Jenni Sipilä

THE MANY FACES OF AMBIVALENCE IN THE DECISION-MAKING PROCESS

Thesis for the degree of Doctor of Science (Economics and Business Administration) to be presented with due permission for public examination and criticism in the Auditorium of the Student Union House at Lappeenranta University of Technology, Lappeenranta, Finland on the 20th of December, 2017, at noon.

Acta Universitatis
Lappeenrantaensis 782
Supervisors  Professor Sanna-Katriina Asikainen
LUT School of Business and Management
Lappeenranta University of Technology
Finland

Associate Professor Anssi Tarkiainen
LUT School of Business and Management
Lappeenranta University of Technology
Finland

Reviewers  Professor Jaakko Aspara
Department of Marketing
Hanken School of Economics
Finland

Associate Professor Lifeng Yang
School of Entrepreneurship and Management
ShanghaiTech University
China

Opponent  Assistant Professor Johanna Gummerus
Department of Marketing
Hanken School of Economics
Finland

ISBN 978-952-335-186-8
ISSN-L 1456-4491
ISSN 1456-4491

Lappeenrannan teknillinen yliopisto
Yliopistopaino 2017
Abstract

The many faces of ambivalence in the decision-making process
Jenni Sipilä
Lappeenranta 2017
109 pages.

Acta Universitatis Lappeenrantaensis 782
Diss. Lappeenranta University of Technology

ISSN-L 1456-4491, ISSN 1456-4491

This dissertation studies the role of psychological ambivalence in decision-making processes in the area of marketing. Ambivalence refers to the possession of both positive and negative evaluations toward the same object, and in addition to being prominent in our everyday lives, it receives continuing attention in the marketing literature. Yet, the concept of ambivalence remains unclear in the area of marketing. Furthermore, while consumers as well as organizational buyers often engage in decision-making processes, it is not understood how ambivalence occurs in these processes and subsequently influences their outcomes. This dissertation addresses these research gaps and hence aims to unveil the concept of ambivalence as well as its implications for marketing, predominantly from a process perspective.

Multiple methods are applied to meet this objective. The research begins with a systematic literature review and conceptual development of ambivalence, followed by a qualitative exploration, conducted with an innovative video diary method. The subsequent quantitative part includes two publications, in which the studies are respectively conducted through a multi-stage survey and a combination of facial recognition and clickstream data. Through this combination of different methods, the dissertation produces a rich understanding of the role of ambivalence in decision-making processes.

The results imply that ambivalence is a more multifaceted concept than the existing research suggests. In sum, the results show that the sources and consequences of ambivalence differ depending on the type of ambivalence in question, the stage of the decision-making process, and the information environment. The main contribution, therefore, lies in re-defining ambivalence in the domain of marketing, and in uncovering its role in the decision-making process. Because the consequences of ambivalence are predominantly negative from a marketing perspective, this dissertation produces managerial implications especially for ambivalence reduction. However, the predominantly negative discourse that has been underlying ambivalence research in marketing is also challenged through further research on the positive consequences of ambivalence from a marketing perspective.

Keywords: Ambivalence, consumer, marketing, attitudes, decision-making process
Acknowledgements

The fact that I am now writing my acknowledgements feels unreal after all my years of hard work on this dissertation. However, this is not only my personal accomplishment. Many people provided their support along the way, and this would not have been possible without all of you.

I would like to begin with a big thank you to my supervisors, Sanna-Katriina Asikainen and Anssi Tarkiainen, for their invaluable support. Sanna-Katriina, thank you for believing in me and giving me the opportunity to write this dissertation. Your advice and supervision significantly improved the quality of my dissertation and made me a better researcher, and for that I will always be grateful. Anssi, thank you for being both an excellent scientific mentor and a mental supporter. Our numerous discussions enabled me to learn important skills and have a lot of fun while working on the dissertation.

I would like to thank my pre-examiners Jaakko Aspara and Lifeng Yang. Your excellent guidance helped me make important final improvements to the dissertation, and gave me great ideas for future research. A big thank you also to Johanna Gummerus for taking the time to be my opponent.

This work would not have been possible without the support of multiple funders. Thank you Finnish Funding Agency for Innovation (Tekes), Tutkijat Maailmalle, KAUTE-säätiö, Emil Aaltosen Säätiö, and Liikesivistysrahasto.

Thank you also to Merilin Juronen, Sari Damstén, Terttu Hynynen, and Eva Kekki, for all the practical and administrative help that was crucial when preparing this dissertation and the defense day.

During my doctoral studies I had the honor of spending six months as a visiting scholar at the Scandinavian Consortium for Organizational Research (SCANCOR) at Stanford University. During those months, I learned a whole new way of looking at research and became convinced that I must continue on the academic path. Thank you Maude Enгрström, Mitchell L. Stevens, Sarah Soule, and all the SCANCOR scholars. You made the experience very special. A great thank you, S. Christian Wheeler, for providing me with invaluable feedback on my work. Thank you, Rebecca Piekkari, for your excellent guidance on qualitative methodology. Sonja Lähti, a special thank you for being such a good friend—our coffee breaks under the Californian sun brought a lot of joy to my days.

I have been honored to have great colleagues with whom to work. A big thank you to my friend and “academic big sister,” Kristiina Herold. You never stopped believing in me, and you were a brilliant co-author. Katariina, thank you for being there. I was lucky to have such a good friend with whom to share the dissertation journey. Päivi K. and Tommi, thank you for making my time at the office so enjoyable. The long days and nights at work would have been much harder without your company. Heini, thank you for being
such fun company at the office and on our trip to Great Britain. Joona, thank you for jumping off an airplane with me. Lasse, thank you for your encouragement in the beginning of my dissertation project. Päivi M.-K., thank you for taking care of me when I was at my weakest. Kirsimarja, thank you for always sharing positivity around you, and for our relaxing yoga moments. Hanna, thank you for being such great company on our trip to Brisbane. Maija, thank you for our numerous fun discussions in the coffee room. Henna, Aino, Maaren, and everyone else who was sharing the experience of writing a dissertation with me—thank you for the invaluable peer support.

Toward the end of the dissertation process, I had the honor to join the team of prof. Laura Marie Schons at the University of Mannheim. Laura, Inken, and Michael, thank you for welcoming me so warmly to Mannheim and for supporting me during the last months of the dissertation process. I am looking forward to our future academic and other adventures.

During the dissertation project, my family has been my backbone. Turo, you are a truly amazing person. You never complained when I spent my evenings and weekends working. You carried me through the everyday ups and downs and lived through the whole process with me. This has been very intense for both of us—thank you for staying by my side. Isi, äiti, Jussi, no matter what happens, I can always count on you. I am grateful for having such a special family who will always love and support me. Kerttu and Helga, my grandmothers, thank you for always believing in me. Kiitos.

Jenni Sipilä
December 2017
Mannheim, Germany
# Contents

Abstract
Acknowledgements

## List of publications

### 1 Introduction

1.1 Background .......................................................... 13
   1.1.1 Background in the psychological literature .................. 13
   1.1.2 Background in the marketing literature ..................... 15
   1.1.3 Alternative perspectives ...................................... 18
1.2 Research objectives ................................................ 19
   1.2.1 Research gaps addressed by the dissertation ............... 19
   1.2.2 Scope and objectives of the study ........................... 22
1.3 Structure .................................................................. 24
1.4 Definitions of the key concepts ................................... 25
   1.4.1 Ambivalence ..................................................... 25
   1.4.2 Different types of ambivalence ............................... 27
   1.4.3 Decision-making process ..................................... 28
1.5 Research contexts ................................................... 30
   1.5.1 Decision-making process in the context of product purchasing .31
   1.5.2 Decision-making process for choosing HE services ....... 31
   1.5.3 Decision-making process in the organizational context .... 32

### 2 Theoretical points of departure

2.1 The property of ambivalence in different evaluative concepts ...... 36
2.2 The objects of ambivalence ........................................ 37
2.3 Ambivalence in decision-making episodes .......................... 38
   2.3.1 Antecedents of ambivalence in the decision-making processes .38
   2.3.2 Consequences of ambivalence in the decision-making process . 41
   2.3.3 Summary .......................................................... 43

### 3 Research design and methods

3.1 Systematic literature review ........................................ 45
   3.1.1 Search and exclusion process .................................. 45
   3.1.2 Coding and analysis ........................................... 46
3.2 Video diaries .......................................................... 49
   3.2.1 Sampling .......................................................... 49
   3.2.2 Data collection ................................................... 50
   3.2.3 Coding and analysis ............................................ 51
   3.2.4 Quality of the research ........................................ 52
3.3 Two-stage survey .................................................................................... 54
  3.3.1 Sampling ......................................................................................... 54
  3.3.2 Data collection ................................................................................ 55
  3.3.3 Analysis ............................................................................................ 56
  3.3.4 Validity and reliability ................................................................. 57
3.4 Facial expression and clickstream data .................................................. 58
  3.4.1 Sampling ......................................................................................... 59
  3.4.2 Data collection ................................................................................ 59
  3.4.3 Analysis ............................................................................................ 60
  3.4.4 Validity and reliability ................................................................. 61

4 Summary of the publications and review of the findings 63
  4.1 Review of the findings ....................................................................... 63
  4.2 Publication I ....................................................................................... 65
  4.3 Publication II ...................................................................................... 66
  4.4 Publication III .................................................................................... 67
  4.5 Publication IV .................................................................................... 68

5 Conclusions 71
  5.1 Theoretical contributions .................................................................... 71
      5.1.1 An improved conceptualization of ambivalence ....................... 71
      5.1.2 Different types of ambivalence ................................................. 72
      5.1.3 Challenging the dominance of choice-stage ambivalence ....... 73
      5.1.4 The relationship between information and ambivalence ......... 73
      5.1.5 The consequences of ambivalence ......................................... 74
      5.1.6 Introducing ambivalence to organizational buying behavior .... 74
  5.2 Managerial implications ..................................................................... 75
      5.2.1 Implications for personal selling .............................................. 75
      5.2.2 Implications for marketing communication ............................. 76
      5.2.3 Implications for website design ................................................. 76
      5.2.4 Implications for the marketing of higher education services ..... 77
  5.3 Limitations and suggestions for further research ............................... 78

References 81

Appendix A. Survey scales used in the two-stage survey 97

Appendix B. Assumption testing for regression analyses, Publication III 101

Appendix C. Assumption testing for regression analysis, Publication IV 107
List of publications

This thesis contains material from the following papers. The rights have been granted by publishers to include the material in the dissertation.


Author's contribution

Jenni Sipiä was the first author in all papers. More detailed contributions of the author are listed below.

Publication I: The author was responsible for the development of the research plan, collecting and analyzing the data, and writing most of the manuscript.

Publication II: The author was responsible for the development of the research plan, collecting and analyzing the data, and writing the manuscript.

Publication III: The author was mainly responsible for developing the theoretical framework of the study, mostly responsible for analyzing the data, and wrote most of the manuscript.

Publication IV: The author was mainly responsible for the development of the research plan and theoretical framework and collecting data, partly responsible for analyzing the data, and wrote most of the manuscript.
1 Introduction

We tend to think of issues in dichotomous or bipolar terms, such as good versus evil, or pros versus cons (Thompson et al., 1995). From this perspective, it appears improbable that someone could evaluate an object both positively and negatively (Thompson et al., 1995). However, in reality, we are often ambivalent—that is, we have both positive and negative evaluations of the same object. Ambivalence is commonplace in various situations. For example, we might feel guilt and pleasure over unsustainable purchase decisions, we might love and hate the same brand, or we might think that a car is very stylish but also has poor fuel efficiency. In fact, ambivalence is clearly salient in the marketplace (Otnes et al., 1997), and not having both positive and negative evaluations of an object might be rather rare (Fazio, 2007). Furthermore, decision-making usually involves multiple, conflicting attributes and goals (Ramanathan and Williams, 2007), and accordingly, ambivalence is prominent in our decision-making (Pfister and Böhm, 2008). This may be the case especially given the increasing amount of two-sided information in the modern information environment (van Harreveld et al., 2012). For example, making sustainable consumption decisions is difficult because many global brands communicate about extensive corporate social responsibility (CSR) programs while the mass media simultaneously communicates about their unethical practices. Looking at daily consumption, even simple grocery shopping is laden with mixed considerations about the healthiness, ethicalness, trendiness, and price of foods and drinks.

In addition to being prevalent, ambivalence is an important and relevant concept in marketing due to its implications. It influences marketing-related outcomes, such as buying intentions (e.g., Sparks et al., 2001; Povey et al., 2001; Berndsen and van der Pligt 2004; Costarelli and Colloca, 2004; Penz and Hogg, 2011), satisfaction, and loyalty (Olsen et al., 2005). Furthermore, it can result in a concrete loss of sales and customer patronage (Otnes et al., 1997). Particularly at the time of choice, it also arouses feelings of discomfort in individuals (Aaker et al., 2008), increases choice-making difficulty (van Harreveld et al., 2009), and may result in delayed choices or residual doubt after choices (Jewell et al., 2002). Taking ambivalence into consideration is also important from a conceptual perspective, because a sole focus on univalent (i.e., either positive or negative) evaluations makes it impossible to know what it means when an individual does not have a strong positive or negative evaluation. In such a case, the individual could be either indifferent (neither positive nor negative), or ambivalent (both positive and negative) (Kaplan, 1972). This is an important source of conceptual vagueness, which is problematic because empirical research cannot be adequately conducted and evaluated when concepts are vague (Strunz, 2012). By pointing out this problem, Kaplan (1972) directed increasing research attention toward ambivalence in the fields of psychology (e.g., Cacioppo and Berntson, 1994; Thompson et al., 1995; Priester and Petty, 1996; Cacioppo et al., 1997; DeMarree et al., 2017), and subsequently marketing (e.g., Jewell et al., 2002; Olsen et al., 2005; Olsen et al., 2009; Chang, 2011; Russell et al., 2011; Moody et al., 2014).
Despite its importance, it is still not clear what ambivalence actually is. The existing definitions of ambivalence are sometimes vague (Sipilä et al., 2017b), meaning that ambivalence has been given multiple meanings (Strunz, 2012), and its boundaries have not been clearly specified (Hampton, 2007). For example, the existing definitions of ambivalence use the word simultaneous (e.g., “ambivalence is a state of having simultaneous positive and negative feelings or cognitions”; Tudoran et al, 2012, p. 393) without specifying what they mean by simultaneity. It is consequently difficult to determine whether a positive evaluation and a negative evaluation can be called ambivalence if they occur, for example, within a range of one minute from each other, but not completely simultaneously, which poses challenges to empirical research on ambivalence (Sipilä et al., 2017b). Second, ambivalence is sometimes defined only through its antecedents, without actually specifying what ambivalence is (Sipilä et al., 2017b). This poses challenges to empirical research around ambivalence, as the relationships between ambivalence and its antecedents cannot be empirically tested if the relationships are already specified in the definition of the concept (MacKenzie, 2003). Third, perhaps because ambivalence as a concept lacks clearly defined boundaries, it has been used interchangeably with other concepts (Sipilä et al., 2017b), especially the concept of mixed emotions (e.g., Hogg and Penz, 2007). This, in turn, makes it impossible to distinguish the relationship between the two concepts, and consequently poses a challenge to empirical research around both ambivalence and mixed emotions. Finally, the existing definitions of ambivalence do not always follow the etymological meaning of the term ambivalence (i.e., “both valences”) (Sipilä et al., 2017b). This is problematic because without a shared understanding of the etymological meaning of words, it is not possible to arrive at a consensus about their use (Keil, 2004).

Before conducting empirical research on any concept, the concept must be clearly defined. Therefore, in this dissertation, the aforementioned conceptual issues in the existing definitions are addressed through the development of an improved conceptualization of ambivalence. The conceptualization consists of three premises, which are developed and elaborated on throughout the dissertation: 1) Ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned. 2) Ambivalence has one clearly-specified object, 3) Ambivalence occurs in decision-making episodes (Sipilä et al., 2017b). Through the premises, research gaps are observed at the intersection of ambivalence and decision-making literature. These gaps are related to different types of ambivalence (i.e., cognitive, affective, and intercomponent), the multifaceted aspects of different ambivalence objects (i.e., utilitarian, hedonic, and symbolic), and the role of ambivalence in different stages of the decision-making process. These gaps are addressed through empirical research in this dissertation.

1 Please note that in the article of Sipilä et al., (2017b), the conceptualization is developed specifically for a consumer researcher audience, and therefore the original conceptualization states, “Consumer ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned; it occurs toward one clearly specified object during a consumption episode and within the internal and socio-cultural contexts of consumption.” In this dissertation, however, both consumer and organizational decision-making are studied, and therefore the consumer-related words are not included in the conceptualization.
dissertation. Furthermore, the premises are applied in the empirical studies of this dissertation, which lends preliminary support for their usefulness.

As a result of the conceptual and empirical work, this dissertation contributes to the literature on ambivalence and decision-making within the field of marketing in multiple respects. Through the improved conceptualization of ambivalence, it becomes possible for future research to generate more accurate empirical findings around ambivalence. The scope of ambivalence research is broadened through the proposition that ambivalence applies to any evaluative concept, which enables ambivalence to be studied on a large scale; this is beneficial due to the prominence of ambivalence (Fazio, 2007). Additionally, by specifying the temporal scope of ambivalence, it becomes possible to more accurately study ambivalence in decision-making processes, and novel, relevant antecedents of ambivalence (such as different types of information varying on their level of abstractness) are accordingly examined in this dissertation. In the conceptualization process, the importance of the ambivalence object is also emphasized, and the relationship between ambivalence and its objects is also empirically explored in this dissertation. Furthermore, this dissertation provides managerial implications in terms of how marketers might be able to either prevent or reduce ambivalence at the right moments, and therefore guide customers toward choosing their product or service while experiencing less discomfort during the decision-making process.

1.1 Background

In this section, the theoretical background of the dissertation is outlined. First, it is explained how the dissertation is based on the literature at the intersections of on the one hand marketing and psychology, and on the other hand ambivalence and decision-making literature. Next, alternative perspectives are discussed, and it is outlined why they were not adopted in this dissertation.

1.1.1 Background in the psychological literature

Research in marketing is strongly influenced by psychology, where both ambivalence and decision-making have longer research traditions. The operationalizations and conceptualizations of ambivalence used in research in marketing are largely based on the psychological literature (e.g., Kaplan, 1972; Thompson et al., 1995; Priester and Petty, 1996). Within this area, Eugen Bleuler formally introduced the concept of ambivalence in 1911 in his work on schizophrenia (Otnes et al., 1997). Subsequently, Kaplan (1972) wrote a seminal paper on the measurement of ambivalence, and Thompson et al. (1995) developed the concept and the operationalization of ambivalence further. As a central part
of their work, Thompson et al. (1995) created the “Griffin measure” of ambivalence, which is applied widely in both psychology and marketing research (e.g., Thompson and Zanna, 1995; Armitage and Conner, 2000; Conner et al., 2002; Sengupta and Johar, 2002; Williams and Aaker, 2002; Olsen et al., 2005), and thus also serves as the operationalization of ambivalence in this dissertation.

In the psychological literature, ambivalence has been seen as a component of attitude strength, which implies that ambivalent attitudes are weaker than univalent attitudes (Krosnick and Petty, 1995). Therefore, ambivalent attitudes should be less durable (Tormala and DeSensi, 2008), less resistant to persuasion, and have less impact on information processing than univalent attitudes (Krosnick and Petty, 1995). Furthermore, they should be less accessible in memory, less extreme, and held with less confidence than univalent attitudes (Olsen et al., 2005). Ambivalent attitudes should also have less impact on behavior than univalent attitudes (Krosnick and Petty, 1995; Glasman and Albarracín, 2006). However, the attitude strength approach to ambivalence has been criticized because ambivalent attitudes may in fact be quite strong predictors of coping behavior (van Harreveld et al., 2012) and therefore cannot be labeled as weak based on this criterion. Furthermore, it has been argued that ambivalent attitudes are more pliable and less stable because individuals want to change their attitudes to reduce discomfort, not because their attitudes are weak (van Harreveld et al., 2012). Addressing this ongoing discussion of ambivalence as a component of attitude strength is not in the scope of the present dissertation, and both approaches are therefore given equal attention.

Ambivalence research in psychology has studied the antecedents, consequences, and moderators (e.g., Thompson and Zanna, 1995; Jonas et al., 1997; Armitage and Conner, 2000; Sparks et al., 2001) of ambivalence on a more general level than research in marketing. A basic procedure to elicit ambivalence in psychological research is providing conflicting information about an attitude object (e.g., Jonas et al., 1997; Nordgren et al., 2006; Reich and Wheeler, 2016; Itzhakov and van Harreveld, 2018), which implies that inconsistent information is a central antecedent of ambivalence. Research into individual differences reveals that individuals with a high need for cognition (NFC) are generally less ambivalent, whereas individuals high in the personal fear of invalidity (PFI) are more ambivalent in comparison to low NFC and low PFI individuals, respectively (Thompson and Zanna, 1995). Regarding the consequences, ambivalence has been found to correlate negatively with readiness for action and positively with avoidance tendencies (Hänze, 2001). In addition, more ambivalent individuals are less certain about the positive outcomes of a behavior (such as exercise) than their less ambivalent counterparts (Sparks et al., 2004). Finally, ambivalence has been associated with a weaker relationship between attitudes and behavior (Armitage and Conner, 2000), but also with increased attitude-behavior consistency (Jonas et al., 1997).

In the psychological decision-making literature, different decision-making subprocesses have been studied (Einhorn and Hogarth, 1981). This literature reveals that the subprocesses interact and their interaction is an important part of decision-making (Einhorn and Hogarth, 1981). This literature influences how the different stages of the
decision-making process are conceptualized in this dissertation; they are seen as interrelated rather than isolated from each other. While studying these interrelationships, this dissertation applies construal level theory (CLT) from the psychological literature. CLT is considered an appropriate theoretical basis because the temporal distance from an event, such as a choice, has a considerable effect on decision-making (Ariely and Zakay, 2001), and CLT suggests that objects are evaluated differently at different points in time (Trope et al., 2007). Therefore, CLT sheds light on the antecedents and consequences of ambivalence within and across different stages of the decision-making process.

Finally, at the intersection of decision-making and ambivalence literature, some advancements have been made on the role of ambivalence in decision-making (van Harreveld et al., 2009; van Harreveld et al., 2012). Arising from this background, the model of ambivalence-induced discomfort (MAID) is applied in this dissertation. The MAID is based on theories of decision-making under conflict, namely balance theory and cognitive dissonance theory. Cognitive dissonance theory assumes that individuals tend to strive for consistency because dissonance is uncomfortable (Festinger, 1962). Similarly, in Fritz Heider’s balance theory, striving for cognitive balance is an important theme (Deutsch, 1968). A balanced state exists if positive or negative attitudes toward the same entity go together (Deutsch, 1968). When an individual’s cognitive structure is in imbalance, a change tends to occur, which brings the structure back into a balanced state (Deutsch, 1968). Together, these theories suggest that individuals seek psychological balance or equilibrium, the implication being that in the case of ambivalence, an individual will try to resolve it. The MAID suggests that individuals usually feel uncomfortable when faced with ambivalence and will thus try to resolve it using different coping mechanisms (van Harreveld et al., 2009).

