following discussion, I will thoroughly review each theory and discuss its applications.

#### ***The Theory of Consumption Value (Seth, Newman and Gross)***

According to theory and in line with value-in-exchange, benefits are inferred from product or service attributes; therefore, they are particularly relevant in consumer choice and preference before purchase. The theory of consumption value (Seth, Newman and Gross 1991a, 1991b) suggests that consumers choose among different brands, products, or services by weighing the following values of the available alternatives:

- 1) Functional value (“the perceived utility acquired from an alternative’s capacity for functional, utilitarian, or physical performance”);
- 2) Social value (“the perceived utility acquired from an alternative’s association with one or more specific social groups”);
- 3) Emotional value (“the perceived utility acquired from an alternative’s capacity to arouse feelings or affective states”);
- 4) Epistemic value (“the perceived utility acquired from an alternative’s capacity to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge”);
- 5) Conditional value (“the perceived utility acquired by an alternative as the result of the specific situation or set of circumstances facing the choice maker”).

### ***Application***

*Consumer perceived value (Sweeney and Soutar).* Based on the theory of consumption value, Sweeney and Soutar (2001) developed the consumer perceived value scale (PERVAL; Sweeney and Soutar 2001). It is developed in particular to measure consumption values consumers perceived from the brand of a durable good, which in turn drive purchase attitude and behavior in a retail setting. PERVAL does not include the epistemic and conditional value dimensions, for the authors argue that these are less relevant to consumer durable goods at the brand level. Consequently, PERVAL has a functional, emotional, and social dimension. The functional value dimension is further divided into quality and performance (quality value) and value for money (price value).

*Shopping value (Babin, Darden, and Griffin).* The shopping value scale (Babin, Darden, and Griffin 1994) adopts the definition that shopping value can be derived from 1) “a utilitarian outcome resulting from some type of conscious pursuit of an intended consequence” and 2) “an outcome related more to spontaneous hedonic responses captures a basic duality of rewards for much human behavior” (p. 645). Consequently, the shopping value scale captures both the “shopping as work” (Utilitarian) and “shopping is fun” (Hedonic) aspects of value derived from shopping trips.

*Brand experience (Brakus, Schmitt, and Zarantonello 2009).* Brand experience is defined as the “subjective, internal consumer responses (sensations, feelings, and cognitions) and behavioral responses evoked by brand-related stimuli that are part of a brand’s design and identity, packaging, communications, and environments” (p. 53). According to the experience literature (i.e., the philosophical literature regarding the nature of “pleasure”; Dubé, and LeBel 2003; the cognitive science literature regarding “mental modules”; Pinker 1997; the marketing and management literature regarding “experience economy”; Pine and Gilmore 1999; Schmitt 1999), the brand experience scale consists five dimensions: sensory, affective (emotional), intellectual (epistemic), behavioral, and social.

The sensory dimension is manifested in items referring to sensations such as “touch and feel” or “smells nice”; the affective dimension contains feelings such as “fun” or “nostalgia”; the intellectual dimension is represented by thoughts such as “it makes me think about precious things in life” or “it makes me think of how to live an active lifestyle”; the behavioral dimension is reflected in behaviors such as “I change the way I organize and interact with information or



“it’s a place I want to go”; and the social dimension pertains to contextual experience such as “I am part of a ‘smarter’ community” or “I feel like an athlete” (p. 6-7).

### ***The Typology of Customer Value (Holbrook)***

Benefits described in this typology coincide with value-in-use because value is derived from interactions between consumers and the focal product or service after purchase and during usage. In his typology of customer value, Holbrook (1999) defined the nature of value as an *interactive relativistic preference experience*:

1. Value is *interactive* because it depends partly on the subjective involvement of the individual with an object or event (e.g., product or service) and partly on the objective characteristics of the object or event.
2. Value is *relativistic* because it is comparative among objects—it bears different weight or meaning across people and varies across contexts.
3. Value is an expression of *preference* such as “attitude,” “opinion,” “valence,” or “evaluation” where the more favorable the rating usually infers higher value.
4. Value is embedded in the consumption *experience* rather than the purchase of the product or service.

The interactive and relativistic aspects of value as articulated by Holbrook (1999) are very similar to the idea of value-in-use Vargo and Lusch (2004, 2008) introduced in their discussion of the service-dominant logic. Although both conceptualizations suggest that value is not

embedded in the product or service, the latter clearly assigned a more active, involving role for the consumer.

Based on the four characteristics of value, Holbrook proposed eight consumer values along three dimensions (refer to Appendix 1 for a detailed description of each): 1) extrinsic versus intrinsic value, 2) self-oriented versus other-oriented value, and 3) active versus reactive value.

*Extrinsic versus intrinsic value.* Extrinsic value is attained by the accomplishment of some purpose, aim, goal, or objective. Intrinsic value is attained by a personal appreciation of the experience that is an end in itself and self-justifying. To illustrate, shopping has been found to have a utilitarian or “work” value, as well as a hedonic or “play” value (Babin, Darden and Griffin 1994). Specifically, shopping value is defined as follows: 1) “a utilitarian outcome resulting from some type of conscious pursuit of an intended consequence” and 2) “an outcome related more to spontaneous hedonic responses [that] captures a basic duality of rewards for much human behavior” (p. 645, Babin, Darden and Griffin 1994). Utilitarian shopping value is evaluated by whether or not the individual gets what he or she wants for the time spent and effort invested. Hedonic shopping value is measured by the person’s subjective sense of escape, immersion, and enjoyment during the shopping trip. Whereas utilitarian shopping value is an extrinsic value, hedonic shopping value is an intrinsic value.

*Self-oriented versus other-oriented value.* Self-oriented value is derived for “my own sake, for how I react to it, or for the effect it has on me” (p. 213, Holbrook 1986). Other-oriented value

is gained through the appreciation and reaction from other people. People can attach either self-oriented or other-oriented value from using the same product or brand (Brakus, Schmitt and Zarantonello 2009). Some people may like to use i-Phones because they enjoy trying out the different functions or applications and playing with the product, which is a self-oriented value. Others may use it because using the product makes them feel that they belong to the ‘smarter’ and ‘tech-savvy’ community, which is an other-oriented value.

*Active versus reactive value.* Active value pertains to the physical or mental involvement with the product, service, brand, or company. In other words, active value is obtained when I act upon it. Reactive value, on the contrary, is received when individuals “apprehend, appreciate, admire, or respond” to the product, service, brand, or company (p. 214, Holbrook 1986).

### ***Application***

*Experiential value (Mathwick, Malhotra, and Rigdon 2001).* Holbrook’s typology of consumer value provided a comprehensive look at customer value and has been adopted by many. Mathwick, Malhotra, and Rigdon (2001) suggested a new application of this typology of consumer value to explain experiential value from consumption. More precisely, this research suggested that consumer value can be derived simply by one browsing a company’s website or flipping through a copy of a company’s shopping catalog independent of choice or purchasing. Based on the extrinsic-intrinsic and active-reactive dimensions, the Experiential Value Scale (EVS) is made up of four types of experiential values:

- 1) Extrinsic-active (customer return-on-investment value): refers to active investment of financial, temporal, behavioral, and psychological resources and is manifested in time investment (Efficiency Value) and financial investment (Economic Value);
- 2) Extrinsic-reactive (service excellence value): refers to value derived from perceived service quality;
- 3) Extrinsic-active (playfulness value): enjoyment from engaging in activities (Intrinsic Enjoyment) and a feeling of escape from the demands of day-to-day world (Escapism);
- 4) Intrinsic-reactive (aesthetics value): reaction to symmetry, proportion, and unity of a physical object, a work of poetry or a performance (Visual Appeal) and an appreciation for the service performance or spectacle (Entertainment).

### ***WHAT IS MISSING FROM CONSUMER VALUE LITERATURE?***

Recent advances in consumer participation research suggest that active consumer participation in product production and service delivery enhance valuation and other quality perceptions (Bendapudi and Leone 2003; Prahalad and Ramaswamy 2004). Making one's own origami (vs. a ready-made one) or building one's own IKEA box (vs. a box built by others) was shown to increase willingness to pay for the finished product (Norton, Mochon, and Ariely 2012). Cooking a meal using a dinner kit (vs. heating up a pre-cooked meal) increased evaluation of the ingredients and taste (Troye and Supphellen 2012). The more an individual actively

exchanged information with one's financial advisor the higher the customer satisfaction (Chan, Yim, and Lam 2010). Patient participation in the treatment process translated to higher trust in the physician and hospital (Ouschan, Sweeney, and Johnson 2006). Appendix 2 provides an overview of consumer participation research and summarizes their findings.

Under the premise that consumers consume value, the fact that consumer participation somehow increases satisfaction and valuation of a product or service suggest that participation must be have added value for the consumer. The notion that only people who participated in the product production or service delivery became more satisfied with or were willing to pay more indicate that these added values are not tied to the product or service, but to the participation process. To illustrate, people who had to build an IKEA box from the kit and those who were offered a pre-built IKEA box were basically evaluating an identical product (i.e., the same shape, same color IKEA box). The fact that builders evaluated their boxes more favorably suggests that the added value is not linked to the box itself, but is derived from the process of building it.

Whereas the theory of consumption (Seth, Newman and Gross 1991a, 1991b) suggests that consumer value is embedded in product attributes, the typology of consumer value (Holbrook 1999) proposes that value is obtained from usage of these attributes. Even though Holbrook (1999) emphasized the interactive nature of value and that value is derived from the consumption process, most of the eight types of consumer value identified by Holbrook are still linked to product or service usage with the exception of intrinsic value, namely, playfulness and aesthetic value. An objective of this dissertation is to discuss the theoretical underpinnings of what value is specific to consumer participation and how consumer participation creates value.

### ***What Kinds of Value are Created by Consumer Participation?***

Many consumer participation studies attribute value enhancement of consumer production to self-extension. That is, people value a product more because they put their stamps on it; so, builders of an IKEA box bid more for their own box than non-builders for an identical box. Norton and colleagues (2012) explained that because people like themselves, this liking for the self extends to objects people associate themselves with (i.e., an IKEA box they built); therefore, they imbue those objects with higher value. People thought a dish they cooked tasted better for the same self-integration reason; moreover, those who liked (vs. disliked) cooking felt an even stronger association between themselves and their dishes (Troye and Supphellen 2012). In the same vein, visualizers (vs. verbalizers) performed better in visual games which led to more positive game evaluation because of the self-game congruence (Holbrook et al. 1984).

A number of studies allude to reasons aside from self-extension for value enhancement caused by consumer participation. Consumers participating in creative tasks such as home improvement and the use of baking kits felt more autonomy and competence, which led to higher task enjoyment (Dahl and Moreau 2007). Bank customers, who had high self-efficacy, enjoyed opportunities to exchange information with bank employees about their financial needs and were more satisfied with the bank (Yim, Chan, and Lam 2012). Past studies therefore suggest that enjoyment and feeling of competence might also explain the positive effects of consumer participation. However, these mechanisms have not been theoretically discussed or empirically verified in past studies. One exception is Mochon, Norton, and Ariely (2012) who showed that people who built an IKEA box felt a sense of competence and increased valuation of the box. Yet, this study did not show the effect of consumer participation beyond the focal product which is the IKEA box. Besides self-extension, should feelings experienced during participation

enhance consumption evaluations? Why would people value their involvement in product production and service delivery?

People dread idleness (e.g., Csikszentmihalyi 2000; Fahlman et al. 2009; Hsee, Yang, and Wang 2010) and desire busyness (e.g., “work is virtuous,” Furham 1982; “labor leads to appreciation,” Norton, Mochon, and Ariely 2012). Broadly speaking, inactivity is disvalued but activity is valued. However, research suggests that activities are not equally valued—satisfying experiences are satisfying because they fulfill fundamental psychological human needs such as achievement, affiliation, and pleasure (Dubé and Le Bel 2003; Sheldon, Elliot, Kim, and Kasser 2001; Ryan and Deci 2001). In accordance with these fundamental needs, when people experience autonomy, competence, relatedness, and pleasure in activities, they derive value from them (Deci and Ryan 1985; Dubé and Le Bel 2003; Kahneman, Diener, and Schwarz 1999; Kwortnik and Ross 2007; Schüler, Sheldon, and Fröhlich 2010; Sheldon and Schüler 2011). Psychological well-being research identified two motivations universal to human beings that drive the attainment of intrinsic value: 1) an intrinsic motivation to approach pleasure for hedonic experience (Dubé and Le Bel 2003; Kahneman, Diener, and Schwarz 1999) and 2) an intrinsic motivation to fulfill fundamental needs for achievement and affiliation for psychological experience (Deci and Ryan 1985; McClelland 1985; Schüler, Sheldon, and Fröhlich 2010; Sheldon and Schüler 2011). Drawing on this line of research, consumers create value from participation in consumption when they experience pleasure (hedonic value) or achievement and affiliation (psychological value).

## ***TWO PROCESSES OF EXPERIENTIAL-VALUE TRANSFER***

One objective of this dissertation is to explore an alternative process through which consumer participation affects consumer outcomes other than the self-object association examined in past studies. The main proposition of this dissertation is that consumer participation leads to hedonic value and psychological value, which then enhances consumer outcomes. I refer to this process as experiential-value transfer. An understanding of experiential-value transfer helps answer the following questions: if someone were to design his/her own shoes and obtained hedonic and psychological value during the designing activity, would this experienced value increase satisfaction? Would it improve evaluation? When and for whom would experiential-value transfer be more likely? Drawing on past research of affect transfer (refer to Schwarz 1990 for a review), people use transient feelings as the basis for judgment and decisions such that positive (vs. negative) feelings lead to favorable (unfavorable) evaluations of a focal object, person, or event. Experiential value such as the experience of hedonic value and psychological value after consumer participation are positive feelings. Therefore, experiential value should enhance consumer satisfaction with a product or service and evaluation of a brand or company. However, two views of affective value transfer are presented in literature and they have different predictions as to how experiential value obtained from consumer participation would affect consumer outcomes. I will present each view and delineate the distinct processes of experiential-value transfer accordingly.



### ***Universal Experiential Value Transfer***

The positive influence of transient feelings on judgment has been well documented in psychology and consumer research (e.g., Frijda 1986; Schwarz 1990). In the typical study, people are induced into positive or negative feelings in a supposedly unrelated task. Then, they are asked to evaluate some target people or objects. The consistent finding is that whereas positive feelings enhance evaluation of the target, negative feelings hinder evaluation. Bringing this to the current study context, the participation activity (e.g., designing a pair of shoes) induces positive feelings (i.e., pleasurable feelings (hedonic) and competence feelings (psychological)) which should lead people to think more positively of the focal product, service, and company of which they are asked to evaluate. The universalistic view of value transfer is supported by past consumer participation research which repeatedly found that participation enhances evaluation of the focal product and service (e.g., Bendapudi and Leone 2003). Norton, Mochon, and Ariely (2011) found that people who built (vs. did not build) their own IKEA boxes always bid higher for their own boxes, irrespective of whether or not they enjoy building things.

### ***Contingent Experiential Value Transfer***

Recent consumer research suggests that a consumer's value perception and appraisal is a need-based process (Brendl, Markman, and Messner 2003; Chartrand, Huber, Shiv, and Tanner 2008; Laran, Janiszewski, and Cunha 2008). Product evaluation and choice depend on the extent to which a product is expected to be an effective means for achieving an active consumer goal (c.f., Van Osselaer and Janiszewski 2012). Similarly, some research also suggests that whether or not transient feelings affect judgment is dependent on the relevance of the feeling to the judgment at hand (Gorn, Goldberg, and Basu 1993; Pham 1998). For example, consumers whose

motives were to watch a movie for pleasure (vs. knowledge) were particularly concerned about their hedonic experience; they were more likely to regard the feelings they experienced (vs. thoughts stimulated by the experience) when they evaluate the movie (Pham 1998). This contingent view suggests that people do not invariably use feelings as bases for their judgments or evaluations. Transient feelings will only be passed onto judgment and evaluation when these feelings are congruent with the underlying motives salient at the time.

Some research supported the contingent view of value transfer by showing that the positive effect of consumer participation is dependent on an individual's motivation (Troye and Supphenllen 2012). In particular, only people who were motivated to cook (i.e., people who liked cooking) thought that their dishes tasted better, but this was not the case for people who were not motivated to cook. Taken together, these studies suggest that value transfer is contingent on individual motivation. This motivation, however, can be driven by personality or personal interest or by external cues.

### ***PROPOSITIONS***

Based on the forgoing literature discussion, the following propositions are generated:

- P1: Consumer participation is positively related to experiential value.
- P2: Experiential value mediates the effect of consumer participation on focal product and service satisfaction.
- P3: Experiential value mediates the effect of consumer participation on company and brand evaluation.

P4: Individual/Contextual differences moderate the effects of experiential value on product and service evaluation.

P5: Individual/Contextual differences moderate the effects of experiential value on company and brand evaluation.

These propositions are depicted in a conceptual model in Figure 1 (p. 6). In the next chapter, I will detail the methodology used to investigate these five propositions. Building on these propositions, hypotheses specific to the context of each study are developed. The main objectives of the studies are: 1) to develop a scale which can sufficiently and reliably capture the two aspects of experiential value, namely, hedonic value and psychological value and 2) to test the five propositions across product and service domains.

## **CHAPTER THREE: METHODOLOGY**

### ***STUDY 1: EXPERIENTIAL VALUE SCALE DEVELOPMENT***

This dissertation proposes that experiential value is derived from the fulfillment of intrinsic hedonic and needs for achievement and affiliation; therefore, a valid experiential value scale should capture both the hedonic and psychological aspects. Since existing experiential value scales do not take into account psychological needs, the first objective of this dissertation is to develop a psychometrically sound measure to sufficiently reflect both values. I follow the scale development procedure delineated in Hinkin (1995, 1998). Each of the following sections discusses in detail the methods and analyses used to develop the new experiential value scale.

#### ***Item Generation***

The experiential value construct proposed here is multidimensional and refers to the fulfillment of hedonic needs and achievement and affiliation needs during a consumption experience. In line with the psychology and marketing literatures, hedonic value can be defined as something about an object, action, activity, or event during a consumption experience which is perceived by an individual as good or pleasurable (Higgins 2006; Holbrook 1996), namely, affect (positive feelings or emotions), entertainment (a reaction to something that amuses or pleases; Mathwick Malhotra, and Rigdon 2001), and sensuous appeal (pleasurable attraction of the sensations of touch, taste, smell, sight, and hearing; Berleant 1964). Drawing on self-determination theory (Deci and Ryan 1985), psychological value can be referred to as the fulfillment of three basic psychological needs, namely, autonomy (feeling in control and ownership of one's behavior), competence (feeling effective and efficacious in one's behavior), and relatedness (feeling close and connected to others) (Sheldon and Schöler 2011). Considering

the well-established theoretical foundation of each category of needs, a deductive approach is most appropriate for item generation (Hinkin 1998).

The initial list of items for value from hedonic value was created by borrowing items from existing marketing measures pertaining to hedonic or pleasurable consumption experience and adhering to this study's theoretical definition of value from hedonic need satisfaction. The initial list includes 11 items from the hedonic shopping value scale (Babin, Darden, and Griffin 1994), six items from the aesthetics dimension of the experiential value scale which are subdivided into visual appeal and entertainment value (Mathwick, Malhotra, and Rigdon 2001), and three items from the pleasure-stimulation dimension of the need-satisfaction scale (Sheldon et al. 2001) adding up to a total of 20 items. The initial list of items for psychological value was created in a like manner. Specifically, this list includes nine items each from the need-fulfillment scale (La Guardia et al. 2000) and the need-satisfaction scale (Sheldon et al. 2001) adding up to a total of 18 items.

Two researchers, who were provided with the theoretical definitions of all constructs and dimensions, independently examined this list of initial items of value. First, the researchers eliminated redundant items. Next, they removed reverse-coded items because there is evidence to suggest that reverse-coded items hinder the psychometric soundness of a measure (Harrison and McLaughlin 1993). Finally, they dropped items that do not fit the theoretical definitions of the construct. The initial list of items is provided in Appendix 3. The remaining items were included in content adequacy analysis: 10 items for hedonic value (two for affect, three for entertainment, and five for sensuous) and 13 items for psychological value (five for autonomy, four for competence, and four for relatedness).

### ***Content Adequacy***

Content adequacy assessment was conducted using the analysis of variance (ANOVA) technique developed by Hinkin and Tracey (1999) which does not rely on subjective judgment. This ANOVA approach provides a direct empirical test for the adequacy of each item in describing its intended construct. The ANOVA approach quantitatively assesses whether the mean score of an item with respect to its intended construct is significantly higher than the mean score of other items which do not belong to the same construct. Moreover, a sample size of 50 is adequate in conducting this ANOVA test for content adequacy (Hinkin and Tracey 1999).

### ***Method***

Participants were recruited online with Amazon's Mechanical Turk. The sample is made up of 55 residents in the United States who indicated that they had at least some college education. The majority of the sample (60%) fell between the ages of 25 to 44. The requirements for the assessment task were that the individual must possess sufficient intellectual ability and lack any theoretical biases (Schriesheim et al. 1991), and there is no apparent reason to suspect that this group of participants fell short in these aspects.

The questionnaire contained three parts. Part 1 included 10 items for hedonic value from the item generation stage along with the theoretical definitions for its three dimensions (i.e., affect, entertainment, sensuous). Part 2 included 13 items for psychological value along with the theoretical definitions for its three dimensions (i.e., autonomy, competence, and relatedness). Part 3 included six items adopted from existing measures for absorption and dedication and their theoretical definitions. Absorption and dedication are measures that will be used to assess the level of customer participation in a specific task in later studies for hypotheses-testing purposes

and will be discussed in more detail later. For each part, participants rated each item on the extent to which they think the item was consistent with the respective dimensions on a scale of 1 (*not at all*) to 5 (*completely*). The definitions used were as follows:

**Affect:** Positive feelings or emotions.

**Absorption:** A state of being immersed in the activity or task at hand which makes one forget about other things such as daily routine.

**Autonomy:** Feeling in control and feeling ownership of one's behavior.

**Competence:** Feeling effective and efficacious in one's behavior.

**Dedication:** A state of being committed to the activity or task at hand.

**Entertainment:** A reaction to something that amuses or pleases.

**Relatedness:** Feeling close and connected to others.

**Sensuous appeal:** Pleasurable attraction of the sensations of touch, taste, smell, sight, and hearing.

The full list of items can be found in the Appendix 3. Two versions of the questionnaire were administered where items and definitions were presented in different orders. An initial test for order effects revealed no statistical differences; therefore, the two versions were combined to form the final data set.

### ***Analysis***

The mean score for each item on each dimension was calculated. A one-way analysis of variance and the Duncan's multiple range tests were then conducted to test for content validity. For each item, the one-way analysis of variance tests whether or not there are mean differences



across groups (in this case, across different dimensions). The Duncan's test is a post hoc analysis which identifies which pairs of means are significantly different. Consequently, a significant result of a one-way analysis of variance tells us that for a particular item, there is at least one mean score on a dimension that is significantly different from mean scores on other dimensions. A Duncan's test then pinpoints whether or not the difference is due to an item scoring significantly higher on its intended dimension than the unintended dimensions.

### ***Results and Discussion***

Table 1 presents results of the analyses. Note that not all items were correctly classified. Table 1a contains results for hedonic value's three subdimensions. The items for the sensuous subdimension were all correctly identified. Items for the affect and entertainment subdimensions were less distinct as perceived by the participants: one item (i.e., "Compared to other things I could have done, the time spent during this experience was truly enjoyable") for the affect subdimension was mis-classified as representing entertainment; one item (i.e., "The enthusiasm of the environment was catching, it picked me up") for the entertainment subdimension was seen as consistent with both the affect and entertainment subdimensions. Table 1b shows results for the psychological value's three subdimensions. All but one item (i.e., "I could voice my opinion" was rated as consistent with both the autonomy and competence subdimensions) were correctly classified. Table 1c presents the ANOVA results for the absorption and dedication dimension. Since there are only two groups (i.e., dimensions), results of a one-way analysis of variance are equivalent to the Duncan's test. One item (i.e., "I would be able to recall what happened") for dedication was rated as consistent with both the absorption and dedication

dimensions. Items which did not show evidence of their content validity; namely, those that were mis-classified or classified as consistent with a dimension other than its intended one were eliminated.

The analysis of variance and Duncan's tests further eliminated two items for the hedonic value and one item for psychological value. To achieve psychometric soundness and parsimony (Hinkin 1998; Hinkin and Schriesheim 2008), only the three items with the highest mean scores on their appropriate dimensions were retained. The final list of items is presented in Appendix 4.

Table 1a:

Study 1: Content Validity Results (ANOVA and Duncan's Tests)

| Hedonic Value |               |                     |                 |                                |   |
|---------------|---------------|---------------------|-----------------|--------------------------------|---|
|               | <b>Affect</b> | <b>Entertaining</b> | <b>Sensuous</b> | <b>One-way<br/>ANOVA<br/>F</b> | <b>Duncan<br/>Subsets for alpha=.05<br/>(p-value within subset)</b> |
| Aff1          | <b>4.55</b>   | 3.75                | 3.27            | 17.99**                        | 3   |
| Aff2          | 3.89          | <b>4.31</b>         | 3.11            | 18.74**                        | 3   |
| Ent1          | 3.22          | <b>4.84</b>         | 2.80            | 53.76**                        | 3   |
| Ent2          | 3.15          | <b>4.8</b>          | 2.78            | 56.33**                        | 2   |
| Ent3          | <b>4.18</b>   | <b>3.87</b>         | 3.33            | 7.57*                          | 2 (.17)   |
| Sen1          | 3.31          | 3.15                | <b>4.40</b>     | 18.69**                        | 2   |
| Sen2          | 3.58          | 3.11                | <b>4.69</b>     | 27.39**                        | 3   |
| Sen3          | 3.45          | 3.42                | <b>4.51</b>     | 13.43**                        | 2   |
| Sen4          | 3.51          | 3.93                | <b>4.40</b>     | 9.38**                         | 3   |
| Sen5          | 3.00          | 2.84                | <b>4.84</b>     | 49.26**                        | 2   |

Table 1b:

Study 1: Content Validity Results (ANOVA and Duncan's Tests)

| Psychological Value |             |             |             |                 |  |
|---------------------|-------------|-------------|-------------|-----------------|--|
| Scale               | Autonomy    | Competence  | Relatedness | One-way ANOVA F | Duncan Subsets for alpha=.05 (p-value within subset) |
| Aut1                | <b>4.53</b> | 3.67        | 2.16        | 87.81**         | 3  |
| Aut2                | <b>4.71</b> | 3.27        | 1.85        | 103.67**        | 2  |
| Aut3                | <b>4.55</b> | 3.44        | 1.93        | 87.00**         | 2  |
| Aut4                | <b>4.20</b> | 3.53        | 2.51        | 30.14**         | 2  |
| Aut5                | <b>4.16</b> | <b>3.76</b> | 2.56        | 30.74**         | 2 (.06)  |
| Com1                | 3.62        | <b>4.65</b> | 1.80        | 122.22**        | 3  |
| Com2                | 3.85        | <b>4.49</b> | 1.80        | 102.83**        | 3  |
| Com3                | 3.84        | <b>4.73</b> | 1.98        | 98.52**         | 3  |
| Com4                | 3.25        | <b>4.80</b> | 1.98        | 99.58**         | 3  |
| Relate1             | 2.11        | 2.27        | <b>4.58</b> | 88.91**         | 2  |
| Relate2             | 2.22        | 2.15        | <b>4.71</b> | 94.17**         | 2  |
| Relate3             | 2.15        | 2.22        | <b>4.62</b> | 79.75**         | 2  |
| Relate4             | 2.11        | 2.25        | <b>4.65</b> | 87.44**         | 2  |

\*p<.05    \*\*p<.001

Table 1c:

Study 1: Content Validity Results (ANOVA and Duncan's Tests)

| Absorption and Dedication |             |             |                 |
|---------------------------|-------------|-------------|-----------------|
| Scale                     | Absorption  | Dedication  | One-way ANOVA F |
| Abs1                      | <b>4.58</b> | 3.27        | 37.35**         |
| Abs2                      | <b>4.71</b> | 3.45        | 37.40**         |
| Abs3                      | <b>4.75</b> | 3.80        | 24.76**         |
| Abs4                      | <b>4.51</b> | 3.05        | 48.12**         |
| Ded1                      | 3.80        | <b>4.51</b> | 10.33*          |
| Ded2                      | 3.75        | <b>4.27</b> | 7.55*           |
| Ded3                      | <b>3.49</b> | <b>3.65</b> | .52             |
| Ded4                      | 2.84        | <b>3.82</b> | 16.48**         |

\*p<.05    \*\*p<.001

## ***STUDY 2: A FACTOR-ANALYTIC TEST OF DISCRIMINANT VALIDITY***

The main objective of this study is to test whether the experiential value scale is a unidimensional or a multidimensional scale. If it were a multidimensional scale, is it a 5-dimensional scale which underlies each of the two aspects of hedonic value and three aspects of need-fulfillment value, or is it a 3-dimensional scale which adhere to the pleasure literature and manifest hedonic value as one dimension and adhere to the self-determination theory and manifest need-fulfillment value as two dimensions (autonomy/competence and relatedness).