1.1.2 Background in the marketing literature

The research area of this dissertation is marketing and its sub-disciplines, consumer research and organizational or B2B buying behavior. This dissertation makes its main contribution to research in these areas. More specifically, within these streams of literature, this dissertation focuses on the conceptualization of ambivalence and its role in decision-making processes (right side in Figure 1). Most of the existing marketing literature around ambivalence occurs in the area of consumer research, whereas in the organizational buying behavior literature, ambivalence is a virtually nonexistent concept. A specific conceptualization of ambivalence has been developed for consumer research (Otnes et al., 1997), which serves as one basis on which the conceptual understanding of ambivalence is built in this dissertation. According to this conceptualization, consumer ambivalence is “the simultaneous or sequential experience of multiple emotional states, as a result of the interaction between internal factors and external objects, people, institutions, and/or cultural phenomena in market oriented contexts that can have direct and/or indirect ramifications on pre-purchase, purchase or post-purchase attitudes and behavior” (Otnes et al., 1997, p. 82–83). This conceptualization offers a solid
understanding of ambivalence in terms of its antecedents ("interaction between internal factors and external objects people, institutions, and/or cultural phenomena"), but later in this dissertation, it is argued that the core of this definition ("the simultaneous or sequential experience of multiple emotional states") has important shortcomings, which need to be addressed to develop a more coherent understanding of ambivalence in marketing (Sipilä et al., 2017b).

The studies of ambivalence in research in marketing provide a rich understanding of the antecedents and consequences of ambivalence, focusing on the domain of consumption (e.g., Otnes et al., 1997; Nowlis et al., 2002; Nelson and Otnes, 2005; Zemborain and Johar, 2007; Chang, 2011; Penz and Hogg, 2011; Bush et al., 2015; Yang and Unnava, 2016a,b). The antecedents studied in previous research include unmet product or retailer expectations, product or task overload (Otnes et al., 1997), simultaneous positive and negative perceptions of salespeople (Bush et al., 2015), and simultaneous trust and distrust towards an online seller (Moody et al., 2014). Antecedents have also been studied on the socio-cultural level of consumption. On this level, ambivalence may arise from role conflicts (Otnes et al., 1997) or conflicts between different cultural values (Nelson and Otnes, 2005). Studies have also focused on personality traits, which can increase one’s susceptibility to ambivalence. For example, skepticism toward green marketing increases ambivalence toward green products and toward buying green products (Chang, 2011).

On the consequence side, previous research in marketing has found mainly negative consequences of ambivalence. These results have been found in the cases of the intention to consume chocolate (negative but insignificant influence) (Sparks et al., 2001), the intention to consume meat (negative and significant influence) (Sparks et al., 2001; Povey et al., 2001; Berndsen and van der Pligt 2004), the intention to behave in an environmentally-friendly way (Costarelli and Colloca, 2004), as well as purchase intentions (Penz and Hogg, 2011). Few studies have examined ambivalence from a positive perspective in the marketing literature, with the notable exception of Celsi et al., (1993), who proposed that consumers may sometimes seek ambivalence-arousing experiences, such as skydiving. Research in marketing has also discussed how consumers address ambivalence, and thereby provides additional understanding of what “tips the balance” of ambivalent evaluations toward positivity or negativity. For example, consumers with ambivalence use univalent information to turn their attitudes toward one direction (Bush et al., 2015). In a similar vein, ambivalent consumers show a negativity bias in their search for information, if it helps them to reduce ambivalence (Yang and Unnava, 2016a), and are more susceptible to implicit priming of the positive or the negative evaluations, which further influences their choices (Yang and Unnava, 2016b).

In the literature of decision-making within the field of marketing, previous studies have formed an understanding of the different stages of the decision-making process and examined how decision-making unfolds through these stages (e.g., Bettman and Park, 1980; Jewell et al., 2002; Puccinelli et al., 2009). At the intersection of decision-making and ambivalence literature within the field of marketing, a few studies have examined the
antecedents and consequences of ambivalence in different time points. For example, it has been proposed that memories of prior experiences, as well as new attitudes arising during the decision-making process can influence ambivalence (Penz and Hogg, 2011). Furthermore, ambivalence has been studied in prospective consumption situations, in which the consumer does not know the outcomes of the purchase at the time of purchase (Bee and Madrigal, 2013). In such situations, evaluating some aspects of the future outcome positively and others negatively may lead to anticipatory ambivalence, which in turn has a negative influence on prospective consumption attitudes and intentions (Bee and Madrigal, 2013). Additionally, one recent study addresses how the timing of information influences the purchase intentions of ambivalent consumers. The study suggests that ambivalence toward a salesperson can be reduced by providing positive information about the salesperson after the initial contact with him/her (Bush et al., 2015). Furthermore, when consumers with ambivalence receive positive information about a salesperson during their interaction with the salesperson, their purchase intentions in fact decrease (presumably because consumer become suspicious of the positive information), whereas if they receive the positive information after the interaction, their purchase intentions increase as a result (Bush et al., 2015).

Previous studies have also discussed ambivalence during two sub-decisions in the context of product replacement, namely the decision to retain an old possession and the decision to acquire a new possession (Roster and Richins, 2009). The findings indicated that when a consumer makes a replacement decision under ambivalence, he or she is more likely to experience negative affect about the decision post-purchase (Roster and Richins, 2009), thus providing some insight on ambivalence in different stages of the decision-making process. In addition, it has been proposed that in the judgment stage, which corresponds roughly with the information search stage discussed in section 1.4.3, the decision-maker forms an overall evaluation of each alternative (Jewell et al., 2002). Furthermore, in the judgment stage, ambivalence is not coped with, as the need to cope is a function of the temporal proximity of the choice (Jewell et al., 2002). According to this framework, in the choice stage, which corresponds roughly with the evaluation and decision stages discussed in section 1.4.3, the decision-maker resolves ambivalence and chooses the best alternative among multiple options (Jewell et al., 2002). However, the specific antecedents and consequences of ambivalence in each stage are not elaborated on in detail in the study of Jewell et al. (2002). These advancements in consumer research indicate that various temporal aspects might come into play when ambivalence is studied in different stages of the decision-making process. However, these studies have discussed only a subset of the stages, and not the complete process. The discussion thus far is visualized in the right panel of Figure 1.
In sum, the present dissertation is positioned at the intersection of the ambivalence and decision-making literature within the field of marketing, as visualized in Figure 1. These lines of literature are based on the ambivalence and decision-making literature in psychology (as visualized by arrows in Figure 1), which is also applied in this dissertation. Figure 1 visualizes the positioning of the dissertation within the existing literature.

1.1.3 Alternative perspectives

When the choice was made to build this dissertation on the background outlined earlier, other potential perspectives had to be excluded. Within the field of marketing, the decision was made to build on the literature of consumer psychology and apply that literature to organizational decision-making as well. Consumer research, however, also involves a stream called consumer culture theory (CCT) (Deighton et al., 2010). Consumer psychology research focuses on the individual consumer, while CCT focuses more on the “sociocultural, experiential, symbolic, and ideological aspects of consumption” (Arnould and Thompson, 2005, p. 868). The CCT understanding of ambivalence is influenced not only by psychology, but also by sociology, where ambivalence refers to “incompatible normative expectations of attitudes, beliefs, and behavior assigned to a status (i.e., a social position) or to a set of statuses in the society” (Merton and Barber 1976, p. 6). More narrowly, it refers to “incompatible normative
expectations incorporated in a single role or a single social status” (Merton and Barber 1976, p. 6). Therefore, psychological and sociological ambivalence represent different levels of analysis: sociological ambivalence represents the social structural level of consumption, while psychological ambivalence represents the individual level (VOICE Group 2010). Thus, psychological ambivalence is a more adequate approach when ambivalence is studied at the individual level, such as in this dissertation. The importance of the CCT understanding of ambivalence is not ignored, however, and in the conceptualization process (Publication I), CCT literature is applied to generate an understanding of the socio-cultural context of ambivalence. However, the main body of work in this dissertation is done at the individual level.

1.2 Research objectives

In the following section, the research gaps of the dissertation are outlined. The gaps are related to both the conceptualization of ambivalence as well as its role in the decision-making process. The gaps serve as the basis for the objectives and research questions of the dissertation, which are consequently presented and discussed.

1.2.1 Research gaps addressed by the dissertation

While ambivalence has been studied increasingly in marketing, it remains unclear what ambivalence actually is (Sipilä et al., 2017b). While a prior in-depth conceptualization of ambivalence in the field of marketing exists (Ottes et al., 1997), research in marketing has advanced remarkably since the publication of Ottes et al.’s (1997) work. Consequently, the conceptualization of Ottes et al. (1997) does not fully accommodate the research questions and methodological approaches pertaining to today’s research in marketing (Sipilä et al., 2017b). Accordingly, most ambivalence studies in marketing draw their definitions directly from psychology or sociology and adapt them to research in marketing as they deem suitable (Sipilä et al., 2017b). Thus, the concept of ambivalence has become ambiguous (Sipilä et al., 2017b), which is problematic because scientific progress depends on precise definitions (Teas and Palan, 1997). Against this background, the first research gap addressed in this dissertation concerns the improved conceptualization of ambivalence in the field of marketing. To address this broad research gap, an extensive conceptualization of ambivalence is developed. The conceptualization consists of the development of three key premises, all of which further lead to more specific research gaps. This logic is visualized in Figure 2, and the remaining research gaps are outlined next.
Introduction

Figure 2. Research gaps derived from the conceptualization of ambivalence

The first premise developed in this dissertation toward an improved conceptualization of ambivalence states that ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned (Sipilä et al., 2017b). This implies that ambivalence comes in many types, such as affective ambivalence (both positive and negative emotions or feelings toward an object) and cognitive ambivalence (both positive and negative thoughts toward an object). These different types of ambivalence can be related to different objects (Conner and Sparks, 2002; Mucchi-Faina et al., 2009) and have different consequences (Costarelli and Colloca, 2004; Pacilli et al., 2013). Therefore, it is necessary to study different types of ambivalence separately, rather than seeing ambivalence as one, unified concept (Sipilä et al., 2017c). Yet, in the existing marketing literature, there is very little comparison about the role of different types of ambivalence in decision-making. Consequently, there have been calls for research on different types of ambivalence in research in marketing (Williams and Aaker, 2002; Taylor, 2009; Penz and Hogg, 2011), also specifically in the decision-making process (Jewell et al., 2002). Hence, instead of studying general attitudinal ambivalence, this dissertation opens up the ambivalence concept and studies its varying types (i.e., cognitive, affective, and intercomponent) in the decision-making process.

The second premise developed in the conceptualization process states that ambivalence has one clearly specified object (Sipilä et al., 2017b). It is important to specify the object of ambivalence, as the object has implications for the types of ambivalence one is expected to find (Conner and Sparks, 2002). However, a stronger focus on the objects of ambivalence brings about new unresolved questions in ambivalence research. First, an analysis of the objects of ambivalence studied in the existing marketing literature reveals that studies focusing on different types of ambivalence have also focused on different
types of objects. CCT studies have been more interested in high-level objects such as morality (Wicks et al., 2007), gender (Goulding and Saren, 2009), political issues (Keller, 2005), and rituals (McKechnie and Tynan, 2008); mixed emotions researchers have paid attention to experiences (McGraw and Larsen, 2008), advertising (e.g., Lau-Gesk and Kramer, 2005; Hong and Lee, 2010; Hung and Mukhopadhyay, 2012), and wedding planning (Otnes et al., 1997); and attitudinal ambivalence researchers have studied ambivalence toward products (Chang, 2011; Tudoran et al., 2012), companies (Moody et al., 2014), brands (Forehand et al., 2007), and countries-of-origin (Russell et al., 2011) (more examples in Publication I, Table 5). Yet, empirical evidence is lacking about whether these differences are coincidental, or whether some objects are systematically related to different types of ambivalence (Sipilä et al., 2017b). Furthermore, the objects are often multifaceted, meaning that they involve utilitarian, hedonic, and symbolic aspects. The different aspects, in turn, are related to different types of evaluations. For example, evaluations of the utilitarian aspects of objects, such as their usefulness, are predominantly cognitive (Spangenberg et al., 1997). However, it remains unclear how these different facets of consumption objects relate to different types of ambivalence. These are important questions because different types of ambivalence have different implications on behavior (Costarelli and Colloca, 2004; Pacilli et al., 2013), and therefore it is theoretically as well as managerially relevant to gain an improved understanding of the circumstances under which different types of ambivalence take place. This dissertation addresses this gap by studying how different types of ambivalence (i.e., cognitive, affective, and intercomponent) are based on the evaluations of different ambivalence objects and their varying aspects (i.e., utilitarian, hedonic, and symbolic aspects).

In a next step of the conceptualization process, the temporal scope of ambivalence is elaborated on. The third premise states that ambivalence occurs in decision-making episodes and therefore defines the temporal boundaries of ambivalence (Sipilä et al., 2017b). This is important because positive and negative evaluations toward an object can occur both simultaneously and sequentially (Otnes et al., 1997). Therefore, it is necessary to define which positive and negative evaluations temporally belong to the same ambivalence. In this dissertation, the temporal boundaries of ambivalence are defined in line with the stages of a decision-making process (see section 1.4.3). Consequently, it becomes possible to systematically examine the role of ambivalence in different stages of the decision-making process. When buyers make important purchase decisions, they go through a multi-stage decision-making process, during which information is searched, and a number of objects and their features are evaluated (Puccinelli et al., 2009). Furthermore, in some cases, such as higher education decision-making, the decision-making process involves connected but separate sub-decisions, such as whether to apply to an institution and whether to actually begin studies in that institution in case of acceptance. In such cases, the consideration of both sub-decisions leads to a better understanding of decision-making than studying only one of the decisions (Roster and Richins, 2009).
Yet, as was outlined in the previous section, the role of ambivalence in decision-making has mainly been studied only at one point in time, and the earlier stages of the decision-making process are not as well understood as the choice stage in decision-making research (Ariely and Zakay, 2001), or in ambivalence research. This is problematic because the stages of a decision-making process involve different goals, activities, and situational conditions, and consequently, what is true in one stage may not apply in another stage. For example, information-processing models of decision-making delineate the role of information processing in each stage of the decision-making process (Jewell et al., 2002). While the actual choice takes place in the final stage of this process, the previous decision-making stages (i.e., need recognition, information search, and evaluation) can define the fate of the decision long before the choice stage (Ariely and Zakay, 2001), and ambivalence has the potential to influence how a decision-making process is carried out (Roster and Richins, 2009). Thus, understanding what triggers ambivalence and how it is resolved as decision-makers move through the stages of a decision-making process is important because these questions can have direct behavioral implications (Otnes et al., 1997). Thereby, this dissertation responds to the calls for supplementing recognized models of the decision-making process with ambivalence (Jewell et al., 2002; Taylor, 2009; Penz and Hogg, 2011). This is done across different stages as well as within a single stage of the decision-making process.

1.2.2 Scope and objectives of the study

Against the background discussed thus far, this dissertation has the following specific objectives:

1. To develop an improved conceptualization of ambivalence.
2. To study the role of different types of ambivalence, occurring toward various multifaceted objects, in the decision-making process.
3. To study the role of ambivalence in different stages of the decision-making process.

Consequently, the dissertation addresses the following main research question: What is ambivalence, and what role does it play in the decision-making process? The main research question is answered through more specific sub-questions, which address the research gaps outlined in the previous section. To answer the main research question, it is necessary to first define ambivalence. Hence, the first sub-question is related to the concept of ambivalence, which was outlined as an important research gap. The first sub-question is as follows:

RQ1: What is ambivalence?
After understanding what ambivalence is, the concept is studied on a more detailed level at the intersection of ambivalence and decision-making literature, and the central premises that are developed for the conceptualization of ambivalence are applied in empirical studies. The second research question addresses the roles of different types of ambivalence in decision-making. As was outlined in the previous section, the existing research provides evidence that different types of ambivalence can be related to different objects (Conner and Sparks, 2002; Mucchi-Faina et al., 2009) and have different behavioral consequences (Costarelli and Colloca, 2004; Pacilli et al., 2013). Yet, ambivalence and decision-making studies in marketing have not taken these differences into account, and these different types of ambivalence have essentially been included into the existing models as error variance. In this dissertation, it is argued that such an approach leaves out important aspects of decision-making. While addressing this second research question, the first two premises of the conceptualization of ambivalence ([ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned and ambivalence has one clearly specified object; Sipilä et al., 2017b]) are also applied empirically. This provides the first test of the suitability of the conceptualization to empirical research. Hence, the second research question is as follows:

RQ2: What are the roles and objects of different types of ambivalence (i.e., cognitive, affective, and intercomponent) in the decision-making process?

The third research question is related to ambivalence in different stages of the decision-making process. As was outlined in the previous section, the role of ambivalence in decision-making has mainly been studied only at one point in time. Yet, buyers’ decision-making often takes place in processes (Puccinelli et al., 2009). Therefore, this dissertation takes a deeper look into the antecedents and consequences of different types of ambivalence throughout the decision-making process, which enables an improved understanding of not only the amount of ambivalence, but also the reasons behind its development in the process. During the decision-making process, buyers search for 1) different types of information 2) about multiple products and their attributes. Section 2 outlines how these two aspects are expected to have varying influences on different types of ambivalence, and in different stages of the decision-making process. Ambivalence, in turn, is expected to have varying consequences depending on its type and the stage in the decision-making process, as outlined in section 2. Hence, the third research question is as follows:

RQ3: What are the antecedents and consequences of ambivalence in different stages of the decision-making process?

The research questions are broad, and this dissertation will address them conceptually and empirically. On the conceptual front, this dissertation develops tools that enable these research questions to be addressed, not only in this dissertation, but also in future research. In Publication I, a conceptualization of ambivalence is developed, which enables more precise research to be done on different types of ambivalence in different time points. In
Publication II, propositions are developed based on a qualitative study, which also provide a conceptual basis for addressing the research questions. On the empirical front, this dissertation will begin to shed light on the role of ambivalence in consumer and organizational decision-making processes by taking a “snapshot” of different kinds of decision-making processes and studying the antecedents and consequences of ambivalence in those processes. A number of contexts, antecedents, and consequences are chosen, which enable different types of ambivalence and the time-related aspects of ambivalence to be studied. Thereby, this dissertation will serve as a fruitful starting point toward achieving an understanding of ambivalence in the decision-making process.

1.3 Structure

Against the background discussed thus far, the remainder of the introduction is organized as follows. The key concepts of the dissertation will be defined and discussed, and the contexts of the dissertation, namely decision-making processes of high-involvement products and services, will be described. This serves as the basis for the theoretical background of the dissertation, which will be discussed thereafter, including a synthesis of prior literature around ambivalence and decision-making. In the following chapter, the research methods, namely, a systematic literature review, video diaries, longitudinal surveys, and the combination of eye tracking and clickstream analysis are discussed, including the assessment of the validity, reliability, and credibility of the results. The fourth chapter presents the specific objectives and main contributions of each publication, and in the final chapter, the contributions, managerial implications, limitations, and the resultant future research directions of this dissertation are discussed. Table 1 provides an overview of the publications included in the dissertation, with the specific sub-questions and objectives they aim to address, as well as the research method and data used for each publication.
Table 1. Overview of the publications

<table>
<thead>
<tr>
<th>Research question*</th>
<th>Title of publication</th>
<th>Objectives</th>
<th>Research method and data</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1</td>
<td>Toward an improved conceptual understanding of consumer ambivalence</td>
<td>To develop an improved conceptualization of ambivalence</td>
<td>Conceptual paper, systematic literature review</td>
</tr>
<tr>
<td>RQ2, RQ3</td>
<td>Winding paths: Ambivalence in consumers’ buying processes</td>
<td>To study the role and objects of different types of ambivalence in the decision-making process</td>
<td>Qualitative, longitudinal video diary process</td>
</tr>
<tr>
<td>RQ3</td>
<td>The influence of word-of-mouth on attitudinal ambivalence during the higher education decision-making process</td>
<td>To study the role of ambivalence in different stages of the decision-making process</td>
<td>Quantitative, two-stage survey</td>
</tr>
<tr>
<td>RQ3</td>
<td>The influence of organizational buyers’ ambivalence on a company website on their behavioral intentions</td>
<td>To study the role of ambivalence in different stages of the decision-making process</td>
<td>Quantitative, facial expression, questionnaire, and clickstream data</td>
</tr>
</tbody>
</table>

* RQ1: What is ambivalence?
RQ2: What are the roles and objects of different types of ambivalence (i.e., cognitive, affective, and intercomponent) in the decision-making process?
RQ3: What are the antecedents and consequences of ambivalence in different stages of the decision-making process?

1.4 Definitions of the key concepts

In this section, the key concepts used in this dissertation are defined. First, the concept of ambivalence is defined, followed by more a more specific definition of different types of ambivalence. These definitions are followed by a definition of the decision-making process and its different stages.

1.4.1 Ambivalence

The psychological understanding of ambivalence is based on the attitude literature. An attitude refers to “general and enduring favorable or unfavorable feelings about, evaluative categorizations of, and action predispositions toward stimuli” (Cacioppo and
Berntson, 1994, p. 401). Attitudes are traditionally assumed to exist on a single valence dimension, with positivity at one end and negativity at the other end. This approach was challenged by Kaplan (1972) in his work on the ambivalence-indifference problem, which means that using traditional bipolar attitude measures, one cannot know whether the respondent is ambivalent or indifferent towards an issue when choosing the “middle” option (e.g., number four on a seven-point Likert scale). As a solution, Kaplan (1972) suggested that positive and negative evaluations should be measured separately and combined into an ambivalence score. This implies that instead of being either positive or negative, attitudes can be both positive and negative (Thompson et al., 1995).

As the ambivalence concept has been applied into research in marketing, a definition has also been developed for consumer ambivalence, as opposed to more general attitudinal ambivalence. In 1997, the original definition of consumer ambivalence was developed, which defined consumer ambivalence as “the simultaneous or sequential experience of multiple emotional states, as a result of the interaction between internal factors and external objects, people, institutions, and/or cultural phenomena in market oriented contexts that can have direct and/or indirect ramifications on pre-purchase, purchase or post-purchase attitudes and behavior” (Otnes et al., 1997, p. 82–83). This definition, however, has been applied in subsequent consumer research to a limited extent. Instead, subsequent research in marketing has defined ambivalence mainly in terms of attitudinal ambivalence (e.g., Olsen et al., 2005; Chang, 2011; Russell et al., 2011; Schmalz and Orth, 2012; Cornil et al., 2014). Based on a thorough analysis and evaluation of the existing definitions, this dissertation highlights the need to revise and develop the definition of ambivalence used in the marketing literature (Sipilä et al., 2017b). Hence, an improved conceptualization of ambivalence is proposed as follows: Ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned; it occurs toward one clearly specified object during a decision-making episode and within the internal and socio-cultural contexts of decision-making (adapted from Sipilä et al., 2017b).