### ***Samples and Procedures***

I conducted confirmatory factor analysis (CFA) for three independent samples to test content validity for the experiential-value scale (Hinkin 1995, 1998). The samples vary in size: sample 1 has an  $N = 82$ , sample 2  $N=315$ , and sample 3  $N=100$ . Given that there are 15 items in the experiential scale, sample 2 with 315 responses satisfies the rule-of-thumb of one item to 10 responses ( $15 \times 10 = 150$ ) (Schwab 1980); sample 1 and sample 3 both fulfill the rule-of-thumb of one item to 4 responses ( $15 \times 4 = 60$ ) (Rummel 1970). Ideally, a sample size of 150 to 200 (Hinkin 1998) is recommended. The concern with small sample sizes is that the confirmatory factor analysis technique (and structural equation modeling in general) is based on multivariate analyses which can be sample specific; the issue with sample specificity attenuates with increasing sample size (Schwab 1980). Therefore, only sample 2 is sufficient to address sample specificity. However, if all three samples yield comparable confirmatory factor analysis results, it can infer that the CFA results were not caused by the specific sample.

Sample 1 and sample 2 both consisted participants recruited online through Amazon's Mechanical Turk's; sample 3 contained data collected from patrons of a restaurant in upstate New York. All samples were collected in the U.S. The study context of samples 1 and 2 was an online shoe design setting where respondents were asked to shop for a pair of sneakers; that of sample 3 was a Japanese restaurant which offers a typical casual dining service (low consumer participation) as well as an interactive, entertaining Hibachi meal (high consumer participation). The different settings of the study allowed for an examination of the factor structure (unidimensional vs. multidimensional) of the proposed experiential-value scale across product and service domains and across online and offline settings.

### ***Analysis and Results***

CFAs were conducted using structural equation modelling with Lisrel. The first analysis' results are in Table 2 in which model fit statistics for a 1-factor, 3-factor, and 5-factor measurement model are reported. Across three samples, the 1-factor model consistently produced the worst model fit statistics, which suggests that experiential value is a multidimensional construct rather than a unidimensional one.

The 3-factor and 5-factor analyses were repeated with 15 items (Table 2a) and 14 items (Table 2b) because one competence item "I felt that I was successfully completing difficult tasks (Comp1)" had low and non-significant factor loadings on its intended construct across the three samples. As is evident in results reported in Table 2, the 3-factor and 5-factor models with 14 items both showed better model fit statistics than their respective models with 15 items. Consequently, further analyses were carried out with 14 items. All 14 items loaded on their

intended constructs at  $p < .05$ , which rejects the hypotheses that their true loadings are zero (Bagozzi, Yi, and Phillips 1991).

Even though both the 3-factor and 5-factor models across three samples produce model fit statistics which indicate good fit (Hu and Bentler 1999), the 5-factor model consistently showed slightly better fit than the 3-factor model (Table 2b). But these slight differences do not provide support that a 5-factor model is definitively better than a 3-factor model. Therefore, both models were tested for discriminant validity to determine which factor model should be adopted.

According to Fornell and Larcker (1981), discriminant validity is evident when the proportion of variance extracted (POVEI) in each construct exceeds the square of the correlation coefficients ( $r^2$ ) representing its correlation with other factors. The POVEIs and  $r^2$ 's are presented in Table 3a and 3b for sample 1, 4a and 4b for sample 2, and 5a and 5b for sample 3. Overall, results of the three samples converge on one finding: the 3-factor structure shows discriminant and convergent validity but the 5-factor structure does not.

In particular, in Table 3a, 4a, and 5a, the proportion of variance extracted (POVEI) for the three dimensions exceed the square of the correlation coefficients (number in parentheses). Using Table 3a as an example, the POVEI for autonomy/competence value (.70), relatedness value (.86), and hedonic value (.70) exceed the square of their respective correlation coefficients autonomy/competence-relatedness  $(.08)^2 = .01$ , autonomy/competence-hedonic  $(.75)^2 = .56$ , and relatedness-hedonic  $(.09)^2 = .01$ . This test supports discriminant validity because items of a particular dimension on average explained more variance than other variables. For example, items belonging to the autonomy/competence value dimension on average explained 70% of

variance in autonomy/competence value versus the 56% variance explained in autonomy/competence given a certain hedonic value.

However, Table 3b, 4b, and 5b suggest that there is a lack of support for convergent and discriminant validity. Using Table 3b as an example, the POVEI for autonomy value (.72), competence value (.73), relatedness value (.86), sensuous value (.60), and affect (.88). The square of correlation coefficients for autonomy-competence  $(.86)^2 = .74$ ; autonomy-sensuous  $(.88)^2 = .77$ ; sensuous-affect  $(.83)^2 = .69$  are higher than their respective POVEIs. For example, items belonging to the autonomy value dimension on average explained 72% of variance in autonomy value, but knowing a certain value of competence can explain more variance—74%—in autonomy value.

Table 2:

## Study 2: Confirmatory Factor Analysis Results

a. 15 items

|                  | Sample 1 (N=82) |            |            | Sample 2 (N=315) |            |            | Sample 3 (N=100) |            |            |
|------------------|-----------------|------------|------------|------------------|------------|------------|------------------|------------|------------|
|                  | 1-factor        | 3-factor   | 5-factor   | 1-factor         | 3-factor   | 5-factor   | 1-factor         | 3-factor   | 5-factor   |
| <b>df</b>        | 90              | 87         | 80         | 90               | 87         | 80         | 90               | 87         | 80         |
| $\chi^2$         | 415.81          | 233.59     | 211.14     | 1276.97          | 469.13     | 422.25     | 327.76           | 192.81     | 146.67     |
| <b>RMSEA</b>     | .17             | .09        | .09        | .18              | .09        | .09        | .13              | .09        | .07        |
| <b>90% C. I.</b> | (.15; .19)      | (.07; .12) | (.06; .12) | (.17; .19)       | (.08; .10) | (.08; .10) | (.11; .15)       | (.07; .11) | (.05; .10) |
| <b>SRMR</b>      | .16             | .12        | .11        | .14              | .10        | .09        | .10              | .09        | .09        |
| <b>CFI</b>       | .83             | .95        | .96        | .85              | .96        | .97        | .91              | .96        | .97        |
| <b>NFI</b>       | .78             | .89        | .90        | .84              | .95        | .95        | .86              | .91        | .93        |
| <b>IFI</b>       | .83             | .95        | .96        | .85              | .96        | .97        | .91              | .96        | .97        |

b. 14 items (removed one competence item)

|                  | Sample 1 (N=82) |            | Sample 2 (N=315) |            | Sample 3 (N=100) |            |
|------------------|-----------------|------------|------------------|------------|------------------|------------|
|                  | 3-factor        | 5-factor   | 3-factor         | 5-factor   | 3-factor         | 5-factor   |
| <b>Df</b>        | 74              | 67         | 74               | 67         | 74               | 67         |
| $\chi^2$         | 199.35          | 175.59     | 346.07           | 294.43     | 176.22           | 127.19     |
| <b>RMSEA</b>     | .10             | .09        | .08              | .07        | .09              | .07        |
| <b>90% C. I.</b> | (.07; .12)      | (.06; .12) | (.06; .09)       | (.06; .08) | (.07; .12)       | (.04; .10) |
| <b>SRMR</b>      | .12             | .10        | .07              | .06        | .09              | .08        |
| <b>CFI</b>       | .95             | .96        | .98              | .98        | .96              | .98        |
| <b>NFI</b>       | .94             | .95        | .97              | .97        | .92              | .94        |
| <b>IFI</b>       | .95             | .96        | .98              | .98        | .96              | .98        |



Table 3a:

## Study 2: Discriminant Validity Analysis Results (Sample 1)

Loadings from 3-factor model (14 items)

|                                 | <b>Factor Loadings</b> | <b>POVEI</b> | <b>Autonomy/Competence<br/>r (r<sup>2</sup>)</b> | <b>Relatedness<br/>r (r<sup>2</sup>)</b> |
|---------------------------------|------------------------|--------------|--|--|
| <b>Autonomy/<br/>Competence</b> | $\alpha = .76$         | .70          |  |  |
| <b>Aut1</b>                     | .75                    |              |  |  |
| <b>Aut2</b>                     | .64*                   |              |  |  |
| <b>Aut3</b>                     | .76*                   |              |  |  |
| <b>Comp2</b>                    | .66*                   |              |  |  |
| <b>Comp3</b>                    | .70*                   |              |  |  |
| <b>Relatedness</b>              | $\alpha = .73$         | .86          | .08 (.01)  |  |
| <b>Rel1</b>                     | .82                    |              |  |  |
| <b>Rel2</b>                     | .90*                   |              |  |  |
| <b>Rel3</b>                     | .87*                   |              |  |  |
| <b>Hedonic</b>                  | $\alpha = .79$         | .70          | .75* (.56)                                       | .09 (.01)                                |
| <b>Sen1</b>                     | .36                    |              |  |  |
| <b>Sen2</b>                     | .70*                   |              |  |  |
| <b>Sen3</b>                     | .48*                   |              |  |  |
| <b>Aff2</b>                     | .77*                   |              |  |  |
| <b>Ent1</b>                     | .95*                   |              |  |  |
| <b>Ent2</b>                     | .94*                   |              |  |  |

\*p&lt;.05

Table 3b:

## Study 2: Discriminant Validity Analysis Results (Sample 1)

Loadings from 5-factor model (14 items)

|                    | <b>Factor Loadings</b> | <b>POVEI</b> | <b>Autonomy<br/>r (r<sup>2</sup>)</b> | <b>Competence<br/>r (r<sup>2</sup>)</b> | <b>Relatedness<br/>r (r<sup>2</sup>)</b> | <b>Sensuous<br/>r (r<sup>2</sup>)</b> |
|--------------------|------------------------|--------------|---------------------------------------|---|--|---------------------------------------|
| <b>Autonomy</b>    | $\alpha = .59$         | .72          |                                       |   |  |                                       |
| <b>Aut1</b>        | .76                    |              |                                       |   |  |                                       |
| <b>Aut2</b>        | .60*                   |              |                                       |   |  |                                       |
| <b>Aut3</b>        | .81*                   |              |                                       |   |  |                                       |
| <b>Competence</b>  | $\alpha = .51$         | .73          | .86* (.74)                            |   |  |                                       |
| <b>Comp2</b>       | .67                    |              |                                       |   |  |                                       |
| <b>Comp3</b>       | .79*                   |              |                                       |   |  |                                       |
| <b>Relatedness</b> | $\alpha = .73$         | .86          | .12 (.01)                             | 0 (0)                                   |  |                                       |
| <b>Rel1</b>        | .81                    |              |                                       |   |  |                                       |
| <b>Rel2</b>        | .90*                   |              |                                       |   |  |                                       |
| <b>Rel3</b>        | .87*                   |              |                                       |   |  |                                       |
| <b>Sensuous</b>    | $\alpha = .58$         | .60          | .88* (.77)                            | .75* (.56)                              | .24 (.06)                                |                                       |
| <b>Sen1</b>        | .46                    |              |                                       |   |  |                                       |
| <b>Sen2</b>        | .79*                   |              |                                       |   |  |                                       |
| <b>Sen3</b>        | .55*                   |              |                                       |   |  |                                       |
| <b>Affect</b>      | $\alpha = .77$         | .88          | .70* (.49)                            | .68* (.46)                              | .08 (.01)                                | .83* (.69)                            |
| <b>Aff2</b>        | .75                    |              |                                       |   |  |                                       |
| <b>Ent1</b>        | .96*                   |              |                                       |   |  |                                       |
| <b>Ent2</b>        | .94*                   |              |                                       |   |  |                                       |

\*p&lt;.05

Table 4a:

## Study 2: Discriminant Validity Analysis Results (Sample 2)

Loadings from 3-factor model (14 items)

|                                 | <b>Factor Loadings</b> | <b>POVEI</b> | <b>Autonomy/Competence<br/>r (r<sup>2</sup>)</b> | <b>Relatedness<br/>r (r<sup>2</sup>)</b> |
|---------------------------------|------------------------|--------------|--|--|
| <b>Autonomy/<br/>Competence</b> | $\alpha = .82$         | .72          |  |  |
| <b>Aut1</b>                     | .72                    |              |  |  |
| <b>Aut2</b>                     | .81*                   |              |  |  |
| <b>Aut3</b>                     | .72*                   |              |  |  |
| <b>Comp2</b>                    | .66*                   |              |  |  |
| <b>Comp3</b>                    | .71*                   |              |  |  |
| <b>Relatedness</b>              | $\alpha = .92$         | .89          | .22* (.05)                                       |  |
| <b>Rel1</b>                     | .84                    |              |  |  |
| <b>Rel2</b>                     | .89*                   |              |  |  |
| <b>Rel3</b>                     | .93*                   |              |  |  |
| <b>Hedonic</b>                  | $\alpha = .89$         | .76          | .79* (.62)                                       | .33* (.11)                               |
| <b>Sen1</b>                     | .58                    |              |  |  |
| <b>Sen2</b>                     | .74*                   |              |  |  |
| <b>Sen3</b>                     | .66*                   |              |  |  |
| <b>Aff2</b>                     | .86*                   |              |  |  |
| <b>Ent1</b>                     | .87*                   |              |  |  |
| <b>Ent2</b>                     | .83*                   |              |  |  |

\*p&lt;.05

Table 4b:

## Study 2: Discriminant Validity Analysis Results (Sample 2)

Loadings from 5-factor model (14 items)

|                    | <b>Factor Loadings</b> | <b>POVEI</b> | <b>Autonomy<br/>r (r<sup>2</sup>)</b> | <b>Competence<br/>r (r<sup>2</sup>)</b> | <b>Relatedness<br/>r (r<sup>2</sup>)</b> | <b>Sensuous<br/>r (r<sup>2</sup>)</b> |
|--------------------|------------------------|--------------|---------------------------------------|---|--|---------------------------------------|
| <b>Autonomy</b>    | $\alpha = .80$         | .76          |                                       |   |  |                                       |
| <b>Aut1</b>        | .73                    |              |                                       |   |  |                                       |
| <b>Aut2</b>        | .83*                   |              |                                       |   |  |                                       |
| <b>Aut3</b>        | .71*                   |              |                                       |   |  |                                       |
| <b>Competence</b>  | $\alpha = .73$         | .76          | .85* (.72)                            |   |  |                                       |
| <b>Comp2</b>       | .73                    |              |                                       |   |  |                                       |
| <b>Comp3</b>       | .79*                   |              |                                       |   |  |                                       |
| <b>Relatedness</b> | $\alpha = .92$         | .89          | .24* (.06)                            | .16* (.03)                              |  |                                       |
| <b>Rel1</b>        | .84                    |              |                                       |   |  |                                       |
| <b>Rel2</b>        | .90*                   |              |                                       |   |  |                                       |
| <b>Rel3</b>        | .93*                   |              |                                       |   |  |                                       |
| <b>Sensuous</b>    | $\alpha = .70$         | .67          | .83* (.69)                            | .73* (.53)                              | .47* (.22)                               |                                       |
| <b>Sen1</b>        | .62                    |              |                                       |   |  |                                       |
| <b>Sen2</b>        | .74*                   |              |                                       |   |  |                                       |
| <b>Sen3</b>        | .65*                   |              |                                       |   |  |                                       |
| <b>Affect</b>      | $\alpha = .89$         | .86          | .77* (.59)                            | .68* (.46)                              | .28* (.08)                               | .96* (.92)                            |
| <b>Aff2</b>        | .88                    |              |                                       |   |  |                                       |
| <b>Ent1</b>        | .88*                   |              |                                       |   |  |                                       |
| <b>Ent2</b>        | .83*                   |              |                                       |   |  |                                       |

\*p&lt;.05

Table 5a:

## Study 2: Discriminant Validity Analysis Results (Sample 2)

Loadings from 3-factor model (14 items)

|                            | <b>Factor Loadings</b> | <b>POVEI</b> | <b>Autonomy/Competence<br/>r (r<sup>2</sup>)</b> | <b>Relatedness<br/>r (r<sup>2</sup>)</b> |
|----------------------------|------------------------|--------------|--|--|
| <b>Autonomy/Competence</b> | $\alpha = .84$         | .73          |  |  |
| <b>Aut1</b>                | .64                    |              |  |  |
| <b>Aut2</b>                | .79*                   |              |  |  |
| <b>Aut3</b>                | .66*                   |              |  |  |
| <b>Comp2</b>               | .69*                   |              |  |  |
| <b>Comp3</b>               | .85*                   |              |  |  |
| <b>Relatedness</b>         | $\alpha = .82$         | .77          | .57* (.32)                                       |  |
| <b>Rel1</b>                | .62                    |              |  |  |
| <b>Rel2</b>                | .87*                   |              |  |  |
| <b>Rel3</b>                | .82*                   |              |  |  |
| <b>Hedonic</b>             | $\alpha = .84$         | .68          | .67* (.45)                                       | .76* (.58)                               |
| <b>Sen1</b>                | .52                    |              |  |  |
| <b>Sen2</b>                | .51*                   |              |  |  |
| <b>Sen3</b>                | .62*                   |              |  |  |
| <b>Aff2</b>                | .80*                   |              |  |  |
| <b>Ent1</b>                | .91*                   |              |  |  |
| <b>Ent2</b>                | .73*                   |              |  |  |

\*p&lt;.05

Table 5b:

## Study 2: Discriminant Validity Analysis Results (Sample 3)

Loadings from 5-factor model (14 items)

|                    | <b>Factor<br/>Loadings</b> | <b>POVEI</b> | <b>Autonomy<br/>r (r<sup>2</sup>)</b> | <b>Competence<br/>r (r<sup>2</sup>)</b> | <b>Relatedness<br/>r (r<sup>2</sup>)</b> | <b>Sensuous<br/>r (r<sup>2</sup>)</b> |
|--------------------|----------------------------|--------------|---------------------------------------|---|--|---------------------------------------|
| <b>Autonomy</b>    | $\alpha = .74$             | .72          |                                       |   |  |                                       |
| <b>Aut1</b>        | .67                        |              |                                       |   |  |                                       |
| <b>Aut2</b>        | .79*                       |              |                                       |   |  |                                       |
| <b>Aut3</b>        | .71*                       |              |                                       |   |  |                                       |
| <b>Competence</b>  | $\alpha = .75$             | .81          | .89* (.79)                            |   |  |                                       |
| <b>Comp2</b>       | .72                        |              |                                       |   |  |                                       |
| <b>Comp3</b>       | .90*                       |              |                                       |   |  |                                       |
| <b>Relatedness</b> | $\alpha = .82$             | .77          | .66* (.44)                            | .63* (.40)                              |  |                                       |
| <b>Rel1</b>        | .61                        |              |                                       |   |  |                                       |
| <b>Rel2</b>        | .89*                       |              |                                       |   |  |                                       |
| <b>Rel3</b>        | .81*                       |              |                                       |   |  |                                       |
| <b>Sensuous</b>    | $\alpha = .67$             | .66          | .73* (.53)                            | .60* (.36)                              | .72* (.52)                               |                                       |
| <b>Sen1</b>        | .68                        |              |                                       |   |  |                                       |
| <b>Sen2</b>        | .54*                       |              |                                       |   |  |                                       |
| <b>Sen3</b>        | .77*                       |              |                                       |   |  |                                       |
| <b>Affect</b>      | $\alpha = .84$             | .82          | .48* (.23)                            | .47* (.22)                              | .60* (.36)                               | .73* (.53)                            |
| <b>Aff2</b>        | .82                        |              |                                       |   |  |                                       |
| <b>Ent1</b>        | .96*                       |              |                                       |   |  |                                       |
| <b>Ent2</b>        | .67*                       |              |                                       |   |  |                                       |

\*p&lt;.05

## ***Discussion***

The forgoing factor-analytic analyses and results support the adoption of a 3-factor measurement model. The 3-factor model not only yields good measurement model fit, it also shows convergent and discriminant validity, which are of paramount importance to a psychometrically sound scale (Hinkin 1995, 1998). This study therefore suggests that experiential value is a multidimensional scale with three subdimensions. These subdimensions underlie the two distinctive natures of valuable experiences, namely, sensuous and affective experiences which generate hedonic value as well as autonomy/competence and relatedness experiences which create psychological value. In the remainder of Chapter Three, studies will adopt the 14-items, 3-factor measurement model structure. Specifically, five items for autonomy/competence value, three for relatedness value, and six for hedonic value. The complete list of items can be found in Appendix 4.

## ***STUDY 3: A TEST OF NEW SCALE CRITERION VALIDITY***

### ***Purpose and Hypotheses***

To provide support for the validity of the new scales, I submitted the new measures to the following tests: 1) if the new, three-dimensional experiential scale is valid, it should show significant differences in experiential value across contexts that vary in degree of consumer participation (i.e., low participation vs. high participation); and 2) if the new scale is valid, it should show that experiential value is associated with relevant consumer outcome measures such as product satisfaction.

### ***Method***

To test whether or not the new experiential value scale satisfies the above conditions, I deployed a quasi-experimental online study. Specifically, I recruited 90 participants through Amazon's Mechanical Turk. The main task of this study was for each individual to visit a designated webpage, perform the required task, and then fill out the questionnaire containing the new experiential value scale and other measures. The designated webpage is the online store for Vans, a brand known for its sports apparel, especially sneakers. The Vans online store offers pre-designed shoes as well as custom-made shoes. Customers can use the design palette on the webpage to design a pair of custom made shoes (Appendix 5). Degree of customer participation was manipulated by a randomly assigned task: to select a pair of pre-designed shoes or to design a pair of custom-made shoes. In both task conditions, participants were asked either to select or design a pair of shoes from the brand's *classic* style to control for potential differences in style preference. After they selected or designed the shoes, participants were asked to copy and paste the web link to their selected or designed shoes onto the online questionnaire. I checked all entries to ensure that the participants followed the instructions and performed the respective task for each condition. This check resulted in the elimination of 10 responses: three participants submitted links that were not from the Vans online store website, four submitted links that were not for the *classic* style, and three submitted links that were not consistent with their assigned condition. The final sample size is 80: 42 in the select condition and 38 in the design condition.

Upon completion of the assigned task, participants responded to measures for the new experiential value scale and two dependent measures, namely, perceived product satisfaction (3 items adapted from Homburg, Koschate, Hoyer 2005) and brand evaluation (3 items adapted



from Brakus, Schmitt, and Zarantonello 2009). Finally, they responded to demographic questions. The average completion time was 15.17 minutes.

### *Analysis*

The correlations of the constructs for this set of data are presented in Table 6. A multivariate analysis of variance (MANOVA) was used to analyze the data. MANOVA is a stringent test because it takes into account the correlation between dependent variables and it avoids inflating errors associated with running multiple univariate analysis of variance (ANOVA) tests. MANOVA is appropriate for this study because each of the three dimensions of the new experiential value scale is considered a dependent variable. Specifically, I am testing whether or not each experiential value dimension differs between people who participated less in a consumption context (i.e., selected a pair of shoes) and those who participated more (i.e., designed a pair of shoes). Other dependent measures, namely, absorption, dedication, product satisfaction, and brand evaluation are also included in the analysis.

Second, a preliminary test of the proposed mediation effects was conducted using regression analysis as suggested by Baron and Kenny (1986). Specifically, each of the two dependent variables (perceived product satisfaction and brand evaluation) were regressed on task (dummy coded as select = 0 and design = 1) and each of the three experiential value dimensions (autonomy/competence, hedonic, and relatedness). Running separate regressions is not the ideal way to test for mediation analysis because multiple tests conducted with the same data inevitably inflate Type I error. Moreover, a regression analysis can only access the effect of

one mediator at a time. Results of this mediation analysis therefore only serve a precursory purpose.