In this definition, the two valences refer to positivity and negativity in line with e.g., Eagly and Chaiken (1993). “Property” means that ambivalence operates like an adjective that can be assigned to various evaluative concepts (Sipilä et al., 2017b) and therefore is not a concept on its own, but instead requires another evaluative concept to which it is assigned (Sipilä et al., 2017b). Evaluations, in turn, consist of components, such as the affective component (i.e., emotions and feelings), and the cognitive component (i.e., beliefs and thoughts) (Fazio, 1995). “Structural” means that ambivalence occurs in this evaluative structure (Krosnick and Petty, 1995), as visualized in Figure 3. The “clearly specified object” part of the definition means that the object of ambivalence should be specified in the definition of ambivalence and that ambivalence is directed toward only one object (Sipilä et al., 2017b). This implies that ambivalence cannot be assigned to concepts that do not have specific object, such as moods (Eagly and Chaiken, 2007), and it differentiates ambivalence from other types of conflicts, such as choice conflicts, which occur between multiple equally attractive alternatives (Tversky and Shafir, 1992).
Finally, decision-making episode is an alternative term to consumption episode, which is used in this introduction for the dissertation because the empirical studies in this dissertation are conducted in both consumer and organizational contexts. However, the ramifications of a decision-making episode are based on the concept of consumption episode, which is the term used in the original publication in which the definition of ambivalence is developed (Sipilä et al., 2017b). A consumption episode refers to a “set of items belonging to the same event and occurring in temporal proximity” (Dhar and Simonson, 1999, p. 30). The purpose of the decision-making episode is simply to define which positive and negative evaluations belong to the same ambivalence (Sipilä et al., 2017b). In this dissertation, the research questions occur at the level of one stage of a decision-making process; therefore, the episode is defined in all empirical studies as one stage of a decision-making process. As these stages occur one after the other, they constitute the decision-making process. A more detailed discussion of the concept of ambivalence is provided in Publication I.

1.4.2 Different types of ambivalence

In the definition of ambivalence, it was stated that ambivalence is a property of any evaluative concept (Sipilä et al., 2017b). Therefore, the property of ambivalence is attached to different types of evaluations, or different attitude components, in this dissertation. Figure 3 visualizes the two attitude components, cognitive and affective, which are studied in this dissertation. As discussed in section 1.4.1, an attitude refers to “general and enduring favorable or unfavorable feelings about, evaluative categorizations of, and action predispositions toward stimuli” (Cacioppo and Berntson, 1994, p. 401). The cognitive attitude component refers to the beliefs and thoughts associated with an attitude object, whereas the affective attitude component refers to the emotions and feelings that an object evokes in an individual (Zanna and Rempel, 1988). Accordingly, attitudinal ambivalence has been approached from both intracomponent and intercomponent perspectives. As visualized in Figure 3, the former refers to ambivalence within an attitude component (for example, two opposing emotions toward the same object) whereas the latter refers to ambivalence between components (positive emotion and negative belief toward the same object, or vice versa) (van Harreveld et al., 2009). Thus, intracomponent ambivalence could refer to having conflicting beliefs about a car; for example, a car can have effective motor (positive belief) but also a poor fuel efficiency (negative belief). Intercomponent ambivalence, on the other hand, would refer to having a positive emotion (such as pride) and a negative belief (poor fuel efficiency) toward the car. Therefore, different types of ambivalence refer to cognitive, affective, and intercomponent ambivalence in this dissertation.
1.4.3 Decision-making process

Decision-making refers to choosing an action alternative to achieve a favorable outcome, based on the information available in the environment (Ariely and Zakay, 2001). More simply, decision-making has been defined as choosing a course of action based on an evaluation of its consequences (Loewenstein, 2001). Decisions can generally be categorized into fast, almost automatic decisions, which are habitual and non-analytic in nature, and slower, more effortful decisions, which require more time (Ariely and Zakay, 2001). As will be outlined in more detail in section 1.5, ambivalence is more likely to occur in complex and effortful decision-making processes than in automatic, habitual decision-making because decisions concerning important and complex issues are often preceded by conflict (Ajzen, 1996). It has even been argued that in more effortful decision-making, a considerable amount of individuals’ decision-making effort is focused on resolving conflicts (Ariely and Zakay, 2001). Complex, effortful decision-making often involves a longitudinal process, and this dissertation accordingly adopts a process approach to decision-making. From this perspective, decision-making consists of multiple sub-processes, such as becoming aware of a decision problem, specifying alternative courses of action, searching for information, identifying circumstances relevant to the decision, considering the potential outcomes of the decision, and eventually the final choice (Ajzen, 1996). In the marketing literature, various decision-making processes have been suggested that involve accessing and combining information about different alternatives and combining attributes of a particular alternative or comparing different alternatives (Pham, 1998). While all these sub-processes may not occur in all decisions, the basic principle that decision-making is a process consisting of various stages or sub-processes serves as the basis for understanding decision-making in this dissertation.

Various multi-stage models of decision-making exist, which differ mostly in the specific stages, which they identify (Ariely and Zakay, 2001). In the psychological literature, decision-making has been divided into interrelated sub-processes, namely information
acquisition, the evaluation of information, and the expression of a decision (Payne et al., 1993). An alternative categorization has been to decompose judgment and choice processes into the four sub-processes of information acquisition, evaluation, action, and feedback/learning (Einhorn and Hogarth, 1981), and therefore additionally include a post-decision stage. Pioneering work in the area of conflict in decision-making processes was conducted by Janis and Mann (1977), who argued that complex decisions can involve conflict at various stages of the decision-making process. In their work, the decision-making process consists of five stages, namely assessing the need for a decision, reviewing the available alternatives, weighing the alternatives, choosing an alternative, and adhering to the choice. Such a description of the decision-making stages with an emphasis on conflict was an important step toward understanding real-life decision-making (Ajzen, 1996). Against this background, in the marketing literature, the decision-making process consists of five stages: need recognition, information search, evaluation of alternatives, purchase decision, and post-purchase decision (Puccinelli et al., 2009).

The discussion thus far is summarized in Figure 4.

**Figure 4.** Stages of the decision-making process

As Figure 4 shows, while the specific stages may be different, in all process models there is a pre-choice stage, involving an information search and the evaluation of alternatives, and a choice stage involving the final choice. In this dissertation, the specific stages of need recognition, information search, evaluation, and choice constitute the decision-making process in line with prior marketing literature (Puccinelli et al., 2009), as shown in Figure 4. However, because the focus is to understand the role of ambivalence in decision-making leading to one-time purchases, the post-purchase stage is excluded from the empirical investigation. In the next section, the specific nature of the different decision-making processes that serve as the empirical contexts for this dissertation is discussed.
1.5 Research contexts

Ambivalence is very prominent in our lives (Fazio, 2007). Therefore, it can be expected to play a role in various contexts, including decision-making for service and product purchases, and for consumer as well as organizational purchases. The common factor in all the contexts studied in this dissertation is that they are high-involvement in nature. Involvement refers to “a person’s perceived relevance of the object based on inherent needs, values, and interests” (Zaichkowsky, 1985, p. 342). High-involvement contexts were chosen for this dissertation for three main reasons. First, they are expected to be more ambivalence-laden than low-involvement contexts, and therefore enable the study of ambivalence. Involvement is akin to importance, as both entail the decision-maker’s thoughts about an object’s relevance (Tudoran et al., 2012). Important decisions, in turn, are likely to engender ambivalence instead of indifference or simple satisficing (Jewell et al., 2002). In addition, ambivalence is likely to occur when the decision-maker is interested in the decision (Kim et al., 2011). Interest, similarly to importance, is a facet of involvement (Laurent and Kapferer, 1985), thus providing further support for the benefit of high-involvement contexts when studying ambivalence.

The second main reason is that high-involvement decisions are likely to involve effortful coping with ambivalence. When a decision is important, a decision-maker has to make difficult trade-offs and is likely to devote a great amount of effort to decision-making, searching for a large amount of information and advice (Bettman et al., 1991). On the other hand, when a decision is less important, the decision-maker is likely to search for less information, expend less effort, and furthermore, less difficult trade-offs are needed (Bettman et al., 1991). Thus, in low-involvement contexts, even if ambivalence occurs, the decision-maker is not necessarily motivated or concerned enough to resolve ambivalence to the same extent as in high-involvement contexts. Therefore, high-involvement contexts provide a more fruitful setting for studying coping with ambivalence.

Third, high-involvement decision-making is more likely to entail a multi-stage decision-making process than low-involvement decision-making, and therefore enables the research gaps and research questions of this dissertation to be addressed. The risk of mispurchase increases involvement; in particular, when a product or service is highly priced, the risks associated with the purchase are also high (Laurent and Kapferer, 1985). The perceived risk of purchase and perceived negative consequences of mispurchase increase the extensiveness of the decision-making process (Laurent and Kapferer, 1985). Additionally, the existing literature cited thus far demonstrates the complexity of high-involvement decisions, which in turn is likely to increase ambivalence (Roster and Richins, 2009).

In addition, in each of the studies included in this dissertation, most of the respondents purchased the chosen product or service for the first time. This was a fruitful condition for ambivalence, as when an individual does not have clear knowledge of how to achieve
a goal (in this case, the goal of choosing and purchasing the “best” option), he or she cannot know whether choosing a certain option will ultimately help in achieving the goal (Deutsch, 1968). When achieving a goal has positive implications and not achieving it has negative ones, not knowing the outcomes of one’s behavior is likely to lead to psychological conflicts (Deutsch, 1968), such as ambivalence. Hence, purchasing a complex, high-involvement product or service for the first time implies that there is no clear cognitive structure about how to make the best decision, and therefore the decision-making is likely to involve ambivalence.

Because both consumer and organizational decision-makers face a number of different decision-making processes during their lifecycle, this dissertation is not confined to only one decision-making process. Instead, different types of decision-making processes are studied; one decision-making process concerns the purchase of consumer products, another concerns the choice of higher-education services, and finally, the third process concerns organizational buying. The characteristics of the chosen contexts are next elaborated upon.

1.5.1 Decision-making process in the context of product purchasing

The specific product studied in this dissertation is dance poles (Sipilä et al., 2017c). They are a high-involvement product due their symbolic, self-expressive meaning, and on the other hand, the risks associated with making a “wrong” choice (Sipilä et al., 2017c). Consumers purchasing a dance pole for recreational purposes face the challenge of choosing the dance pole that suits their needs and identity as a pole dancer the best from a variety of options (Sipilä et al., 2017c). Dance poles are relatively expensive (prices range from approximately 150 € to 1300 €) (Sipilä et al., 2017c), implying that the purchase involves a financial risk. They are also durables, which implies that the decision-maker is likely to use the product for many years (Sipilä et al., 2017c). Therefore, choosing the “right” option is highly important, and the risks associated with the purchase are relatively high (Sipilä et al., 2017c). Hence, involvement can be argued to be high during the decision-making process for purchasing a dance pole (Sipilä et al., 2017c). Purchasing a dance pole also involves evaluations of different brands, product options, and sales channels, which involve hedonic, utilitarian, and symbolic aspects (Sipilä et al., 2017c). Given this complexity, it is expected that some of the aspects of dance poles will be evaluated positively and others negatively, and the context was expected to be rich in different types of ambivalence (Sipilä et al., 2017c).

1.5.2 Decision-making process for choosing HE services

The second context in which ambivalence is studied is the decision-making process for choosing higher education (HE) services, during which HE applicants choose in which
masters’ degree program they will begin their studies. Services are intangible and perishable in nature, and therefore difficult to evaluate (Murray, 1992), which differentiates them from products, which can be physically seen and touched. It has been proposed that ambivalence might be especially likely to occur when a service is hard to evaluate (Bush et al., 2015). This is indeed the case for decision-making for HE services, which involves a considerable amount of complexity (Chapman, 1986) and is a high-involvement context (Cubillo-Pinilla et al., 2009). In addition, HE applicants evaluate multiple service attributes (Joseph and Joseph, 1998; Soutar and Turner, 2002; Cubillo-Pinilla et al., 2009), and the HE decision-making process was expected to involve ambivalence because it was deemed likely that HE applicants evaluate some of the attributes positively and others negatively (Sipilä et al., 2017a). Therefore, the HE decision-making process was chosen as a context representing decision-making for high-involvement services (Sipilä et al., 2017a). The HE decision-making process consists of five stages: pre-search, search, application decision, choice decision, and matriculation decision (Chapman, 1986). In this dissertation, two of these stages are studied, namely search and choice stages. The same stages can also be found in the classical product decision-making process. However, in the HE decision-making process both the search and the choice stages involve a decision (Sipilä et al., 2017a). During the search stage, HE applicants search for information about the attributes of each HE institution, and at the end of the stage, they make an application decision (Chapman, 1986). During the choice stage, HE applicants choose whether to accept a place in one of the (normally only few) institutions to which they have been accepted (Chapman, 1986). Hence, in the search stage, a preliminary application decision is made, and subsequently, the final decision is made in the choice stage.

### 1.5.3 Decision-making process in the organizational context

The existing research on the role of ambivalence in decision-making within the field of marketing has been conducted exclusively in the consumer context. Yet, recent calls have been made for more investigations on the role of ambivalence in the organizational context (Ashforth et al., 2014; Bush et al., 2015). Hence, organizational buying is chosen as the third empirical context of this dissertation. Similar to the introduced consumer decision-making contexts, the organizational buying decision-making process can involve complexity, conflicting decision criteria, and information from multiple sources (Webster and Wind, 1972). Hence, it is reasonable to expect that multiple pieces of information must be considered, some of which are evaluated positively while others are evaluated negatively. For this reason, organizational buying may involve a great amount of ambivalence. Similar to consumer research, process models have also been proposed in organizational decision-making research. In this dissertation, the decision-making process for the purchase of a professional services automation (PSA) software is studied (Sipilä et al., 2016). In the existing literature, a six-stage model has been developed to represent the decision-making process for industrial software, involving the stages of planning, information search, selection, evaluations, choice, and negotiations (Verville
and Hallingten, 2003). Of these stages, the information search stage is taken into consideration in this dissertation (Sipilä et al., 2016), which is also a stage in the consumer decision-making process. This stage is approached from a process perspective, meaning that ambivalence is measured continuously during the stage. Information search refers to the effort directed toward the acquisition of information that is relevant to a purchase decision (Bunn et al., 2001). The decision to focus on information search instead of the other stages was made because information has an important influence on ambivalence (Maio et al., 1996; Jonas et al., 1997; Hodson et al., 2001).

In the B2B context, solution provider websites have become the primary source of information (Grewal et al., 2015), and therefore, organizational information search is studied specifically in the online context. The online context is relevant in terms of understanding organizational decision-making perhaps now more than ever, as organizational decision-making increasingly takes place in online contexts (Marshall et al., 2012). The online context involves a substantial amount of information without direct contact to a salesperson who might be able to help in digesting all the information. Hence, a B2B buyer can easily become ambivalent while evaluating a substantial amount of information, which is likely to involve product or service attributes, some of which are evaluated positively while others are evaluated negatively.
Theoretical points of departure

In this section, the theoretical underpinnings of the dissertation are outlined and discussed. As outlined thus far, an improved conceptualization of ambivalence is the central theme of this dissertation. The conceptualization is developed in the first publication (Sipilä et al., 2017b); it is further applied and its adequacy is evaluated through the subsequent empirical publications. In sum, the conceptualization of ambivalence developed in this dissertation states that ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned; it occurs toward one clearly specified object during a decision-making episode and within the internal and socio-cultural contexts of decision-making (adapted from Sipilä et al., 2017b). In this section, this conceptualization is divided into its components, which are expressed in three premises. It is outlined how each premise guides the theoretical and empirical choices made in this dissertation.

Table 2 outlines how each of the premises appears in each publication. The first premise (ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned; Sipilä et al., 2017b) is applied in the empirical publications, as various evaluative concepts (cognitive, affective, and their combinations) are studied from an ambivalence perspective. The second premise (ambivalence has one, clearly specified object; Sipilä et al., 2017b) is applied in all the empirical publications, which investigate ambivalence toward various objects from dance poles to professional services automation software. Additionally, the relationship between multiple facets of ambivalence objects (i.e., utilitarian, hedonic, and symbolic) and different types of ambivalence is explored in Publication II. Finally, the third premise (ambivalence occurs in decision-making episodes; Sipilä et al., 2017b) is applied in all empirical publications. Because this dissertation studies ambivalence in different stages of the decision-making process, a decision-making episode refers to one stage of the decision-making process in all empirical studies. The second central theme in this dissertation is the role of ambivalence in the decision-making process. This theme is approached from multiple perspectives, in various contexts, and by studying a number of relevant antecedents and consequences of ambivalence. As shown in Table 2, Publications II and III address the antecedents of ambivalence, and all empirical publications address the consequences of ambivalence in different stages of the decision-making process.
2.1 The property of ambivalence in different evaluative concepts

The first premise in the definition of ambivalence developed in this dissertation states that "ambivalence is a structural property of any evaluative psychological concept to which
two valences can be assigned (Sipilä et al., 2017b). As was outlined in section 1.4.1, the “evaluative psychological concept” is defined broadly and can refer to affective as well as cognitive evaluations (Cacioppo and Berntson 1994; Fazio 1995). In line with this conceptualization, various types of ambivalence are studied in this dissertation. The property of ambivalence is attached to affective and cognitive evaluations as well as their combinations (i.e., intercomponent ambivalence). With the componential perspective to attitudes outlined in section 1.4.2, two types of ambivalence have been identified in the existing literature, namely, intracomponent and intercomponent ambivalence.

Intracomponent ambivalence refers to ambivalence within the same attitude component (i.e., cognitive or affective component) (van Harreveld et al., 2009). The intracomponent approach has received some research attention, especially in studies dealing with affective ambivalence (e.g., Otnes et al., 1997; Nelson and Otnes, 2005; Penz and Hogg, 2011). On the other hand, intercomponent ambivalence refers to ambivalence between attitude components, such positive affect and negative cognition or vice versa toward the same object (van Harreveld et al., 2009). Intercomponent ambivalence has been recognized in prior psychological literature (Thompson et al., 1995; van Harreveld et al., 2009), and it can have a different influence on decision-making than intracomponent ambivalence (Hodson et al., 2001). Therefore, attaching the property of ambivalence to different evaluative concepts implies taking the differences between different types of ambivalence into account. Section 2.2 outlines how these different types of ambivalence are expected to be based on the evaluations of different aspects of the ambivalence object, and section 2.3 discusses how they are expected to have different roles in the decision-making process. In addition, section 3.2.3 outlines how different types of ambivalence are also differently visible in body language and prosody.

2.2 The objects of ambivalence

Premise 2 states: Ambivalence has one clearly specified object (Sipilä et al., 2017b). The amount and type of ambivalence depend on the object of ambivalence (Sipilä et al., 2017b). Therefore, in this dissertation, the ambivalence objects are chosen so that it is possible to find ambivalence, as outlined in section 1.5. However, the objects are often multifaceted in nature, meaning that they have multiple aspects (i.e., utilitarian, hedonic, and symbolic), and in fact, choices can be driven by the consideration of these different aspects (Dhar and Wertenbroch, 2000). Therefore, it is relevant for researchers in marketing to consider not only the object of ambivalence as a whole, but also the different aspects of that object. Synthesizing the ambivalence literature with the literature concerning these different aspects of objects leads to the proposition, which is also empirically studied in this dissertation, that the evaluations of the different aspects of ambivalence objects form the basis for different types of ambivalence (i.e., cognitive, affective, and intercomponent) (Sipilä et al., 2017c). This proposition is elaborated on
next. Later in this dissertation it is discussed how the different types of ambivalence further have different consequences for buyer behavior, thus requiring different marketing actions (Sipilä et al., 2017c).

While the ambivalence literature has remained relatively silent about different aspects of ambivalence objects, the literature on hedonic, utilitarian, and symbolic consumption has discussed the types of evaluations that are related to different aspects of objects. Evaluations of the utilitarian aspects of objects concern how useful and beneficial the objects are (Batra and Ahtola, 1990) and are predominantly cognitive (Spangenberg et al., 1997). Evaluations of the hedonic aspects of objects, on the other hand, concern how pleasant, agreeable (Batra and Ahtola, 1990), and intrinsically pleasing (Mano and Oliver, 1993) the object is. Thus, they are more affective evaluations. Furthermore, objects can have symbolic aspects, which help the buyer to develop a visible representation of him- or herself (Holman, 1981). These different aspects of the objects are not necessarily mutually exclusive (Batra and Ahtola, 1990), meaning that, for example, a salad can have both utilitarian (healthiness) and hedonic (taste) aspects. The hedonic and utilitarian aspects can also be conflicting (Batra and Ahtola, 1990), implying ambivalent evaluations. Hence, literature around the hedonic, utilitarian, and symbolic aspects of objects serves as a background for understanding the bases of different types of ambivalence in the decision-making process (Sipilä et al., 2017c). This discussion is visualized in Figure 5, where conflicting (i.e., positive and negative) information of different aspects of ambivalence objects gives rise to different types of ambivalence.

2.3 Ambivalence in decision-making episodes

Premise 3 states that ambivalence occurs in decision-making episodes (Sipilä et al., 2017b). Section 1.4.1 noted that each researcher should define the decision-making episode, as it can take multiple forms, and the most suitable form depends on the research question (Sipilä et al., 2017b). The decision-making episode defines the temporal boundaries of ambivalence, by defining which evaluations belong to the same ambivalence and which ones belong to another one (Sipilä et al., 2017b). In this dissertation, the decision-making episode refers to one stage of the decision-making process. In the following section, the antecedents and consequences of ambivalence in different stages of the decision-making process are discussed.

2.3.1 Antecedents of ambivalence in the decision-making processes

Extensive information search is an essential part of a high-involvement decision-making processes (Bettman et al., 1991) and may also influence ambivalence (Hodson et al.,
Theoretical points of departure

2001). The existing research suggests that through a careful processing of information, decision-makers with ambivalence may develop more univalent attitudes toward an object (Maio et al., 1996). Furthermore, they are motivated to find information that helps them resolve any conflicts in their attitudes (Maio et al., 1996). Information can therefore influence attitudes, which in turn influence behavioral intentions toward the attitude object (Maio et al., 1996). Yet, information is a very broad concept, defined as “data that have been organized or given structure – that is, placed in context – and thus endowed with meaning” (Glazer, 1991, p. 2). Therefore, it is necessary to define the type of information in detail. Previous research shows that the type of information is a relevant consideration. For example, it has been found that for decision-makers with ambivalence, message strength increases thought favorability, which in turn increases their acceptance of an attitude object (Maio et al., 1996). However, this does not respond to the research question posed in this dissertation regarding the antecedents of ambivalence in different decision-making stages. Hence, this dissertation extends the proposition that decision-makers with ambivalence obtain information that helps them become more univalent toward the attitude object (Maio et al., 1996) by studying what types of information (i.e., more abstract versus more concrete information) help them in different decision-making stages.

Decision-makers use different types of information and different decision-making heuristics in the different stages of the decision-making process (Bettman and Park, 1980). This implies that as ambivalence is studied in different stages of the decision-making process, the judgment and choice processes can vary. For example, a situation can activate pre-existing evaluations and provide new input to the pre-existing evaluations, resulting in new evaluative responses (Eagly and Chaiken 2007). A naturally changing aspect of the decision-making process is that as the process proceeds, the choice and the actual consumption of a product or service become temporally closer. Therefore, CLT is applied as a theoretical lens in this dissertation, as it explains how different aspects of psychological distance, including temporal distance, influence individuals’ thoughts and behavior (Trope et al., 2007). Objects that are psychologically close are construed on a low level, in terms of their detailed and contextual features, whereas objects that are psychologically further away are construed on a higher level, in terms of their abstract and stable characteristics (Trope et al., 2007). This implies, for example, that while thinking about a vacation that is six months away, a decision-maker is likely to evaluate the destination based on a general feeling of how sunny and relaxing the vacation will be. However, as the vacation becomes closer in time, the decision-maker is likely to start thinking about more concrete matters, such as what the exact temperature is, what the distance from the hotel to the beach is, and whether there are mosquitoes at night or not. In addition, as temporal distance from an action increases, pros become more salient than cons, because pros are higher-level construals (Trope et al., 2007). Therefore, CLT implies that abstract, positive information should be considered more when the choice and consumption of a product or service is temporally further, whereas more detailed and concrete information should be increasingly important when a choice becomes temporally closer (Sipilä et al., 2017a).
CLT thus implies that information on various levels of abstraction is considered and used to inform attitudes to varying degrees depending on how temporally close the actual choice and consumption of a product or service is (Sipilä et al., 2017a). This logic is used as a central theoretical basis in this dissertation to hypothesize on the antecedents of ambivalence in different stages of the decision-making process. Different types of information varying in the level of abstractness are operationalized through word-of-mouth (WOM) praise and WOM activity. WOM praise means the level of favorableness or valence of WOM, whereas WOM activity means the amount and detail of WOM information (Harrison-Walker, 2001). WOM activity is therefore a more detailed and concrete form of information, whereas WOM praise consists of more abstract, coherent, and unambiguous information (Sipilä et al., 2017a). Thus, WOM praise and WOM activity are an ideal marketing-related operationalization of different types of information, varying in their level of abstractness.

Figure 5 summarizes the discussion thus far. In the figure, the studied antecedents and their expected relationships with ambivalence are visualized. The figure shows that ambivalence can be based on conflicting evaluations of utilitarian, hedonic, and symbolic aspects of consumption objects, as well as be influenced by different types of information, varying in their level of abstractness. In the next section, it is outlined how decision-makers cope with the resulting ambivalence, and how it ultimately influences their decision-making.

**Figure 5.** Antecedents of ambivalence studied in this dissertation
2.3.2 Consequences of ambivalence in the decision-making process

Coping responses

Individuals generally find ambivalence uncomfortable and are therefore motivated to resolve it (van Harreveld et al., 2012). This is particularly the case when a commitment to one side of an issue has to be made (van Harreveld et al., 2012), such as in a decision-making process, which has the ultimate goal of making a choice. The need to commit makes ambivalent individuals feel physiological arousal, which is potentially based on anticipated regret about the choice (van Harreveld et al., 2012). When a decision is required and all alternatives have both positive and negative aspects, it is impossible to escape the uncomfortable state of conflict induced by the decision problem (Einhorn and Hogarth, 1981). Various coping mechanisms can be used to resolve ambivalence and therefore make a decision. Emotion-focused coping emphasizes alleviating the uncomfortable feeling of ambivalence and includes procrastination and denying one’s responsibility for the decision (van Harreveld et al., 2009). Problem-focused coping, on the other hand, focuses on using time and effort to resolve the ambivalent evaluations and can occur through unbiased, systematic processing, or heuristic and biased processing (van Harreveld et al., 2009). More effortful coping is possible given sufficient motivation and ability (Nowlis et al., 2002), and accordingly, the coping strategies used depend on an effort-accuracy trade-off (van Harreveld et al., 2012). When there is not much fear about making the wrong decision and cognitive resources are limited, less effortful coping is likely to occur (van Harreveld et al., 2012). Especially in low-involvement tasks, decision-makers may cope with the uncomfortable state of ambivalence through simple processing, such as heuristics, or decision avoidance (Nowlis et al., 2002). On the other hand, when regret about making a bad decision is anticipated, an accuracy motivation is likely to prevail, leading to more effortful problem-focused coping (van Harreveld et al., 2012). Because the decision-making contexts in this dissertation are high-involvement in nature, and because they have the goal of making a decision, it is expected that more problem-focused coping prevails instead of emotion-focused coping.

Additionally, different types of ambivalence may call for different coping mechanisms (Jewell et al., 2002) and therefore have different decision-making consequences. The previous section discussed how cognitive ambivalence is likely to arise from conflicting evaluations of utilitarian product or brand attributes. In such situations, problem-focused coping strategies can be expected to occur (Sipilä et al., 2017c) because they involve resolving conflicting evaluations (van Harreveld et al., 2009). In the case of affective ambivalence, the existing literature suggests that coping mechanisms, such as reappraising the situation, turn it into univalence over time (Aaker et al., 2008). Finally, in the case of intercomponent ambivalence, less research exists on its specific coping mechanisms. However, one route through which intercomponent ambivalence is expected to arise involves conflicting evaluations of utilitarian and symbolic aspects of brands and products, when they have a value-expressive function (Sipilä et al., 2017c). In such cases, it is expected that biased predecision processing might occur, as such processing can occur early in the decision-making process to bolster an initial preference for one option.
and subsequently lead to selective attention to information about an attitude object (van Harreveld et al., 2009). These strategies are explored, and additional strategies are also found in the qualitative study included in this dissertation. Against this background, coping mechanisms are visualized as a consequence of ambivalence in Figure 6.

**Behavioral intentions and choice**

The influence of ambivalence on behavioral intentions has been found to be mostly negative (e.g., Sparks et al., 2001; Povey et al., 2001; Berndsen and van der Pligt 2004; Costarelli and Colloca, 2004; Penz and Hogg, 2011). Furthermore, ambivalence has been found to correlate negatively with readiness for action and positively with avoidance tendencies (Hänze, 2001), and more ambivalent individuals are less certain about the positive outcomes of a behavior (such as exercise) than their less ambivalent counterparts (Sparks et al., 2004). Therefore, ambivalence is expected to have mainly negative consequences for the final choice of products or services (Sipilä et al., 2017a). However, some findings have also challenged this negative perspective. For example, individuals may seek ambivalent experiences, such as skydiving (Celsi et al., 1993). Ambivalence may also improve judgment accuracy (Rees et al., 2013), and individuals may even desire ambivalent attitudes as a means of strategic self-protection when they are uncertain about their possibilities of reaching a desired target, such as getting a dream job (Reich and Wheeler, 2016). Therefore, the possibility of positive consequences of ambivalence is also taken into account in the empirical studies.

This dissertation begins to investigate the possibility that ambivalence might have positive consequences in the decision-making process by exploring whether ambivalence arising in an ambiguous information environment (i.e., landing page of a website) has different decision-making consequences than ambivalence arising in a more detailed information environment (i.e., product information page of a website) (Sipilä et al., 2016). Ambiguity arises when information is missing that would be relevant to a task (Frisch and Baron, 1988, p. 152), and therefore, ambiguous information is insufficient information (van Dijk and Zeelenberg, 2003). Hence, when ambivalence arises in an ambiguous information environment (i.e., landing page on a website), it may motivate continuing the decision-making process, as the decision-maker perceives ambiguous information as insufficient (van Dijk and Zeelenberg, 2003) and therefore needs additional information to make a predominantly positive or negative evaluation of the object on which to base a decision. Because the final choice is still temporally distant in the information search stage, ambivalence is expected to influence the intention to continue the decision-making process rather than the final choice.

The proposition that ambivalence does not lead to quitting the decision-making process in the earlier stages, such as the information stage, but instead motivates continuing the process, implies that ambivalence may not always be completely coped with immediately. In other words, it is expected that when the temporality of the decision-making process is
considered, ambivalence does not necessarily have immediate consequences in each stage. For example, when ambivalence arises during information search, a decision-maker does not yet have to commit to a choice and can still consider different options that have their pros and cons (van Harreveld et al., 2009). Therefore, some ambivalence can remain unresolved in the information search stage and carry over to the choice stage (Sipilä et al., 2017a). The discussion about the different consequences of ambivalence is visualized in Figure 6.

Figure 6. The consequences of ambivalence studied in this dissertation

2.3.3 Summary

Figure 7 shows the whole theoretical framework of this dissertation, which is a “snapshot” of relevant antecedents and consequences of ambivalence in the decision-making process. The framework visualizes the proposed relationships between the concepts discussed thus far. On the antecedent side, it is expected that different types of ambivalence are based on conflicting information of different aspects of the evaluated objects. Furthermore, it is expected that different types of information influence ambivalence in different stages of the decision-making process. Ambivalence, in turn, is coped with predominantly through problem-focused mechanisms given the high-involvement nature of the empirical contexts in this dissertation. Subsequently, ambivalence has consequences for ambivalence in the next stages of the decision-making process (ambivalence carryover), behavioral intentions to proceed in the decision-making process, as well as the final choice. These relationships are studied empirically using various methods, which are outlined in the next section. To empirically study the framework, it is necessary to establish the concept of ambivalence, and much of this work has been discussed already. The next section outlines how the existing definitions of ambivalence in the marketing literature were analyzed through a systematic literature review, on which the conceptualization of ambivalence discussed in this dissertation is built. Next, it is outlined how the framework is first explored in a qualitative study, followed by two more quantitative studies, which further establish the framework.
**Figure 7.** Theoretical framework of the dissertation
3 Research design and methods

The research in this dissertation has been conducted using a systematic literature review as well as three different empirical methods. In this section, the methods are introduced, and the quality of the empirical research is discussed.

3.1 Systematic literature review

The first objective of this dissertation is to formulate a conceptual understanding of what ambivalence is. To evaluate the existing definitions and therefore build a basis for an improved conceptualization, a systematic literature review was conducted. In the review, it was investigated how ambivalence has been defined and how these definitions could be classified. The reviewing process followed literature review guidelines from prior literature, including Webster and Watson (2002) and Hart (2005). The stages of the process are now discussed separately.

3.1.1 Search and exclusion process

An article database search was conducted using ABI/INFORM, EBSCO, and Elsevier ScienceDirect databases. A search for the combination of search terms “consumer” and “ambivalence” appearing in the abstract of the article yielded 38 results in ABI/INFORM, 79 results in EBSCO, and 34 results in Elsevier ScienceDirect. Since “mixed emotions” was found to be often used interchangeably with ambivalence, the decision was made to also include it in the search terms. The combination of the search terms “consumer” and “mixed emotions” in the title or abstract of a publication yielded 7 results in ABI/INFORM, 22 results in EBSCO, and 2 results in Elsevier ScienceDirect. Thirty-nine articles appeared more than one time in the searches, and counting those articles only once, the search yielded 143 articles in total.

The articles were assessed based on a number of exclusion criteria. First, it was determined whether the article represented the marketing discipline, thus excluding 7 papers, which focused on theatre or literature-related topics and happened to have the search terms in their abstracts but did not discuss consumers’ ambivalence. Second, it was determined whether ambivalence (or mixed emotions) was studied from the consumers’ perspective, thus excluding 13 papers, which discussed issues such as ambivalence experienced by service providers. Third, it was examined whether ambivalence (or mixed emotions) was in the focus of the paper. In practice, a paper was excluded based on this criterion if the word “ambivalence” was mentioned 1–3 times,
and/or there was no indication of the definition of ambivalence (or mixed emotions). This resulted in the exclusion of 25 articles. Fourth, articles were required to be in English, which resulted in the exclusion of 2 articles. Fifth, only scientific articles were accepted into the sample, and thus, 2 papers were excluded. Finally, journals that were not listed in the Association of Business Schools (ABS) Academic Journal Guide 2015 were excluded, and this resulted in excluding 23 publications from the sample. As a result of this exclusion process, a total of 66 articles were left.

The first publication’s goal was to develop a conceptualization of consumer ambivalence, which speaks to a broad community of consumer researchers and therefore enables bridges to be built across the seemingly separate streams of consumer psychology and CCT (Sipilä et al., 2017b). After the first round of literature search, however, it was deemed that the sample did not represent CCT sufficiently. Therefore, an additional search was conducted with the following criteria: 1) the article had to be published after 2005, which is the year in which CCT was officially “branded”; and 2) the article had to be published in one of the main outlets for CCT research, namely Journal of Consumer Research, Consumption Markets and Culture, and Journal of Consumer Culture. Naturally, the article also had to include the search terms (“consumer” and “ambivalence” or “mixed emotions”) in the abstract. This resulted in the addition of 10 articles into the sample. However, the two search criteria served also as exclusion criteria, meaning that nine articles that seemed to represent the CCT stream, but were published before 2005 in journals not established in the CCT community were excluded. After this step, 67 articles were involved in the final sample.

The sample included papers from a variety of journals, some of which were more theoretically oriented (e.g., Journal of Consumer Research) and others more practically oriented (e.g., Electronic Commerce Research and Applications). Conference proceedings were also included, especially from the Advances in Consumer Research (ACR) conference. Naturally, consumer and marketing journals and conferences were the most important outlets for the reviewed studies. However, it is noteworthy that applied and context-related journals from various fields, particularly journals focused on the provision and consumption of food (e.g., British Food Journal), were also relatively common. There was an increasing trend in the amount of papers published from the 1990s until this day (two articles published between 1990–2000 compared to 38 articles published between 2001–2010 and 27 articles after 2011). This implies that ambivalence has gained increasing interest in consumer research, indicating its relevance as a topic of research. It also demonstrates that the sample of the reviewed studies consists of relatively recent publications.

### 3.1.2 Coding and analysis

The analysis of the definitions proceeded by collecting the definitions into one file and searching for the main elements of the definitions. These involved defining what
ambivalence is according to each definition, what ambivalence is based on (if applicable),
and what its object is. The reviewing process proceeded through 1) reading the paper, 2)
finding the definition of ambivalence used in the paper, 3) finding any further discussion
about ambivalence, and 4) identifying the theoretical background of the paper. Prior
literature suggests that “conceptualization is a process of abstract thinking involving the
mental representation of an idea” (MacInnis, 2011, p. 140), while “definition is about
placing boundaries around the meaning of a term (...) the boundaries relate to the way
in which a term or word is used in a given context” (Hart 2005, p. 121). These guidelines
were used to determine, what is a definition and what is a conceptualization.

Next, previous definitions and conceptualizations of ambivalence in the existing research
in marketing were categorized. The categorization was done based on the theoretical
perspective of the paper, which was determined based on the paper’s front end, main
body, as well as references. Based on submissions to the leading consumer research
journal, Journal of Consumer Research, the field of consumer research can be broadly
viewed from two perspectives (Deighton et al., 2010). The first one is that of
psychological studies that provide theoretical advances with empirical support, often in
the form of experiments (Deighton et al., 2010). The second approach is qualitative and
to a large extent conducted within the CCT paradigm (Deighton et al., 2010). The
reviewed articles could be divided into one of these two categories based on the
methodological and theoretical basis that they represented, and that was the first, broadest
categorization criterion. The psychologically-oriented category of studies was further
divided into attitudinal ambivalence and mixed emotions categories. Sometimes the
categorization was not clear-cut on this basis, and further categorization information was
searched from the methods and measures used in the paper. For example, if a paper
appeared to use mixed emotions and ambivalence as interchangeable terms, it was sought
how the measurement had been conducted; if a specific emotion pair was used in the
measurement, the paper would have been categorized as representing the mixed emotions
category.

In addition, the definitions were coded as including or not including one of four evaluation
criteria: vagueness, definition through antecedents, interchangeable use of concepts, and
correspondence with the etymological meaning of ambivalence (Sipilä et al., 2017b). The
first criterion used to evaluate the definitions is vagueness (Sipilä et al., 2017b), which
means that a concept does not have clear boundaries (Hampton 2007) and thus has several
meanings (Strunz 2012). The second criterion was based on the common mistakes that
research in marketing has made in defining concepts (MacKenzie 2003) and was named
defining a concept through its antecedents (Sipilä et al., 2017b). An additional problem
with many of the definitions was interchangeable use of concepts, which was chosen as
the third evaluation criterion (Sipilä et al., 2017b). The fourth evaluation criterion is the
correspondence with the etymological meaning of the term ambivalence (Sipilä et al.,
2017b). The evaluation of the definitions according to these criteria enabled an
understanding of the main definitional challenges of ambivalence and served as a basis
for developing an improved understanding of the concept (Sipilä et al., 2017b). The
importance of each criterion is discussed more extensively in Publication I, and Table 3 presents examples of definitions coded based on the evaluation criteria.

**Table 3.** Examples of definitions coded based on the evaluation criteria used in Publication I.

<table>
<thead>
<tr>
<th>Evaluation criterion</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vagueness</td>
<td>Definition includes vague terms, such as “object” or “simultaneous,” without an explanation of their meaning.</td>
<td>“Ambivalence is a state of having simultaneous positive and negative cognitions and feelings towards the same object” (Tudoran et al., 2012, p. 393)</td>
</tr>
<tr>
<td>Definition through antecedents</td>
<td>Definition includes expressions, such as arises when, arise from, fed by, created through, results from, results in, as a result of, sources of, produces, leads to, causing, or stems from, without a definition of the concept (i.e., ambivalence) itself.</td>
<td>“Emotional ambivalence may arise from psychological conflict when values and practices of heritage and mainstream cultural groups are perceived to be too distant or in opposition (…) from the fluctuating responses from others (…), or from intragroup conflicts among newly arrived and established cultural groups who settle within the same geographical area (…)” (Kramer et al., 2008, p. 144)</td>
</tr>
<tr>
<td>Interchangeable use of concepts</td>
<td>Definition includes expressions, such as also known as, and mixed emotions (i.e. ambivalence).</td>
<td>“Mixed emotions (i.e. consumer ambivalence) play a central role in approach-avoidance conflicts in retailing.” (Penz and Hogg, 2011, p. 104)</td>
</tr>
<tr>
<td>Lack of correspondence with the etymological meaning of ambivalence</td>
<td>Definition does not involve two valences (i.e., positivity and negativity)</td>
<td>“The cultural work of this giving process may explain cases of ambivalence to corporate sponsorships of local community events in which outside gifts threaten to usurp the local social structure and relationships.” (Weinberger and Wallendorf, 2012, p. 245)</td>
</tr>
</tbody>
</table>
3.2 Video diaries

To address the second objective of the dissertation, that is, to explore the role of different types of ambivalence in the decision-making process, the second dataset was collected in the form of video diaries. The video diary method was chosen for multiple reasons. First, it enabled the recording of the participants’ reactions almost immediately (Symon, 2004), meaning that the diaries enabled the participants to describe details that might have been otherwise forgotten (Wind and Lerner, 1979). This level of detail enabled an in-depth exploration of ambivalence (Sipilä et al., 2017c). Second, given that the dissertation focuses on decision-making processes, it was necessary to record data over time in a process format, which was possible with the video diaries (Symon, 2004; Brown et al., 2010). Third, it was necessary to record not only the verbal expressions, but also prosody, movement, and facial expressions of the participants to acquire an in-depth understanding of ambivalence, and video diaries enabled such multimodal data to be acquired (Sipilä et al., 2017c). Finally, video diaries were deemed the most convenient method of data collection for the participants, as they were relatively young and fluent with technology (Sipilä et al., 2017c).

3.2.1 Sampling

The key criteria for selecting participants were that the participants were planning to purchase a dance pole, were at the beginning of the decision-making process, and were able to commit to the data-collection process (Sipilä et al., 2017c). The reason for choosing these criteria lied in the objectives of the study; the key was to find participants who enabled collecting data about different types of ambivalence in different stages of the decision-making process (Sipilä et al., 2017c). To motivate the participants to finish the process and correspondingly minimize drop-out, one of the participants was rewarded with a dance pole, while the others were given gift cards to a web shop (Sipilä et al., 2017c). The participants were recruited from a pole dancing forum or the forum’s equivalent Facebook page (Sipilä et al., 2017c). First, four participants completed the process, but in the analysis stage it was deemed necessary to collect more data to assess the robustness of the findings. Therefore, three more participants were recruited. A total of seven participants was accepted as sufficient for the exploratory purposes of the study (Sipilä et al., 2017c). The participants were relatively young and highly-educated women, and pole dancing was their hobby (Sipilä et al., 2017c). A more detailed description of the sampling process is provided in Publication II, which also includes more information about the participants.
3.2.2 Data collection

The first stage of the data-collection procedure was a briefing session, during which the participants were welcomed to the video diary process and briefed about how the process would unfold. After the briefing session, the video diary process started, during which the participants recorded multiple video clips throughout the decision-making process (Sipilä et al., 2017c). To help the participants to record the video diaries efficiently, and therefore to minimize the amount of drop-out, they were provided with open-ended questions as examples of what kinds of issues they could discuss in the video clips (Sipilä et al., 2017c). Additionally, the participants were encouraged to discuss any issues that they felt were relevant to their decision-making. The instructions and questions given to the participants are provided in Appendix A in Publication II.

The video diaries were collected using an event-contingent procedure, meaning that the participants were asked to record a video clip whenever a pre-established event, in this case a stage of the decision-making process, took place (Nezlek, 2001). Additionally, as they searched for information from different sources at different times, they were asked to record a video clip after each information search event (Sipilä et al., 2017c). The participants indeed mainly recorded the video clips shortly after each stage of the decision-making process or information search event. However, a limitation of the procedure is that the participants had already identified the need for a dance pole before taking part in the study, as the recruitment targeted individuals who were interested in acquiring the product. Therefore, the participants had to rely on their memory to recall their attitudes during need recognition. This may imply that some of the ambivalence that actually occurred during need recognition was not detected, as the memory of ambivalence may decay over time (Aaker et al., 2008). The video diary data collection resulted in 52 video clips and a total of 5 hours and 9 minutes of video material (Sipilä et al., 2017c). A detailed report of how many video clips each participant recorded is provided in Table 1 in Publication II.

Additionally, an interview was conducted with each participant to find out more about their socio-demographic backgrounds and life situations, which are summarized in Table 2 in Publication II (Sipilä et al., 2017c). Furthermore, the first authors' personal experience with pole dancing served as a third data source (Sipilä et al., 2017c). This was beneficial because pole dancing is a niche hobby, and the authors' experience enabled an elaborate understanding of the data and the context, which would not have been otherwise possible (Sipilä et al., 2017c). The first author was a pole dance teacher at a local gym and shared key characteristics with the participants: she was oriented towards pole dancing as a form of exercise, similarly to the participants of the study, and her demographic profile and lifestyle also matched those of the participants (Sipilä et al., 2017c).
3.2.3 Coding and analysis

The video diary data were analyzed using a multimodal approach, which was a rich method for an in-depth analysis of the video diaries (Sipilä et al., 2017c). First, the vocal-aural modality was analyzed, meaning spoken language and prosody (Stivers and Sidnell, 2005). To analyze spoken language, the audio part of the video data was transcribed into a text form and analyzed using qualitative content analysis (Sipilä et al., 2017c). The coding scheme for the central concepts was based on the existing literature, which is called a directed approach to coding (Hsieh and Shannon, 2005). The coding procedure is explained in detail in section 3.3 of Publication II. Additionally, the coding scheme is provided in Appendix B of Publication II. In addition to the content analysis of spoken language, speech patterns were also analyzed as a part of the vocal-aural modality (Sipilä et al., 2017c). The analyzed speech patterns are listed in Table 4. The second analyzed modality was visuospatial modality, which refers to gestures and body postures (Stivers and Sidnell, 2005). This modality enabled deeper insight to be obtained into the vocal-aural modality and was analyzed as a final step together with prosody (Sipilä et al., 2017c). The analyzed visuospatial indicators are also listed in Table 4. The vocal-aural and visuospatial indicators were attained from a variety of studies from the fields of linguistics (McClave, 2000; Krahmer and Swerts, 2005; Voutilainen et al., 2014), psychology (McClintock and Hunt, 1975; Kircher et al., 2004; Schneider et al., 2013), and human-computer interaction (Khawaja et al., 2008). Although the indicators were selected from different fields and the suitability of each indicator for video diary analysis was not discussed in the original papers, similar indicators have been successfully used in prior video diary analysis (Cherrington and Watson, 2010). Therefore, the indicators were deemed suitable for the purposes of the video diary analysis in this dissertation.
Table 4. Indicators used in the analysis of speech patterns and the visuospatial modality.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Meaning</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vocal-aural modality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Periods of silence (i.e., pauses) among the</td>
<td>Planning of forthcoming</td>
<td>Kircher et al., 2004</td>
</tr>
<tr>
<td>participants’ speech</td>
<td>speech</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cognitive load</td>
<td>Khawaja et al., 2008</td>
</tr>
<tr>
<td>Filler words, such as “umm”</td>
<td>Uncertainty</td>
<td>Krahmer and Swerts, 2005</td>
</tr>
<tr>
<td><strong>Visuospatial modality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facial expression of smiling</td>
<td>Positive affect</td>
<td>Voutilainen et al., 2014</td>
</tr>
<tr>
<td></td>
<td>Embarrassment and discomfort</td>
<td>McClintock and Hunt, 1975</td>
</tr>
<tr>
<td>Facial expression of frowning</td>
<td>Negative affect</td>
<td>Voutilainen et al., 2014</td>
</tr>
<tr>
<td>Nod</td>
<td>Varying meanings, interpreted together with the vocal-aural modality</td>
<td>McClave, 2000</td>
</tr>
<tr>
<td>Head shake</td>
<td>Varying meanings, interpreted together with the vocal-aural modality</td>
<td>McClave, 2000</td>
</tr>
<tr>
<td>Side-to-side movement of the body</td>
<td>Attitudinal ambivalence</td>
<td>Schneider et al., 2013</td>
</tr>
</tbody>
</table>

3.2.4 Quality of the research

In qualitative research, the assessment of the quality and robustness of studies is less straightforward than in quantitative research because such a wide array of paradigms, techniques, and procedures fall under the general rubric of qualitative research (Prasad, 2005). Additionally, establishing common criteria for assessing qualitative research is problematic because qualitative research is guided by “creativity, exploration, conceptual flexibility, and freedom of spirit” (Seale, 1999, p. 467). In this dissertation, the quality of the qualitative part is confirmed by following the process of building robust theoretical contributions from qualitative research proposed by Eisenhardt (1989), which aims to develop theoretical propositions for further empirical testing. This approach to assessing the quality of the research was chosen because it specifically focuses on the generation of new theoretical insight (Eisenhardt, 1989), which was the aim of the qualitative study.