Table 6:  
Study 3: Correlation Results

| Construct                          | Mean | S.D. | 1     | 2     | 3     | 4     | 5     | 6     |
|------------------------------------|------|------|-------|-------|-------|-------|-------|-------|
| <b>1. Absorption</b>               | 4.68 | 1.48 |       |       |       |       |       |       |
| <b>2. Dedication</b>               | 5.94 | .85  | .48** |       |       |       |       |       |
| <b>3. Autonomy/<br/>Competence</b> | 5.69 | .94  | .37** | .41** |       |       |       |       |
| <b>4. Relatedness</b>              | 3.08 | 1.51 | .27*  | -.10  | .16   |       |       |       |
| <b>5. Hedonic</b>                  | 4.88 | 1.28 | .68** | .32** | .60** | .45** |       |       |
| <b>6. Product Satisfaction</b>     | 5.96 | 1.03 | .25*  | .35** | .51** | .003  | .35** |       |
| <b>7. Brand Evaluation</b>         | 5.98 | 1.17 | .23*  | .36** | .47** | -.005 | .36** | .86** |

\* $p < .05$ ; \*\* $p < .001$

### Results

*MANOVA.* Task (select vs. design) is the independent variable and the three experiential value dimensions, product satisfaction, and brand evaluation are the dependent variables. Table 7 presents the means, standard deviation, and MANOVA results. The MANOVA test revealed a marginally significant task effect: Wilk's lambda ( $\lambda$ ) = .87; Hotelling's Trace ( $T^2$ ) = .126;  $F(5, 74) = 2.14$ ,  $p < .10$ . Specifically, people who were assigned to the design condition indicated higher autonomy/competence value ( $M_{\text{design}} = 5.91$  vs.  $M_{\text{select}} =$

5.49;  $F(1, 78) = 4.23, p < .05$ ), hedonic value ( $M_{\text{design}} = 5.31$  vs.  $M_{\text{select}} = 4.48$ ;  $F(1, 78) = 9.15, p < .05$ ), product satisfaction ( $M_{\text{design}} = 6.24$  vs.  $M_{\text{select}} = 5.71$ ;  $F(1, 78) = 5.57, p < .05$ ), and brand evaluation ( $M_{\text{design}} = 6.28$  vs.  $M_{\text{select}} = 5.71$ ;  $F(1, 78) = 5.05, p < .05$ ). It is also important to note that the two tasks did not induce differences in relatedness value which is afforded by neither the tasks nor the online consumption environment for this study. Moreover, people who were assigned to the design condition also reported higher engagement experience as reflected in their responses to absorption ( $M_{\text{design}} = 4.94$  vs.  $M_{\text{select}} = 4.44$ ;  $F(1, 78) = 2.41, p < .07, 1\text{-tail}$ ) and dedication ( $M_{\text{design}} = 6.11$  vs.  $M_{\text{select}} = 5.79$ ;  $F(1, 78) = 2.86, p < .05, 1\text{-tail}$ ).

Table 7:

## Study 3: MANOVA Results

| Dependent Variable           | Grand Mean | S.D. | Design      | Select      | F    | Task Effect        |                    |  |
|------------------------------|------------|------|-------------|-------------|------|--------------------|--------------------|--|
|                              |            |      | Mean (S.D.) | Mean (S.D.) |      | p-value (2-tailed) | p-value (1-tailed) |  |
| <i>Engagement Experience</i> |            |      |             |             |      |                    |                    |  |
| Absorption                   | 4.68       | 1.48 | 4.94 (1.41) | 4.44 (1.52) | 2.41 | .13                | .07                |  |
| Dedication                   | 5.96       | .85  | 6.11 (.70)  | 5.79 (.96)  | 2.86 | .10                | .05                |  |
| <i>Experiential Values</i>   |            |      |             |             |      |                    |                    |  |
| Autonomy/Competence          | 5.70       | .94  | 5.91 (.78)  | 5.49 (1.03) | 4.23 | .04                | .02                |  |
| Relatedness                  | 3.08       | 1.51 | 3.18 (1.49) | 2.99 (1.53) | .29  | .59                | .30                |  |
| Hedonic                      | 4.90       | 1.28 | 5.31 (1.00) | 4.48 (1.39) | 9.15 | .003               | .002               |  |
| <i>Consumer Outcomes</i>     |            |      |             |             |      |                    |                    |  |
| Product Satisfaction         | 5.97       | 1.03 | 6.24 (.65)  | 5.71 (1.24) | 5.57 | .02                | .01                |  |
| Brand Evaluation             | 5.99       | 1.17 | 6.28 (.83)  | 5.71 (1.36) | 5.05 | .03                | .02                |  |

*Preliminary Mediation Analysis.* I performed mediation tests (Baron and Kenney 1986) to determine whether or not task influenced perceived product satisfaction and brand evaluation

through each of the three experiential values. As expected, for both perceived product satisfaction and brand evaluation, both autonomy/competence value and hedonic value mediated the influence of task. First, task has a significant effect on autonomy/competence ( $\beta = .4, t = 2.06, p < .05$ ) and on hedonic value ( $\beta = .82, t = 3.03, p < .05$ ). Next, autonomy/competence has a significant influence on perceived product satisfaction ( $\beta = .56, t = 5.18, p < .001$ ) and brand evaluation ( $\beta = .58, t = 4.68, p < .001$ ). Similar results were found for hedonic value which has a significant influence on perceived product satisfaction ( $\beta = .35, t = 4.23, p < .001$ ) and brand evaluation ( $\beta = .39, t = 4.18, p < .001$ ). Finally, when both task and autonomy/competence value were included, the influences of task on perceived product satisfaction ( $\beta = .31, t = 1.52, p > .10$ ) and brand evaluation ( $\beta = .35, t = 1.45, p > .10$ ) both became non-significant, but the influence of autonomy/competence value remain significant (perceived product satisfaction:  $\beta = .52, t = 4.74, p < .001$  and brand evaluation:  $\beta = .54, t = 4.27, p < .001$ ). The same pattern of results was obtained using hedonic value as the mediator. When both task and hedonic value were included, the influences of task on perceived product satisfaction ( $\beta = .27, t = 1.23, p > .10$ ) and brand evaluation ( $\beta = .28, t = 1.12, p > .10$ ) both became non-significant, but the influence of hedonic value remain significant (perceived product satisfaction:  $\beta = .32, t = 3.62, p < .05$  and brand evaluation:  $\beta = .36, t = 3.60, p < .05$ ).

A Sobel test conducted for each dependent variable supported the proposed mediation effects: for autonomy/competence value,  $Z_{satisfaction} = 1.90, p = .06$  and  $Z_{brand} = 1.89, p = .06$ ; for hedonic value,  $Z_{satisfaction} = 2.49, p < .05$  and  $Z_{brand} = 2.49, p < .05$ ). The same mediation analysis was done using relatedness value as the mediator which did not support a mediation effect.

## *Discussion*

Study 3 provided a number of important insights. First, the experiential value scale can effectively access differences across consumption situations (i.e., selecting from pre-designed options vs. custom-making a product) in which different levels of hedonic and psychological value are expected. Second, the preliminary mediation analyses provide initial support for the assertion that degree of consumer participation influences outcomes such as product satisfaction and brand evaluation through experiential value; more specifically, only experiential value that is afforded by the participation task (i.e., custom-making one's own shoes online only increases hedonic and autonomy/competence value, but not relatedness value). In this regard, these mediation analyses results also provided initial criterion validity to the newly developed experiential value scale by showing its relationship with task as the antecedent and product satisfaction and brand evaluation as consequents.

It is also worth noting that the MANOVA results suggest that selecting and custom-making shoes effectuate different level of engagement represented by the level of absorption and dedication. In general, it can be interpreted as custom-making shoes is a more engaging task than merely selecting pre-designed shoes. Within the context of study 3, the measures of absorption and dedication are essentially manipulation checks. The significant differences found in absorption and dedication between the select and design tasks suggest that this task manipulation effectively induced varying levels of consumer participation. Absorption and dedication can also be used to measure individual differences in level of participation for the same task. It is expected that people who are more engaged in an activity should derive more intense experiences, specifically, higher experiential value. In the next study, absorption and dedication will be used to access these idiosyncratic differences of participation experience.

***STUDY 4: A FURTHER CRITERION-RELATED VALIDITY TEST FOR THE NEW EXPERIENTIAL VALUE SCALE***

The purpose of this study is to develop a nomological network and further establish criterion-validity for the new experiential-value scale, which are important for a new scale (Hinkin 1995, 1998). In particular, I examine relationships between the new experiential-value scale and theoretically related antecedent or consequent variables. I also use structural equation modeling (SEM) to test the hypothesized relationships between the antecedent and consequent variables with the experiential-value scale which will further test the validity of the experiential value scale as well as the hypothesized mediation and moderation relationships.

Hypotheses specific to this study are as follows:

- H1: Consumer participation (absorption and dedication) is positively related to a) autonomy/competence value and b) hedonic value.
- H2: a) Autonomy/competence value and b) hedonic value mediate the effect of consumer participation on product satisfaction.
- H3: a) Autonomy/competence value and b) hedonic value mediate the effect of consumer participation on brand evaluation.
- H4: Individual differences in need for uniqueness moderate the effects of autonomy/competence value and hedonic value on product satisfaction such that for those with a high (vs. low) need for uniqueness, autonomy/competence value (vs. hedonic value) will influence a) product satisfaction and b) brand evaluation.

### ***Method***

Participants of this study were recruited from Amazon's Mechanical Turk. A total of 337 people completed the study. Four cases were removed because an incorrect web link was provided. Cases with substantial missing data were also eliminated; this yielded a final sample of 315. The procedures of this study followed those described in Study 3 closely except for the exclusion of the task manipulation—all participants in this study were asked to design their own shoes. Variation in consumer participation was assessed with the absorption and dedication measures.

Consumers who are asked to perform the same task—in this case to design their own shoes—may still exhibit different levels of participation such that higher absorption and dedication ratings will be observed for those who were more involved. This variation in level of participation will then influence the intensity of experiential value obtained, and in turn, consumer outcomes such as product satisfaction and brand evaluation. A self-integration measure was also included to establish that experiential value adds value to the shoes above and beyond the self-integration value found in past literature (Bendapudi and Leone 2003; Norton, Mochon, Ariely 2011; Troye and Supphellen 2012).

After participants designed their own shoes and submitted the web link to their design, they responded to the online survey which consisted the experiential value scales, the proxies for consumer participation (the absorption and dedication scales), individual's need for uniqueness specific to product (the 9-item avoidance of similarity measures; Tian, O'Bearden, and Hunter 2001), the self-integration measure (3-item; Troye and Supphellen 2012), the same consumer outcome variables in Study 3 ( product satisfaction and brand evaluation), and demographic information. Measures used for this study are presented in Appendix 6.

### *Analysis*

The correlation table of variables for this study is presented in Table 8. Lisrel was used to conduct structural equation modeling analysis to test the hypotheses. Two features of the structural equation modeling test makes it a stringent test for model testing: 1) it takes into account measurement errors such that the substantive relationships (relationships between exogenous and endogenous variables) are not disguised by potential measurement errors that may either accentuate or attenuate the true effects and 2) it simultaneously tests all hypothesized relationships and provides an assessment regarding the adequacy of the full model rather than individual effects as in multiple regression. Given the purpose of Study 4, structural equation modeling provides more accurate individual hypothesized effects relating to the new experiential-value scale as well as how well the hypothesized network of variables including the experiential-value scale explain the observed phenomenon (i.e., whether or not the hypothesized model fit the data well).



Table 8:  
Study 4: Correlation Results

| Construct                  | Mean  | S.D.  | 1     | 2     | 3     | 4     | 5     | 6     | 7 |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| 1. Absorption              | 4.55  | 1.52  |       |       |       |       |       |       |   |
| 2. Dedication              | 5.73  | .94   | .51** |       |       |       |       |       |   |
| 3. Autonomy/<br>Competence | 5.57  | .98   | .48** | .51** |       |       |       |       |   |
| 4. Hedonic                 | 4.95  | 1.28  | .71** | .46** | .57** |       |       |       |   |
| 5. Self-integration        | 5.49  | 1.12  | .46** | .42** | .53** |       |       |       |   |
| 6. Product Satisfaction    | 5.69  | 1.08  | .48** | .54** | .59** | .75** |       |       |   |
| 7. Brand Evaluation        | 5.72  | 1.11  | .37** | .42** | .47** | .80** | .81** |       |   |
| 8. Likelihood to Buy       | 63.99 | 26.72 | .44** | .29** | .49** | .59** | .62** | .53** |   |

\* $p < .05$ ; \*\* $p < .001$

### Results

*Test of Measurement Model.* Before testing the main hypotheses, a CFA was conducted to assess the adequacy of the measures (Table 9). The measurement model consists seven constructs: autonomy/competence value, hedonic value, absorption, dedication, self-integration, product satisfaction, and brand evaluation. This measurement model yielded the following fit statistics: a chi-square of 1096.46 ( $df = 303$ ,  $p < .001$ ); RMSEA = .06 (90% C. I. RMSEA = .05-.06); SRMR = .05; CFI = .99; all of which indicate a good fit (Hu and Bentler 1999).

Results also show that the scales have both convergent and discriminant validity. According to Fornell and Larcker (1981), discriminant validity is evident when the proportion of variance extracted in each construct exceeds the square of the correlation coefficients representing its correlation with other factors. Referring to Table 9, the proportion of variance

Table 9a:  
Study 4: CFA Results

| Measurement Model                          |        | Factor Loadings | POVEI | 1 <sup>1</sup> | 2 <sup>1</sup> | 3 <sup>1</sup> | 4 <sup>1</sup> | 5 <sup>1</sup> | 6 <sup>1</sup> |
|--|--------|-----------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1. Absorption ( $\alpha = .87$ )           |        |                 | .82   |                |                |                |                |                |                |
|  | Abs1   | .73             |       |                |                |                |                |                |                |
|  | Abs2   | .81**           |       |                |                |                |                |                |                |
|  | Abs3   | .93**           |       |                |                |                |                |                |                |
| 2. Dedication ( $\alpha = .80$ )           |        |                 | .77   | .68 (.46)      |                |                |                |                |                |
|  | Ded1   | .81             |       |                |                |                |                |                |                |
|  | Ded2   | .64**           |       |                |                |                |                |                |                |
|  | Ded3   | .86**           |       |                |                |                |                |                |                |
| 3. Autonomy/Competence ( $\alpha = .82$ )  |        |                 | .71   | .62 (.38)      | .71 (.50)      |                |                |                |                |
|  | Aut1   | .71             |       |                |                |                |                |                |                |
|  | Aut2   | .81**           |       |                |                |                |                |                |                |
|  | Aut3   | .74**           |       |                |                |                |                |                |                |
|  | Comp2  | .63**           |       |                |                |                |                |                |                |
|  | Comp3  | .68**           |       |                |                |                |                |                |                |
| 4. Hedonic ( $\alpha = .89$ )              |        |                 | .77   | .80 (.64)      | .68 (.46)      | .80 (.64)      |                |                |                |
|  | Sen1   | .62             |       |                |                |                |                |                |                |
|  | Sen2   | .74**           |       |                |                |                |                |                |                |
|  | Sen3   | .71**           |       |                |                |                |                |                |                |
|  | Aff2   | .85**           |       |                |                |                |                |                |                |
|  | Ent1   | .87**           |       |                |                |                |                |                |                |
|  | Ent2   | .81**           |       |                |                |                |                |                |                |
| 5. Self-integration ( $\alpha = .89$ )     |        |                 | .84   | .53 (.28)      | .58 (.34)      | .63 (.40)      | .60 (.36)      |                |                |
|  | SelfI1 | .84             |       |                |                |                |                |                |                |
|  | SelfI2 | .81**           |       |                |                |                |                |                |                |
|  | SelfI3 | .87**           |       |                |                |                |                |                |                |
| 6. Product Satisfaction ( $\alpha = .91$ ) |        |                 | .87   | .55 (.30)      | .68 (.46)      | .70 (.49)      | .68 (.46)      | .82 (.67)      |                |
|  | Sat1   | .79             |       |                |                |                |                |                |                |
|  | Sat2   | .90**           |       |                |                |                |                |                |                |
|  | Sat3   | .91**           |       |                |                |                |                |                |                |
| 7. Brand Evaluation ( $\alpha = .95$ )     |        |                 | .92   | .42 (.18)      | .58 (.34)      | .58 (.34)      | .56 (.31)      | .79 (.62)      | .88 (.77)      |
|  | Beval1 | .95             |       |                |                |                |                |                |                |
|  | Beval2 | .91**           |       |                |                |                |                |                |                |
|  | Beval3 | .89**           |       |                |                |                |                |                |                |

\*\* $p < .001$     <sup>1</sup>Correlation (Variance in parentheses): all correlations are significant at  $p < .05$

Table 9b:  
Study 4: CFA Results

Model Fit Statistics

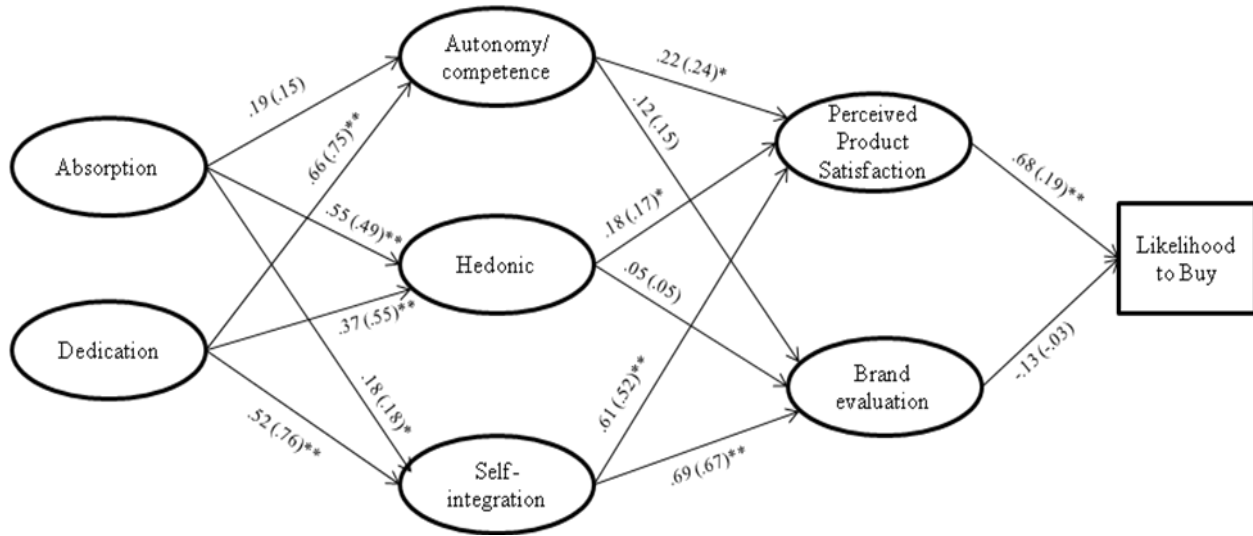
|                                    | Measurement Model |
|------------------------------------|-------------------|
| $\chi^2(df)$                       | 1096.46 (303)     |
| <b>RMSEA (90% C. I. for RMSEA)</b> | .06 (.05-.06)     |
| <b>SRMR</b>                        | .05               |
| <b>CFI</b>                         | .99               |
| <b>NFI</b>                         | .98               |
| <b>IFI</b>                         | .99               |

extracted (POVEI) for all constructs exceed the square of the correlation coefficients (number in parentheses). For example, the POVEI for autonomy/competence value (.71) and hedonic value (.77) exceed the square of their correlation coefficients  $(.80)^2 = .64$ . This test supports both convergent and discriminant validity because items for the same construct collectively explained more variance than other variables.

*Mediation Results (H1 to H3).* The data set with 315 responses was used for the mediation analysis. Detailed results are reported in Figure 2. Model fit indices indicate that the hypothesized model is a good fit with the data:  $\chi^2(335) = 1283.89$ , RMSEA = .06, 90% C.I. of RMSEA .05-.07, SRMR = .07, CFI = .99, and NFI = .97 (Hu and Bentler 1999). As expected, the more absorbed and dedicated the higher the experiential value; specifically, absorption is positively related to hedonic value ( $\beta = .55$ ;  $p < .05$ ) and dedication is positively related to hedonic value ( $\beta = .37$ ;  $p < .05$ ) and autonomy/competence value ( $\beta = .66$ ;  $p < .05$ ). But absorption is not related to autonomy/competence value. Therefore, Hypothesis 1a is partially supported and 1b is supported.

Figure 2:

Study 4: Mediation Path Model (N = 315)



Standardized estimates (Unstandardized estimates in parentheses). \* $p < .05$ ; \*\* $p < .001$

Model Fit Statistics

|                             | Hypothesized Model |
|-----------------------------|--------------------|
| $\chi^2(df)$                | 1283.89 (335)      |
| RMSEA (90% C. I. for RMSEA) | .06 (.05-.07)      |
| SRMR                        | .07                |
| CFI                         | .99                |
| NFI                         | .97                |
| IFI                         | .99                |

Moreover, both autonomy/competence value ( $\beta = .22$ ) and hedonic value ( $\beta = .18$ ) have positive influences on product satisfaction which support hypothesis 2a and 2b. However, neither autonomy/competence value ( $\beta = .12$ ) nor hedonic value ( $\beta = .05$ ) have any effects on brand evaluation which means that hypothesis 3a and 3b are not supported. In addition, the model also

showed that product satisfaction leads to higher likelihood to buy ( $\beta = .68$ ) but brand evaluation does not.

*Moderation Results (H4).* The score for the avoidance of similarity measures ( $\alpha = .97$ ) was used to categorize respondents into two groups: low need for uniqueness and high need for uniqueness. In particular, a median split method ( $Median = 3.22$ ) was used such that people who scored from 1 to 3.21 were grouped into the low need for uniqueness group and those whose score were 3.23 and above were put into the high need for uniqueness group. Next, multi-group structural equation modeling was conducted to test the moderation hypotheses. In general, the procedure of multi-group structural equation modeling (Jöreskog and Sörbom 1999) involves testing for model invariance between the groups, in this case, the low and high need for uniqueness groups. Starting with a test of 1) invariant models, 2) freeing error variances of individual items, 3) freeing both error variances and factor loadings, 4) freeing error variances of individual items, factor variances, and covariances, and 5) freeing path estimates. If the hypothesized moderating effects are significant, then model 5 (freeing path estimates) would show the best model fit. Only when this is the case would it be appropriate to interpret any differences in the hypothesized relationships between the low and high need for uniqueness groups. Model fit indices for all alternative models specified above are reported in Table 10. Results showed that when comparing the best fitted measurement model (model 3) with the structural equation model which allowed path estimates to be different across groups (model 5), the latter yield a better fitted model ( $\Delta\chi^2(9) = 16; p < .10$ ) which is indicative of a significant moderation effect.

Table 10

## Study 4: Multi-group Alternative Models Test Results

| Model   | $\chi^2$   | df  | p   | RMSEA (90% C.I.)    | SRMR | CFI  | NFI  |
|---|--|-----|-----|---------------------|------|------|------|
| Model 1<br>Invariant  | 1419   | 496 | 0.0 | 0.11<br>(0.10-0.11) | 0.12 | 0.94 | 0.91 |
| Model 2<br>Freed error<br>variances   | 1229   | 473 | 0.0 | 0.10<br>(0.09-0.11) | 0.12 | 0.95 | 0.92 |
| Model 3<br>Freed error<br>variances &<br>factor<br>loadings                   | 1183   | 456 | 0.0 | 0.10<br>(0.09-0.11) | 0.12 | 0.95 | 0.92 |
| Model 4<br>Freed error<br>variances,<br>factor<br>variances, &<br>covariances | 1229   | 467 | 0.0 | 0.10<br>(0.10-0.11) | 0.12 | 0.95 | 0.92 |
| <b>Measurement model assessment</b>   | Comparing base model 2 and best fitted model 3:<br>$\Delta\chi^2(17) = 46$ ; $p < .005$  |     |     |                     |      |      |      |
| Model 5<br>Based on<br>Model 3 and<br>freed paths                             | 1167   | 447 | 0.0 | 0.10<br>(0.09-0.11) | 0.08 | 0.95 | 0.93 |
| <b>Moderating effect assessment</b>   | Comparing best fitted model 3 and model 5:<br>$\Delta\chi^2(9) = 16$ ; $p < .10$ (critical value of $p < .05$ is 16.92 and for $p < .10$ is 14.68) |     |     |                     |      |      |      |

Next, separate structural equation models were run for each of the need for uniqueness groups. The path models are depicted in Figure 3a and 3b. As hypothesized, for people with a low need for uniqueness, hedonic value mediated the effect of consumer participation (absorption and dedication) on both product satisfaction ( $\beta = .33$ ) and brand evaluation ( $\beta = .19$ ). But for people with a high need for uniqueness, autonomy/competence value mediated the participation effects on product satisfaction ( $\beta = .40$ ) and brand evaluation ( $\beta = .41$ ).

Furthermore, only product satisfaction result in higher likelihood to buy the shoes for both high and low need for uniqueness groups.

Figure 3a:

#### Study 4: Moderation Path Models

Low Need for Uniqueness (N=149)

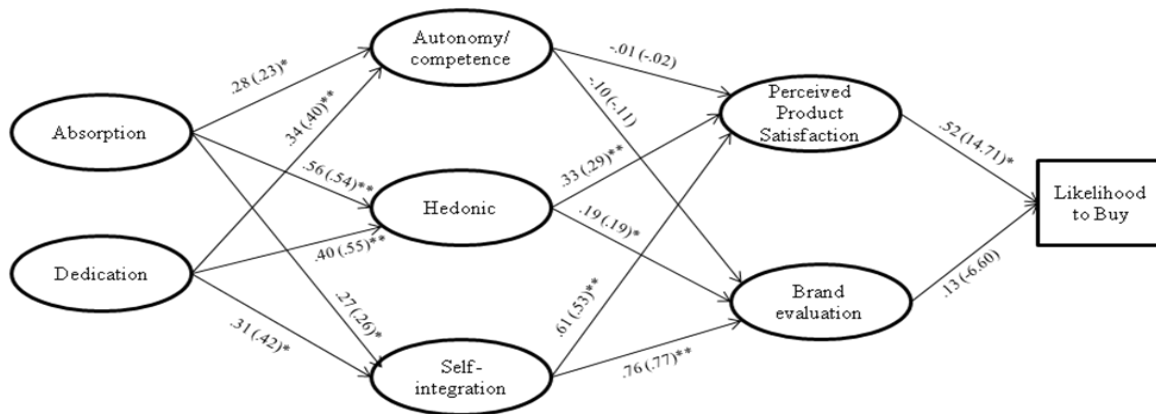
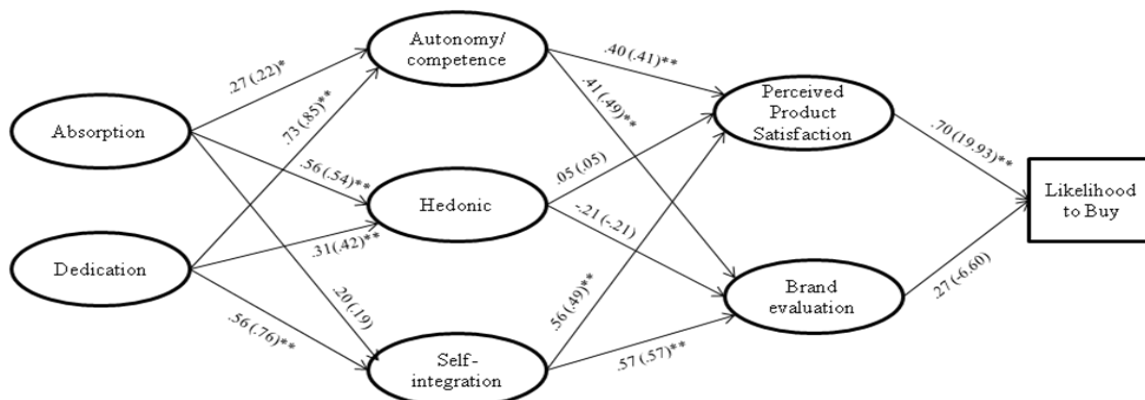


Figure 3b:

#### Study 4: Moderation Path Models

High Need for Uniqueness (N=166)



Standardized estimates (Unstandardized estimates in parentheses). \* $p < .05$ ; \*\* $p < .001$

## *Discussion*

Study 4 shows that experiential value explains the relationship between engagement level, a proxy for level of consumer participation, and three key consumer outcomes. In past studies, consumer participation is either operationalized as a dichotomous variable (i.e., consumer participation present vs. absent) or a continuous variable (i.e., extent to which one participated). In this dissertation, Study 3 and Study 4 showed that regardless of whether consumer participation is dichotomized or measured continuously, the effect of consumer participation remains the same: participation and extent of participation both increase experiential value, which in turn enhance customer satisfaction, brand evaluation, and likelihood to purchase.

One important contribution of study 4 is that it shows that experiential value has effects above and beyond the self-object association mechanism examined in past studies. The self-object association describes how people invest themselves into objects or things they helped create which then enhance their liking and valuation. Study 4 provides evidence for a second mechanism through which extra value can be imbued into products—through autonomy/competence and hedonic experience. Moreover, the different routes in value transfer for the low and high need for uniqueness groups support the contingent view of experiential-value transfer rather than the universalistic view. In line with the contingent experiential-value perspective, value transfer is a need-based process where only relevant feelings have an influence on judgment and choice (Gorn, Goldberg, and Basu 1993; Pham 1998; Van Osselaer and Janiszewski 2012). It is likely that the goal or relevant feeling for people with low need for uniqueness in designing shoes is to have fun; therefore, only hedonic value experienced during the designing task impacted product satisfaction and likelihood to buy. But the goal or relevant



feeling for people with high need for uniqueness is to design a pair of shoes to avoid similarity with others; consequently, only autonomy/competence value felt during the designing task had an effect on product satisfaction and likelihood to buy. It is also worth noting that the self-object association mechanism does not vary across the low and high need for uniqueness group.

Perhaps not surprisingly, this suggests that the self-object association mechanism is common to all individuals. This difference also highlights the importance of separating these two processes for how consumer participation affects consumer outcomes.

Another significant contribution of Study 4 is that it shows the consumer-participation effect on brand evaluation as well as on the focal product. As it was mentioned previously, most existing studies only provide evidence that consumer participation increases liking for the product, but whether or not it has any influence on the company or brand remains unclear. This is because past studies focused on the self-object association mechanism which does not offer a clear prediction of what effect self-involvement might have on the company or brand. Building on consumer participation, psychological well-being, and affect transfer literatures, this study proposes and shows that the positive influence of consumer participation is beyond the focal product; it also enhances brand evaluation. More importantly, the enhanced satisfaction and brand evaluation also lead to higher purchase intention.

Although Study 4 helped answer two central questions of this dissertation, namely, showing that experiential value does explain the effect of consumer participation on consumer outcomes and that experiential value transfer is contingent on individual's motivation or goal concerning the focal task (i.e., product design), there are other questions which need to be addressed. First, this dissertation proposes that the existence of experiential value and the process of experiential value transfer apply to both products and services. The relationships observed in

Study 3 and 4 must be replicated in service settings. Second, the contingent view on value transfer needs to be further examined for generalizability in other individual motivations or goals under different circumstances. Study 5 will address both of these concerns.

### ***STUDY 5: CUSTOMIZED MENU AND FOOD EVALUATION***

#### ***Purpose and Hypotheses***

This study tests the hypothesized relationship between consumer participation, experiential value, and consumer outcomes using a restaurant scenario. Food consumption studies have consistently found that people's food choices and eating behaviors are susceptible to external cues such as container volume and descriptive names of menu items (c.f. Wansink 2004). In this study, I propose that menu-options presentation might influence perceptions of the food. Specifically, menus with standardized menu items requires lower participation, but menus that allows for customization (i.e., create your own dish) require higher participation from the customer. Higher participation in food consumption has been found to increase taste perception and food evaluation; in particular, cooking one's own dish made it tastier (Troyes and Supphellen 2012). By the same token, a menu which offers the option of customization requires higher participation from the customer, which may enhance the value of food choice.

However, in line with the contingent perspective of experiential-value transfer, the influence of customized menu options on outcomes such as taste perception should be dependent on an individual difference characterized by different motivations concerning food consumption. One such factor is an individual's body mass index (BMI hereafter). BMI is a measure of body fat based on height and weight and is used to identify obesity. People whose BMI is between 18

and 25 are considered normal weight and people whose BMI is 25 or above are considered overweight or obese (National Institutes of Health). Past studies have found that people who are normal versus overweight according to BMI are influenced by external cues to different extents. For examples, overweight individuals are more likely to over-consume foods with low-fat labels (Wansink and Chandon 2006); low self-esteem individuals binge eat foods in small packages (Argo and White 2012); overweight individuals are more likely to select a healthy food when offered reward points, but normal-weight individuals are more likely to choose an unhealthy food when offered monetary discounts (Chan, Wansink, and Kwornik, 2014). Moreover, BMI is often found to be negatively correlated with self-esteem and self-control (Crescioni, Ehrlinger, and Alquist 2011; Keller and Siegrist 2014). Interestingly, while people with low self-control have difficulty refraining from indulgence (Fujita et al. 2006; Trope and Fishbach 2000), those with high self-control have to pre-commit to indulgence to break from their habits of exercising self-control (Kivetz and Simonson 2002).

While overweight people lack self-esteem and self-control especially with food decisions (Argo and White 2012), normal weight people lack the impulsivity to indulge (Kivetz and Simonson 2002). Following this logic, overweight people who lack self-esteem and self-control will likely be more responsive to autonomy/competence value, but normal weight people who lack the impulsivity to indulge will likely be more driven by hedonic value. Moreover, the effect of consumer participation should also be more prominent for overweight people when choosing a healthy food and for normal weight people when choosing an unhealthy food as the choice of healthy and unhealthy foods are often equated with manifestations of self-control and self-indulgence, respectively (Shiv and Fedorikhin 1999). Hypotheses specific to this study are as follows:

- H5: Custom-making your own food (vs. selecting from predesigned options) will enhance a) taste perception and b) restaurant evaluation.
- H6: The relationships between custom-making food and consumer outcomes are moderated by Body Mass Index (BMI) such that a) for normal-weight individuals ( $BMI < 25$ ), custom-making food increases hedonic value and b) for overweight/obese individuals ( $BMI \geq 25$ ) custom-making food increases autonomy/competence value, which in turn, enhance taste perception and restaurant evaluation.
- H7: The relationships specified in H6 are moderated by type of food such that the effects in H6a will be more prominent when the focal food is unhealthy and those in H6b will be more prominent when the focal food is healthy.

### ***STUDY 5A: PIZZA AND SALAD***

#### ***Method***

Participants of this study were recruited from Amazon's Mechanical Turk. A total of 263 people completed the study (58.9% female). This study deployed a 2 (task: select vs. custom-made) by 2 (food: pizza vs. salad) experimental design. Participants were randomly presented with one of four menus (Appendix 6): Select/Pizza vs. Custom-made/Pizza vs. Select/Salad vs. Custom-made Salad. All participants were asked to imagine themselves as patrons of a new restaurant. Depending on the experimental condition they were assigned, they either looked at a menu with pizzas (pizza condition) or salads (salad condition). Within each food condition, they were either asked to select something to order on the menu with predetermined options (select

condition) or to custom-make their own food with toppings/salad ingredients on the menu (custom-made condition). The menus contain the same pizza toppings or salad ingredients. Menus used for this study are presented in Appendix 7.

After participants ordered food, they responded to the mediators and dependent measures (Appendix 9). The two mediators were autonomy/competence value (3-items) and hedonic value (3-items) and the dependent measures were taste perception ( $\alpha = .96$ ; “How do you think the food you ordered would taste?” 1=Bad to 7=Good; 1=Unfavorable to 7=Favorable; 1=Not delicious to 7=Delicious) and restaurant evaluation ( $\alpha = .97$ ; “How would you rate this restaurant as a whole?” 1=Bad to 7=Good; 1=Unfavorable to 7=Favorable; 1=Dislikable to 7=Likeable). Moreover, participants indicated their weight and height so that their Body Mass Index (BMI) could be calculated. Finally, participants answered demographic questions including age and gender.

### ***Analyses and Results***

*Effects of Task, Food, and BMI Group (H5).* To test H5, separate MANOVAs were conducted for each dependent measure, namely, taste perception and restaurant evaluation. Age and gender were included as covariates; task (0 = select, 1 = custom-made), food (0 = pizza, 1=salad), and BMI group (0 = normal (BMI < 25), 1 = overweight (BMI  $\geq$  25)) were independent variables; all 2-way (task x food; task x BMI group; food x BMI group) and 3-way (task x food x BMI group) interactions were also included in the analyses.

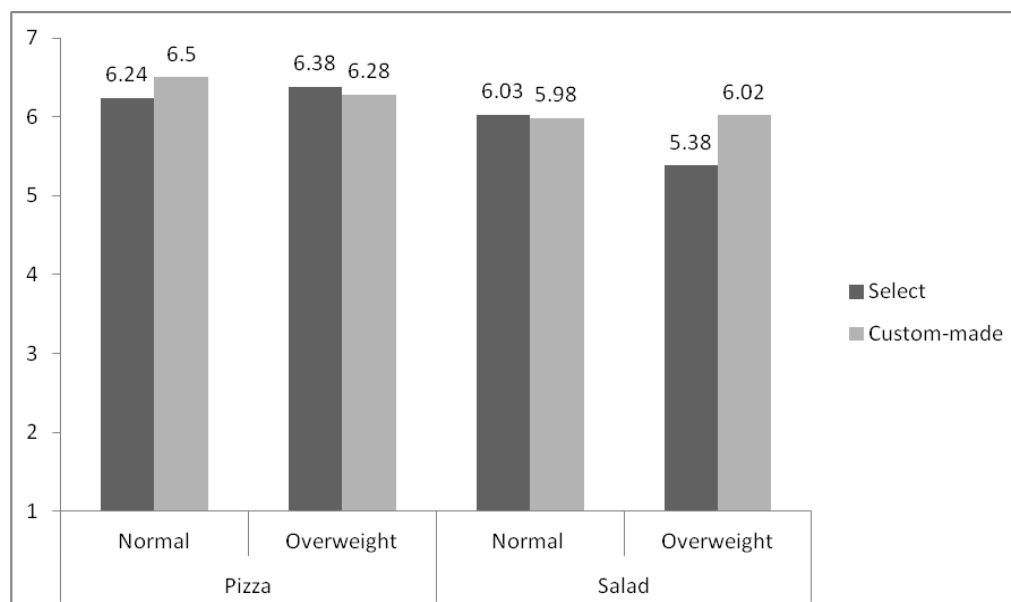
MANOVA results on taste perception revealed a significant main effect of food ( $F(1, 251) = 15.16; p < .05$ ) which is qualified by a significant task x food x BMI group 3-way interaction ( $F(1, 251) = 4.26; p < .05$ ). Mean patterns and MANOVA results are reported in Figure 4a. Similarly, MANOVA results on restaurant evaluation revealed a significant main

effect of food ( $F(1, 251) = 11.85; p < .05$ ) which is qualified by a marginally significant task x food x BMI group 3-way interaction ( $F(1, 251) = 2.74; p < .10$ ). Mean patterns and MANOVA results are reported in Figure 4b. These significant 3-way interactions, with the observed patterns of means, can be interpreted as follow: the effects of custom-making (vs. selecting) food on taste perception and restaurant evaluation are contingent on type of food (pizza vs. salad).

Figure 4a

## Study 5a: MANOVA Results of Taste Perception

DV: Taste Perception (How do you think it would taste?)



Higher score means better taste perception.

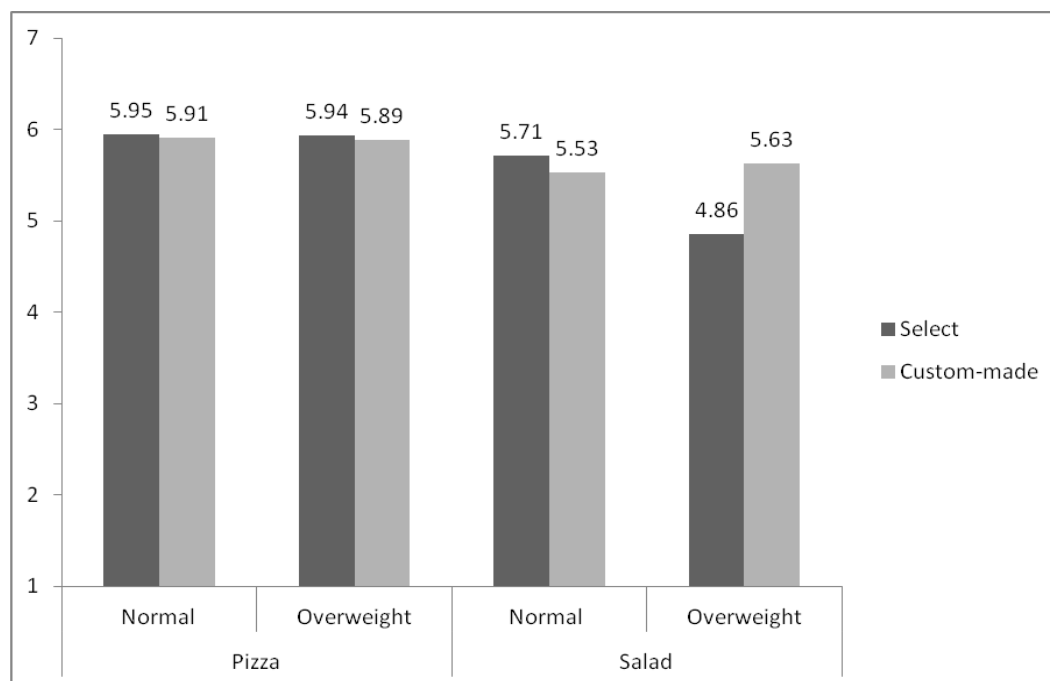
MANOVA Results (DV: Taste Perception)

| Variables                         | Mean Square | F     | p-value (2-tailed) |
|-----------------------------------|-------------|-------|--------------------|
| <i>Covariates</i>                 |             |       |                    |
| Age                               | 2.14        | 2.03  | .16                |
| Gender                            | 4.30        | 4.08  | .05                |
| <i>Independent Variables</i>      |             |       |                    |
| Task (select vs. custom)          | 2.19        | 2.07  | .15                |
| Food (pizza vs. salad)            | 15.99       | 15.16 | .00                |
| BMI group (normal vs. overweight) | 1.74        | 1.65  | .20                |
| Task x Food                       | .72         | .69   | .41                |
| Task x BMI group                  | .44         | .41   | .52                |
| Food x BMI group                  | 1.22        | 1.16  | .28                |
| Task x Food x BMI group           | 4.49        | 4.26  | .04                |

Figure 4b

## Study 5a: MANOVA Results of Restaurant Evaluation

DV: Restaurant Evaluation (How would you rate the restaurant as a whole?)



Higher score means better restaurant evaluation.

## MANOVA Results (DV: Restaurant Evaluation)

| Variables                         | Mean Square | F     | p-value (2-tailed) |
|-----------------------------------|-------------|-------|--------------------|
| <i>Covariates</i>                 |             |       |                    |
| Age                               | 3.29        | 2.49  | .12                |
| Gender                            | 1.28        | .97   | .33                |
| <i>Independent Variables</i>      |             |       |                    |
| Task (select vs. custom)          | .99         | .75   | .39                |
| Food (pizza vs. salad)            | 15.58       | 11.76 | .00                |
| BMI group (normal vs. overweight) | 2.45        | 1.85  | .18                |
| Task x Food                       | 1.69        | 1.28  | .26                |
| Task x BMI group                  | 3.68        | 2.78  | .10                |
| Food x BMI group                  | 2.58        | 1.95  | .16                |
| Task x Food x BMI group           | 3.75        | 2.83  | .09                |



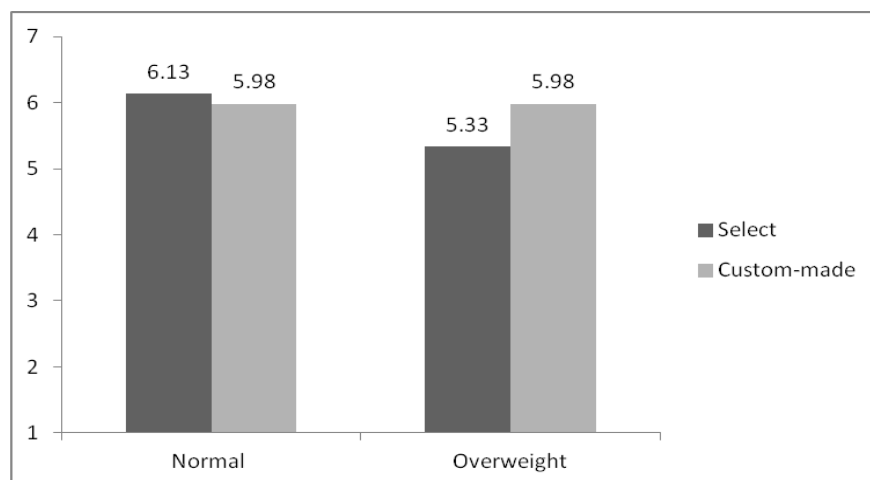
*Moderated Mediation Analyses (H6 to H7).* To test H6 and H7, MANOVAs were conducted for the same dependent measures within each food condition (pizza vs. salad). Age and gender were included as covariates; task (0 = select, 1 = custom-made) and BMI group (0 = normal (BMI < 25), 1 = overweight (BMI ≥ 25)) were independent variables; and the 2-way interaction (task x BMI group) was included. Moreover, regression analyses and Sobel tests were conducted to test for the hypothesized mediation effects.

Surprisingly, MANOVA results for the pizza condition revealed no significant effects ( $p$ 's > .10) and will not be analyzed further. However, MANOVA results for the salad condition showed a marginally significant BMI group main effect ( $F(1, 120) = 3.62; p = .06$ ) which is qualified by a significant task x BMI group interaction ( $F(1, 120) = 3.84; p = .05$ ) on taste perception as well as a significant BMI group main effect ( $F(1, 120) = 4.34; p = .04$ ) which is qualified by a significant task x BMI group interaction ( $F(1, 120) = 5.38; p = .02$ ) on restaurant evaluation. Simple effects analyses revealed a marginally significant task effect on taste perception ( $p = .06$ ) and a significant task effect on restaurant evaluation ( $p = .03$ ) among overweight individuals. However, there were no task effects on neither taste nor restaurant evaluation among normal weight individuals ( $F$ 's < 1). Means pattern and MANOVA results are reported in Figure 5.

Figure 5a

## Study 5a: Mediation Results for the Salad Condition

DV: Taste Perception (How do you think it would taste?)



Higher score means better taste perception.

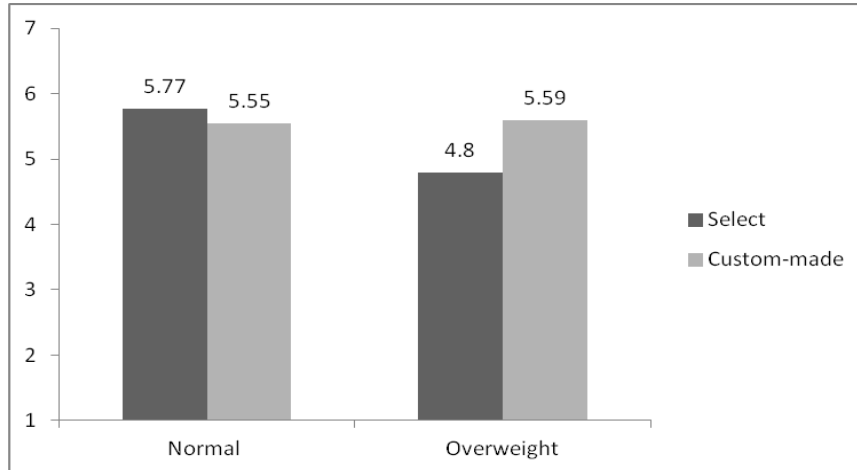
MANOVA Results (DV: Taste Perception)

| Variables                    |                                   | Mean Square | F    | p-value (2-tailed) |
|------------------------------|-----------------------------------|-------------|------|--------------------|
| <i>Covariates</i>            |                                   |             |      |                    |
|                              | Age                               | 11.56       | 8.94 | .00                |
|                              | Gender                            | 1.16        | .89  | .35                |
| <i>Independent Variables</i> |                                   |             |      |                    |
|                              | Task (select vs. custom)          | 2.02        | 1.56 | .21                |
|                              | BMI group (normal vs. overweight) | 4.68        | 3.62 | .06                |
|                              | Task x BMI group                  | 4.96        | 3.84 | .05                |

Figure 5b

## Study 5a: Mediation Results for the Salad Condition

DV: Restaurant Evaluation (How would you rate the restaurant as a whole?)



Higher score means better restaurant evaluation.

MANOVA Results (DV: Restaurant Evaluation)

| Variables                         | Mean Square | F    | p-value (2-tailed) |
|-----------------------------------|-------------|------|--------------------|
| <i>Covariates</i>                 |             |      |                    |
| Age                               | 5.79        | 3.99 | .05                |
| Gender                            | 3.08        | 2.12 | .15                |
| <i>Independent Variables</i>      |             |      |                    |
| Task (select vs. custom)          | 2.51        | 1.73 | .19                |
| BMI group (normal vs. overweight) | 6.30        | 4.34 | .04                |
| Task x BMI group                  | 7.82        | 5.38 | .02                |

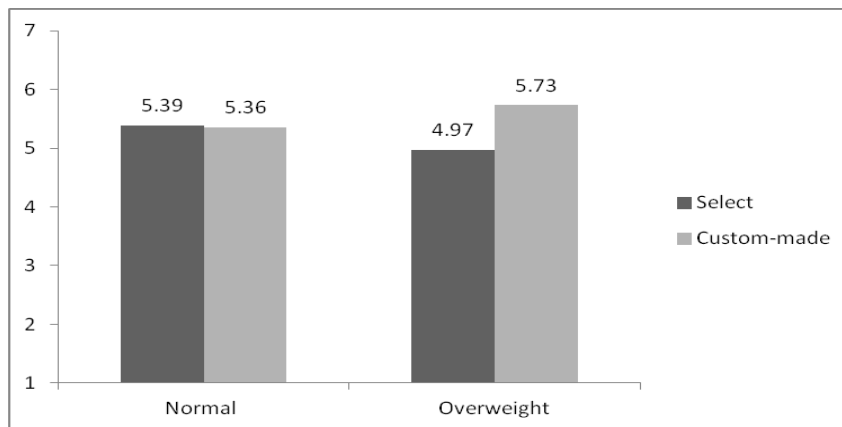
To establish that autonomy/competence value and hedonic value mediate the relationship between custom-made food order and customer outcomes for the salad condition as specified in H6, the same MANOVAs were repeated using autonomy/competence and hedonic value as the dependent variables. MANOVA results showed a marginally significant task main effect on autonomy/competence ( $F(1, 120) = 3.57; p = .06$ ) which is qualified by a significant task x BMI

group interaction ( $F(1, 120) = 4.12; p = .05$ ), but, there were no significant effects on hedonic value ( $p's > .10$ ). Consequently, hedonic value was not analyzed further. Simple effects analyses revealed a marginally significant task effect on autonomy/competence value ( $p < .05$ ) among overweight individuals. However, there were no task effects on autonomy/competence value among normal weight individuals ( $F < 1$ ). Means pattern and MANOVA results are reported in Figure 6.

Figure 6a

Study 5a: Mediation Results for the Salad Condition

DV: Autonomy/Competence Value



Higher score means higher autonomy/competence.

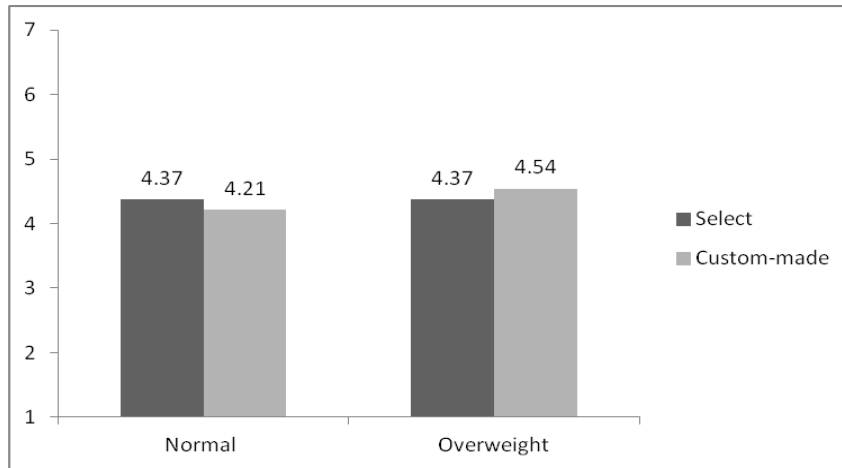
MANOVA Results (DV: Autonomy/Competence Value)

| Variables                         | Mean Square | F    | p-value (2-tailed) |
|-----------------------------------|-------------|------|--------------------|
| <i>Covariates</i>                 |             |      |                    |
| Age                               | .34         | .29  | .59                |
| Gender                            | .19         | .16  | .69                |
| <i>Independent Variables</i>      |             |      |                    |
| Task (select vs. custom)          | 4.11        | 3.57 | .06                |
| BMI group (normal vs. overweight) | .02         | .02  | .90                |
| Task x BMI group                  | 4.75        | 4.12 | .05                |

Figure 6b

## Study 5a: Mediation Results for the Salad Condition

DV: Hedonic Value



Higher score means higher hedonic value.

MANOVA Results (DV: Hedonic Value)

| Variables                         | Mean Square | F    | p-value (2-tailed) |
|-----------------------------------|-------------|------|--------------------|
| <i>Covariates</i>                 |             |      |                    |
| Age                               | 5.29        | 3.92 | .05                |
| Gender                            | .58         | .43  | .52                |
| <i>Independent Variables</i>      |             |      |                    |
| Task (select vs. custom)          | .00         | .00  | .98                |
| BMI group (normal vs. overweight) | .78         | .58  | .45                |
| Task x BMI group                  | .84         | .62  | .43                |

Regression analyses and a Sobel test were conducted to assess whether or not the observed effect of custom-making food on taste perception and restaurant evaluation were mediated by autonomy/competence value. The significant task x BMI group interaction effect noted above indicate that the mediation effects of task on taste perception and restaurant

evaluation are contingent on BMI group. Consequently, mediation analyses were conducted separately for each BMI group.

For the normal weight group, regression results revealed that task was not related to autonomy/competence value ( $t(1,62) = -.10; p = .92$ ), taste perception ( $t(1,62) = -.38; p = .71$ ), or restaurant evaluation ( $t(1,62) = -.60; p = .55$ ). As expected, custom-making healthy food does not affect normal weight individuals. Hypothesis 6 is supported.

The same regressions were conducted for the overweight group. There was a significant main effect of task on autonomy/competence ( $\beta = .35, t(60) = 2.84, p = .01$ ), a marginally significant main effect of task on taste perception ( $\beta = .24, t(60) = 1.9, p = .06$ ), and a significant main effect of task on restaurant evaluation ( $\beta = .28, t(60) = 2.29, p = .03$ ). Since the task variable is dummy coded such that 0 = select and 1 = custom-made, these coefficients can be interpreted as participants who custom-made their own salads reported higher autonomy/competence value, taste perception, and restaurant evaluation.