The first step in the process is the proper outset of the study, meaning that there is a research question, which provides focus for the data collection and analysis, and possibly some a priori concepts that are studied; however, there should not be strong expectations of a particular theory or hypothesis, as that might bias and limit the findings. This was
indeed the case when the qualitative data were collected for this dissertation. The second step in the process proposed by Eisenhardt (1989) is *case selection*, which should be conducted to replicate or extend the emergent theory. In this dissertation, the sampling was conducted as outlined above. During the analysis, each participant enabled additional understanding of the phenomena under investigation; however, the main findings remained the same. This indicates that the selection of participants was done accordingly to the recommendation in Eisenhardt (1989). The third step is the *combination of multiple data collection methods*. This was done using three sources of data, namely background interviews, personal experience, and video diaries, as outlined earlier. The fourth step is *overlapping data collection and data analysis*, which may also include making changes to data collection while it is still ongoing, to further explore emerging themes, for example (Eisenhardt, 1989). Because the participants followed a given format of recording the video diaries to which they had been thoroughly briefed, it was not deemed suitable to change the instructions during the diary process. However, data analysis and data collection were overlapping because after the first four participants, the ambivalence theme emerged from the data, and to study ambivalence further, three more participants were included into the study. Additionally, in the analysis stage, an additional modality (visuospatial) was added to gain a more in-depth understanding of ambivalence.

The fifth step in the process proposed by Eisenhardt (1989) is *within-case analysis*, which helps in coping with the often substantial amount of data and allows for unique patterns of each case to emerge before a more general cross-case analysis is conducted. Accordingly, preliminary analysis of each participant was first conducted before generalizing across participants. In the next step, *cross-case patterns* are searched by looking at the data in many different ways to avoid information-processing biases. Consequently, researchers are forced to go beyond their initial impressions and develop more accurate and reliable theoretical insight, which fits the data closely (Eisenhardt, 1989). This was done by analyzing the data from multiple different “angles.” Initially, only univalent attitudes were analyzed; however, as the ambivalence theme emerged, it was analyzed in greater detail. Ambivalence was also first analyzed on a more general level, without taking different types of ambivalence into account; however, as the different types emerged as an interesting and important theme, they were selected as the focus of the analysis. In the next step, *hypotheses (in this dissertation, they are termed propositions) are crafted* (Eisenhardt, 1989). To gain valid theoretical insight according to the recommendations of Eisenhardt (1989), the propositions are compared to the data on a case-by-case basis. Cases that are in line with the propositions increase their validity, whereas those cases that are not in line provide an opportunity to extend and refine the propositions. This was an iterative process, during which the emerging propositions were compared with the data and again refined based on the data. The propositions and the theoretical framework were then compared with the existing literature in terms of similarities and differences, which enabled greater validity and theoretical generalizability of the results (Eisenhardt, 1989). Finally, it was determined *when to stop collecting and analyzing data*. According to Eisenhardt (1989), both decisions should be guided by theoretical saturation, meaning that additional participants or analyses would add only minimally to the acquired findings. When collecting data, four participants were
Research design and methods

initially collected; however, it was deemed necessary to recruit more participants because it was not possible to state with high confidence whether saturation had been achieved or not. Similarly, numerous iterations were conducted in the analysis stage until additional insight was not achieved.

According to Eisenhardt (1989), the end product of this process is likely to be highly valid, as the findings arise from a very close understanding of the data. Further evaluation of the theoretical insight can be conducted by assessing whether the end result is “good theory” in the sense that it is parsimonious, logical, and testable (Eisenhardt, 1989). In addition, by following and explicitly reporting a careful analytical procedure, by providing “proof” that the evidence supports the findings, and by ruling out rival explanations, readers can be convinced about the general robustness of the findings (Eisenhardt, 1989). Accordingly, the general robustness of the qualitative part of this dissertation is ensured through a detailed reporting of the methodological procedures and providing quotes from the data, which demonstrate that the evidence indeed supports the findings. Finally, a strong theoretical contribution is novel (Eisenhardt, 1989), which is indeed the case, as discussed elsewhere in this dissertation.

3.3 Two-stage survey

The conceptual and qualitative endeavors discussed thus far have enabled the conceptualization of ambivalence and exploration of different types of ambivalence in the decision-making process. As a next step, quantitative research was conducted to address the next objectives of this dissertation, which concern the role of ambivalence in the decision-making process. The first quantitative dataset was collected as a two-stage survey and analyzed using hierarchical regressions. The two stages of the survey correspond with two different stages of the decision-making process, namely information search and choice stages, and the context of the survey was the international higher education (HE) application process. This following section discusses the data collection and sampling choices, as well as the analysis method. Finally, the validity and reliability of the results are assessed.

3.3.1 Sampling

International applicants who applied to master’s level programs in four Finnish HE institutions were recruited as participants for the two-stage survey (Sipilä et al., 2017a). The first stage of data collection was conducted at the information search stage (Sipilä et al., 2017a). During this stage, 1,718 respondents (response rate: 43.8%) took part in the survey, and 1,110 of these respondents proceeded to the second stage of data collection,
which was collected at the choice stage (Sipilä et al., 2017a). During the second stage, 481 respondents (response rate: 43.3%) participated in the survey (Sipilä et al., 2017a). Of these respondents, 213 were selected for subsequent analyses because they had been accepted by a Finnish institution to which they had applied and had chosen whether to begin studies in that institution (Sipilä et al., 2017a). This decision was made because choice was the ultimate dependent variable of the study. The mean age of the respondents was 24 years, 47% were female, and the majority of the respondents were from Asian, Middle-Eastern, and European countries (Sipilä et al., 2017a). A more detailed description of the respondents is provided in Publication III.

3.3.2 Data collection

All international applicants who applied to master’s level programs in four Finnish HE institutions were contacted via email including a link to an online questionnaire (Qualtrics software) in the spring of 2012 (Sipilä et al., 2017a). The first data-collection stage (T1) was conducted shortly after the search stage and before the applicants had received any acceptance information from the HE institutions (Sipilä et al., 2017a). The second data-collection stage (T2) was conducted shortly after the choice stage, meaning that the applicants had received acceptance information from the HE institutions and made their final choice of institution (Sipilä et al., 2017a). However, they did not have experience studying at the institution yet (Sipilä et al., 2017a). This process enabled the collection of data regarding a real choice and the incorporation of a decision-making process. Both are relatively rare benefits compared to the existing literature and enable the generation of new and relevant knowledge about ambivalence in the decision-making process.

The two-stage survey measured WOM activity and WOM praise as antecedents of ambivalence, as these were used as operationalizations of information at varying levels of abstractness (Sipilä et al., 2017a). The measures for these constructs were adapted from Harrison-Walker (2001). Both constructs were measured on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). The choice criteria used for constructing the ambivalence scores were also adapted from the existing literature (e.g., Joseph and Joseph, 1998; Mazzarol and Soutar, 2002). Agreement with each choice criterion was measured on a seven-point Likert scale (1 = strongly disagree; 7 = strongly agree). Because ambivalence is most prominent when it is based on conflicting evaluations of the important aspects of objects (Jewell et al., 2002), the subjective importance of each choice criterion was measured with a seven-point Likert scale (1 = not at all important; 7 = very important) (Sipilä et al., 2017a). The 10 most important criteria were then included into the calculation of a “Griffin score” of ambivalence (Thompson et al., 1995). The score consists of two parts. The first part indicates the similarity of positive and negative evaluations and is calculated as: \((P+N)/2\), where \(P\) meaning positive evaluations and \(N\) meaning negative evaluations (Thompson et al., 1995). The other part of the score indicates the intensity of positive and negative evaluations and is calculated as the absolute value of \(P-N\) (Thompson et al., 1995). The ambivalence score is then calculated as: \(\frac{(P + N)}{2} -\)
Research design and methods

[P − N] (Thompson et al., 1995). Finally, choice was a binary variable, indicating whether the respondent chose to begin studies in the HE institution toward which ambivalence was measured (Sipilä et al., 2017a). In addition, a number of control variables, such as age, gender, and nationality, were measured. The measures as well as the calculation of ambivalence scores are presented in more detail in Appendix A and in Publication III.

3.3.3 Analysis

Multiple regression analysis was the main method of hypothesis testing, which is one of the most widely used analysis methods in marketing due to its wide applicability, ease of interpretation, robustness to violations of the underlying assumptions, and wide availability (Mason and Perreault, 1991). It is used to analyze the relationship between a single dependent variable and multiple independent variables (Hair et al., 1998). Multiple regression can be used for both predictive and explanatory purposes (Weinberg and Abramowitz, 2015). In this dissertation, it is used for explanation, as the objective is to understand and explain concepts of interest and investigate the influence of independent variables on these concepts (Weinberg and Abramowitz, 2015). Multiple regression analysis estimates the unknown parameters (regression coefficients) in the regression model (i.e., fits the model to the data) (Montgomery et al., 2015). Consequently, a process of model adequacy checking is conducted to study the appropriateness of the model and quality of the fit (Montgomery et al., 2015). Importantly, a regression model does not establish a causal relationship between variables, but rather, an empirical relationship between them (Montgomery et al., 2015). In the analysis, a hierarchical approach to regression was used, meaning that the regressions were run in multiple steps. This enables the investigation of whether, and how much, the independent variables specified in the hypotheses explain variance in the dependent variable over and above the control variables.

Additionally, logistic regression was used, which is a type of regression analysis method suitable when the outcome variable is dichotomous (Peng et al., 2002). Therefore, it was used to explain choice, which was operationalized as a yes/no variable. The independent variables can be continuous, categorical, or both (Akinci et al., 2007). Logistic regression is used to predict the probability that a respondent belongs to one group (choice=yes) rather than the other (choice=no) (Hosmer and Lemeshov, 2005). Correspondingly, it is presumed that each of the potential values for the dependent variable (“no” and “yes,” coded as 0 or 1) has an expected probability that varies as a function of the values of the independent variables (Cabrera, 1994). Logistic regression uses the maximum likelihood method, which chooses those estimates for the intercept and beta coefficients that maximize the likelihood of reproducing the observed probability value for the dependent variable (Cabrera, 1994). In other words, the maximum likelihood method derives those estimates of the intercept and the beta coefficients that would make the likelihood of having observed the dependent variable the highest (Cabrera, 1994). Logistic regression
can also be run in a hierarchical fashion, which was done in the dissertation by first inserting the control variables, followed by the independent variables.

3.3.4 Validity and reliability

The assessment of validity refers to the assessment of the degree to which the measures used in the empirical research truly capture the construct they are intended to measure (Peter, 1979). There are multiple forms of validity, and therefore the assessment of validity requires multiple tests. Construct validity refers to the degree to which a measure sufficiently measures the intended construct and is therefore for example free of measurement error (O’Leary-Kelly and Vokurka, 1998). The assessment of construct validity is necessary because the ability to correctly identify significant relationships between variables depends on our ability to measure the variables adequately (O’Leary-Kelly and Vokurka, 1998). The assessment of construct validity is a multifaceted process, which begins with the assessment of content validity (O’Leary-Kelly and Vokurka, 1998). Content validity refers to the “degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose” (Haynes et al., 1995, p. 238). Content validity has many facets; first, the measured construct should be defined accurately (Haynes et al., 1995). This was the case in this dissertation because existing, established definitions from the literature were used to define the constructs. In addition, all elements of an assessment instrument should be subjected to content validation by multiple judges (Haynes et al., 1995). Accordingly, an outside expert performed a language revision of the survey, and the survey was examined by three researchers prior to data collection. Other forms of validity also enable further assessment of content validity; if other validity indices are poor, it is likely that content validity is also poor (Haynes et al., 1995).

The second step of assessing construct validity involves multiple assessments of the degree to which the empirical indicators measure the constructs and consists of assessing the unidimensionality, reliability, and validity of measures (O’Leary-Kelly and Vokurka, 1998). Unidimensionality means that a set of items relates to only one construct and can be established through confirmatory factor analysis (CFA) (O’Leary-Kelly and Vokurka, 1998). CFA was correspondingly run to establish unidimensionality. CFA also enables assessing discriminant validity, which is an additional component of construct validity (Fornell and Larcker, 1981). CFA involves an assessment of the average variance extracted (AVE) and construct reliability (CR). The AVE indicates how much variance a construct captures in relation to measurement error, whereas the CR indicates how reliable the construct is (Fornell and Larcker, 1981). Both indices were calculated and were found to be at acceptable levels (Sipilä et al., 2017a). More specifically, the AVE values exceeded the threshold of .50, indicating satisfactory construct validity (Hair et al., 1998), and the CR values exceeded .60, indicating satisfactory internal consistency (Bagozzi and Yi, 1988). Discriminant validity means that a construct is unique and can be assessed according to the Fornell-Larcker criterion. In this procedure, the squared
correlations between the constructs are compared with the AVEs (Fornell and Larcker, 1981). The criterion was met in all cases, indicating that discriminant validity was on an acceptable level (Sipilä et al., 2017a).

The reliability of the measures was established not only through the CR, but also with other assessments and preparations. The potential of acquiring high reliability can be increased prior to data collection using multi-item scales and ensuring that the instructions are clear and the items are unambiguous (Peter 1979). All these tools were used in this dissertation. The scales consisted of multiple items (Appendix A), and the survey was pretested and language checked, which prevented ambiguousness. After the data collection, Cronbach’s alphas (hereafter alphas) were calculated to additionally assess reliability (Sipilä et al., 2017a). As shown in Appendix A, all alphas were acceptable by exceeding the threshold of .70 (George and Mallery, 2003). Additional support for the reliability of the measures is acquired because the central constructs were measured in two time points, and the correlations between the constructs in these two time points were moderate or high (i.e., within the range of -.419–.613) and significant. Each assessment method for reliability has its strengths and weaknesses (O’Leary-Kelly and Vokurka, 1998), but due to a number of different indicators for reliability, which all point to the conclusion that reliability is good, it can be established that the reliability of the measures in the two-stage survey is on an acceptable level. In sum, both the reliability and validity of the two-wave survey can be concluded to be good. Additionally, the assumptions of regression analysis (i.e., linearity, homoscedasticity, normality of residuals, and multicollinearity assumptions) were met on a satisfactory level, which lends further support for the trustworthiness of the results (Appendix B).

### 3.4 Facial expression and clickstream data

The final study of this dissertation takes a more in-depth approach to examine one decision-making stage. The context for this data collection is organizational decision-making, and more specifically, information search on a company website (Sipilä et al., 2016). It has been proposed that research on the time-related aspects of information search calls for “non-traditional” methodologies (Einhorn and Hogarth, 1981). Accordingly, continuous facial expression and clickstream data were collected for the final study included in this dissertation to study ambivalence during the information search stage in more detail than in the other studies. Facial expressions were used because they enabled the continuous measurement of emotions while the participants were searching for information on a website. Continuous measurement was beneficial especially because this dissertation’s focus on processes, as not only the end state, but also the unfolding of evaluations as they form is observable in overt motor behavior (Schneider et al., 2015), such as facial expressions. Additionally, the facial expression approach enabled ambivalence to be measured on an implicit level, therefore complementing the verbal
measures of ambivalence used in the other data collections. This was beneficial because in this study, the affective component of ambivalence was the focus area, and in terms of emotions, verbal expressions have their limitations, as emotions are not only a verbally conveyable experience; they are also embodied (Larsen et al., 2008). Therefore, one school of emotion researchers have approached emotions using physiological signals to understand psychological processes (Larsen et al., 2008). This approach was also adopted in this study.

3.4.1 Sampling

Because the study investigates organizational buyers’ decision-making, it was necessary to recruit participants who either had some experience with organizational buying tasks or could be conducting such tasks in organizations (Sipilä et al., 2016). The participants were therefore recruited from professional events, email lists, and social media forums targeting university alumni or students who were close to graduation (Sipilä et al., 2016). A total of 29 individuals participated in the study (Sipilä et al., 2016). One participant had to be excluded for not following the instructions, and three additional participants were excluded because their faces were not properly identified by the Noldus FaceReader software, which was used to identify emotions from facial expressions (Sipilä et al., 2016). Thus, the final sample consisted of 25 participants (Sipilä et al., 2016). The participants’ mean age was 34 years, most had a higher education degree (n=20), and they had a business (n=16) or engineering (n=9) background (Sipilä et al., 2016). Thus, the sample was comparable to young professionals who might be assigned the task of searching for information and evaluating a software service for their company. In addition, it mainly represents novice B2B decision-makers who are accustomed to searching for information in an online environment (Marshall et al., 2012). However, there is an oversampling of doctoral degree holders, which is a limitation of the study.

3.4.2 Data collection

Upon arrival, the participants were led to a controlled laboratory setting, where they were briefed and signed an informed consent form (Sipilä et al., 2016). They were then seated in front of a computer screen, and were asked to fill in a pre-questionnaire with questions about their demographics and work experience (Sipilä et al., 2016). Next, they were asked to imagine that they had been assigned to purchase a professional services automation (PSA) software for a small- or medium-sized (SME) company at which they were currently employed (Sipilä et al., 2016). They were then asked to search for information and evaluate the suitability of an actual PSA software presented on an existing website for the company’s PSA needs (Sipilä et al., 2016). The participants were allowed to chat with sales representatives via an automatically opening chat window, but were not allowed to use any other websites during the task (Sipilä et al., 2016). The participants were given a maximum time of 20 minutes to spend on the website (Sipilä et al., 2016).
While the participants were on the website, their clickstream was recorded using eye tracking software (Tobii Studio), and their facial expressions were recorded with a video camera (Microsoft LifeCam) (Sipilä et al., 2016). After the search task, the participants received a questionnaire, in which their behavioral intentions towards the company and the control variables were measured (Sipilä et al., 2016). After the questionnaire, they were debriefed and left the laboratory (Sipilä et al., 2016). The entire session took 45–60 minutes (Sipilä et al., 2016). The process is described in more detail in Publication IV.

The dependent variable and control variables were measured in the post-questionnaire (Sipilä et al., 2016). The dependent variable was constructed of three behavioral intention items, which indicated how the participants would have proceeded after the task (Sipilä et al., 2016). The items were “I would send a request for an offer,” “I would schedule a demo with a sales person,” and “I would start trial,” measured on a sliding scale (0 = very unlikely; 100 = very likely) (Sipilä et al., 2016). A summated scale was calculated based on these items (Sipilä et al., 2016). Perceived risk related to the decision was used as a control variable and was measured on a scale from 1 to 7, using three items adopted from Sitkin and Weingart (1995). The question was: “How would you characterize the decision at hand?” The items were: “significant opportunity - significant threat,” “potential for loss - potential for gain,” and “positive situation - negative situation.” Product evaluation was measured with items adapted from Mukherjee and Hoyer (2001) and measured on a sliding scale (0 = totally disagree; 100 = totally agree). The items were: “This software seems good,” “I like this software,” “This software is useful,” and “This software is high quality.”

The ambivalence measure was constructed from the emotion measurements exported from face reading software (the software is described in more detail in the next section). In line with the existing research (e.g., McGraw and Larsen, 2008), happiness and sadness were used for operationalizing the positive and negative emotion dimensions (Sipilä et al., 2016). In the raw data exported from the FaceReader, each emotion has a value between 0 and 1, 0 meaning that the emotion is not expressed on the face, and 1 meaning a very strong expression (Sipilä et al., 2016). For both happiness and sadness, there was thus a value between 0 and 1, measured 30 times per second, and these values were used to calculate an ambivalence score using the Griffin calculation, which was outlined in section 3.3.2 (Sipilä et al., 2016).

3.4.3 Analysis

After the data collection, the videos of the participants’ facial expressions were run through the Noldus FaceReader software, which uses the Facial Action Coding System (FACS; Ekman and Friesen, 1976) to identify seven basic emotions (happiness, sadness, anger, fear, disgust, surprise, and neutral) (Sipilä et al., 2016). The FACS is the most commonly used, comprehensive, and rigorous observer-based system of facial expression recognition, and uses action units (AUs), which are the smallest visually discriminable
facial movements (Cohn et al., 2007). From the AUs, it is then possible to interpret emotions according to different combination rules (Cohn et al., 2007). This step was automatically conducted by the FaceReader.

The website was divided into two-page categories based on the contents of each page, namely the landing and product information pages (Sipilä et al., 2016). The participants started the task on the landing page, and subsequently moved to the product information pages, including a page with an overview of the product and more detailed product information pages (Sipilä et al., 2016). The time periods during which the participants were on the landing page or the product information pages were acquired from the clickstream data and consequently event marked into the FaceReader data (Sipilä et al., 2016). For data-reduction purposes, the mean values of ambivalence on the landing and product pages were calculated for each participant (Sipilä et al., 2016). These values were imported into SPSS 22, and hierarchical multiple regression was performed with ambivalence on the landing and product information pages as independent variables and behavioral intentions as dependent variables, with perceived risk and product evaluations as control variables (Sipilä et al., 2016). A more detailed description of the analysis is included in Publication IV.

3.4.4 Validity and reliability

The content validity of the questionnaire measures was ensured using constructs from the existing research, which had been accurately defined and validated in previous studies. Any modifications to the wording of the items was made only to adapt the measures to the context of the study. In addition, all materials were examined by three researchers prior to the data collection. The validity of the facial expression measures was assessed based on the existing literature, which has provided evidence on the validity of measures of facial muscle activity as indicators of valence (Bolls et al., 2001; Wang and Minor, 2008). These studies have been conducted with electromyography (EMG), which involves placing electrodes on the participant’s skin, and is therefore slightly different from the facial expression measures used in this dissertation. Correspondingly, the validity of Noldus FaceReader has been confirmed by comparing the output of the FaceReader with EMG (D’Arcey, 2013). Additional efforts to validate the FACS method are based on the performed action criterion, in which people were trained to perform certain actions on request, and records of the performances were coded without knowing the actions requested. FACS can recognize the performed behaviors (Kanade et al., 2000). Furthermore, the stability of FACS action units has been found to be good over a four-month interval (Cohn et al., 2002). These studies provide evidence of the validity of the FACS coding, based on which the FaceReader interprets emotions.