Next, I regressed taste perception on autonomy/competence and found a significant effect ( $\beta = .38, t(60) = 3.15, p = .003$ ). However, when I regressed taste perception on both task and autonomy/competence, the main effect of task became non-significant ( $\beta = .12, t(59) = .97, p = .34$ ) but the main effect of autonomy/competence value remained significant ( $\beta = .33, t(59) = 2.62, p = .01$ ). A Sobel test revealed that this mediation effect is significant ( $Z = 2.09; p = .04$ ). This finding suggests that custom-making food increased autonomy/competence value for overweight individuals, which in turn, increased taste perception of the salad.

I repeated the regressions using restaurant evaluation as the dependent measure. A significant effect of autonomy/competence on restaurant evaluation was found ( $\beta = .29, t(60) = 2.30, p = .03$ ). However, when I regressed restaurant evaluation on both task and

autonomy/competence, the main effect of task became non-significant ( $\beta = .21$ ,  $t(59) = 1.62$ ,  $p = .11$ ) and the main effect of autonomy/competence value became marginally significant ( $\beta = .23$ ,  $t(59) = 1.73$ ,  $p = .09$ ). A Sobel test revealed that this mediation effect is marginally significant ( $Z = 1.77$ ;  $p = .08$ ). This finding suggests that custom-making food increased autonomy/competence value for overweight individuals, which in turn, increased restaurant evaluation.

### ***Discussion***

Study 5a provided partial support for the hypotheses. As predicted, normal weight and overweight individuals, who are governed by different food consumption motivations, do react differently to consumer participation. Overweight individuals who tend to have lower self-esteem and self-control with food decisions actually relied on the autonomy/competence value derived from the participation activity (i.e., creating one's own dish) to form taste perceptions and restaurant evaluations. This chain of effects among overweight individuals is only observed for a healthy food (i.e., salad) but not an unhealthy food (i.e., pizza), further supporting the hypothesized association between different types of food and experiential value, namely, healthy food and autonomy/competence value versus unhealthy food and hedonic value.

Contrary to the hypotheses, normal weight people did not use hedonic value as their basis for judging an unhealthy food's tastefulness or evaluation of the restaurant. This finding can be interpreted in either one of two ways: 1) normal weight people are less prone to rely on experiential value as a basis for evaluating food or food-related choices or 2) the unhealthy food chosen (i.e., pizza) makes a uniform impression in people's mind as a comfort food or indulgent food such that there is no room for interpretation; consequently, the finding is reflecting a ceiling effect rather than a null effect. To better gauge the underlying mechanism for participation effect

for unhealthy foods and eliminate the possible ceiling effect introduced in the previous study, I re-run the study using sandwiches, which can be viewed as either healthy or unhealthy.

### ***STUDY 5B: UNHEALTHY VS. HEALTHY SANDWICHES***

#### ***Method***

Participants of this study were recruited from Amazon's Mechanical Turk. A total of 321 people completed the study (55.5% female). The method of this study closely resembled that used in Study 5a with a 2 (task: select vs. custom-made) by 2 (sandwich type: unhealthy vs. healthy) experimental design. Participants were randomly presented with one of four menus (Appendix 7): Select/Unhealthy Sandwiches vs. Custom-made/ Unhealthy Sandwiches vs. Select/ Healthy Sandwiches vs. Custom-made Healthy Sandwiches. Depending on the task condition, they either looked at a menu with unhealthy sandwiches (unhealthy condition) or healthy sandwiches (healthy condition). Within each sandwich condition, they were either asked to select a sandwich from the menu options (select condition) or to custom-make their own sandwich (custom-made condition). The same choices of meats and vegetables are included within the unhealthy sandwich and within the healthy sandwich conditions; the unhealthy menus have more items in total than the healthy menus. Menus used in this study are presented in Appendix 8.

After indicating their sandwich choice, participants responded to the same measures as in study 5a. A health perception measure created for the purpose of this study was added (3-items: How would you rate the food you have just ordered at the restaurant? 1=An unhealthy meal to 7=A healthy meal; 1=High calorie to 7=Low calorie; 1=Indulgent to 7=Not indulgent).



### ***Analyses and Results***

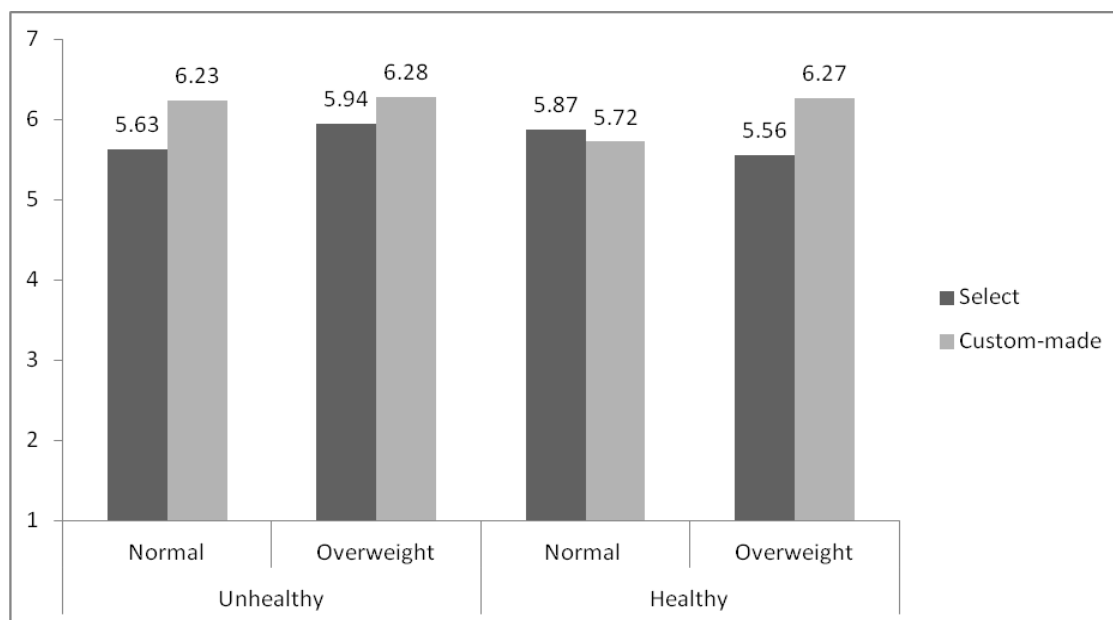
*Effects of Task, Food Type, and BMI Group (H5).* The same tests in study 5a were repeated here. MANOVAs were conducted for each dependent measure, namely, taste perception ( $\alpha = .97$ ) and restaurant evaluation ( $\alpha = .96$ ). Age and gender were included as covariates; task (0 = select, 1 = custom-made), food type (0 = unhealthy sandwiches, 1 = healthy sandwiches), and BMI group (0 = normal, 1 = overweight) were independent variables; all 2-way (task x food; task x BMI group; food x BMI group) and 3-way (task x food x BMI group) interactions were also included in the analyses.

MANOVA results on taste perception revealed a significant main effect of task ( $F(1, 274) = 8.05; p = .005$ ) that is qualified by a significant task x food type x BMI group 3-way interaction ( $F(1, 274) = 4.54; p = .03$ ). Mean patterns and MANOVA results are reported in Figure 7a. Similarly, MANOVA results on restaurant evaluation revealed a significant main effect of food type ( $F(1, 274) = 4.35; p = .04$ ) that is qualified by a significant task x food x BMI group 3-way interaction ( $F(1, 274) = 4.59; p = .03$ ). Mean patterns and MANOVA results are reported in Figure 7b. A close inspection of the means patterns depicted in Figure 7a and 7b suggest that custom-making food affects taste perception and restaurant evaluation differently across the unhealthy and healthy sandwiches.

Figure 7a

## Study 5b: MANOVA Results of Taste Perception

DV: Taste Perception (How do you think it would taste?)



Higher score means better taste perception.

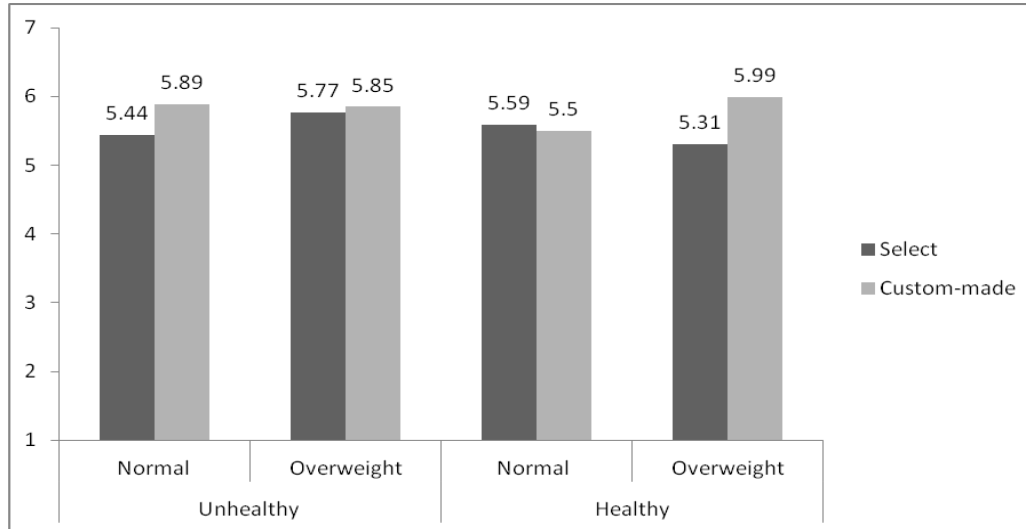
MANOVA Results (DV: Taste Perception)

| Variables                         | Mean Square | F    | p-value (2-tailed) |
|-----------------------------------|-------------|------|--------------------|
| <i>Covariates</i>                 |             |      |                    |
| Age                               | .09         | .07  | .79                |
| Gender                            | 1.71        | 1.42 | .24                |
| <i>Independent Variables</i>      |             |      |                    |
| Task (select vs. custom)          | 9.74        | 8.05 | .005               |
| Food (unhealthy vs. healthy)      | 1.91        | 1.58 | .21                |
| BMI group (normal vs. overweight) | 1.5         | 1.24 | .27                |
| Task x Food                       | .66         | .55  | .46                |
| Task x BMI group                  | 1.52        | 1.25 | .26                |
| Food x BMI group                  | .07         | .06  | .82                |
| Task x Food x BMI group           | 5.48        | 4.54 | .03                |

Figure 7b

## Study 5b: MANOVA Results of Restaurant Evaluation

DV: Restaurant Evaluation (How would you rate the restaurant as a whole?)



Higher score means better restaurant evaluation.

MANOVA Results (DV: Restaurant Evaluation)

| Variables                         | Mean Square | F    | p-value (2-tailed) |
|-----------------------------------|-------------|------|--------------------|
| <i>Covariates</i>                 |             |      |                    |
| Age                               | 1.91        | 1.56 | .21                |
| Gender                            | .73         | .59  | .44                |
| <i>Independent Variables</i>      |             |      |                    |
| Task (select vs. custom)          | 5.34        | 4.35 | .04                |
| Food (unhealthy vs. healthy)      | 1.36        | 1.11 | .29                |
| BMI group (normal vs. overweight) | 1.12        | .91  | .34                |
| Task x Food                       | .02         | .02  | .90                |
| Task x BMI group                  | .69         | .56  | .46                |
| Food x BMI group                  | .03         | .02  | .89                |
| Task x Food x BMI group           | 5.62        | 4.59 | .03                |

*Task x BMI Group Effect By Unhealthy vs. Healthy Food.* To gain better insights into the different effects of custom-making food, MANOVAs with age and gender as covariates; task (0

= select, 1 = custom-made) and BMI group (0 = normal, 1 = overweight) as independent variables; and task x BMI group as the interaction were run separately for the unhealthy and healthy sandwiches conditions. For the unhealthy sandwiches condition, results revealed that individuals who custom-made their own sandwiches thought that the food would taste better (i.e., a significant task main effect;  $F(1, 130) = 7.39; p = .007$ ), but there were no significant effects on restaurant evaluation. No further analyses were conducted for the unhealthy sandwiches condition.

For the healthy sandwiches condition, there were significant task x BMI group interaction effects for both taste perception ( $F(1, 142) = 4.60; p = .03$ ) and restaurant evaluation ( $F(1, 142) = 4.34; p = .04$ ). These results suggest that the effects of custom-making food on outcomes vary across BMI groups. Means patterns depicted in Figure 7a and 7b indicate that custom-making food enhanced taste perception and restaurant evaluation only for people who are overweight but not for those whose weight is normal. Consequently, mediation analyses were conducted to test for mediation within the healthy sandwiches condition.

*Mediation Analyses for Healthy Sandwiches Condition (H6 to H7).* To test whether or not custom-making (vs. selecting) food enhanced taste perception and restaurant evaluation through increased autonomy/competence or hedonic values, MANOVAs were first conducted using autonomy/competence and hedonic value as the dependent variables; age and gender as covariates; and task, BMI group and their interaction effect as independent variables. MANOVA results showed a significant task main effect on autonomy/competence ( $F(1, 142) = 3.96; p = .05$ ) which is qualified by a marginally significant task x BMI group interaction ( $F(1, 142) = 3.17; p = .08$ ). There was only a marginally significant task main effect on hedonic value ( $F(1,$

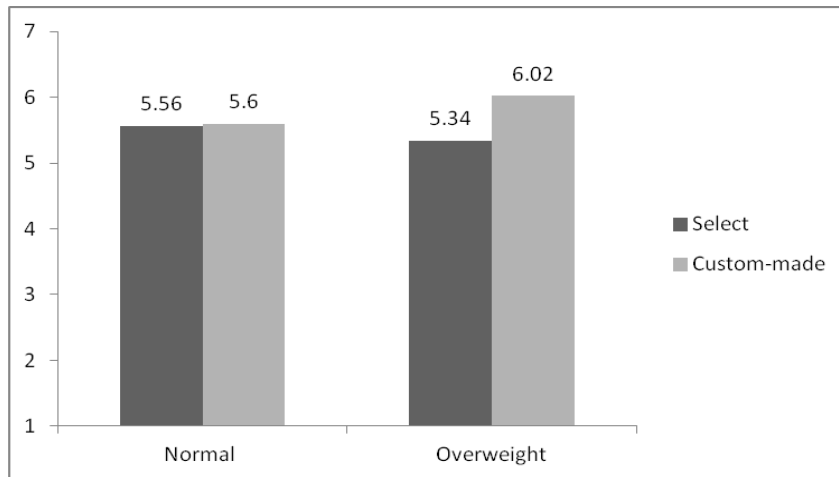
142) = 3.38;  $p = .07$ ). Means patterns and MANOVA results are reported in Figure 8a and 8b.

These results suggest that custom-making food changed autonomy/competence value but not hedonic value, which in turn, enhanced outcomes such as taste perception and restaurant evaluation.

Figure 8a

Study 5b: Mediation Results for the Healthy Sandwich

DV: Autonomy/Competence Value



Higher score means higher autonomy/competence.

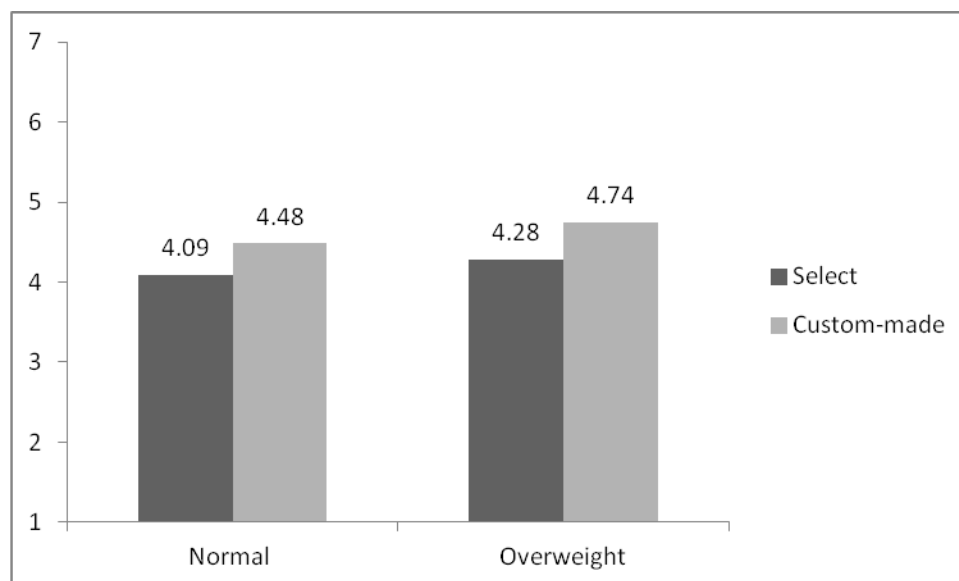
MANOVA Results

| Variables                         | Mean Square | F    | p-value (2-tailed) |
|-----------------------------------|-------------|------|--------------------|
| <i>Covariates</i>                 |             |      |                    |
| Age                               | .57         | .48  | .49                |
| Gender                            | .03         | .03  | .87                |
| <i>Independent Variables</i>      |             |      |                    |
| Task (select vs. custom)          | 4.68        | 3.96 | .05                |
| BMI group (normal vs. overweight) | .36         | .30  | .58                |
| Task x BMI group                  | 3.74        | 3.17 | .08                |

Figure 8b

## Study 5b: Mediation Results for the Healthy Sandwich

DV: Hedonic Value



Higher score means higher hedonic value.

MANOVA Results (DV: Hedonic Value)

| Variables                    |                                   | Mean Square | F    | p-value (2-tailed) |
|------------------------------|-----------------------------------|-------------|------|--------------------|
| <i>Covariates</i>            |                                   |             |      |                    |
|                              | Age                               | 2.01        | 1.04 | .31                |
|                              | Gender                            | 1.46        | .75  | .39                |
| <i>Independent Variables</i> |                                   |             |      |                    |
|                              | Task (select vs. custom)          | 6.57        | 3.38 | .07                |
|                              | BMI group (normal vs. overweight) | 1.82        | .94  | .34                |
|                              | Task x BMI group                  | .04         | .02  | .89                |

Regression analyses were conducted within each BMI group to further test the proposed mediation process. Among normal-weight individuals, task (custom-making vs. selecting) was not related to any of the mediating (autonomy/competence value:  $p = .92$ ; hedonic value:  $p = .18$ ) or dependent variables (taste perception:  $p = .68$ ; restaurant evaluation:  $p = .83$ ). As expected, custom-making healthy food does not affect normal weight individuals.

Among overweight individuals, there was a significant main effect of task on autonomy/competence ( $\beta = .30$ ,  $t(66) = 2.52$ ,  $p = .01$ ), a significant main effect of task on taste perception ( $\beta = .32$ ,  $t(66) = 2.75$ ,  $p = .008$ ), and a significant main effect of task on restaurant evaluation ( $\beta = .34$ ,  $t(66) = 2.81$ ,  $p = .007$ ). Since the task variable is dummy coded such that 0 = select and 1 = custom-made, these coefficients can be interpreted as overweight participants who custom-made their own healthy sandwiches reported higher autonomy/competence value, taste perception, and restaurant evaluation.

Next, I regressed taste perception on autonomy/competence and found a significant effect ( $\beta = .54$ ,  $t(66) = 5.25$ ,  $p < .001$ ). However, when I regressed taste perception on both task and autonomy/competence, the main effect of task became non-significant ( $\beta = .18$ ,  $t(65) = 1.64$ ,  $p = .11$ ) but the main effect of autonomy/competence value remained significant ( $\beta = .49$ ,  $t(65) = 4.59$ ,  $p < .001$ ). A Sobel test revealed that this mediation effect is significant ( $Z = 2.24$ ;  $p = .03$ ). This finding suggests that custom-making healthy food increased autonomy/competence value for overweight individuals, which in turn, increased taste perception.

I repeated the regressions using restaurant evaluation as the dependent measure. A significant effect of autonomy/competence on restaurant evaluation was found ( $\beta = .26$ ,  $t(66) = 2.05$ ,  $p = .05$ ). However, when I regressed restaurant evaluation on both task and autonomy/competence, the main effect of task became non-significant ( $\beta = .15$ ,  $t(66) = 1.13$ ,  $p =$

.11) and the main effect of autonomy/competence value remained significant ( $\beta = .29$ ,  $t(66) = 2.18$ ,  $p = .03$ ). A Sobel test revealed that this mediation effect is marginally significant ( $Z = 2.33$ ;  $p = .02$ ). This finding suggests that custom-making food increased autonomy/competence value for overweight individuals, which in turn, increased restaurant evaluation.

### ***Discussion***

Study 5b replicated the pattern of results observed in Study 5a. This study corroborated the finding that overweight individuals used autonomy/competence value derived from the participation activity (i.e., creating one's own dish) to form taste perceptions and restaurant evaluations for a healthy food but not for an unhealthy food. However, null effects were observed in this study for a healthy food—neither overweight or normal-weight individuals' taste perceptions or restaurant evaluations were affected by customizing a dish. These consistent findings of null effects weaken the possibility of ceiling effects; rather, it suggests that normal weight people are less prone to the influence of transient, experiential value when making food-related judgments. This is in line with past studies which show that normal-weight people are in general more self-reliant in food decisions (Argo and White 2012; Wansink and Chandon 2006).

### ***STUDY 6: EXPERIENTIAL VALUE VS. SERVICE QUALITY IN DRIVING CUSTOMER SATISFACTION AND REVISIT INTENTION***

In this study, I examine the construct validity of the experiential value scale as well as the ecological validity of the effects of experiential value in a real setting. More importantly, I include a well-established service quality measure (SERVQUAL) (Parasuraman, Zeithaml, and



Berry 1988) to test for incremental validity of the experiential value scale; that is, I show that experiential value has significant effects on consumer outcomes above and beyond the influence of service quality. Specifically, this study tests the following hypotheses:

- H8: Absorption is positively related to a) autonomy/competence value, b) hedonic value, and c) relatedness value.
- H9: Dedication is positively related to a) autonomy/competence value, b) hedonic value, and c) relatedness value.
- H10: Autonomy/competence value is positively related to a) restaurant evaluation and b) revisit intention.
- H11: Hedonic value is positively related to a) restaurant evaluation and b) revisit intention.
- H12: Relatedness value is positively related to a) restaurant evaluation and b) revisit intention.
- H13: Service quality is positively related to a) restaurant evaluation and b) revisit intention.
- H14: Consumer participation (high participation context vs. low participation context) will moderate the relationships specified in H7-H10. In particular, a) in a high participation context, experiential value (i.e., autonomy/competence, hedonic, and relatedness) will have stronger influences on restaurant evaluation and revisit intention and b) in a low participation context, service quality will have a stronger influence on restaurant evaluation and revisit intention.

### ***Method***

The restaurant where data were collected has a unique setting that makes it particularly suitable for study 6, which objectives are to test whether or not experiential value exists beyond quasi-experimental settings and to assess the incremental effects of experiential value over service quality. The servicescape of the focal restaurant is divided into two areas: the Hibachi room where patrons enjoy their meals in a highly participative, entertaining environment, and the dining room where patrons enjoy their meals in an ordinary casual dining restaurant setting. The survey included a question that asked patrons to indicate whether they dined at the Hibachi room or dining for their most recent visit. This information was used to categorize respondents of the survey into a low-participation context (i.e., dining room) vs. a high-participation context (i.e., Hibachi room).

Patrons were told that they would have a chance to win a cash voucher for the restaurant after they completed an online survey regarding their dining experience. Posters were placed at the restaurants; flyers containing the same information as the posters were handed out to patrons after their meals with a brief description of the study, the link to the online survey, and the lottery drawing information. Samples of the poster and flyer are included in Appendix 10. The recruitment started in February to mid-March 2014 for approximately 6 weeks. A total of 100 people completed the survey online (46.1% female, average = 30.05 years).

Measures included in the survey were the experiential value scale, the absorption and dedication measures used in Study 3 and 4, the SERVQUAL scales (Parasuraman, Zeithaml, and Berry 1988), satisfaction, and revisit intention. Specific items for SERVQUAL, satisfaction, and revisit intention can be found in Appendix 11.

### *Analysis*

The correlation results of focal variables are presented in Table 11. Lisrel was used to conduct structural equation modeling analysis to test the hypothesized relationships for the same reasons specified in study 4 and are not repeated here.