The reliability of the questionnaire measures was established prior to data collection by using multi-item scales and ensuring that the instructions were clear and the items were unambiguous (Peter 1979). The scales consisted of multiple items, and the questionnaire was pretested, which prevented ambiguity. The reliability of the survey measures was
assessed with Cronbach’s alphas, which ranged from 0.713 (perceived risk related to the decision) to 0.915 (product evaluation), indicating good to very good reliability (Sipilä et al., 2016). The reliability of the facial expression analysis was ensured using a controlled laboratory setting with a frontal camera orientation. The camera was placed at an optimal distance from the participants to ensure that the FaceReader software would analyze the expressions correctly, and the participants were asked to remain as still as possible during the recording. These steps were important for ensuring reliability at the data-collection stage, because the camera orientation, head motion, and size of the head in an analyzed figure are reasons for poor reliability in facial expression studies (Sayette et al., 2001). Additionally, using a computer software for FACS coding instead of human coders may increase reliability, as the software makes fewer coding errors than human coders (Cohn et al., 2007). Finally, the assumptions of regression analysis (i.e., linearity, homoscedasticity, normality of residuals, and multicollinearity assumptions) were met on a satisfactory level, which lends further support for the trustworthiness of the survey results (Appendix C).
4 Summary of the publications and review of the findings

This section summarizes the results and outlines the publications included in the dissertation. First, a summary of the results of the entire dissertation is outlined. Next, the objectives, main results, and contributions of each paper are discussed.

4.1 Review of the findings

Figure 8 presents an overview of the findings of this dissertation regarding the role of ambivalence in the decision-making process, organized into a classical model of the decision-making process (e.g., Puccinelli et al., 2009). As visualized in Figure 8, the findings suggest that in the need recognition stage, ambivalence arises from the preliminary information of different product attributes, but does not have many consequences. During the information search stage, information is actively searched, and therefore different types of information about products, brands, and their aspects become relevant antecedents. Additionally, ambivalence has more consequences than in the need recognition stage. Furthermore, different types of ambivalence are coped with differently. While cognitive ambivalence is coped with through an increased information search, both cognitive and affective ambivalence are coped with through emphasizing the valence of the most important product attribute. Further, intercomponent ambivalence is coped with through the rejection of symbolically unacceptable product options. In the information search stage, ambivalence carryover and the intention to continue in the decision-making process are also found to be consequences of ambivalence. In the evaluation stage, information about different product attributes continues to influence ambivalence. However, potentially because of the temporal proximity of the choice stage, ambivalence in the evaluation stage does not have numerous consequences. For example, in the video diaries, many participants combined the evaluation and choice stages, doing their final evaluation only moments before the final choice. In the choice stage, concrete information reduced ambivalence, as theorized based on CLT. Information about some product attributes still continued to elicit different types of ambivalence, which were coped with by emphasizing the most important attribute. Finally, any remaining ambivalence had a negative influence on choice.
Summary of the publications and review of the findings 64

Figure 8. Summary of the results
4.2 Publication I

Toward an improved conceptual understanding of consumer ambivalence

Objectives

The first publication has the objective of conceptualizing ambivalence, which has been an increasingly popular concept in research in marketing since the 1990s, but still lacks an unambiguous definition (Sipilä et al., 2017b). The ambiguity of the existing definitions of ambivalence used in research in marketing stems partly from the varying definitions of ambivalence, which different authors have unsystematically developed to suit their theoretical and empirical standpoints, and partly from a number of issues that make the interpretation of the definitions challenging, such as vagueness and the interchangeable use of concepts (Sipilä et al., 2017b). This is problematic because meaningful scientific research depends on precise definitions (Teas and Palan, 1997), without which research will suffer from poor measurements and validity, and misguided findings (MacKenzie, 2003). While there has been a previous attempt to conceptualize ambivalence in the field of marketing (Ottes et al., 1997), it lacks precision and has been adopted in subsequent studies only to a limited extent (Sipilä et al., 2017b). The reason for this low rate of adoption is perhaps that, being published almost 20 years ago, the definition does not serve today’s community of researchers in marketing (Sipilä et al., 2017b). Thus, this publication’s objective is to conceptualize ambivalence by taking stock of research on ambivalence after two decades of research, pointing out various issues and challenges based on a systematic analysis and critical evaluation of its prior definitions in the marketing literature (Sipilä et al., 2017b). Based on this understanding, an improved conceptual understanding of ambivalence is developed (Sipilä et al., 2017b).

Main contributions

This publication contributes to the existing ambivalence literature by redefining consumer ambivalence as a structural property of any evaluative psychological concept to which valences can be assigned; it occurs toward one clearly specified object during a consumption episode and within the internal and socio-cultural contexts of consumption (Sipilä et al., 2017b). Thereby, this publication synthesizes ambivalence literature in the two streams of consumer psychology and CCT to arrive at a conceptualization that serves both streams. This “common language” will hopefully bridge the gap between these streams of consumer research and enable a more holistic understanding of consumer ambivalence in the future. Through a clarification of the temporal scope of ambivalence, this publication further provides recommendations for an improved measurement of ambivalence (Sipilä et al., 2017b), and thus enables more insightful ambivalence research in the future. By broadening the scope of ambivalence to a wider range of evaluative concepts than the existing definitions allow, this publication also enables future studies to broadly apply the ambivalence framework, thus leading to a more in-depth understanding of consumer behavior. Finally, this publication specifies the objects of ambivalence, and thereby conceptually differentiates ambivalence from other types of
Summary of the publications and review of the findings

conflicts (Sipilä et al., 2017b). Thus, this paper is an important contribution to ambivalence-focused research in marketing because it provides improved guidance for future conceptual and empirical work (Sipilä et al., 2017b).

4.3 Publication II

Winding paths: Ambivalence in consumers’ buying processes

Objectives

The objective of this publication is to explore the role of different types of ambivalence in a decision-making process for the purchase of a high-involvement product (Sipilä et al., 2017c). This is an important objective because different types of ambivalence can be related to different objects (Conner and Sparks, 2002; Mucchi-Faina et al., 2009) and have different behavioral consequences (Costarelli and Colloca, 2004; Pacilli et al., 2013). Yet, in the existing marketing literature, there is very little comparison about the role of different types of ambivalence in decision-making. Consequently, there have been calls for research on different types of ambivalence in research in marketing (Williams and Aaker, 2002; Taylor, 2009; Penz and Hogg, 2011), also specifically in the decision-making process (Jewell et al., 2002), and this publication responds to these calls. Furthermore, an analysis of the objects of ambivalence studied in the existing marketing literature reveals that studies focusing on different types of ambivalence have also focused on different types of objects. This publication aims to find out if these differences are coincidental, or whether some types of ambivalence are in fact systematically related to specific objects or their utilitarian, hedonic, and symbolic aspects. This publication therefore explores different types of ambivalence in different stages of the decision-making process, investigating what they consist of, and what their roles are in the decision-making process (Sipilä et al., 2017c).

Main contributions

The main contribution of this publication lies in the exploration of the roles of different types of ambivalence in the decision-making process (Sipilä et al., 2017c). The findings suggest that different types of ambivalence (i.e., cognitive, affective, and intercomponent) are based on distinct factors, involve different verbal and bodily expressions, and have different decision-making consequences (Sipilä et al., 2017c). Additionally, a completely new type of intercomponent ambivalence is found, which is based on conflicting evaluations of the utilitarian and symbolic aspects of products and brands (Sipilä et al., 2017c). It is found that decision-makers emphasize symbolic aspects in their evaluations early in the decision-making process to reject a categorically unacceptable option, even though it has good utilitarian attributes, such as a low price (Sipilä et al., 2017c). Therefore, the important role of symbolic product and brand aspects is introduced into the ambivalence literature. Collectively, these findings make a contribution to the
literature around the role of ambivalence in decision-making (Sipilä et al., 2017c). As the key outcome of the exploration, propositions and a synthesizing framework about the different types of ambivalence in the decision-making process are developed for future research (Sipilä et al., 2017c). In sum, this paper challenges the existing view of ambivalence as a unitary concept and proposes an agenda for future research based on a more fine-grained understanding of different types of ambivalence (Sipilä et al., 2017c).

4.4 Publication III

*The influence of word-of-mouth on attitudinal ambivalence during the higher education decision-making process*

*Objectives*

This publication studies the antecedents and consequences of ambivalence in two stages of the decision-making process (information search and choice stages), particularly focusing on the influence of different types of information on ambivalence in the higher education (HE) decision-making context. Ambivalence is problematic for HE applicants because the choice of whether to begin studies in an institution is difficult when the applicant's evaluations towards the institution are conflicting (Sipilä et al., 2017a). Furthermore, ambivalence is uncomfortable and needs to be resolved, especially when a commitment to one side of an issue has to be made (van Harreveld et al., 2012), such as in the case of choosing whether to begin studies in an institution or not. Additional information may help HE applicants to develop more favorable or unfavorable evaluations towards the institution (Hodson et al., 2001) and thus reduce ambivalence (Sipilä et al., 2017a). Hence, applicants with ambivalence may actively search for and use information to reduce ambivalence (Maio et al., 1996). However, previous research does not show whether some types of information are more useful in this regard than others in the decision-making process (Sipilä et al., 2017a). In this publication, the focus is therefore on the types of information that decision-makers need in different stages of the decision-making process to reduce ambivalence, and the subsequent consequences of ambivalence for decision-making (Sipilä et al., 2017a). This publication synthesizes construal level theory (CLT) with ambivalence literature to conceptualize the relationship between different types of information and ambivalence in two stages of the decision-making process and further tests the developed hypotheses in a two-stage survey.

*Main contributions*

This publication extends the existing understanding of the role of ambivalence in the decision-making process. The existing studies concerning the role of ambivalence in consumer decision-making have predominantly been conducted at the choice stage (e.g., Sparks et al., 2001; van Harreveld et al., 2009; Pang et al., 2017). This publication extends these studies by demonstrating that ambivalence has an important role also in other stages.
Summary of the publications and review of the findings

of the decision-making process (Sipilä et al., 2017a). More specifically, this publication shows that search-stage ambivalence might shape choice-stage ambivalence (Sipilä et al., 2017a). This finding is in line with prior suggestions about the process nature of ambivalence (Jewell et al., 2002) and adds to the existing literature by further directing attention toward ambivalence during different stages of the decision-making process. Additionally, this study extends the literature around factors that can reduce ambivalence (e.g., Maio et al., 1996; Jonas et al., 1997; Hodson et al., 2001; van Harreveld et al., 2009) by showing that the relative importance of different types of information (varying in their level of abstractness) varies across the stages of the decision-making process (Sipilä et al., 2017a). Furthermore, the findings support the existing literature by extending the result that ambivalence has a negative influence on behavioral intentions (Sparks et al., 2001; Povey et al., 2001; Berndsen and van der Pligt 2004; Costarelli and Colloca, 2004; Penz and Hogg, 2011), using a real choice setting and thus providing external validity to this basic finding. Finally, a conceptual contribution is made by synthesizing CLT with the ambivalence literature. CLT was proved to be a valuable framework for theorizing about the factors that reduce ambivalence when the temporal distance to the final choice changes (Sipilä et al., 2017a).

4.5 Publication IV

The influence of organizational buyers’ ambivalence on a company website on their behavioral intentions

Objectives

The objective of this publication is to explore the influence of ambivalence on the intention to proceed in the decision-making process (Sipilä et al., 2016). The existing research mainly suggests that ambivalence has a negative influence on behavioral intentions (e.g., Povey et al., 2001; Sparks et al., 2001; Berndsen and van der Pligt 2004; Costarelli and Colloca, 2004). However, these previous findings are related to purchase or consumption intentions, and thus concern mainly the choice stage of the decision-making process. Thus, it is not yet understood how ambivalence influences different types of behavioral intentions in the earlier stages of the decision-making process. To address this gap, this publication investigates emotional ambivalence on different types of web pages (i.e., landing and product information pages) and explores its influence on decision-makers’ intentions to proceed in the decision-making process (Sipilä et al., 2016). This study is conducted in the context of an organizational decision-making process, which is complex, contains potentially conflicting decision criteria, and often requires information from multiple sources (Webster and Wind, 1972). Therefore, it is plausible that ambivalence plays a role in organizational decision-making processes. However, the existing research on the role of ambivalence in decision-making within the field of marketing has been conducted exclusively in the consumer context. Thus, this paper also makes a contextual contribution and answers recent calls for research on the role of
emotions (Leek and Christodoulides, 2011) and ambivalence (Ashforth et al., 2014) in the organizational context (Sipilä et al., 2016).

**Main contributions**

This publication contributes to ambivalence research by studying the boundary conditions of the ambivalence-intention relationship on a moment-to-moment basis (Sipilä et al., 2016). This study adds to the existing studies that have mainly found a negative influence of ambivalence on behavioral intentions (e.g., Povey et al., 2001; Sparks et al., 2001; Berndsen and van der Pligt 2004; Costarelli and Colloca, 2004), by revealing that this finding might not hold on different types of web pages including information at different levels of ambiguity. Thus, this study emphasizes the importance of taking the context into account on a very detailed level when studying the consequences of ambivalence (Sipilä et al., 2016). This is a significant addition to the existing research, which has tracked ambivalence continuously (Schneider et al., 2013; Schneider et al., 2015) but has not considered the consequences of ambivalence on such a detailed level (Sipilä et al., 2016). These results are likely to hold in both consumer and organizational contexts, as this study focused on individual decision-makers who were performing an information search task on a company website—a situation that may occur in both contexts. However, since ambivalence is a major research void in organizational decision-making literature, this publication contributes to research on organizational buying behavior by demonstrating that ambivalence influences an organizational buyer’s intention to continue in the decision-making process (Sipilä et al., 2016). This finding challenges and extends the established models of organizational buying behavior, which remain silent about the role of ambivalence (e.g., Webster and Wind, 1972; Sheth, 1973; Johnston and Lewin, 1996).
5 Conclusions

This dissertation advances the existing research in marketing by bringing increased precision to the concept of ambivalence and subsequently studying its role in the decision-making process, both in consumption and organizational contexts. The theoretical contributions, managerial implications, limitations, and suggestions for future research are outlined in this final section.

5.1 Theoretical contributions

The theoretical contributions of this dissertation can be categorized into two main areas. First, the dissertation extends the current understanding of the concept of ambivalence within the field of marketing. This involves conceptualizing ambivalence with improved precision, as well as “opening up” the concept and studying it on a more detailed level than before. The second category of contributions is an increased understanding of the role of ambivalence in decision-making processes. The theoretical contributions are outlined below.

5.1.1 An improved conceptualization of ambivalence

This dissertation contributes to the conceptualization of ambivalence, which has remained ambiguous despite earlier conceptualization attempts (Otnes et al., 1997; Jewell et al., 2002). The redefinition of ambivalence developed in this dissertation allows for the concept to be used by a significant number of researchers in marketing, as it allows the property of ambivalence to be assigned to a broad variety of evaluative concepts (Sipilä et al., 2017b). Hence, the prominence of ambivalence (Fazio, 2007) will be better reflected in future research in marketing as a consequence of applying the definition developed in this dissertation. Although the definition develops the existing definitions of ambivalence further, it also leans on them, and therefore allows future research to build on the existing body of ambivalence studies (Sipilä et al., 2017b). In addition, by addressing a number of sources of vagueness in previous definitions of ambivalence, the dissertation defines ambivalence with increased precision (Sipilä et al., 2017b), which facilitates future empirical research around ambivalence, as it is challenging to conduct and evaluate empirical research when concepts are vague (Strunz, 2012). Furthermore, the definition takes into account ambivalence over time and defines the temporal boundaries of ambivalence (Sipilä et al., 2017b), and therefore enables future researchers to continue the work started in this dissertation about the role of ambivalence in decision-
making processes. Finally, the definition synthesizes consumer psychologists’ and consumer culture theorists’ approaches to ambivalence, thus allowing ambivalence to be studied from a holistic perspective (Sipilä et al., 2017b). The conceptualization of ambivalence was not only developed, but also applied empirically in this dissertation, which lends further support for its usefulness in research in marketing.

### 5.1.2 Different types of ambivalence

In the existing literature, the following statement has been made: “Although it is important to realize that internal conflict comes in many flavors, we believe that they are fundamentally similar” (van Harreveld et al., 2009, p. 46–47). This dissertation challenges this statement, opens up the ambivalence concept, and studies its varying types in the decision-making process. An important contribution of this dissertation lies in the exploration of the roles of different types of ambivalence in the decision-making process (Sipilä et al., 2017c). The existing literature around the role of ambivalence in decision-making (e.g., van Harreveld et al., 2009) is based on general attitudinal ambivalence, and this dissertation therefore extends this literature by revealing the roles of different types of ambivalence that reside within the attitudinal ambivalence concept (Sipilä et al., 2017c). Additionally, this dissertation contributes to the few studies that have discussed the differences between cognitive and affective ambivalence (e.g., Conner and Sparks, 2002) by empirically exploring the proposition that different types of ambivalence may be differentially important in different situations (Sipilä et al., 2017c). Furthermore, antecedents and consequences of different types of ambivalence are explored (Sipilä et al., 2017c). This is an important contribution because, thus far, different types of ambivalence have been studied in contexts such as ingroup and outgroup evaluations, where moderators, such as fairness norms, are relevant (Mucchi-Faina et al., 2002). Yet, these studies do not elucidate much about the role of different types of ambivalence in the marketing domain. This dissertation also extends studies that have found that affective and cognitive ambivalence have different consequences (Costarelli and Colloca, 2004; Pacilli et al., 2013) by exploring the differences on the antecedent side (Sipilä et al., 2017c). By demonstrating that different types of ambivalence (affective, cognitive, and intercomponent) are based on conflicting information about different aspects of objects, this dissertation therefore contributes to the existing literature of ambivalence in marketing by enabling a more accurate understanding of the role of ambivalence in the decision-making process (Sipilä et al., 2017c). This contribution is further strengthened by demonstrating that each type of ambivalence has different implications for decision-making and is associated with different verbal and bodily expressions (Sipilä et al., 2017c).
5.1.3  **Challenging the dominance of choice-stage ambivalence**

This dissertation shows that ambivalence plays a role and develops throughout the decision-making process, and its development in the earlier stages may ultimately influence choice-stage ambivalence (Sipilä et al., 2017a). Therefore, this dissertation challenges the prevailing focus that previous research has had on ambivalence at the choice stage (e.g., Sparks et al., 2001; van Harreveld et al., 2009; Pang et al., 2017). The results also emphasize the importance of taking ambivalence into account throughout the decision-making process (Sipilä et al., 2017a). For example, by showing that ambivalence might contribute to quitting the decision-making process before ever advancing to the choice stage (Sipilä et al., 2016), this dissertation emphasizes the need to take the whole decision-making process into account when studying ambivalence. Additionally, while prior research has focused on the factors that can reduce ambivalence at the choice stage (e.g., van Harreveld et al., 2009), the results of this dissertation demonstrate that ambivalence is also reduced in the earlier stages of the decision-making process (Sipilä et al., 2017a; Sipilä et al., 2017c). The findings also show that an ambivalent attitude can begin to polarize toward the valence of the evaluation of the most important product attribute early in the decision-making process, and as a result, there is considerably less ambivalence left in the choice stage (Sipilä et al., 2017c). Collectively, these findings contribute to the existing literature by turning attention toward ambivalence during the whole decision-making process.

5.1.4  **The relationship between information and ambivalence**

This dissertation shows that it is not sufficient to only refer to “information” in studies of the relationship between information and ambivalence, as different types of information play different roles in relation to ambivalence, depending on the stage of the decision-making process. By taking temporality into account through a focus on the decision-making process, the present findings indicate that as the final choice becomes closer in time, decision-makers need different types of information to reduce ambivalence (Sipilä et al., 2017a). This extends the existing literature, which suggests that information may reduce ambivalence (Hodson et al., 2001), and accordingly, that information can help people develop more positive or negative attitudes (Maio et al., 1996). Furthermore, this dissertation extends a more recent study, which found that ambivalence toward a salesperson can be reduced by providing positive information about the salesperson only after the initial contact with the salesperson (Bush et al., 2015). This study showed that the timing of the information matters in ambivalence reduction, and this dissertation extends this finding by demonstrating that the relative importance of different types of information varies across different stages of the decision-making process (Sipilä et al., 2017a). In so doing, this dissertation demonstrates the necessity to compare different types of information on a detailed level in ambivalence research.
5.1.5 The consequences of ambivalence

This dissertation takes part in an emerging discussion about the dynamics of ambivalence during processes (Jewell et al., 2002; Schneider et al., 2015) by studying marketing-related situational conditions that influence the consequences of ambivalence on a moment-to-moment basis. By doing so, this dissertation shows that even within one stage of the decision-making process, ambivalence has different consequences in different information environments, in this case different web pages (Sipilä et al., 2016). This finding provides a more fine-grained approach to the implications of ambivalence than the existing research. Whereas the existing research has found that affective ambivalence has a negative influence on behavioral intentions (Costarelli and Colloca, 2004), this dissertation demonstrates that the consequences can also be positive, and even change in a matter of minutes (Sipilä et al., 2016). This is a significant addition to the existing research, which has tracked ambivalence continuously (Schneider et al., 2013; Schneider et al., 2015) but has not considered the consequences of ambivalence on such a fine-grained basis. Additionally, while organizational research has come to emphasize the positive consequences of ambivalence (e.g., Rothman et al., 2017), research in marketing continues to emphasize its negative consequences. This dissertation therefore contributes to the existing marketing literature by challenging the position that ambivalence is only a negative concept from a company perspective.

5.1.6 Introducing ambivalence to organizational buying behavior

Finally, the existing research on the role of ambivalence in decision-making within the field of marketing has been conducted exclusively in the consumer context, and this dissertation is thus among the first to take ambivalence into account in organizational decision-making. Therefore, this dissertation supports the recent suggestions on the role of emotional issues (e.g. Leek and Christodoulides, 2011) and ambivalence (Ashforth et al., 2014; Bush et al., 2015) in the organizational context (Sipilä et al., 2016). Hence, a broader contribution is made to marketing in addition to the contributions made to consumer decision-making. By demonstrating that ambivalence has implications for whether an organizational buyer will continue in the decision-making process, a basis for the importance of ambivalence in organizational decision-making is laid (Sipilä et al., 2016). This challenges the established models of organizational buying behavior, which ignore the role of ambivalence (e.g., Webster and Wind, 1972; Sheth, 1973; Johnston and Lewin, 1996). Ambivalence would extend these models, which already recognize the role of interpersonal conflict (Sheth, 1973), but thus far have left out the role of intrapersonal ambivalence. Hence, this dissertation shows that it is time to take ambivalence into account broadly in the field of marketing, and not only in consumer research.
5.2 Managerial implications

The findings of this dissertation emphasize the managerial relevance of ambivalence, as it is found to have implications for decision-makers’ real behavior and decision-making. The marketing consequences are mostly negative, and therefore the managerial implications focus on effective ambivalence reduction. The managerial implications also involve recommendations of when to allocate resources to ambivalence reduction. The fact that ambivalence in the need recognition stage was not found to have consequences for decision-making points to the conclusion that although ambivalence takes place throughout the decision-making process, managers with limited marketing resources can allow its occurrence in the earlier stages (need recognition stage and the very beginning of the information search stage) because it is not as harmful from a marketing perspective as ambivalence in later stages. However, as soon as customers begin active information search, ambivalence begins to be problematic from a marketing perspective, and it should be reduced utilizing the tools discussed in the following section. It is next discussed how managers could use various marketing functions to minimize potential problems resulting from ambivalence.