### *Results*

*Test of Measurement Model.* Before testing the main hypotheses, a CFA was conducted to assess the adequacy of the measures (Table 12). The measurement model consists eight constructs: absorption ( $\alpha = .82$ ), dedication ( $\alpha = .78$ ), autonomy/competence value ( $\alpha = .84$ ), hedonic value ( $\alpha = .84$ ), relatedness value ( $\alpha = .82$ ), SERVQ ( $\alpha = .82$ ), restaurant satisfaction ( $\alpha = .92$ ), and revisit intention ( $\alpha = .79$ ). The Cronbach's alphas reported in parentheses indicate

Table 11  
Study 6: Correlation Results

| Construct              | Mean | S.D. | 1     | 2     | 3     | 4     | 5     | 6     | 7     |
|------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1. Absorption          | 4.70 | 1.16 |       |       |       |       |       |       |       |
| 2. Dedication          | 5.33 | 1.03 | .57** |       |       |       |       |       |       |
| 3. Autonomy/Competence | 4.87 | 1.02 | .58** | .73** |       |       |       |       |       |
| 4. Hedonic             | 5.40 | .92  | .76** | .56** | .55** |       |       |       |       |
| 5. Relatedness         | 4.94 | 1.11 | .69** | .61** | .54** | .60** |       |       |       |
| 6. Service Quality     | 5.07 | .88  | .53** | .46** | .45** | .64** | .43** |       |       |
| 7. Satisfaction        | 5.72 | 1.17 | .55** | .41** | .38** | .75** | .48** | .75** |       |
| 8. Revisit             | 5.27 | 1.13 | .47** | .41** | .49** | .68** | .39** | .69** | .84** |

\* $p < .05$ ; \*\* $p < .001$

Table 12a  
Study 6: CFA Results

| Measurement Model |  |                 | POVEI | 1 <sup>1</sup> | 2 <sup>1</sup> | 3 <sup>1</sup> | 4 <sup>1</sup> | 5 <sup>1</sup> | 6 <sup>1</sup> | 7 <sup>1</sup> |
|-------------------|--|-----------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                   |  | Factor Loadings |       |                |                |                |                |                |                |                |
| 1.                | Absorption ( $\alpha = .82$ )              | Abs1            | .76   | .78            |                |                |                |                |                |                |
|                   |  | Abs2            | .81   |                |                |                |                |                |                |                |
|                   |  | Abs3            | .76   |                |                |                |                |                |                |                |
| 2.                | Dedication ( $\alpha = .78$ )              | Ded1            | .63   | .74            | .71 (.50)      |                |                |                |                |                |
|                   |  | Ded2            | .76   |                |                |                |                |                |                |                |
|                   |  | Ded3            | .84   |                |                |                |                |                |                |                |
| 3.                | Autonomy/Competence ( $\alpha = .84$ )     | Aut1            | .65   | .72            | .72 (.52)      | .90 (.81)      |                |                |                |                |
|                   |  | Aut2            | .81   |                |                |                |                |                |                |                |
|                   |  | Aut3            | .65   |                |                |                |                |                |                |                |
|                   |  | Comp2           | .68   |                |                |                |                |                |                |                |
|                   |  | Comp3           | .82   |                |                |                |                |                |                |                |
| 4.                | Hedonic ( $\alpha = .84$ )                 | Sen1            | .63   | .67            | .90 (.81)      | .70 (.49)      | .63 (.40)      |                |                |                |
|                   |  | Sen2            | .76   |                |                |                |                |                |                |                |
|                   |  | Sen3            | .89   |                |                |                |                |                |                |                |
|                   |  | Aff2            | .59   |                |                |                |                |                |                |                |
|                   |  | Ent1            | .54   |                |                |                |                |                |                |                |
|                   |  | Ent2            | .63   |                |                |                |                |                |                |                |
| 5.                | Relatedness ( $\alpha = .82$ )             | Rel1            | .64   | .78            | .82 (.67)      | .73 (.53)      | .66 (.44)      | .82 (.67)      |                |                |
|                   |  | Rel2            | .83   |                |                |                |                |                |                |                |
|                   |  | Rel3            | .86   |                |                |                |                |                |                |                |
| 6.                | SERVQ ( $\alpha = .82$ )                   | Tang            | .84   | .89            | .66 (.44)      | .53 (.28)      | .55 (.30)      | .76 (.58)      | .51 (.26)      |                |
|                   |  | Reliab          | .88   |                |                |                |                |                |                |                |
|                   |  | Resp            | .90   |                |                |                |                |                |                |                |
|                   |  | Assur           | .90   |                |                |                |                |                |                |                |
|                   |  | Emp             | .91   |                |                |                |                |                |                |                |
| 7.                | Restaurant Satisfaction ( $\alpha = .92$ ) | Sat1            | .94   | .91            | .69 (.48)      | .48 (.23)      | .44 (.19)      | .93 (.86)      | .59 (.35)      | .81 (.66)      |
|                   |  | Sat2            | .91   |                |                |                |                |                |                |                |
|                   |  | Sat3            | .87   |                |                |                |                |                |                |                |
| 8.                | Revisit Intention ( $\alpha = .79$ )       | Revisit1        | .53   | .78            | .61 (.37)      | .49 (.24)      | .49 (.24)      | .87 (.76)      | .48 (.23)      | .73 (.53)      |
|                   |  | Revisit2        | .93   |                |                |                |                |                |                | .92 (.85)      |
|                   |  | Revisit3        | .87   |                |                |                |                |                |                |                |

\*\*p<.001

<sup>1</sup>Correlation (Variance in parentheses): all correlations are significant at p<.05

Table 12 b

## Study 6: CFA Results

## Model Fit Statistics

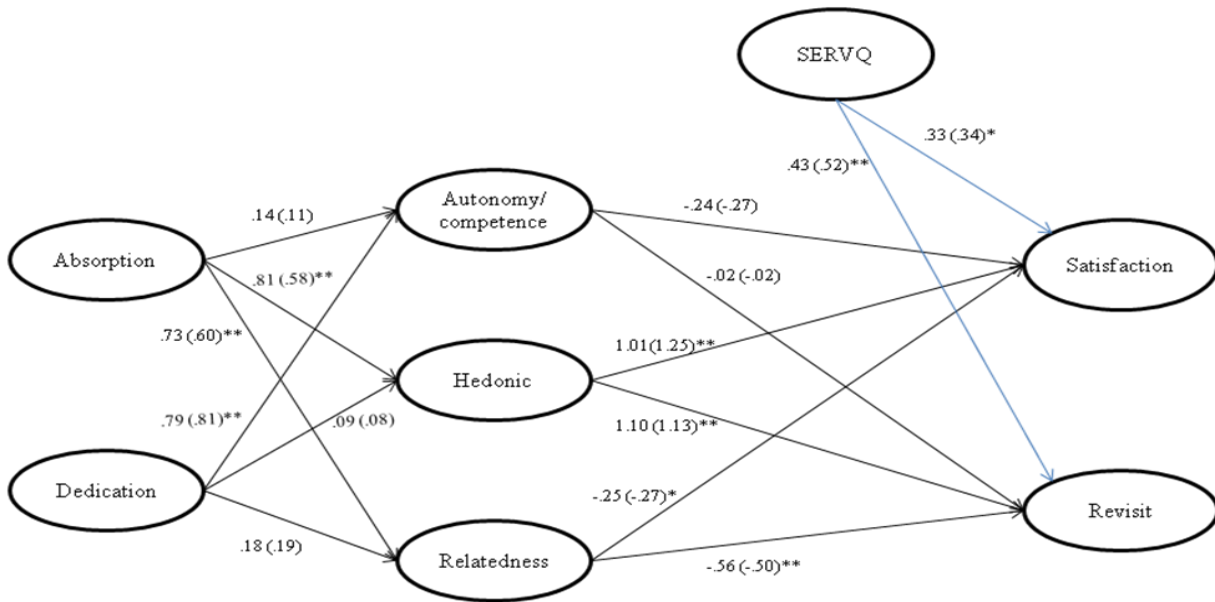
|                                    | Measurement Model |
|------------------------------------|-------------------|
| $\chi^2(df)$                       | 657.35 (370)      |
| <b>RMSEA (90% C. I. for RMSEA)</b> | .09 (.08-.10)     |
| <b>SRMR</b>                        | .08               |
| <b>CFI</b>                         | .96               |
| <b>NFI</b>                         | .93               |
| <b>IFI</b>                         | .96               |

that each scale has internal validity because the alpha for each is greater than .70 (Nunnally 1978). This measurement model yielded the following fit statistics: a chi-square of 657.35 ( $df = 370$ ,  $p < .001$ ); RMSEA=.09 (90% C. I. .08 -.10); SRMR = .08; CFI = .96; all statistics indicate that the measurement model has a good fit (Hu and Bentler 1999).

Results also show discriminant validity for the experiential value scales. According to Fornell and Larcker (1981), discriminant validity is evident when the proportion of variance extracted in each construct exceeds the square of the correlation coefficients representing its correlation with other factors. Referring to Table 12a, the proportion of variance extracted (POVEI) for the three dimensions of experiential value exceed the square of the correlation coefficients (in parentheses). POVEI for autonomy/competence value (.72), hedonic value (.67), and relatedness value (.78) exceed the square of their correlation coefficients with each other (autonomy/competence and hedonic:  $(.63)^2 = .40$ ; autonomy/competence and relatedness:  $(.66)^2 = .44$ ; hedonic and relatedness:  $(.82)^2 = .67$ ). More importantly, each dimension is also distinctive from the SERVQUAL measure: autonomy/competence-SERVQUAL  $(.55)^2 = .30$ ; hedonic-SERVQUAL  $(.76)^2 = .58$ ; relatedness-SERVQUAL  $(.51)^2 = .26$ .

*Hypotheses Testing.* The data set with 100 responses was used for testing Hypothesis 8 to 14. Detailed results are depicted in Figure 9. Model fit indices indicate that the hypothesized model is a good fit with the data:  $\chi^2(380) = 685.49$ , RMSEA = .09, 90% C.I. of RMSEA .08-.10, SRMR = .09, CFI = .96 (Hu and Bentler 1999). However, not all hypothesized relationships were supported.

Figure 9  
Study 6: SEM Results



Standardized estimates (Unstandardized estimates in parentheses). \*p<.05; \*\*p<.001

Model Fit Statistics

|                             | Hypothesized Model |
|-----------------------------|--------------------|
| $\chi^2(df)$                | 685.49 (380)       |
| RMSEA (90% C. I. for RMSEA) | .09 (.08; .10)     |
| SRMR                        | .09                |
| CFI                         | .96                |
| NFI                         | .92                |
| IFI                         | .96                |

Absorption was only positively related to hedonic value ( $\beta = .81$ ) and relatedness ( $\beta = .73$ ) but not with autonomy/competence value. Dedication was only positively related to autonomy/competence value ( $\beta = .79$ ). Therefore, H8b, 8c, and 9a are supported; but H8a, 9b, and 9c are not supported. As expected, there was a positive effect of service quality on restaurant satisfaction ( $\beta = .33$ ) and revisit intention ( $\beta = .43$ ); positive effects of hedonic value on restaurant satisfaction ( $\beta = 1.01$ ) and revisit intention ( $\beta = 1.10$ ). Consequently, H11a, H11b, H13a, and H13b are supported.

The remaining results were not as hypothesized. The most surprising result is that relatedness value has negative effects on both restaurant satisfaction ( $\beta = -.25$ ) and revisit intention ( $\beta = -.56$ ). Autonomy/competence value has no effects at all on consumer outcomes. As a result, H10a, H10b, H12a, and H12b are not supported.

Finally, the same multi-group structural equation modeling test (Jöreskog and Sörbom 1999) as in study 4 was conducted to test for the moderation hypothesis (H13). It involves testing for model invariance between groups, in this case, the low and high participation context. Model fit indices for all alternative models specified above are reported in Table 13. Results show evidence of a moderating effect of participation context. Specifically, when comparing the best fitted measurement model (model 2) with the structural equation model which allowed path estimates to be different across groups (model 4), the latter yielded a better-fitted model ( $\Delta\chi^2(3) = 15.84; p < .05$ ), which is indicative of a significant moderation effect. Therefore, H14 is supported.

Table 13

## Study 6: Multi-group Alternative Models Test Results

| Model   | $\chi^2$  | df  | p   | RMSEA<br>(90% C.I.)  | SRMR | CFI | NFI |
|---|---|-----|-----|----------------------|------|-----|-----|
| Model 1<br>Invariant                              | 3009.12   | 842 | 0.0 | 0.14<br>(0.13; 0.14) | .14  | .92 | .88 |
| Model 2<br>Freed factor<br>loadings               | 2972.45   | 820 | 0.0 | 0.13<br>(.13; .15)   | .13  | .91 | .88 |
| Model 3<br>Fixed Paths                            | 3056.69   | 831 | 0.0 | .14<br>(.13; .15)    | .14  | .91 | .87 |
| Model 4<br>Based on<br>Model 3 and<br>freed paths | 2956.61   | 817 | 0.0 | .14<br>(.14; .15)    | .13  | .91 | .87 |
| <b>Moderating<br/>effect<br/>assessment</b>       | Comparing best fitted model 2 and model 4:<br>$\Delta\chi^2(3) = 15.84$ ; $p < .05$ (critical value of $p = .05$ is 7.81) |     |     |                      |      |     |     |

Next, separate structural equation models were run for each of the participation contexts, namely, Hibachi (high participation) and dining (low participation). The path models are depicted in Figure 10a and 10b. A close inspection of the relationships between the focal constructs reveal that the most obvious difference between the Hibachi and dining context were the negative effect of autonomy/competence value on restaurant satisfaction found in the low participation, dining context ( $\beta = -.57$ ) but autonomy/competence value had no effects on consumer outcomes for the high participation, Hibachi context. Another notable difference is the effects of service quality (SERVQUAL) on consumer outcomes across participation contexts. Results suggest that service quality exerted more influences on consumer outcomes for the low participation, dining context ( $\beta = .55$  for satisfaction and  $\beta = .58$  for revisit intention) than for the high participation, Hibachi context ( $\beta = .14$  for satisfaction and  $\beta = .37$  for revisit intention). The positive effects of hedonic value and the unexpected negative effects of relatedness value on

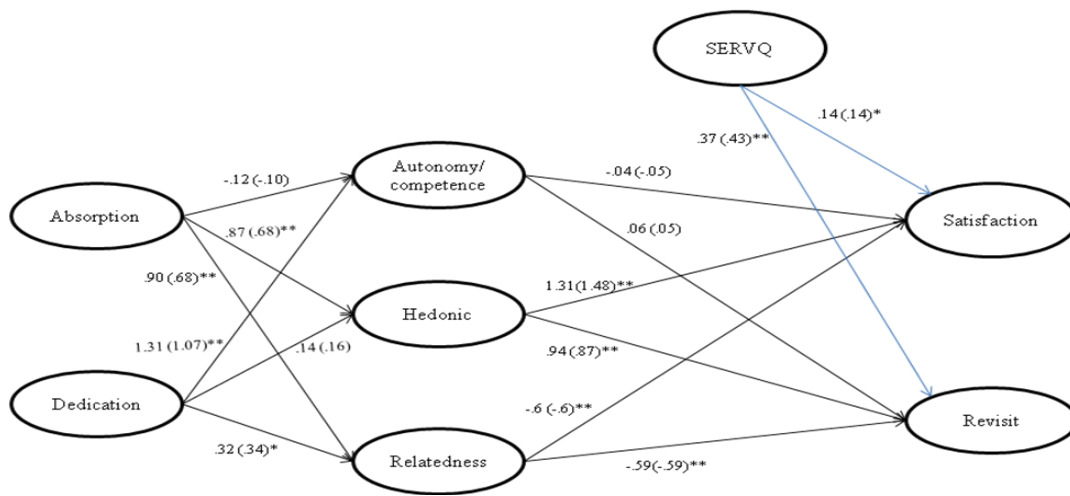


satisfaction and revisit intention remained the same and effect sizes were comparable across contexts.

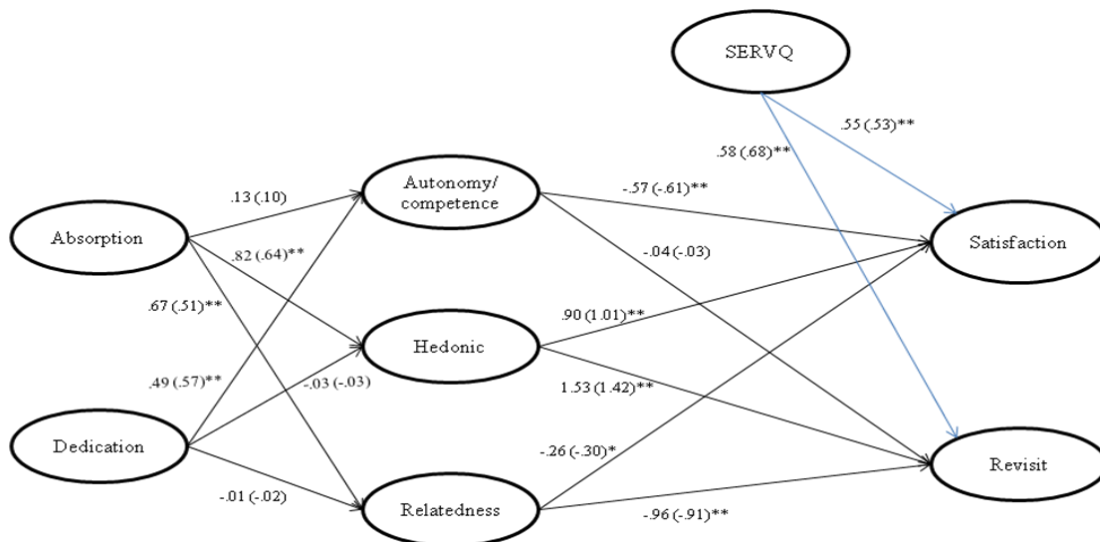
Figure 10

Study 6: Moderation Path Models

a. Hibachi



b. Dining



## *Discussion*

The purpose of Study 6 was to test the effects of consumer participation on experiential value and consumer outcomes in a service setting. Most importantly, this study examined the incremental validity of experiential value above and beyond service quality. Results only provided partial support to the hypotheses. First, as expected, absorption and dedication determined the amount of experiential value one obtained from the dining experience. On top of the positive effects of service quality, hedonic value contributes positively to the dining experience, resulting in higher satisfaction and revisit intention. Surprisingly, autonomy/competence value did not have an impact on the dining experience, and relatedness value actually hindered it. When the low (dining) and high (Hibachi) participation contexts were examined separately, autonomy/competence value makes the dining experience worse off in the low participation context but did not change the experience for people in the high participation context. In both contexts, hedonic value makes the dining experience better, but relatedness value worsens it.

The finding that autonomy/competence value had no influence in a high participation setting but a negative influence in the low participation setting may be due to people's expectation of a dining experience. In general, dining out is viewed as an enjoyable and social experience, but not an achievement opportunity. The need for achievement is not a relevant motivation in a restaurant context; therefore, even when people obtained autonomy/competence value, it is not relevant, so that it is not used in forming judgments regarding the dining experience. The undermining effect of relatedness value is somewhat perplexing. One conjecture for this result is that patrons were seated too closely to one another, which made them feel close and connected to others yet worsens their dining experience. Another reason is that patrons

enjoyed their own company so much so that the relatedness value overshadowed the dining experience; in other words, people were paying more attention to their group's experience rather than the food and atmosphere at the restaurant.

In the next study, I test the hypothesized model in a sports event context, namely, a hockey game experience. In this context, the three experiential values—autonomy/competence, hedonic, and relatedness—should all be relevant. A game environment should heighten one's need for achievement and for affiliation. Moreover, attending a sports event is in general perceived as an opportunity for fun and enjoyment. If the unexpected effects of autonomy/competence and relatedness value were due to relevance of specific motivation in a restaurant setting, then the game context should yield results in support of the hypothesized positive experiential value transfer.

### ***STUDY 7: EXPERIENTIAL VALUE VS. GAME QUALITY IN DRIVING SATISFACTION AND REVISIT INTENTION***

Study 7 further tests construct validity and ecological validity of the experiential value scale in a real setting.

- H15: Absorption is positively related to a) autonomy/competence value, b) hedonic value, and c) relatedness value.
- H16: Dedication is positively related to a) autonomy/competence value, b) hedonic value, and c) relatedness value.
- H17: Game quality is positively related to a) hedonic value and b) relatedness value.

H18: Autonomy/competence value is positively related to a) satisfaction and b) revisit intention.

H19: Hedonic value is positively related to a) satisfaction and b) revisit intention.

H20: Relatedness value is positively related to a) satisfaction and b) revisit intention.

### ***Method***

Attendees of four college men's ice hockey games were recruited on a fan site to fill out an online survey. The four games took place in March (March 1, 14, 15, and 16) 2014.

Respondents who completed the survey were entered into a lucky drawing for one of five team hockey jerseys. A total of 68 people completed the survey (30.8% female, average age = 44.18 years).

Measures in the survey include the experiential value scale, the absorption and dedication measures used in Study 3 and 4, the game quality measure (adopted from Brakus, Schmitt, and Zarantonello 2009), satisfaction (Homburg, Koschate, Hoyer 2005), and revisit intention (Kim and Moon 2009). Specific items for game quality, satisfaction, and revisit intention can be found in Appendix 12.

### ***Structural Equation Modeling Analysis***

Correlation results are presented in Table 14. Lisrel was used to conduct structural equation modeling analysis to test the hypothesized relationships for the same reasons specified in study 4 and are not repeated here. SEM was used to test the hypothesized relationships between consumer participation (i.e., extent of absorption and dedication), experiential value, and consumer outcomes (i.e., satisfaction and revisit intention). Game quality was included so that the incremental contribution of experiential value on consumer outcomes can be estimated.

Table 14  
Study 7: Correlation Results

| Construct                          | Mean | S.D. | 1     | 2     | 3     | 4     | 5     | 6     | 7     |
|------------------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|
| <b>1. Absorption</b>               | 5.33 | 1.14 |       |       |       |       |       |       |       |
| <b>2. Dedication</b>               | 6.10 | 1.18 | .83** |       |       |       |       |       |       |
| <b>3. Game Quality</b>             | 6.10 | .98  | .46** | .57** |       |       |       |       |       |
| <b>4. Autonomy/<br/>Competence</b> | 5.51 | 1.14 | .77** | .88** | .57** |       |       |       |       |
| <b>5. Hedonic</b>                  | 5.59 | 1.00 | .81** | .81** | .62** | .85** |       |       |       |
| <b>6. Relatedness</b>              | 5.13 | 1.26 | .70** | .70** | .55** | .79** | .77** |       |       |
| <b>7. Satisfaction</b>             | 6.16 | 1.04 | .69** | .78** | .75** | .75** | .89** | .69** |       |
| <b>8. Revisit</b>                  | 4.60 | .69  | .43** | .46** | .57** | .41** | .59** | .46** | .63** |

\*p<.05; \*\*p<.001

## Results

*Test of Measurement Model.* Before testing the main hypotheses, a CFA was conducted to assess the adequacy of the measures (Table 15). The measurement model has eight constructs: absorption ( $\alpha = .87$ ), dedication ( $\alpha = .96$ ), game quality ( $\alpha = .93$ ), autonomy/competence value ( $\alpha = .92$ ), hedonic value ( $\alpha = .98$ ), relatedness value ( $\alpha = .82$ ), satisfaction ( $\alpha = .98$ ), and revisit intention ( $\alpha = .97$ ). The Cronbach's alphas reported in parentheses indicate that each scale has internal validity because the alpha for each is greater than .70 (Nunnally 1978). This measurement model yielded the following fit statistics: a chi-square of 743.07 ( $df = 349$ ,  $p < .001$ ); RMSEA=.13 (90% C. I. .12 -.14); SRMR = .07; CFI = .93. All statistics but RMSEA indicate that the measurement model has a good fit (Hu and Bentler 1999).

Results again show discriminant validity for the experiential value scales. Referring to Table 14, the proportion of variance extracted (POVEI) for the three dimensions of experiential value exceed the square of the correlation coefficients (in parentheses). POVEI for autonomy/competence value (.82), hedonic value (.78), and relatedness value (.96) exceed the square of their correlation coefficients with each other (autonomy/competence-hedonic:  $(.87)^2 = .76$ ; autonomy/competence- relatedness:  $(.81)^2 = .66$ ; hedonic-relatedness:  $(.74)^2 = .55$ ). More importantly, each dimension is distinct from the game quality measure (.92): autonomy/competence-game quality  $(.64)^2 = .41$ ; hedonic-game quality  $(.74)^2 = .55$ ; relatedness-game quality  $(.54)^2 = .29$ .

Table 15a:  
Study 7: CFA Results

| Measurement Model                         |          |                 | POVEI | 1 <sup>1</sup> | 2 <sup>1</sup> | 3 <sup>1</sup> | 4 <sup>1</sup> | 5 <sup>1</sup> | 6 <sup>1</sup> | 7 <sup>1</sup> |
|---|----------|-----------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|   |          | Factor Loadings |       |                |                |                |                |                |                |                |
| 1. Absorption ( $\alpha = .87$ )          | Abs1     | .89             | .83   |                |                |                |                |                |                |                |
|   | Abs2     | .65             |       |                |                |                |                |                |                |                |
|   | Abs3     | .95             |       |                |                |                |                |                |                |                |
| 2. Dedication ( $\alpha = .96$ )          | Ded1     | .92             | .94   | .92 (.85)      |                |                |                |                |                |                |
|   | Ded2     | .96             |       |                |                |                |                |                |                |                |
|   | Ded3     | .95             |       |                |                |                |                |                |                |                |
| 3. Game Quality ( $\alpha = .93$ )        | Gq1      | .86             | .92   | .58 (.34)      | .61 (.37)      |                |                |                |                |                |
|   | Gq2      | .91             |       |                |                |                |                |                |                |                |
|   | Gq3      | .98             |       |                |                |                |                |                |                |                |
| 4. Autonomy/Competence ( $\alpha = .92$ ) | Aut1     | .80             | .82   | .90 (.81)      | .95 (.90)      | .64 (.41)      |                |                |                |                |
|   | Aut2     | .80             |       |                |                |                |                |                |                |                |
|   | Aut3     | .74             |       |                |                |                |                |                |                |                |
|   | Comp2    | .80             |       |                |                |                |                |                |                |                |
|   | Comp3    | .96             |       |                |                |                |                |                |                |                |
| 5. Hedonic ( $\alpha = .98$ )             | Sen1     | .76             | .78   | .85 (.72)      | .85 (.72)      | .74 (.55)      | .87 (.76)      |                |                |                |
|   | Sen2     | .38             |       |                |                |                |                |                |                |                |
|   | Sen3     | .77             |       |                |                |                |                |                |                |                |
|   | Aff2     | .95             |       |                |                |                |                |                |                |                |
|   | Ent1     | .97             |       |                |                |                |                |                |                |                |
|   | Ent2     | .83             |       |                |                |                |                |                |                |                |
| 6. Relatedness ( $\alpha = .82$ )         | Rel1     | .94             | .96   | .78 (.61)      | .72 (.52)      | .54 (.29)      | .81 (.66)      | .74 (.55)      |                |                |
|   | Rel2     | .98             |       |                |                |                |                |                |                |                |
|   | Rel3     | .97             |       |                |                |                |                |                |                |                |
| 7. Satisfaction ( $\alpha = .98$ )        | Sat1     | .96             | .96   | .78 (.61)      | .81 (.66)      | .80 (.64)      | .81 (.66)      | .99 (.98)      | .70 (.49)      |                |
|   | Sat2     | .97             |       |                |                |                |                |                |                |                |
|   | Sat3     | .96             |       |                |                |                |                |                |                |                |
| 8. Revisit Intention ( $\alpha = .97$ )   | Revisit1 | 1               | .96   | .82 (.67)      | .75 (.56)      | .68 (.46)      | .72 (.52)      | .92 (.85)      | .67 (.45)      | .86 (.74)      |
|   | Revisit2 | .94             |       |                |                |                |                |                |                |                |
|   | Revisit3 | .95             |       |                |                |                |                |                |                |                |

\*\*p<.001

<sup>1</sup>Correlation (Variance in parentheses): all correlations are significant at p<.05

Table 15b

## Study 7: CFA Results

## Model Fit Statistics

|                                    | Measurement Model |
|------------------------------------|-------------------|
| $\chi^2(df)$                       | 743.07 (349)      |
| <b>RMSEA (90% C. I. for RMSEA)</b> | .13 (.12; .14)    |
| <b>SRMR</b>                        | .07               |
| <b>CFI</b>                         | .93               |
| <b>NFI</b>                         | .90               |
| <b>IFI</b>                         | .93               |

*Hypotheses Testing.* The data set with 68 responses was used for testing Hypothesis 15 to 20. Detailed results are depicted in Figure 11. Model fit indices indicate that the hypothesized model is a good fit with the data:  $\chi^2(345) = 599.87$ , RMSEA = .11, 90% C.I. of RMSEA .09-.12, SRMR = .07, CFI = .95 (Hu and Bentler 1999). However, not all hypothesized relationships were supported.

Absorption was positively related to hedonic value ( $\beta = .32$ ) and relatedness ( $\beta = .80$ ) but not with autonomy/competence value. Dedication was positively related to autonomy/competence value ( $\beta = .71$ ) and hedonic value ( $\beta = .42$ ) but not relatedness value. Therefore, H15b, 15c, 16a, and 16c are supported; but H15a and 16b are not supported. Game quality was positively related to hedonic value ( $\beta = .31$ ) but not to relatedness value or autonomy/competence value. Therefore, H17a was supported but not H17b.

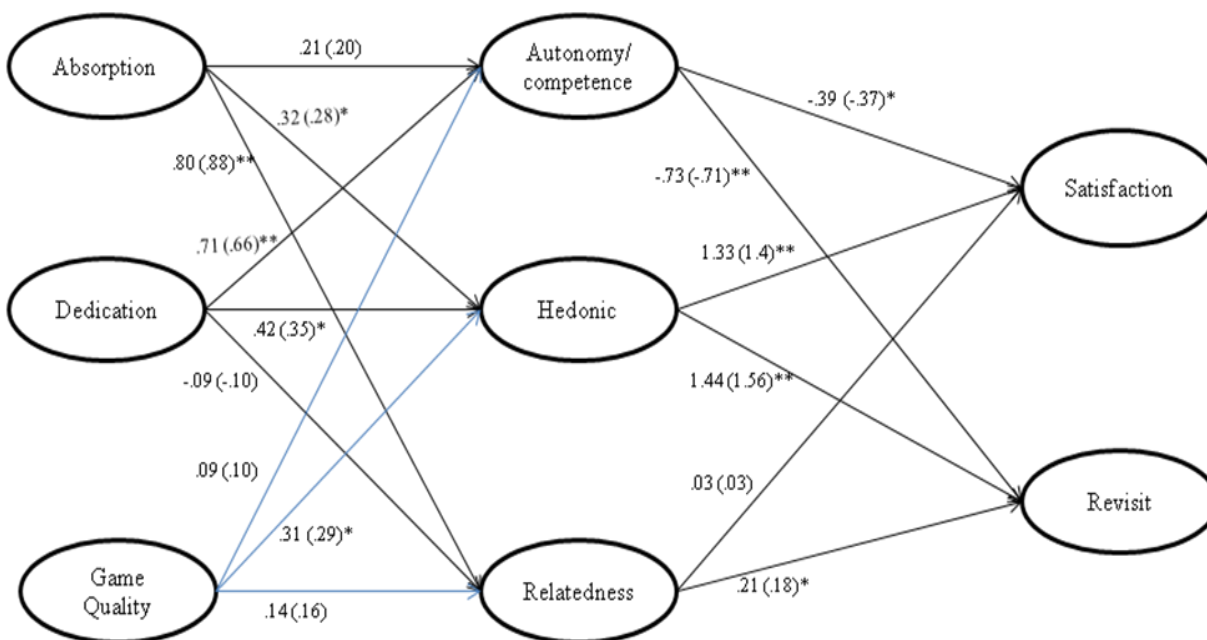
As expected and corroborating results of Study 6 in the restaurant setting, hedonic value was positively related to satisfaction ( $\beta = 1.33$ ) and revisit intention ( $\beta = 1.44$ ), but relatedness value only had a positive effect on revisit intention ( $\beta = .21$ ). Therefore, H19a, H19b, and H20b were supported but H20a was not. Contrary to hypothesis 18, negative rather than positive



effects were observed for the influence of autonomy/competence value on satisfaction ( $\beta = -.39$ ) and revisit intention ( $\beta = -.73$ ). Thus, neither H18a nor H18b was supported.

Figure 11

## Study 7: SEM Results



Standardized estimates (Unstandardized estimates in parentheses). \* $p < .05$ ; \*\* $p < .001$

## Model Fit Statistics

|                             | Hypothesized Model |
|-----------------------------|--------------------|
| $\chi^2(df)$                | 599.87 (345)       |
| RMSEA (90% C. I. for RMSEA) | .11 (.09; .12)     |
| SRMR                        | .07                |
| CFI                         | .95                |
| NFI                         | .92                |
| IFI                         | .95                |

## *Discussion*

Study 7 extends the application of experiential value to a sports event setting. Unlike in a restaurant where patrons receive individual attention and services, sports event attendees are more likely to blend into the crowd and are more self-reliant. It is expected that the quality of the game (i.e., performance of the two hockey teams) as well as attendees' own absorption and dedication would all contribute to the extent of experiential value experienced. This is mostly what is shown in the results: game quality yielded hedonic value, and attendees' level of absorption and dedication led to all three aspects of experiential value. The experienced hedonic value then transferred to the overall game experience, resulting in higher satisfaction and revisit intention. However, autonomy/competence value hampered the overall game experience, leading to lower satisfaction and revisit intention. Although needs for achievement, affiliation, and pleasure are all likely to be relevant, results of this study do not support the experiential value-transfer mechanism. Except for hedonic value, neither the autonomy/competence nor relatedness value added value to the overall experience and revisit intention.

Taken together, findings in Study 6 and Study 7 only supported hedonic-value transfer from consumer participation, but not autonomy/competence and relatedness value. Even more perplexing are the hampering effects these values have on consumer outcomes. One explanation could be that experiential value transfer operates through a different process for tangible products such as shoes (Study 3 and Study 4) or food (Study 5) versus intangible services (Study 6) or experiences (Study 7). It could also be that somehow for intangible services and experiences, consumers are more likely to attribute success to the self than for tangible products; therefore resulting in the self-serving bias effect observed in other consumer participation studies (Bendapudi and Leone 2003). Finally, the respondents in Study 3, 4, and 5 reported the extent of

experiential value felt and evaluated outcomes immediately after the participation activity, but this was not the case in Study 6 and 7. Arguably, experiential value transfer requires an immediate reporting, but not a memory-based recounting. The distance between the felt experiential value might be discounted by the time elapsed between the actual experience and the time of response.

## **CHAPTER FOUR: GENERAL DISCUSSION**

This dissertation attempts to answer the following questions: 1) what are the components of experiential value, 2) how consumer participation creates experiential value, and 3) how experiential value transfers to products and services, company and brand, and enhance behavioral intention such as purchase intention and revisit intention. Drawing on the literature review (Chapter Two) and empirical results from seven studies (Chapter Three), answers to each question will be summarized here.

### ***What Kind of Value is Unique to Consumer Participation?***

Consumer participation can be broadly defined as consumer's engagement in various activities (e.g., research and development, design, building, etc.) when they are acquiring products or services. This dissertation proposes that just as consumers consume value from products or services, they also consume value from consumer participation activities. I refer to the value associated with consumer participation as experiential value. Because satisfying life events are often characterized by experiences of hedonic pleasure and of self-achievement and affiliation (Dubé and Le Bel 2003; Sheldon, Elliot, Kim, and Kasser 2001; Ryan and Deci 2001), experiential value could have hedonic, self-achievement, and affiliation underpinnings. This is indeed what this dissertation found. Specifically, Study 1 of this dissertation reported the development of the experiential value scale. Results supported that experiential value is a multidimensional construct consisting three subdimensions reflecting the hedonic, self-achievement, and affiliation aspects. Experiential value refers to experiences of hedonic pleasure, autonomy and competence, and relatedness.

### ***How Does Consumer Participation Create Experiential Value?***

Empirical results presented in this dissertation suggest two ways with which consumer can create experiential value through their own participation. Simply giving people choices such as selecting from shoe designs off-the-rack or from set menu options does not bring about experiential value. However, customization options such as designing your own shoes or creating your own dish induce hedonic and autonomy/competence value which then enhances satisfaction with the product and evaluation of the company and brand.

Moreover, experiential value also varies by the level of engagement during the participation. Engagement refers to the level of absorption and dedication one experienced during consumption (Schaufeli, Bakker, and Salanova 2006). The more absorbed and dedicated one is, the higher the experiential value. The positive influence of engagement on experiential value is perhaps not surprising; what is surprising is that experiencing experiential value does not necessarily increase satisfaction or enhance other consumer outcomes.

### ***Does Experiential Value Transfer to Products, Services, Companies, and Brands?***

This dissertation suggests that whether or not consumer participation can enhance consumer outcomes depends on an individual's motivation at the time of the participation. Consequently, people with high need for uniqueness felt competent after the shoe designing activity but people with low need for uniqueness simply regarded the same task as fun. Likewise, overweight individuals who generally lack self-control in food consumption were empowered by creating their own healthy food. Most importantly, for each group of people, only experiential value relevant to the motivation salient was transferred onto product and service and affected evaluation of the company and brand. These results support the need-based process rather than a

static, universalistic one (Van Osselaer and Janiszewski 2012). Specifically, these results point to the fact that not all experiential value created through consumer participation are relevant; they corroborate past studies that only relevant feelings or means influence judgment and choice (Gorn, Goldberg, and Basu 1993; Pham 1998; Van Osselaer and Janiszewski 2012).

Most research examining the effects of consumer participation reported positive consequences (refer to Appendix 2). Bendapudi and Leone (2003), however, suggested that due to self-serving bias (i.e., a tendency for people to attribute success to the self and failure to others; Curren, Folkes, and Steckel 1992), when consumers participated in product production or service delivery, they might actually evaluate the company less favorably; this was what they found in their scenario based experiments. Interestingly, some studies in this dissertation also found negative consequences of consumer participation. For unforeseen reasons, the more connected restaurant patrons felt, the less satisfied they were with the restaurant and less likely they were to revisit. Also, game attendees who felt more autonomy/competence value also viewed the game more negatively and were less likely to attend again.

Taken together, this dissertation showed that experiential value transfer is a need-based process for tangible products. For intangible services and experiences such as restaurant and game experience, the value transfer process is not as clear. Consistent with existing work concerning hedonic value, pleasurable experiences enhance satisfaction and other outcomes even after controlling for service quality in the restaurant setting and game quality at the hockey games. But autonomy/competence value and relatedness value either had no impact or hindered consumer outcomes.

### ***Theoretical Implications***

*Consumer participation.* Existing literature examining consumer participation has conceptualized and operationalized participation in many different ways. For examples, communication such as information sharing and making suggestion (e.g., Chan, Yim, and Lam 2010 Gallan, Jarvis, Brown, and Bitner 2013); physical involvement such as assembling products and cooking (e.g., Bendapudi and Leone 2003; Norton, Mochon, and Ariely 2012; Troye and Supphellen 2012); cognitive involvement such as new product development and design (e.g., Fang 2008; Moreau and Dhal 2005). Past studies, in spite of how participation was operationalized, found mostly positive influences of consumer's own involvement on outcomes. In this dissertation, participation entailed both cognitive input which required one to choose or create (Study 3, 4, and 5) and physical involvement which involved actual encounters (Study 6 and 7). Results imply that when participation involves cognitive inputs, participation exert positive impacts on outcomes through different experiential value. However, when the participation entails physical encounters, participation may enhance or hamper outcomes depending on the type of experiential value felt during the participation. Bendapudi and Leone (2003) found in their study that people tend to attribute success to the self which led them to rate a company less favorably after they helped create their own product or service. In their study, however, they only inferred to such a bias without showing the proposed self-serving bias mechanism. Results of this dissertation suggest that when people felt autonomy/competence value generated by a need for achievement and relatedness value generated by a need for affiliation, they tend to attribute them to the self; therefore, higher autonomy/competence value and relatedness value worsen evaluation of the consumption experience. This was not the case



for hedonic value. Hedonic value, as it is shown, would be transferred positively to outcomes as long as the individual is not pre-occupied with other needs such as need to be unique (study 4) or need to feel control (study 5).

The diverging effects of participation as physical involvement found in this dissertation, however, must be further tested. Reason to this is because the current dissertation cannot rule out that these observed results reflect memory biases rather than differences in the actual experiential value transfer process. It is possible that if people were asked to report their experiences and evaluation real-time, the experiential value transfer process would occur as hypothesized; specifically, both autonomy/competence value and relatedness value should be positively related to consumer outcomes. The negative effects of autonomy/competence value and relatedness value found in study 6 and 7 may simply reflect memory bias. This memory bias somehow leads people to associate hedonic value with favorable consumption outcomes; but attribute autonomy/competence value and relatedness value to themselves. In this regard, the current dissertation also highlights a methodological concern for future consumer participation research. Should the negative influences reported in this dissertation manifest a memory bias, it suggests that future research examining the effect of consumer participation must be conducted with real-time techniques such as the experience sampling method which prompts participants to stop at certain times and report their experience in real time (Larson and Csikszentmihalyi 1983). However, the presence of memory bias must be tested by comparing data collected real time and retrospectively to be validated.

Finally, this dissertation also contributed to consumer participation research by showing that participation can be operationalized with a more general measure, namely, level of absorption and dedication. On the one hand, results showed that a more engaging participation

task (i.e., designing a product) would lead to higher levels of absorption and dedication than a less engaging task (i.e., selecting a product off-the-rack). On the other hand, results suggested that even when people are involved in the same engaging participation activity, the extent of absorption and dedication would also determine the extent of experiential value, which in turn affect other consumer outcomes. As it is evident in the literature summary provided in Appendix 2, consumer participation has been a highly context dependent concept. The definition and operationalization of consumer participation varied depending on the study context. The absorption and dedication operationalization deployed in this dissertation provide a conceptualization that is more generalizable than the ones used in existing literature.

*Consumer Value Creation and Transfer.* For a long time, consumer value is equated with bundles of attributes in products or services. The term value-in-exchange was coined to represent this view which suggests that value is embedded in attributes of products or services and consumer's expectation and perception of these attributes are unambiguous—the value of a product or service can be inferred from its attributes which is equivalent to consumer value (Cronin and Taylor 1992; Parasuraman, Zeithaml, and Berry 1985). Unambiguous expectation and perception of attributes in a product or service allows for a trade-off between what one gives and what one gets, which characterizes the traditional view of consumer value creation (Hauser and Simmie 1981; Hauser and Urban 1986; Zeithaml 1988). This conceptualization also assumes that consumer value is stable within a product or service. Ample research supported attribute-based product and service choice (Bettman and Park 1980; Green and Srinivasan 1978; Guadagni and Little 1983; Rosenberg 1956; Sheth and Talarzky 1972; Troutman and Shanteau

1976). For example, consumers rely on attribute-based evaluation especially when they are unfamiliar with the product category (Bettman and Park 1980).

However, recent research have consistently found that external factors can affect consumer preferences and choices indicating that value of a product or service varied and suggesting that value may not be stable within a product or service. Evidence of value as unstable within products or services is ubiquitous in recent marketing literature. For instance, in extant goal literature, results repeatedly support that choice and behavior can be affected by more salient goals. Goals can become salient subconsciously through priming or external cues. For examples, priming a frugal (vs. hedonic) goal induces choice of a generic brand over a luxury brand (Chartrand, Huber, Shiv, and Tanner 2008) and priming an enjoyment (vs. status) goal encourages choice of a fun restaurant over an elegant restaurant (Laran, Janiszewski, and Cunha 2008). Although this stream of research does not reference the role of value, they support the fact that chronic personal values as well as contextual factors may influence value perception and experience, which in turn affect consumption choices and behaviors.

The transient view of value is more in line with the concept of value-in-use. The idea of value-in-use came about as the customer-grounded view was introduced in different streams of marketing research, including experiential consumption (Holbrook 1986; Holbrook and Hirschman 1982), experience and performance consumption (Deighton 1992; Pine and Gilmore 1999), co-creation and co-production (Bendapudi and Leone 2003; Grönroos and Voima 2013), and the service-dominant logic (Vargo and Lusch 2004, 2008). Value-in-use is not embedded in products' or services' attributes; rather, it is co-created by the company and consumers (Grönroos and Ravald 2011; Vargo and Lusch 2004). This means that for any product or service, no value is created until consumer actually consumes it. In other words, this perspective of

value-in-use allows for individual and situational differences in value creation even for consumption of the same product or service carrying identical attributes. This view of value incorporates the unstable, varying property of consumer value. Results found in this dissertation further add to literature that aside from products and services, value is also not embedded in a participation experience.

Moreover, this dissertation contributes to our understanding of how experienced value gets transferred to services and products and then affects consumer judgment and decision. The self-object association mechanism examined in past literature suggests that the self-object association mechanism is common to all individuals. That is, people in general like themselves therefore whenever they establish an association with an object or a thing, the liking for the self is transferred, irrespective of individual motivations. But when experiential value is taken into account, individual and contextual motivations became important. Specifically, the different routes in value transfer for the low and high need for uniqueness groups and the normal and overweight BMI groups provide support for the contingent view of experiential-value transfer rather than the universalistic view. The contingent experiential-value perspective posits that value transfer is a need-based process where only relevant feelings have an influence on judgment and choice (Gorn, Goldberg, and Basu 1993; Pham 1998; Van Osselaer and Janiszewski 2012). Consequently, low need for uniqueness people focus on having fun when designing shoes such that only hedonic value experienced during the designing task was relevant to evaluate the product outcome and determine likelihood to buy. But high need for uniqueness people are motivated to avoid similarity with others, making autonomy/competence value felt during the designing task informative for making product evaluation and deciding whether or not to buy. Similarly, normal weight and overweight individuals are governed by different food

consumption motivations making them react differently to consumer participation. Overweight individuals relied on the autonomy/competence value derived from the participation activity (i.e., creating one's own dish) to form taste perceptions and restaurant evaluations. Here, it is shown that only when an experiential value matched the individual or contextual need salient at the time of participation would the experienced value affects judgment and decision. This is the first study to show that experienced value is not simply taken at face value, positive experiences (i.e., autonomy/competence value, relatedness value, hedonic value) do not invariably enhance consumers' perceptions and judgments.

### ***Managerial Implications***

*Targeted Consumer Participation.* The idea that consumer participation can enhance satisfaction and outcome is not new. Many companies and brands have been offering participation opportunities to their customers. However, this research suggests that not all participation can lead to desirable outcomes. Participation only enhances outcome when the consumer feel that what they got out of the participation activity is relevant to their needs. If companies and brands can better match individual's need with participation activity, they will receive more benefit. After all, participation opportunities do not come at no cost for companies and brands. Participation options such as self-design and custom menus must be carefully designed and implemented. Also, as past research and the current dissertation found, participation sometimes have negative effects on consumer outcomes. It is important for companies and brands to know how to maximize benefits receive and minimize costs incur before implementing consumer participation opportunities. This dissertation suggests that one

way to derive benefits is to target customers with the right participation opportunity. Using the shoe design studies as an example, brands may want to offer different customization options to different customers. Include a filter question before the customer begin to design to gauge whether the individual is only looking for a fun experience or is eager to come up with a design to reflect his or her uniqueness. Accordingly, the customer can be directed to either a more playful or professional design palette.

*Restaurant and Food Industry.* One implication specific to the restaurant and food industry is how a simple change in the menu can encourage healthy food consumption. The select menu and the more engaging custom-make menu used in this dissertation (Appendix 7 and 8) do not differ substantively. For instance, the same salad items (e.g., lettuce, tomatoes, etc.) were included in both the select and custom-make menu; whereas in the former people would pick a salad with the group of items they prefer, in the latter people would select items to create a salad that they like. This subtle change in the menu actually made overweight individuals have the illusion of control and competence in making healthy food choices. Past research have found that people usually associate healthy food with worse taste (Raghunathan, Naylor, and Hoyer 2006); this dissertation showed that one simple change in menu presentation can enhance the taste perception of healthy food which are normally considered as unappetizing.

### ***Limitation and Future Studies***

One limitation of the current dissertation is that it did not test the effects of consumer participation through experiential value on actual behavior. Although the studies showed that

autonomy/competence value and hedonic value can both lead to more satisfaction and better evaluation, their effects on actual behavior like actual purchase or actual taste were not shown. It is important that future studies test the proposed effects of the current dissertation with overt behaviors to establish their significance.

A second limitation is how consumer participation was operationalized in study 3, 4, and 5, which was asking respondents to perform specific tasks online. For the shoe design study, the online setting was appropriate because that is the natural setting for product customization. For the menu study, however, it is necessary to replicate the study at either a lab or a real restaurant setting where respondents look at a menu and then order food. Arguably, the respondents in the menu studies ordered food from the menu provided knowing that they did not have to actually taste the food; as a result, there was no real consequence to their choice. This realism issue was equal for all treatment and individual motivation groups, namely, normal-weight and overweight BMI people, therefore, the observed effect of a custom-made menu on taste perception and evaluation for overweight individuals were not confounded. However, if people actually had to choose a food that they would eat, they might be more focused on its taste and could result in changes in the magnitude of some of the effects like those of hedonic value, which is shown to exert no effects on taste perception or restaurant evaluation.

A third limitation of this dissertation is specific to study 6 and 7 where data were collected in real settings. As these data were collected retrospectively, the alternative explanation that the observed effects only reflect memory bias but not the actual experiential value transfer process could not be ruled out. As discussed previously, in order to rule out the possibility of memory biases, data must be collected with real time methods such as experience sampling. If the same surveys can be administered using an experience sampling method (i.e., prompting

restaurant patrons and game attendees at different times during the experience), data collected with the two methods (i.e., retrospective vs. real time) can be compared and that would yield better insight into the real experiential value transfer process.

### ***Conclusion***

Psychological research suggests that two experiences enhance human well-being: hedonic experience (Dubé and Le Bel 2003; Kahneman, Diener, and Schwarz 1999) and psychological experiences resulting from fundamental needs fulfillment such as need for achievement and affiliation (Deci and Ryan 1985; McClelland 1985; Schöler, Sheldon, and Fröhlich 2010; Sheldon and Schöler 2011). Satisfying events in life are often characterized by hedonic pleasure and self-achievement and affiliation (Sheldon, Elliot, Kim, and Kasser 2001; Ryan and Deci 2001). It has been found that people who have more hedonically and psychologically fulfilling experiences are in general happier (Sheldon, Elliot, Kim, and Kasser 2001). Consumption has become a huge part of people's lives and experiences in consumption such as vacations, the purchase of cars, and homes often contribute to people's life satisfaction (Ahuvia 2008; Frank 1985). This dissertation shows that even less significant purchases, like sneakers and food, can derive hedonic, achievement, and affiliation experiences. Extant literature in consumer participation focused on the immediate benefits that consumer's involvement brings to products, services, brands, and companies. Results of this dissertation imply that consumer participation might have a more significant impact on consumer than what has been found in literature. The potential long term benefits of consumer participation on consumer well-being coupled with its implication for companies and brands are perhaps interesting areas for future research.



## **APPENDICES**

*Appendix 1: Typology of Customer Value (Holbrook 1999)*

|                |          | Extrinsic   | Intrinsic  |
|----------------|----------|---|--|
| Self-oriented  | Active   | <b>EFFICIENCY</b><br>Derived from a comparison between input and output. If input is some monetary costs, then efficiency is like value for money. If input is some non-monetary costs, such as time spent, then efficiency is more like convenience. E.g. quick-service and low-cost foods offered by fast food restaurants. | <b>PLAY</b><br>Derived from performing a fun activity that one enjoys for his/her sake. E.g. playing with your phone.  |
|                | Reactive | <b>EXCELLENCE</b><br>Derived from the realization of the functional benefits promised by the product or service provider, which can also be referred to as quality. E.g. high quality images on your HD TV channel or HD TV.  | <b>AESTHETICS</b><br>Derived from admiring the beauty of an artwork, natural wonders, or the nature. E.g. a visit to the art museum.   |
| Other-oriented | Active   | <b>STATUS</b><br>Derived from the belief that one is projecting a desired image, for impression management purpose, to others when using a product or service. E.g. driving an expensive car.   | <b>ETHICS</b><br>Derived from the belief that one is doing something good for the sake of others such as when one is engaging in green consumption or charitable activities. E.g. re-using towels for your hotel stay. |
|                | Reactive | <b>ESTEEM</b><br>Derived from the belief that one is winning approval from relevant others or being envied by others when owning a product or be eligible for an exclusive service. E.g. owing season ticket for courtside seats at the Knicks' games.  | <b>SPIRITUALITY</b><br>Derived from the feeling that one is connected to some higher-level entity such as nature or a deity. E.g. a river-rafting trip to connect to nature.   |

***Appendix 2: Summary of Consumer Participation Research Findings***

| <b>Reference</b>                      | <b>Context</b>  | <b>Conceptualization</b>   | <b>Operationalization</b>  | <b>Summary of Results</b>   |
|---------------------------------------|---|--|--|---|
| Ashley, Noble, Donthu, & Lemon (2011) | Participation in company's marketing engagement programs (e.g., loyalty card, company credit card, rebate offer, etc.). | Involvement: Degree to which consumers are interested and involved in the services/products offered by the company.  | <ol style="list-style-type: none"> <li>1. I closely keep track of the services provided by this company.</li> <li>2. I participate in many of the services offered by this company.</li> <li>3. I am on top of things as far as this service provider is concerned.</li> </ol>   | Involvement increases relationship program receptiveness which in turn increases commitment and program dependence.   |
| Auh, Bell, McLeod, Shih (2007)        | Actions and inputs during service meetings (i.e., financial service and hospital).                                      | Co-production: Constructive customer participation in the service creation and delivery process and the extent to which customers are engaged as active participants in the organization's work. | <ol style="list-style-type: none"> <li>1. I try to work cooperatively with my (advisor/doctor)</li> <li>2. I do things to make my (advisor's/doctor's) job easier</li> <li>3. I prepare my queries before contacting my advisor/going to an appointment with my doctor</li> <li>4. I openly discuss my needs with my doctor to help him/her deliver the best possible treatment (physician-patient relationship only)</li> </ol> | Communication, client expertise, affective commitment, and interactional justice encourage co-production which in turn leads to attitudinal and behavioral loyalty. |
| Bendapudi & Leone (2003)              | Involvement in some part of the consumption across different product categories.  | Customer participation: Degree to which the customer is involved in producing and delivering the service.  | Scenario based manipulations:<br>Customer (vs. store) assembles shelf<br>Customer (vs. store) builds frame   | Participation increases process and outcome satisfaction. Favorable outcomes decrease firm satisfaction.  |
| Bloemer & Ruyter (1999)               | Service settings categorized as high vs. low involvement  | Involvement: degree to which a service experience requires customer participation which is more extensive and sustained sensory & expressive content & ritualistic processes are present.        | <ol style="list-style-type: none"> <li>1. When I need this type of service, it does not matter so much whether I make a wrong choice.</li> <li>2. I am very interested in choosing a service provider.</li> </ol>  | Involvement moderates the effect of positive emotion on satisfaction and loyalty.   |

*Appendix 2 (continued)*

| Reference                 | Context  | Conceptualization  | Operationalization  | Summary of Results   |
|---------------------------|--|--|---|--|
| Chan, Yim, & Lam (2010)   | Providing information, making suggestions, and involving in decision making with bank employees. | Customer participation:<br>The extent to which customers provide or share information, make suggestions, and become involved in decision making during the service co-creation and delivery process. | <ol style="list-style-type: none"> <li>1. I spent a lot of time sharing information about my needs and opinions with the staff during the service process.</li> <li>2. I put a lot of effort into expressing my personal needs to the staff during the service process.</li> <li>3. I always provide suggestions to the staff for improving the service outcome.</li> <li>4. I have a high level of participation in the service process.</li> <li>5. I am very much involved in deciding how the services should be provided.</li> </ol> | Participation increases economic and relational value which in turn increases satisfaction.  |
| Dahl & Moreau (2007)      | Consumers participating in creative activities (e.g., cooking kits, home improvement, etc.)      | Experiential creation:<br>The universe of activities in which a consumer actively produces an outcome.   | Scenario based manipulations:<br>Participation: detailed (vs. vague) instructions<br>Skill: participant's skill low (vs. high)<br>Creativity: picture (vs. no picture)  | Instruction and skill level increases feeling of competency and autonomy which in turn increases task enjoyment.   |
| Dong, Evans, & Zou (2008) | Participation in service recovery.   | Customer participation: Degree to which the customer is involved in producing and delivering the service.  | Scenario based manipulations:<br>Firm recovery vs. joint recovery vs. Customer recovery   | Customer participation increases role clarity, perceived value for future co-creation and satisfaction with recovery which in turn drives intention toward future co-creation. |