5.2.1 Implications for personal selling

The findings of this dissertation demonstrate that customers have different types of ambivalence, which are based on different factors and are reduced differently (Sipilä et al., 2017c). This implies that managers should not consider ambivalence as one, unitary issue but rather, cater their marketing efforts to each type of ambivalence. In terms of personal selling, the most interesting finding is that bodily expressions and prosody can give clear indications of different types of ambivalence (Sipilä et al., 2017c). Thus, salespeople can be trained to read customers’ body language during the sales encounter and react accordingly (Sipilä et al., 2017c). Based on the findings, this approach is likely to be most effective in the case of cognitive ambivalence, which is based on conflicting evaluations of the utilitarian aspects of products or brands (Sipilä et al., 2017c). The findings imply that the important utilitarian aspects of products and brands, to which decision-makers give most weight in their final choice, can be detected from their body language and prosody relatively early in the buying process and remain relatively stable over time (Sipilä et al., 2017c). For example, if a customer talks about the environmental friendliness of a car repeatedly, and places emphasis (not only verbally but also with his or her body) on features influencing environmental friendliness, the salesperson could effectively influence the customers’ choice by making sure that the customers’ evaluation of those features of the car he or she is trying to sell is as positive as possible (Sipilä et al., 2017c). Affective ambivalence, on the other hand, is based on conflicting expected outcomes of the decision-making process: getting a product one wants is usually a positive outcome, but there are also financial, functional, and social risks involved with
the choice of a product (Sipilä et al., 2017c). Accordingly, affective ambivalence can be reduced by minimizing the perceived risks of purchasing a product (Sipilä et al., 2017c). This could be done, for example, by offering flexible return policies or opportunities to try the product prior to purchase (Sipilä et al., 2017c). This implies that salespeople should be given the freedom to offer such benefits to customers to help them “swing the balance” of their ambivalence toward more positivity.

5.2.2 Implications for marketing communication

Another type of ambivalence, intercomponent ambivalence, was found to be based on conflicting evaluations of the utilitarian, hedonic, and/or symbolic aspects of brands (Sipilä et al., 2017c). Interestingly, symbolic aspects were found to serve as decision-making heuristics, which enable the rejecting of completely unacceptable options early in the decision-making process (Sipilä et al., 2017c). Accordingly, managers are encouraged to determine whether their customers associate some symbolic meaning with their products or brands (Sipilä et al., 2017c). For example, when customers are considering to purchase an expensive designer sofa, they might perceive the designer sofa as a symbolically appealing option (e.g., trendy and sustainable) but also recognize the potential utilitarian problems, such as price and the need to be careful not to break the sofa. In such a situation, marketers are encouraged to emphasize the symbolic benefits in marketing communication (Sipilä et al., 2017c). Subsequently, if cognitive ambivalence remains due to conflicting utilitarian aspects of the remaining option, a marketer should emphasize the positive utilitarian aspects of their product, especially focusing on the aspects that are the most important to the customers (e.g., “This designer sofa lasts time and will save you money in the long run!”) (Sipilä et al., 2017c). Customers’ perceptions of the symbolic benefits and drawbacks of different brands and products will of course vary based on individual differences, which marketers should take into account—indeed, in the example above, the designer sofa might not be the symbolically superior option to some customers, who for example do not want to be identified as snobs. Hence, market research is encouraged to identify what symbolic meaning different customer segments give to different brand or product categories.

5.2.3 Implications for website design

Affective ambivalence was found to have a negative influence on intentions to proceed in the decision-making process when it occurred on product information pages on a company website (Sipilä et al., 2016). Therefore, the possibility for ambivalence to arise should be minimized on such pages (Sipilä et al., 2016). However, the findings of this dissertation also indicate that, in fact, ambivalence may not be harmful in all cases (Sipilä et al., 2016). On the contrary, the findings suggest that ambivalence on a less information-rich web page has a positive influence on intentions to proceed in the decision-making
process (Sipilä et al., 2016). This is an interesting finding because it implies that managers do not need to be equally concerned about ambivalence in all situations. Indeed, the findings imply that the consequences of ambivalence turn negative only briefly after the customer has visited the landing page, when he or she reaches the product information pages (Sipilä et al., 2016). Hence, if there are only limited marketing resources available, companies are encouraged not to allocate too many resources to minimize ambivalence on the landing page (Sipilä et al., 2016). Rather, such considerations are more important on product information pages (Sipilä et al., 2016). Information-rich product information pages should therefore provide decision-makers with tools to cope with ambivalence immediately, such as online chat services, through which sales representatives can address any conflicting reactions of the potential buyers (Sipilä et al., 2016).

5.2.4 Implications for the marketing of higher education services

The findings of this dissertation imply that in the earlier stages of the decision-making process when the final decision is further away in time (i.e., the information search stage), decision-makers need more abstract positive information for ambivalence reduction, in addition to concrete and detailed information (Sipilä et al., 2017a). In this dissertation, these information types were operationalized through WOM activity and WOM praise, which enables managerial implications to be generated, particularly in terms of managing WOM. Potential ways of promoting the more abstract WOM praise in the information search stage involve creating positive “hype” among the senders of WOM, perhaps by using marketing efforts, such as conversation-generating ad campaigns (Sipilä et al., 2017a). More direct efforts to promote WOM praise could also involve encouraging current students or alumni to talk about their positive experiences with potential applicants (Sipilä et al., 2017a), which ensures a solid foundation of WOM (Lang and Hyde 2013). More generally, the findings imply that customers should not be given only details about the HE institution in the information search stage, but in addition, they should be given general, abstract positive information, which helps to reduce their ambivalence (Sipilä et al., 2017a).

On the other hand, especially at the choice stage, more detailed and concrete WOM activity is needed (Sipilä et al., 2017a). WOM activity can be promoted by providing a considerable amount of detailed information to senders of WOM (Sipilä et al., 2017a). This can be done through creating shareable content on an institution’s website, or email campaigns in which the receivers are encouraged to forward the email to others, as well as providing informative event marketing (Sipilä et al., 2017a). In addition, both WOM activity and WOM praise can be promoted by connecting prospective customers to former or current customers, e.g., through social media, and enabling discussions among them (Sipilä et al., 2017a). Such tactics are encouraged throughout the decision-making process, but even more so in the search stage in which both WOM praise and WOM activity were found to reduce ambivalence (Sipilä et al., 2017a). Using these tactics, marketers can promote ambivalence reduction and therefore increase the likelihood of
applicants choosing their HE institution, as the findings imply that ambivalence towards a HE institution increases the likelihood of not choosing that institution (Sipilä et al., 2017a).

5.3 Limitations and suggestions for further research

This dissertation, like all research, carries limitations that are discussed next. The limitations serve as bridges to new research ideas that merit attention in future studies. This dissertation begins with an extensive conceptualization effort to understand the concept of ambivalence. As a result, an improved definition for ambivalence is provided. In the definition, it is argued that ambivalence can be a property of any evaluative psychological concept. Preliminary supporting evidence for this argument can be found from recent literature suggesting that, for example, by adopting an ambivalence perspective to trust research, it is possible to develop more accurate insight about trust (Ou and Sia 2010; Moody et al., 2014). Accordingly, the wide use of ambivalence in different areas of research in marketing is advocated, and ambivalence is proposed as a framework with broad applicability to various areas of marketing. However, in this dissertation, the focus has been on attitudes, and therefore more specific insight on ambivalence in different evaluative concepts was not studied. Future research is encouraged in this area, as it would generate relevant insight for a wide audience of researchers in marketing. Additionally, the objective of the conceptual work (Publication I) was to develop the definition of ambivalence, or in other words, generate an improved understanding of what ambivalence is. To take this work further, additional conceptual work is needed to, for example, synthesize the attitude strength approach to ambivalence (Petty and Krosnick, 1995) and the MAID model (van Harreveld et al., 2009) to generate a more holistic conceptual understanding of the antecedents and consequences of ambivalence in the area of marketing.

While applying the ambivalence concept more widely, future research is also needed to understand the differences between ambivalence and other psychological conflicts in greater depth. Although the conceptual differences between ambivalence and, for example, cognitive dissonance are understood, comparative research on the consequences of these different conflicts on decision-making would enable understanding when and to what extent these conflicts are elicited though different factors and resolved differently. In other words, a more comprehensive and general theorizing around different types of conflicts (including ambivalence) in research in marketing is necessary. This would also involve research on the relationship between choice conflicts (i.e., not knowing which alternative to choose when all alternatives area equally attractive; Tversky and Shafir, 1992) and ambivalence.
In this dissertation, many of the negative implications of ambivalence have been outlined, accompanied with preliminary findings regarding the positive consequences of ambivalence. The negative orientation toward ambivalence is in line with most research in marketing addressing individual responses to ambivalence, where it is widely assumed, and found, that ambivalence leads to negative outcomes from a marketing perspective (Jewell et al., 2002; Berndsen and van der Pligt, 2004; Costarelli and Colloca, 2004; Olsen et al., 2005; Penz and Hogg, 2011). However, researchers in the field of management have proposed that ambivalence may also lead to positive outcomes (Fong, 2006; Rees et al., 2013). Additionally, sometimes individuals might even seek experiences that generate ambivalent emotions, such as in the case of high-risk leisure activities (Celsi et al., 1993), and ambivalence has also been associated with increased attitude-behavior consistency (Jonas et al., 1997). Yet, there is little research on the potential positive consequences of ambivalence for consumer or organizational decision-making. This dissertation shows that ambivalence has positive consequences in the early stages of the decision-making process, on the landing page of a company website (Sipilä et al., 2016), thus providing preliminary insight into this topic. It would be relevant for future researchers to study what drives these effects. Perhaps when asked to evaluate a service, ambivalence on a landing page of a website has a positive influence on behavioral intentions because the customer needs to cope with ambivalence by searching for additional information about the company. Subsequently, once the customer has reached product information pages but still has not been able to resolve ambivalence, it might begin to have a negative influence on behavioral intentions because the customer does not believe that ambivalence toward this particular option can be resolved and stops engaging in further coping efforts. Additional research is needed on such dynamics, as well as the individual and environmental factors that turn the consequences of ambivalence positive or negative from a marketing perspective. Such an understanding would not only be theoretically interesting, but it would also help companies to understand when ambivalence should be minimized and in which cases it may not be equally problematic.

In terms of the decision-making process, one limitation of this dissertation is that the post-decision or post-purchase stage is not included in the empirical studies. However, ambivalence affects the pre- and post-purchase stages of the decision-making process (Roster and Richins, 2009), and many consequences of ambivalence, such as satisfaction or loyalty (Olsen et al., 2005), take place after the decision-making process for the focal product or service has been completed. In addition, the question remains as to whether ambivalence is reduced only before choice, or also after choice, and accordingly, whether there is a difference between post-decisional ambivalence and cognitive dissonance (Jewell et al., 2002). Future studies taking the post-decision or post-purchase processes into account as a part of the multi-stage decision-making process would provide an even more complete understanding of the role of ambivalence in decision-making processes.

While ambivalence was studied in multiple time points in this dissertation, the dynamics of ambivalence could be studied on a more detailed level in future research. In this dissertation, ambivalence was studied on the level of an entire stage of a decision-making process, or an aggregate of visits to certain types of web pages. However, encouraging
advancements have been made recently on the continuous measurement and analysis of ambivalence (Larsen et al., 2009; Larsen and McGraw 2011; Schneider et al., 2013; Schneider et al., 2015). Studying the dynamics of ambivalence in such a detailed manner would be a natural next step to take the research conducted in this dissertation further. For example, it was found that ambivalence on product information web pages has a negative influence on intentions to proceed in the decision-making process, and future research could analyze ambivalence data on a more fine-grained temporal level to determine whether there are specific elements on product information pages that systematically trigger ambivalence. This would enable an understanding of not only the consequences, but also the antecedents of ambivalence on a moment-to-moment basis.

The empirical research was mostly conducted in different “real-life” decision-making contexts. While this permits greater external validity than, for example, laboratory experiments, it also makes it more difficult to know all of the factors that contributed to ambivalence (Jewell et al., 2002). Hence, experimental research is recommended to further validate the results. On the other hand, larger-scale studies in various contexts are necessary to increase the generalizability of the results. This dissertation is among the first attempts to build an understanding of the role of ambivalence in the decision-making process, and therefore is partly exploratory in nature. Hence, future studies will have to confirm the findings through rigorous theory testing and continue building a holistic understanding around this important topic.

Finally, this dissertation presented the concept of ambivalence into the area of organizational buying behavior. In this work, consumer research and psychological research were applied to the area of organizational buying behavior. This was seen as a reasonable starting point because although the organizational and consumer buying contexts can be very different, in the case of complex, high-involvement decision-making, they are quite similar. Additionally, to move toward a more general understanding of marketing phenomena, it is beneficial to place less emphasis on the differences between consumer and organizational marketing because “industrial and consumer marketing are more similar than different” (Fern and Brown, 1984, p. 69). Further, it has been suggested that the differences within consumer and industrial marketing are greater than the differences between the two (Fern and Brown, 1984). Furthermore, in this dissertation the level of analysis was individual behavior, and therefore it was assumed that consumer and psychological research, which focuses on the behavior of individuals, would be applicable to organizational buying behavior. However, organizational buying behavior often involves a buying group, and different group dynamics and conflicts may come into play in organizational decision-making, which were not addressed in this dissertation. Furthermore, organizational buying may involve more interpersonal negotiations than consumer decision-making. Therefore, future research should broaden the level of analysis from individual to group decision-making and interpersonal communication when studying ambivalence in organizational decision-making processes.
References


References


References


Fornell, C. and Larcker, D.F. (1981). Evaluating structural equation models with
unobservable variables and measurement error. Journal of Research in marketing,


778-822


expressions at the Whitby goth festival. Consumption, Markets and Culture,
12(1), pp. 27-46.

Grewal, R., Lilien, G.L., Bharadwaj, S., Jindal, P., Kayande, U., Lusch, R.F., and


Science, 31, pp. 355 - 384

Harrison-Walker, L.J. (2001). The measurement of word-of-mouth communication and
an investigation of service quality and consumer commitment as potential antecedents.


assessment: A functional approach to concepts and methods. Psychological

Hodson, G., Maio, G.R., and Esses, V.M. (2001). The role of attitudinal ambivalence in
susceptibility to consensus information. Basic and Applied Social Psychology, 23(3),
pp. 197-205.


References


References


References


Appendix A. Survey scales used in the two-stage survey

Note: This appendix is adapted from Sipilä et al., (2017a).

### WOM activity

<table>
<thead>
<tr>
<th>Items</th>
<th>Scale points</th>
<th>Cronbach’s alphas</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The university has been frequently mentioned in discussions</td>
<td>Five-point Likert</td>
<td>Family T1: $\alpha = .79$</td>
</tr>
<tr>
<td>(2) I have had more discussions about the university than about other universities</td>
<td></td>
<td>Family T2: $\alpha = .86$</td>
</tr>
<tr>
<td>(3) The discussions about the university tend to be in great detail</td>
<td></td>
<td>Friends T1: $\alpha = .65$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Friends T2: $\alpha = .78$</td>
</tr>
</tbody>
</table>

**Source**

Harrison-Walker (2001)

### WOM praise

<table>
<thead>
<tr>
<th>Items</th>
<th>Scale points</th>
<th>Cronbach’s alphas</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) In the discussions, the university was praised</td>
<td>Five-point Likert</td>
<td>Family T1: $\alpha = .79$</td>
</tr>
<tr>
<td>(2) The discussions have only been on good things about the university</td>
<td></td>
<td>Family T2: $\alpha = .74$</td>
</tr>
</tbody>
</table>

**Source**

Harrison-Walker (2001)

### Choice criteria

Criteria used for ambivalence calculation (i.e., the most important criteria)

<table>
<thead>
<tr>
<th>Items</th>
<th>Scale points</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The degrees offered have academic value</td>
<td></td>
</tr>
<tr>
<td>(2) The degrees offer good job prospects</td>
<td></td>
</tr>
<tr>
<td>(3) The program fulfils my academic needs</td>
<td></td>
</tr>
<tr>
<td>(4) A clean and safe study environment</td>
<td></td>
</tr>
<tr>
<td>(5) Country’s high academic reputation</td>
<td></td>
</tr>
<tr>
<td>(6) Institution is well-known for its reputation</td>
<td></td>
</tr>
</tbody>
</table>

**Source**

Harrison-Walker (2001)
Appendix A. Survey scales used in the two-stage survey

(7) Reasonable living costs (accommodation, food, traveling, etc.)
(8) A high level of security in the host country
(9) University’s high-ranking position
(10) An active student life

Other criteria originally measured:
(11) A low level of racial discrimination in the host country
(12) University’s cost of education/tuition fees is/are reasonable
(13) The possibility of studying for a doctoral degree
(14) Reasonable entry/admission requirements
(15) The university is centrally located
(16) A positive city image
(17) The possibility to work during one’s studies
(18) The availability of advice and help with organizing everyday life in the host country
(19) The availability of financial help/scholarships
(20) Recommendations from alumni or current students
(21) My friends are applying to the same university
(22) I know someone who has studied or is currently studying at the university
(23) I know someone who has studied or is currently studying in the country

Scale points
Seven-point Likert scale: 1=’strongly disagree’; 7=’strongly agree’
Source
Joseph and Joseph (1998); Mazzarol and Soutar (2002)

Importance of choice criteria

Items
The same items were used as in the choice criteria measure
Scale points
Seven-point Likert scale: 1=’not at all important’; 7=’very important’
Source
Joseph and Joseph (1998); Mazzarol and Soutar (2002)

Calculation of positivity, negativity, and ambivalence

The choice criteria scales were first recoded into a scale ranging from -3 to +3. Next, the scale was split at the middle point. Because all of the original choice criteria were labeled positively, the values from -3 to -1 reflected negativity, and the values from 1 to 3 reflected positivity for each choice criterion. In order to calculate an ambivalence score from the choice criteria, the positivity and negativity values for each criterion were next aggregated. Since there were different numbers of positive and negative responses for many of the items, the positivity score was calculated by dividing the sum of positive responses to all items by the total number of the items (i.e., 10), and the same was done
Appendix A. Survey scales used in the two-stage survey for the negative responses. Table 1 below shows two examples of the calculation of positivity and negativity scores for hypothetical participants.

Table 1. Examples of the calculation of the positivity and negativity scores

<table>
<thead>
<tr>
<th>Choice criteria</th>
<th>R1, original response</th>
<th>R1, recoded response</th>
<th>R2, original response</th>
<th>R2, recoded response</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The degrees offered have academic value</td>
<td>1</td>
<td>-3</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2) The degrees offer good job prospects</td>
<td>3</td>
<td>-1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>(3) The program fulfils my academic needs</td>
<td>6</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>(4) A clean and safe study environment</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>-2</td>
</tr>
<tr>
<td>(5) Country’s high academic reputation</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>(6) Institution is well-known for its reputation</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>-1</td>
</tr>
<tr>
<td>(7) Reasonable living costs (accommodation, food, traveling, etc.)</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>(8) A high level of security in the host country</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>(9) University’s high-ranking position</td>
<td>2</td>
<td>-2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>(10) An active student life</td>
<td>3</td>
<td>-1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Sum of negative responses</td>
<td>-7</td>
<td></td>
<td>-3</td>
<td></td>
</tr>
<tr>
<td>Sum of positive responses</td>
<td>9</td>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td><strong>Negativity score</strong></td>
<td>-0.7</td>
<td></td>
<td>-0.3</td>
<td></td>
</tr>
<tr>
<td><strong>Positivity score</strong></td>
<td>0.9</td>
<td></td>
<td>1.4</td>
<td></td>
</tr>
</tbody>
</table>

Note: R1=Respondent 1; R2=Respondent 2

Next, the positivity and negativity scores were combined into an overall ambivalence score according to the following formula: 

\[
\frac{(P + N)}{2} - |P - N|, \quad \text{where } P \text{ is the positivity score and } N \text{ is the negativity score} \ (\text{Thompson et al., 1995}).
\]

Because both positivity and negativity components should be inserted into the equation with a positive sign, the negativity scores were first multiplied by -1. Thus, the values for ambivalence could range from -1.5 (i.e., univalent positive or negative attitude) to 3 (when both positivity and negativity scores are 3). In the example above, the ambivalence score is: 

\[
\frac{(0.9+0.7)}{2} - |0.9-0.7| = 0.6 \text{ for Respondent 1, and: } \frac{(1.4+0.3)}{2} - |1.4-0.3| = -0.25 \text{ for Respondent 2, indicating that Respondent 1 is more ambivalent.}
\]
Appendix A. Survey scales used in the two-stage survey

Demographics (used as control variables)

Age (continuous scale)

Gender (male, female)

Nationality (coded as European, Asian, American, and African, and introduced into the analyses as a dummy variable)

Other control variables

Number of WOM sources (whether the respondent received WOM only from friends or family, i.e., one source, or both from friends and family, i.e. two sources)

Perceived social pressure (single item: “I feel social pressure to start my masters' degree studies at university X”, measured on a seven-point scale from 1 = strongly disagree to 7 = strongly agree)
Appendix B. Assumption testing for regression analyses, Publication III

In regression analysis, the assessment of how well the assumptions for regressions are met is a central step in assessing the trustworthiness of the results. The following assumptions of regression are next discussed: Linearity, homoscedasticity, the normality of residuals, and multicollinearity. It is not uncommon that some assumptions are violated when dealing with real-life data; however, it is necessary to estimate whether the violations are remarkable enough to potentially bias the results (Osborne and Waters, 2002). The assumption testing concerns Models A and B in Publication III. The third model in the publication (Model C) is a logistic regression model, which has considerably fewer assumptions, and it can be assumed to be robust as long as the observations are independent of each other (Peng et al., 2002).

**Linearity**

Linearity means that the relationships between independent and dependent variables should be linear (Hair et al., 1998). If the relationship between an independent and a dependent variable is not linear, a regression analysis will underestimate their true relationship (Osborne and Waters, 2002). As a first step, the correlations between the independent and dependent variables were inspected. There were significant moderate negative correlations between all independent variables and the dependent variable in all models based on the two-wave survey data, indicating that there is at least a significant relationship between the variables. To investigate whether this relationship is linear, the scatter plots visualizing the relationships between the variables of interest were examined. The plots are included in Figures 1a and 1b, and visual inspection suggests that the assumption of linearity is met.
Appendix B. Assumption testing for regression analyses, Publication III

Homoscedasticity

Homoscedasticity means that the error variance is constant across all levels of the dependent variable, and when this assumption is violated (i.e., heteroscedasticity), the findings can become distorted (Osborne and Waters, 2002). Homoscedasticity was assessed by examining the scatterplot of the residuals against the predicted values of the dependent variables (Osborne and Waters, 2002). For both models in Publication III, the graphs show a weak cone-shaped pattern, indicating slight heteroscedasticity. However, as slight heteroscedasticity rarely has an influence on significance tests (Osborne and
Waters, 2002), it was deemed that heteroscedasticity does not pose a serious threat to the trustworthiness of the results. Figures 2a and 2b show the scatterplot of residuals against the predicted values of the dependent variable, which were used to confirm homoscedasticity.