*Appendix 2 (continued)*

| Reference                       | Context  | Conceptualization   | Operationalization   | Summary of Results  |
|---------------------------------|--|---|--|---|
| Fang (2008)                     | Customer participation in new product development. | Customer participation:<br>1) as information sharing (customer sharing demand information, information about customer needs, and potential competitive reactions with the manufacturer);<br>2) as co-developer (the extent to which the customer's task involvement constitutes a significant portion of the development tasks) | CPI During the participation process:<br>1. We actively transferred information gathered from our distributors and retailers into development team.<br>2. We kept our manufacturer informed about what was happening in the market of our distributors and retailers.<br>3. The transfer of information about downstream customer needs and preferences took place frequently.<br>4. We shared proprietary information with our component manufacturer if we feel that the information can improve the development of the component.<br>CPC During the participation process:<br>1. Our development effort played a very important role in the completion of development tasks.<br>2. Our work constituted a significant portion of the overall development effort.<br>3. Our involvement as codeveloper of the component was quite significant. | CPI, CPC increases new product innovativeness and speed to market. These effects are moderated by downstream network, process interdependence, and process complexity.  |
| Fang, Palmatier, & Evans (2008) | Customer participation in new product development. | Customer participation:<br>Breadth: the scope of participation across the product development process, where a customer could be involved in just one activity or in a wide range of activities.<br>Depth: the customer's level of involvement in a phase of the product development process.                                   | Activities: idea generation, concept screening, product specification, etc.<br><br>For each of the activities in the new product development process, we would like you to identify whether you participated in this activity. (0 = no, 1 = yes)<br><br>If you participated, how deeply were you involved? (very superficial – very deeply)  | Customer participation increases info sharing, coordination effectiveness, customer relationship-specific investment, and supplier relationship-specific investment which in turn enhance new product value (size and share of product) and customer value. |

*Appendix 2 (continued)*

| Reference                                     | Context   | Conceptualization  | Operationalization   | Summary of Results  |
|---|---|--|--|---|
| Fuchs, Prandelli, & Schreier (2010)           | Selecting products/concepts to be marketed  | Customer empowerment<br>A strategy firms use to give customers a sense of control over a company's product selection process, allowing them to collectively select the final products the company will later sell to the broader market. | Manipulations:<br>Select the best t-shirts; you and community decide which go to market vs.<br><br>Community decides which go to market vs.<br><br>Select the best t-shirts; market research decide which go to market | Empowerment leads to psychological ownership which in turn increases product demand (WTP, intent to purchase).  |
| Gallan, Jarvis, Brown, & Bitner (2013)        | Patients' participation in health care service.   | Adopted from Chan, Yim, & Lam (2010).  | Same as Chan, Yim, & Lam (2010).   | Customer positivity increases patient participation which enhances service quality and customer satisfaction.   |
| Gebauer, Fuller, & Pezzei (2013)              | Participation in an online contest to design a shopping bag in order to reduce use of plastic bags. | Co-creation experience: positive and negative user behaviors.  | 1. I have enjoyed the entire contest.<br>2. I had a good time designing the bags during the contest.<br>3. This task was a lot of fun.   | Co-creation leads to sense of community which in turn increases WOM and WTP.  |
| Holbrook, Chestnut, Oliva, & Greenleaf (1984) | Consumer play as participation (e.g., video games).   | Not available.   | Measured individual difference: Personality-game congruity (e.g., visualizers & visual games)<br>Manipulation: Game complexity   | Congruity and complexity enhance to performance and emotions which lead to positive affects (liking, pleasure, dominance).  |
| Moreau & Dhal (2005)                          | Consumer participating in creative tasks (e.g., designing a toy).                                   | Creative task participation: The extent to which creative cognitive processes are utilized in developing a solution that determines the likelihood that a more creative idea or product will result.                                     | Task manipulations:<br>Input restrictions (yes vs. no)<br>Input requirements (yes vs. no)<br>Time constraints (yes vs. no)   | Input restrictions influences creative process which in turn enhances novelty of outcome. The specified relationship is moderated by time constraints and input requirements. |

*Appendix 2 (continued)*

| Reference                          | Context  | Conceptualization  | Operationalization  | Summary of Results  |
|------------------------------------|--|--|---|---|
| Muthukrishnan & Wathieu (2007)     | Making superfluous choices (choices that have no impact on the final option selected; e.g., choice of colors for CDs).                               | Participation:<br>Mere existence of preliminary choice steps preceding a decision.   | Manipulations:<br>No choice vs. superfluous choice  | Superfluous choice leads to deliberation and fluency which encourage repeat choice.   |
| Norton, Mochon, & Ariely (2011)    | Building boxes and origami.  | Participation:<br>Self-assembled products  | Task manipulations:<br>Building an IKEA box (or origami) vs. getting a pre-built box (or origami) | Self-assembling increases WTP. This relationship is moderated by task incompleteness such that the effect is not found when the task is not completed.                                      |
| Roggeveen, Tsiros, & Grewal (2012) | Customer participation in service recovery: customer involvement in non-self-service tech settings or for failures that customer has not co-created. | Customer participation in service recovery:<br>Degree to which the customer is involved in taking actions to respond to a service failure.                               | Scenario-based manipulations:<br>No customer vs. customer participation in recovery.              | Co-creation increases equity which in turn enhances recovery satisfaction and repurchase intentions.  |
| Troye & Supphellen (2012)          | Using branded input product to create the end product (e.g., cooking a meal using dinner kit)  | Self-production:<br>Consumers use branded kits to produce outcomes for themselves, such as assembly of a chair from IKEA or preparation of soup using a Knorr soup base. | Task manipulations:<br>Self-production (no vs. low vs. high)                                      | Self-production leads to self-integration which in turn increases outcome evaluation. This relationship only holds for those who are interested in cooking and whose dish was satisfactory. |

*Appendix 2 (continued)*

| Reference        | Context                               | Conceptualization  | Operationalization  | Summary of Results |
|------------------|---------------------------------------|--|---|--------------------|
| Yi & Gong (2012) | Adopted from Chan, Yim, & Lam (2010). | Customer value co-creation behavior:<br>Required (in-role) behavior necessary for successful value co-creation<br>Customer citizenship behavior:<br>Voluntary (extra-role) behaviors that provides extraordinary value to the firm | Customer participation behavior:<br><i>1. Information seeking</i><br>a. I have asked others for information on what this service offers.<br>b. I have searched for information on where this service is located.<br>c. I have paid attention to how others behave to use this service well.<br><i>2. Information sharing</i><br>a. I clearly explained what I wanted the employee to do.<br>b. I gave the employee proper information.<br>c. I provided necessary information so that the employee could perform his duties.<br>d. I answered all the employee's service-related questions.<br><i>3. Responsible behavior</i><br>a. I performed all the tasks that are required.<br>b. I adequately completed all the expected behaviors.<br>c. I fulfilled responsibilities to the business.<br>d. I followed the employee's directives or orders.<br><i>4. Personal Interaction</i><br>a. I was friendly to the employee.<br>b. I was kind to the employee.<br>c. I was polite to the employee.<br>d. I was courteous to the employee.<br>e. I didn't act rudely to the employee. |                    |



*Appendix 2 (continued)*

| Reference                        | Context | Conceptualization | Operationalization  | Summary of Results   |
|----------------------------------|---------|-------------------|---|--|
| Yi & Gong<br>(2012)<br>continued |         |                   | <p>Customer citizenship behavior:</p> <p><i>1. Feedback</i></p> <p>a. If I have a useful idea on how to improve service, I let the employee know.</p> <p>b. When I receive good service from the employee, I comment about it.</p> <p>c. When I experience a problem, I let the employee know about it.</p> <p><i>2. Advocacy</i></p> <p>a. I said positive things about XYZ and the employee to others.</p> <p>b. I recommended XYZ and the employee to others.</p> <p>c. I encouraged friends and relatives to use XYZ.</p> <p><i>3. Helping</i></p> <p>a. I assist other customers if they need my help.</p> <p>b. I help other customers if they seem to have problems.</p> <p>c. I teach other customers to use the service correctly.</p> <p>d. I gave advice to other customers.</p> <p><i>4. Tolerance</i></p> <p>a. If service is not delivered as expected, I would be willing to put up with it.</p> <p>b. If the employee makes a mistake during service delivery, I would be willing to be patient.</p> <p>c. If I have to wait longer than I normally expected to receive the service, I would be willing to adapt.</p> | <p>Role clarity, ability, motivation encourages customer participation behavior and customer citizenship behavior and behavior which creates customer value.</p> |

*Appendix 2 (continued)*

| Reference                       | Context   | Conceptualization   | Operationalization   | Summary of Results   |
|---------------------------------|---|---|--|--|
| Yim, Chan, & Lam (2012)         | Adopted from Chan, Yim, & Lam (2010).               | Adopted from Chan, Yim, & Lam (2010).   | Same as Chan, Yim, & Lam (2010).   | Consumer participation increases satisfaction and repurchased intention. This relationship only holds when there is customer self-efficacy and perceived employee efficacy.  |
| Yoo, Arnold, & Frankwick (2012) | Patients' actions and resources input in a hospital | Customer participation: Actions and resources supplied by customers for service production or delivery. | <ol style="list-style-type: none"> <li>1. I need to exert a lot of energy to use this hospital.</li> <li>2. I need to be persistent to use this hospital.</li> <li>3. Too much intellectual effort is needed when using this hospital.</li> <li>4. The use of the hospital involves many steps and stages.</li> <li>5. I need to have prior knowledge of the hospital in order to understand how to use it.</li> <li>6. This is an easy hospital to use.</li> <li>7. I have searched for information on what this hospital offers.</li> <li>8. I have searched for information in how to use this hospital.</li> </ol> | Positive customer-to-customer interaction, customer role conflict, and customer role clarity affect customer participation which in turn influences service quality, satisfaction. Customer participation enhances service quality and satisfaction when there is interactional justice. |

*Appendix 3: Initial List of Items for Experiential Value and Engagement*

| Code                | Item  |
|---------------------|---|
| Psychological Value |   |
| Q10a                | I felt that my choices were based on my true interests and values.  |
| Q14a                | I felt free to do things my own ways.   |
| Q15a                | I felt that my choices expressed my “true self”.  |
| Q18a                | I had a say in what happened.   |
| Q21a                | I could voice my opinion.   |
| Q11c                | I felt that I was successfully completing difficult tasks.  |
| Q13c                | I felt that I was mastering hard challenges.  |
| Q19c                | I felt very capable.  |
| Q20c                | I felt like a competent person.   |
| Q12r                | I felt a sense of contact with other people.  |
| Q16r                | I felt close and connected with other people.   |
| Q17r                | I felt a strong sense of intimacy with other people.  |
| Q22r                | I felt a lot of closeness with other people.  |
| Hedonic Value       |   |
| Q38aff              | The experience was truly a joy.   |
| Q40aff              | Compared to other things I could have done, the time spent during this experience was truly enjoyable.          |
| Q36ent              | The experience was very entertaining.   |
| Q42ent              | The experience entertained me.  |
| Q44ent              | The enthusiasm of the environment was catching, it picked me up.  |
| Q35s                | The experience took place in an environment that was attractive.  |
| Q37s                | I felt that I was experiencing new sensations.  |
| Q39s                | The experience was aesthetically appealing.   |
| Q41s                | I felt that I had found new sources and types of stimulation for myself.  |
| Q43s                | The experience appealed to my senses (one or more of the five senses: touch, taste, smell, sight, and hearing). |
| Absorption          |   |
| Q26abs              | The experience got me away from everything else.  |
| Q29abs              | I got so involved that I forgot everything else.  |
| Q30abs              | I was immersed in the experience.   |
| Q32abs              | I lost track of time.   |
| Dedication          |   |
| Q25d                | I was focused during the experience.  |
| Q27d                | I was involved during the experience.   |
| Q28d                | I would be able to recall what happened.  |
| Q31d                | I was aware of what happened during the experience.   |

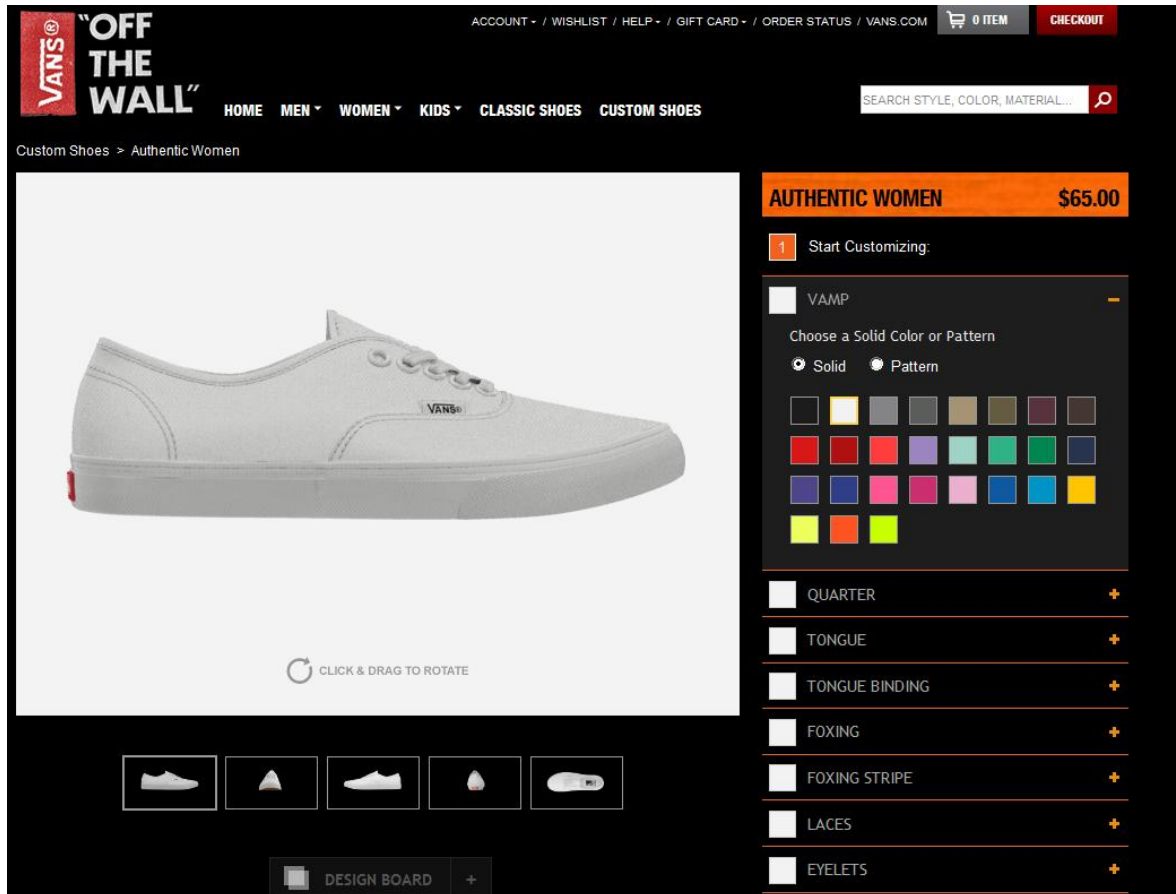
***Appendix 4: Final List of Items for the Experiential Value Scale***

| <b>Scale</b>  | <b>Item</b>  |
|---------------|--|
| Hedonic Value | <p>Compared to other things I could have done, the time spent during this experience was truly enjoyable. (Affect)</p> <p>The experience was very entertaining. (Entertainment)</p> <p>The experience entertained me. (Entertainment)</p> <p>I felt that I was experiencing new sensations. (Sensuous)</p> <p>The experience was aesthetically appealing. (Sensuous)</p> <p>The experience appealed to my senses (one or more of the five senses: touch, taste, smell, sight, and hearing). (Sensuous)</p> |

| <b>Scale</b>        | <b>Item</b>   |
|---------------------|---|
| Psychological Value | <p>I felt that my choices were based on my true interests and values. (Autonomy)</p> <p>I felt free to do things my own ways. (Autonomy)</p> <p>I felt that my choices expressed my “true self”. (Autonomy)</p> <p>I felt that I was successfully completing difficult tasks. (Competence)*</p> <p>I felt very capable. (Competence)</p> <p>I felt like a competent person. (Competence)</p> <p>I felt close and connected with other people. (Relatedness)</p> <p>I felt a strong sense of intimacy with other people. (Relatedness)</p> <p>I felt a lot of closeness with other people. (Relatedness)</p> |

\*Eliminated for consistently low factor loading

*Appendix 5: Vans Custom Made Shoes Design Palette (Study 3 and 4)*



### ***Appendix 6: Other Measures (Study 4)***

#### Avoidance of Similarity (Tian, Bearden, and Hunger 2001)

1. When products or brands I like become extremely popular, I lose interest in them.
2. I avoid products or brands that have already been accepted and purchased by the average consumer.
3. When a product I own becomes popular among the general population, I begin using it less.
4. I often try to avoid products or brands that I know are bought by the general population.
5. As a rule, I dislike products or brands that are customarily purchased by everyone.
6. I give up wearing fashions I've purchased once they become popular among the general public.
7. The more commonplace a product or brand is among the general population, the less interested I am in buying it.
8. Products don't seem to hold much value for me when they are purchased regularly by everyone.
9. When a style of clothing I own becomes too commonplace, I usually quit wearing it.

#### Self-Integration (Sivadas and Machleit 1994; Troye and Supphellen 2012)

1. I put a lot of myself into the task.
2. I felt creative when [designing the shoes].
3. I put my signature on the [shoes I designed].

#### Perceived product satisfaction (Homburg, Koschate, Hoyer 2005)

1. All in all, I am satisfied with my shoe design.
2. My shoe design will meet my expectations.
3. Overall, how satisfied are you with your shoe design?

#### Brand evaluation (Brakus, Schmitt, and Zarantonello 2009)

How would you rate this restaurant as a whole?

1. 1=Bad to 7=Good
2. 1=Unfavorable to 7=Favorable
3. 1=Dislikable to 7=Likeable

**Appendix 7: Pizza and Salad Menus (Study 5a)**

a) Custom-made Pizza Condition

**8" Personal Size**  
\$ 8.50

## Create Your Own Pizza!

Start by selecting a sauce and choose from over 25 toppings including premium meats and freshly sliced veggies. All of our pizzas include generous amounts of toppings, and our dough is hand tossed and made fresh daily.

Choose up to 5 toppings  
from any of our meat, veggies, cheeses & sauces selections

**TOPPINGS**

| <b>MEATS</b> | <b>VEGGIES</b> | <b>CHEESES<br/>&amp; SAUCES</b> |
|--------------|----------------|---------------------------------|
| Bacon        | Basil          | Cilantro                        |
| Chicken      | Garlic         | Green Onions                    |
| Ham          | Green Peppers  | Olives                          |
| Pepperoni    | Mushrooms      | Peanuts                         |
| Sausage      | Onions         | Fresh Tomatoes                  |
|              | Red Onions     | Sun Dried Tomatoes              |

b) Select Pizza Condition

**8" Personal Size**  
\$ 8.50

## Specialty Pizzas

|   |   |
|---|---|
| <p align="center"><b>Margherita</b></p> <p><i>Feta and mozzarella cheese, tomatoes, basil and garlic on an oil brushed crust</i></p>                | <p align="center"><b>The Italian</b></p> <p><i>Sun dried tomatoes, garlic, basil, mozzarella cheese and Parmesan on an oil brushed crust</i></p>  |
| <p align="center"><b>Famous Alfredo</b></p> <p><i>Alfredo sauce, mild Italian sausage, onion, basil, and mozzarella cheese</i></p>                  | <p align="center"><b>Thai Chicken</b></p> <p><i>Thai sauce, spicy chicken breast, peanuts, green bell peppers, green onions, garlic, cilantro and mozzarella cheese</i></p>                       |
| <p align="center"><b>BBQ Chicken</b></p> <p><i>Chicken breast covered in BBQ sauce, garlic, cilantro, red onions, and mozzarella cheese</i></p>     | <p align="center"><b>Spicy Buffalo Chicken</b></p> <p><i>Chicken breast in spicy buffalo sauce, mixed with bleu cheese and topped with garlic, cilantro, red onions and mozzarella cheese</i></p> |
| <p align="center"><b>Meat Lover's</b></p> <p><i>Our homemade pizza sauce, ham, bacon, mild Italian sausage, pepperoni and mozzarella cheese</i></p> | <p align="center"><b>Vegetarian</b></p> <p><i>Our homemade pizza sauce, mushrooms, olives, tomatoes, onions, green peppers, garlic, and mozzarella cheese</i></p>                                 |

*Appendix 7 (continued)*

a) Custom-made Salad Condition



**Salad** \$ 5.50

**Create your own salad**  
Select up to 4 items from any of the choices below:

**Greens**  
*Romaine lettuce      Baby spinach*

**Veggies & others**  
*Carrots      Cherry tomatoes*  
*Dry cranberries      Olives*  
*Red onion      Croutons*  
*Cucumbers      Mushroom*  
*Corn*

**Your choice of dressings:**  
Balsamic vinegar or  
Lemon & olive oil

b) Select Salad Condition



**Salad** \$ 5.50

**Caesar**  
*Romaine lettuce, Olives, Croutons*

**Garden**  
*Baby spinach, Carrots, Cherry tomatoes, Cucumbers*

**Greek**  
*Romaine lettuce, Red onion, Olives, Mushroom*

**House**  
*Baby spinach, Red onion, Dry cranberries, Corn*

**Your choice of dressings:**  
Balsamic vinegar or  
Lemon & olive oil



*Appendix 8: Unhealthy and Health Sandwiches Menus (Study 5b)*

a) Custom-made Unhealthy Sandwich Condition



b) Select Unhealthy Sandwich Condition



*Appendix 8 (continued)*

c) Custom-made Healthy Sandwich Condition

| Menu   |                                  |
|--|----------------------------------|
| Sandwiches Lunch Special \$ 6.95   |                                  |
| Create your own sandwich.<br>Select 3 items from the following options (1 meat and 2 other items). |                                  |
| Meat (choose 1)  |                                  |
| Roast beef   | Roasted chicken      Pulled pork |
| Vegetables & others (choose 2)   |                                  |
| Roasted onion  | Roasted green peppers            |
| Roasted mushrooms  | Lettuce                          |
| Your choice of white or brown bread.   |                                  |

d) Select Healthy Sandwich Condition

| Menu  |  |
|---|--|
| Sandwiches Lunch Special \$ 6.95                                    |  |
| Beef Sandwich<br>Roast beef, lettuce, roasted onion                 |  |
| Chicken Sandwich<br>Roasted chicken, lettuce, roasted green peppers |  |
| Pork Sandwich<br>Pulled pork, lettuce, roasted mushrooms            |  |
| Your choice of white or brown bread.                                |  |

***Appendix 9: Other Measures (Study 5)***

Taste perception (Brakus, Schmitt, and Zarantonello 2009)

How do you think the food you ordered would taste?

1. 1=Bad to 7=Good
2. 1=Unfavorable to 7=Favorable
3. 1=Not delicious to 7=Delicious)

Restaurant evaluation (Brakus, Schmitt, and Zarantonello 2009)

How would you rate this restaurant as a whole?

4. 1=Bad to 7=Good
5. 1=Unfavorable to 7=Favorable
6. 1=Dislikable to 7=Likeable

*Appendix 10: Sample Poster and Flyer (Study 6)*

a. Flyer

**WIN a \$100 cash voucher to SUMO!**

I am a graduate student at Cornell and I need your help with my graduation project! Please fill out an online survey about your experience at SUMO.

To access the survey:

Email me at [ekc55@cornell.edu](mailto:ekc55@cornell.edu) (Elisa) and use SUMO as the subject OR

Visit

<http://ekc554.wix.com/mysumo>

**WIN a \$100 cash voucher to SUMO!**

As a token of appreciation, you will be entered into a lucky draw after you completed the survey. Prizes include:

**Two winners for \$100 SUMO cash voucher each**

Multiple winners for \$20 SUMO cash voucher each



**THANK YOU FOR YOUR HELP!**



b. Poster

**WIN a \$100 cash voucher to SUMO**



I am a graduate student at Cornell and I need your help with my graduation project! Please fill out an online survey about your experience at SUMO.

**To access the SURVEY:**

**Email Elisa at [ekc55@cornell.edu](mailto:ekc55@cornell.edu) and use SUMO as the subject**

**OR**

**Visit <http://ekc554.wix.com/mysumo>**

As a token of appreciation, you will be entered into a lucky draw after you completed the survey. Prizes include:

**Two winners for \$100 SUMO cash voucher each**

Multiple winners for \$20 SUMO cash voucher

### *Appendix 11: Other Measures (Study 6)*

Service Quality (SERVQUAL; Parasuraman, Zeithaml, and Berry 1988)

#### Tangibles

1. X has up-to-date equipment.
2. The physical facilities of X are visually appealing.
3. The employees at X are well dressed and appear neat.
4. The appearance of physical facilities at X is in keeping with the type of services provided.

#### Reliability

1. When X promises to do something by a certain time, it does so.
2. When you have problems, X is sympathetic and reassuring.
3. X is dependable.
4. X provides its services at the time it promises to do so.

#### Responsiveness

1. X tells customers exactly when services will be performed.
2. You receive prompt service from X's employees.
3. The employees of X are always willing to help customers.
4. The employees of X respond to customer requests promptly.

#### Assurance

1. You can trust employees of X.
2. You feel safe in your transactions with X's employees.
3. The employees of X are polite.
4. The employees get adequate support from X to do their jobs well.

#### Empathy

1. X gives you individual attention.
2. Employees of X know what your needs are.
3. X has your best interests at heart.

*Appendix 11 (continued)*

Restaurant Satisfaction (Homburg, Koschate, and Hoyer 2006)

4. All in all, I am satisfied with X.
5. X meets my expectations.
6. Overall, how satisfied are you with your visit to X?

Revisit Intention (Maxham 2001)

1. The next time I eat out, I intend to go to X.
2. I will continue to visit X.
3. I have plans to re-visit X.

### *Appendix 12: Other Measures (Study 7)*

#### Game Quality (Brakus, Schmitt, and Zarantonello 2009)

Based on the performances of BOTH hockey teams during the game, how would you describe this hockey game?

1. 1=Bad to 7=Good
2. 1=Boring to 7=Exciting
3. 1=Not much action to 7=A lot of action

#### Game Satisfaction (Homburg, Koschate, Hoyer 2005)

1. I am satisfied with the game experience.
2. The quality of the game experience was good.
3. The game experience met my expectations.

#### Revisit Intention (Kim and Moon 2009)

1. Based on my experience this time, I would attend another men's hockey game.
2. Based on my experience this time, I would bring family/friends to attend a men's hockey game again.
3. Based on my experience this time, the men's hockey game would be my first choice over other Cornell sports games.

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