**Figure 2a.** Homoscedasticity assessment for Publication III, model A

**Figure 2b.** Homoscedasticity assessment for Publication III, model B
Normality of residuals

Normality in this case means that the errors are normally distributed, and meeting this assumption helps in ensuring that p-values and t-tests are valid (SPSS Web Books 2016). Normal probability plots were used to assess normality of residuals (Hair et al., 1998). As shown in Figure 3c, the standardized residuals follow the diagonal normal distribution line closely, which indicates that based on these plots, the assumption of normality is met (Hair et al., 1998). However, in Figure 3a the residuals are not perfectly normally distributed. A histogram confirms that this is the case (Figure 3b), and that there is some skewness to the left. For this reason, additional analyses were conducted in Publication III, whereby Model A was rerun using bias-corrected bootstrap. The benefit of the bootstrap confidence intervals and significance values is that they do not rely on assumptions of normality and homoscedasticity (Field, 2015). The results remained the same; therefore, it was concluded that the violation of the normality of residuals assumption was not severe.

Figure 3a. Normality of standardized residuals for Publication III; Model A
Figure 3b. Normality of standardized residuals for Publication III in a histogram; Model A

Figure 3c. Normality of standardized residuals for Publication III, Model B
Multicollinearity

Checking multicollinearity is important because independent variables that are highly collinear can be problematic in correctly estimating regression coefficients or their standard errors (Mason and Perreault, 1991). The correlation matrix, tolerance, and variance inflation factor (VIF) indicators were used to determine whether multicollinearity was a problem. In the correlation matrices of Publication III, it is evident that there are significant moderate correlations between the independent variables, which raises some concern about multicollinearity. However, the correlations are within the 0.3–0.4 range, while the cut-off values for serious multicollinearity used in prior literature are in the 0.8–0.9 range (Mason and Perreault, 1991), indicating that while there is some multicollinearity, it might not be a major problem. However, to further investigate how serious the problem of multicollinearity is, the tolerance and VIF were calculated. The tolerance values ranged between .561 and .987, exceeding the threshold of .10, and the VIF values ranged between 1.013 and 1.783 in all analyses, which is considerably below the threshold of 10 (Hair et al., 1998). Therefore, the tolerance and VIF values indicated that multicollinearity was not an issue (Hair et al., 1998).
Appendix C. Assumption testing for regression analysis, Publication IV

Similar to Publication III, the following assumptions of regression are next discussed for Publication IV: linearity, homoscedasticity, normality of residuals, and multicollinearity.

Linearity

As a first step, the correlations between the independent and dependent variables were inspected. There were significant moderate negative correlations between all independent variables and the dependent variable, indicating that there is at least a significant relationship between the variables. To investigate whether this relationship is linear, the scatterplots visualizing the relationships between the variables of interest were examined. The plots are included in Figure 1, and visual inspection suggests that the assumption of linearity is met.

Figure 1. Scatter plot of variables for Publication IV

Homoscedasticity

Homoscedasticity was assessed by examining the scatterplot of the residuals against the predicted values of the dependent variables (Osborne and Waters, 2002). The graph shows no signs of heteroscedasticity, and therefore it was deemed that heteroscedasticity does not pose a threat to the trustworthiness of the results. Figure 2 shows the scatterplot of residuals against the predicted values of the dependent variable, which was used to confirm homoscedasticity.
Normal probability plots were used to assess the normality of residuals (Hair et al., 1998). As shown in Figure 3, the standardized residuals follow the diagonal normal distribution line relatively closely, which indicates that based on these plots, the assumption of normality is met (Hair et al., 1998).

**Figure 3.** Normality of standardized residuals for Publication IV

**Multicollinearity**

The correlation matrix, tolerance, and VIF indicators were used to determine whether multicollinearity was a problem. There are significant moderate correlations between the independent variables, which raises some concern about multicollinearity. However, the correlations are within the 0.4–0.5 range, while the cut-off values for serious multicollinearity used in prior literature are in the 0.8–0.9 range (Mason and Perreault, 1991), indicating that while there is some multicollinearity, it might not be a major problem.
Table 1. Correlations between variables in Publication IV

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Behavioral intentions</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived risk</td>
<td>-.444*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Product attitude</td>
<td>.699***</td>
<td>-.431*</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Ambivalence, landing page</td>
<td>.315†</td>
<td>-.185</td>
<td>.249</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>5. Ambivalence, product page</td>
<td>-.191</td>
<td>-.075</td>
<td>-.089</td>
<td>.494**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

However, to further investigate how serious the problem of multicollinearity is, the tolerance and VIF were calculated. The tolerance values ranged from .669–.814, exceeding the threshold of .10, and the VIF values ranged from 1.228–1.494 in all analyses, which is considerably below the threshold of 10 (Hair et al., 1998). Therefore, the Tolerance and VIF values indicated that multicollinearity was not an issue (Hair et al., 1998).
Publication I

Sipilä, J., Tarkiainen, A., and Sundqvist, S.
Toward an improved conceptual understanding of consumer ambivalence.

Reprinted with permission from
AMS Review
© 2017, Springer
Toward an Improved Conceptual Understanding of Consumer Ambivalence

Abstract Despite the significance of ambivalence in consumer research, the concept suffers from a lack of clarity. This study thus aims to develop an improved conceptual understanding of consumer ambivalence based on the analysis of existing definitions. A number of challenges are observed and addressed through key premises that characterize the concept of consumer ambivalence. Furthermore, the presented conceptualization is contextualized into the area of consumption. The result of this process is an enhanced view of consumer ambivalence that builds on and extends earlier conceptualizations in 1) recognizing a wide variety of concepts that can be studied under the umbrella of consumer ambivalence, 2) specifying the multitude of objects of consumer ambivalence, and 3) specifying the temporal scope of consumer ambivalence through the concept of consumption episodes. The proposed conceptualization accommodates the richness of different approaches to consumer ambivalence and thus contributes to a wide range of consumer research.

Keywords Ambivalence · mixed emotions · consumer · conceptual development
Toward an Improved Conceptual Understanding of Consumer Ambivalence

Ambivalence, which refers to the simultaneous positivity and negativity of a psychological concept, such as the attitude toward an object, has become a focal concept in consumer research over the past two decades. Ambivalence has enabled consumer researchers to gain novel insights into different decisions (Bee and Madrigal 2013; Roster and Richins 2009), choices (Jewell, Coupey and Jones 2002), satisfaction, and loyalty (Olsen, Wilcox and Olsson 2005), to name a few examples. Because of its potential to enhance the understanding of various consumption-related issues, ambivalence is a highly relevant concept in consumer research.

Although ambivalence has long been featured in fields such as psychology and sociology, it was not until 1997 that Otnes, Lowrey, and Shrum introduced the discussion on consumer ambivalence as a separate concept. In their conclusions, they stated that the challenge of fully articulating consumer ambivalence rests on future researchers who aim to deepen understanding of the concept. Indeed, ambivalence has been of increasing interest in consumer research since the 1990s. However, what ambivalence means in consumer research remains unclear. A wide variety of definitions represent various theoretical and empirical standpoints, which individual authors have unsystematically modified to suit their specific research questions. Many of these definitions include issues such as vagueness and an interchangeable use of concepts, which make their unambiguous interpretation impossible. This is problematic because meaningful scientific inquiry depends on adequate definitions that clarify the meaning of concepts used in scientific theories (Teas and Palan 1997). Failure to adequately define concepts leads to validity issues, poor measurement, misguided suggestions about the relationships between concepts, and poor credibility of the research findings (MacKenzie 2003).
The first proposed definition for consumer ambivalence, based on sociological, cultural, and psychological ambivalence, states that consumer ambivalence is “the simultaneous or sequential experience of multiple emotional states, as a result of the interaction between internal factors and external objects, people, institutions, and/or cultural phenomena in market oriented contexts that can have direct and/or indirect ramifications on prepurchase, purchase or postpurchase attitudes and behavior” (Otnes, Lowrey and Shrum 1997, p. 82-83). Although an important contribution, we demonstrate that this definition still lacks precision and does not correspond to the growing body of consumer research around ambivalence. Perhaps for these reasons, relatively few studies in consumer research have actually adopted (partially or completely) the definition of Otnes, Lowrey, and Shrum, with notable exceptions including Darmody and Bonsu (2007), Johnson and Grier (2012), Mileti, Prete, and Guido (2013), and Ruth, Brunel, and Otnes (2002). Thus, through an analysis of the definitions of ambivalence in the consumer context, we take stock of consumer ambivalence after two decades of research.

We point out various challenges and suggest key premises on which to base an enhanced understanding of the concept. Therefore, the aim is to develop a more comprehensive conceptualization and framework to guide future research on consumer ambivalence.

Against this background, we contribute to consumer research on ambivalence by extending Otnes, Lowrey, and Shrum’s definition, as well as subsequent definitions, through three key premises that will be developed throughout this study: 1) Consumer ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned; 2) Consumer ambivalence is directed toward one clearly specified consumption-related object; and 3) Consumer ambivalence exists in consumption episodes. Through the first premise, we broaden the scope of consumer ambivalence, and thus enable its use by a wider audience of
consumer researchers. Through the second and third premises, we address vagueness in existing definitions through a specification of the objects and temporal scope of consumer ambivalence. Furthermore, we contextualize the developed conceptualization into the domain of consumption by outlining how consumer ambivalence exists in both the internal, micro-level context of the consumer and in the wider socio-cultural context of consumption. Through this contextualization process, this study extends both major streams of consumer research (consumer psychology and consumer culture theory [CCT]) by bridging the gap between sociological and psychological ambivalence in consumer research. Finally, we present a synthesizing framework that enables a more accurate positioning of existing and future research on consumer ambivalence than what has previously been possible in this seemingly fragmented area.

Analysis of existing definitions

We continue with an analysis of existing definitions of ambivalence, which are categorized into three groups: attitudinal ambivalence, mixed emotions, and definitions in CCT. For each category, we first review the origins of the concept in the psychological or sociological literature, followed by a review of how the concept has been applied to consumer research, based on a representative sample of 67 papers. The sample was collected following a systematic database search (the papers in the sample are marked with an asterisk* in the reference list). We then analyzed the identified definitions (cf. Hart 2005) and/or conceptualizations (cf. MacInnis 2011) to reach an understanding of what ambivalence is according to existing consumer research. We evaluated the definitions on four criteria, namely vagueness, definition through antecedents, interchangeable use of concepts, and correspondence with the etymological meaning of ambivalence, which were chosen to facilitate the analysis of major
definitional issues. Doing so was considered a reasonable approach because to the best of our knowledge, this is the first attempt to critically evaluate the definitions of ambivalence in consumer literature. We will use this evaluation as a basis for the development of our conceptualization of consumer ambivalence toward the end of this paper. Before the analysis and evaluation of the definitions, we discuss each evaluation criterion in detail.

**Evaluation criteria**

The first criterion used to evaluate the definitions is *vagueness*, which means that a concept lacks clearly defined boundaries (Hampton 2007) and thus has several meanings that cannot be separated from one another (Strunz 2012). Vagueness is problematic because without conceptual precision, science cannot be separated from faith, and the applicability of concepts to empirical research cannot be evaluated; furthermore, empirical testability presupposes conceptual precision (Strunz 2012). Claiming certain knowledge of the world when the words used to express such knowledge are vague is impossible (Hampton 2007). We find three major sources of vagueness: the temporal scope of consumer ambivalence, the objects of consumer ambivalence, and, in the area of mixed emotions, the amount of emotions that the term “mixed emotions” includes. The second evaluation criterion is whether the concept is defined through its antecedents. Such a misspecification makes the empirical testing of the theoretical linkages between concepts and their antecedents impossible, since the relationships are assumed in the definition (MacKenzie 2003). The third evaluation criterion, namely the *interchangeable use of concepts*, was included because the concept of mixed emotions is sometimes used interchangeably with ambivalence (e.g., Hogg and Penz 2007), even though the concepts are not always interchangeable. The fourth and final evaluation criterion is correspondence with the *etymological meaning* of ambivalence. The term ambivalence comprises two literal
components derived from Latin: ambo, which means “both,” and valere, which means “to be strong” (Foy 1985). In the area of attitudes, valence has come to mean both positivity and negativity (Eagly and Chaiken 1993), so the “valere” component can be interpreted as both strength and positivity versus negativity. The evaluated definitions do not always follow this etymological meaning, which is problematic because etymology enables deriving a consensus about the use of words through an understanding of their meaning (Keil 2004). The following discussion covers the theoretical background of the different definitions and conceptualizations of ambivalence in consumer research and evaluates them by using the criteria outlined above. We use the evaluation as a basis for an improved conceptualization of consumer ambivalence.

**Attitudinal ambivalence**

In the following, we outline the origins of attitudinal ambivalence and analyze how it has been defined in consumer research. Attitudinal ambivalence appears to dominate the definitional field of ambivalence in consumer research, underlining the need to update the definition provided by Otnes, Lowrey, and Shrum (1997), who defined the core of consumer ambivalence merely as “mixed or multiple emotions”. An attitude refers to “general and enduring favorable or unfavorable feelings about, evaluative categorizations of, and action predispositions toward stimuli” (Cacioppo and Berntson 1994, p. 401). The cognitive attitude component refers to beliefs and thoughts, whereas the affective component refers to emotions and feelings associated with an attitude object (Zanna and Rempel 1988). Attitudes are traditionally assumed to exist on a single valence dimension, which makes it impossible to tell whether a respondent claiming to be neutral is indifferent or ambivalent toward the attitude object (Kaplan 1972). Thus, attitudes were re-conceptualized as two-dimensional rather than bipolar (Thompson, Zanna and Griffin 1995), providing a basis for research on attitudinal ambivalence.
in the consumer literature. Attitudinal ambivalence is operationalized in two ways: objective (also termed potential) ambivalence refers to the coexistence of both positive and negative evaluations, whereas subjective (also termed felt) ambivalence refers to the subjective experience of ambivalence (van Harreveld, van der Pligt and Yael 2009).

Table 1 lists representative examples of definitions of attitudinal ambivalence in consumer research. It has been defined as psychological conflict (Roster and Richins 2009) and also as evaluative activities, such as holding evaluations (Pang and Keh 2011) or expressing them (Olsen, Wilcox and Olsson 2005). Furthermore, the attitude structure is a key consideration because attitudes are summary evaluations consisting of various beliefs, emotions, and/or behaviors (Fazio 2007), and in many definitions, attitudinal ambivalence lies within the structure of these attitude components. Accordingly, attitudinal ambivalence has been defined as a property of attitudes (Jewell, Coupey and Jones 2002) or evaluations (Olsen, Prebensen and Larsen 2009), and according to some of the definitions, ambivalence is based on feelings (Choi and Crandall 2008) or evaluations (Olsen, Wilcox and Olsson 2005). Finally, there are also definitions stating that ambivalence is an experience of contradiction (Honkanen and Olsen 2009), reflecting the subjective operationalization of ambivalence.
### Table 1. Analysis of the definitions of attitudinal ambivalence: Illustrative examples

<table>
<thead>
<tr>
<th>Attitudinal ambivalence is...</th>
<th>Attitudinal ambivalence is based on...</th>
<th>Example</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict</td>
<td>&quot;Ambivalent feelings represent a state of psychological conflict concerning an attitude object.&quot; (p. 48)</td>
<td>Roster and Richins, (2009)</td>
<td></td>
</tr>
<tr>
<td>Property of an attitude</td>
<td>&quot;(…) we conceptualize ambivalence as a component of an attitude that reflects the presence of positive and negative feelings or beliefs that are deemed important by the decision maker.&quot; (p. 334)</td>
<td>Jewell, Coupey and Jones (2002)</td>
<td></td>
</tr>
<tr>
<td>Property of evaluations</td>
<td>&quot;People often hold inconsistent beliefs or feelings about an object or issue, some positive and some negative” (Brekcller, 1994). “The evaluative inconsistency toward an attitude object is referred to as ambivalence (Katz 1981).” (p. 358)</td>
<td>Russell, Russell and Klein (2011)</td>
<td></td>
</tr>
<tr>
<td>Evaluative activity</td>
<td>&quot;(…) the activity of holding opposing evaluations about a single object (…)” (p. 51)</td>
<td>Pang and Keh (2011)</td>
<td></td>
</tr>
<tr>
<td>Experience of contradictions</td>
<td>&quot;'Ambivalence’ is one term used to describe contradictions people experience in their individual attitudes, beliefs or preferences” (Thompson et al. 1995). (p. 296)</td>
<td>Honkanen and Olsen (2009)</td>
<td></td>
</tr>
<tr>
<td>Evaluative process</td>
<td>&quot;Ambivalence research theorizes that, even in the same relationship, individuals experience different encounters with different intentions, and these lead to different outcomes; therefore a relation often contains simultaneously positive and negative evaluative processes in individuals” (Cacioppo and Berntson 1994). (p. 914)</td>
<td>Ou and Sia (2010)</td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>&quot;Ambivalence, more specifically attitudinal ambivalence, is the state in which a person is inclined to assess equivalently strong positive and negative evaluations toward an attitude object” (Thompson and Zanna 1995). (p. 270)</td>
<td>Moody, Galletta and Lowry (2014)</td>
<td></td>
</tr>
<tr>
<td>Feelings</td>
<td>&quot;(…) evaluations of Black models in ads are determined by a complex mix of positive and negative feelings characterized by ambivalence.” (p. 724)</td>
<td>Choi and Crandall (2008)</td>
<td></td>
</tr>
<tr>
<td>Evaluations</td>
<td>&quot;(…) conflicting and inconsistent feelings may underlie the evaluation of a single object or that attitude evaluations are based on separate positive and negative evaluations of different attitude object components” (Thompson, Zanna, &amp; Griffin, 1995). (p. 249)</td>
<td>Olsen, Wilcox and Olsson (2005)</td>
<td></td>
</tr>
</tbody>
</table>

A closer look at the definitions shows vagueness in the use of the word “simultaneous,” such as in the following definition: “Ambivalence is a state of having simultaneous positive and
negative cognitions and feelings towards the same object” (Tudoran, Olsen and Dopico 2012, p. 393). Technically, simultaneity can be claimed only if two events or processes (for example beliefs, emotions, and/or behaviors) occur at exactly the same time (Jammer 2006). However, what if they occur sequentially but within a time frame of, say, five seconds? Would this still indicate ambivalence in attitudes? Within the same time window, is it possible at all to determine whether the valence components are simultaneous, especially with self-reports?

Furthermore, attitudinal ambivalence has been defined either as a state (Moody, Galletta and Lowry 2014) or, conversely, a process (Ou and Sia 2010). What, then, does simultaneity really mean with regard to ambivalence? These questions will be addressed from the perspective of consumption episodes (premise 3). Another example of vagueness is the word “object,” which can be any discriminable evaluated entity (Eagly and Chaiken 2007). Thus, reference to an object without further specification already in the operational definition is a major source of vagueness. Furthermore, the object has an important role in the consumption context because different types of ambivalence (i.e., cognitive or affective) might take place toward different objects (Conner and Sparks 2002). Definitions of ambivalence should therefore specify the object they refer to (premise 2).

**Mixed emotions**

In the following, we discuss the concept of mixed emotions. Originally, consumer ambivalence was defined as “mixed or multiple emotions” (Otnes, Lowrey and Shrum 1997, p. 82-83). Subsequently, a body of consumer research has studied mixed emotions by using attitudinal ambivalence as one literature stream around which hypotheses about and operationalizations of mixed emotions are built (Bee and Madrigal 2013), or as an interchangeable concept with mixed emotions (Kramer, Lau-Gesk and Chiu 2008; Penz and Hogg 2011). The evaluative
space model (ESM; Cacioppo and Berntson 1994) from the attitude literature had an especially important influence because it challenged the prevailing circumplex models of emotions, which suggested that happiness and sadness are mutually exclusive (e.g., Russell 1980). The model implies that the affect system is a bivariate space instead of a bipolar continuum, and thus allows the coactivation of positivity and negativity (Larsen, McGraw and Cacioppo 2001). Consequently, individuals can experience happiness and sadness at the same time.

Table 2 shows that mixed emotions are most commonly defined as the experience of two emotions (Lau-Gesk and Kramer 2005) or as opposing feeling states (Grasshoff and Williams 2005), which corresponds with the experience-based definition because the word “feeling” represents the experience component of emotions (Barrett, Mesquita, Ochsner and Gross 2007). Thus, the predominant definition relates to experience, which is in line with the origins of research on mixed emotions in psychology. However, the emotions have been defined on different levels of abstraction. As Table 2 shows, the broadest level constitutes positive and negative valence (Hershfield and Adler 2012), which is conceptually similar to ambivalence. A slightly more concrete approach is to categorize specific emotions as hedonic (excitement and sadness) or self-conscious (pride and guilt) (Hung and Mukhopadhyay 2012). The most concrete and most common approach involves a pair of differently valenced emotions, predominantly happiness and sadness (e.g., McGraw and Lau-Gesk 2008). The research context tends to guide the choice of specific pairs of emotions; hope and fear are a more relevant combination in the case of anticipatory mixed emotions, for example (Bee and Madrigal 2013). Although research has predominantly focused on contrasting valence, mixed emotions of the same valence have also been studied (Grasshoff and Williams 2005; Ruth, Brunel and Ottes 2002).
In the area of mixed emotions, simultaneity and sequentiality are discussed more thoroughly than they are in the area of attitudinal ambivalence. Nevertheless, they remain a source of vagueness. Some authors have inferred mixed emotions through sequential manipulation of different emotions (Labroo and Ramanathan 2005), or through an electromyography measurement showing negative emotions immediately followed by positive emotions (van den Broek and Westerink 2009). However, disagreement exists on whether sequential mixed
emotions are, in fact, mixed emotions, or merely a vacillation between two emotions (Larsen and McGraw 2011). The time period within which this vacillation could still be called mixed emotions is also an issue. Another source of vagueness is whether mixed emotions occur in pairs, causing confusion around the difference between mixed emotions and ambivalence. Mixed emotions have been defined as “multiple emotions” (van den Broek and Westerink 2009, p. 1062) or “blends of emotions” (Fournier and Alvarez 2013, p. 259), which could refer to more than two emotions. However, most papers defined or at least operationalized them in pairs (Table 2). These issues will be covered in premises 2 and 3.

Ambivalence in consumer culture theory

Attitudinal ambivalence and mixed emotions represent a psychological and often quantitatively oriented approach toward consumer research, whereas a stream known as CCT concerns the “sociocultural, experiential, symbolic, and ideological aspects of consumption” (Arnould and Thompson 2005, p. 868). This stream involves a group of research domains labeled as consumer identity projects, marketplace cultures, socio-historic patterning of consumption, and mass-mediated marketplace ideologies and consumers’ interpretive strategies (Arnould and Thompson 2005). Much of the understanding of ambivalence in CCT research is derived from sociology, and in the following, sociological ambivalence and the definitions of ambivalence used in the CCT stream are discussed. Broadly, sociological ambivalence refers to “incompatible normative expectations of attitudes, beliefs, and behavior assigned to a status (i.e., a social position) or to a set of statuses in the society” (Merton and Barber 1976, p. 6). More narrowly, it refers to “incompatible normative expectations incorporated in a single role or a single social status” (Merton and Barber 1976, p. 6, italics in original). According to Merton and Barber (1976), sociology concerns the processes through which social structures
generate the circumstances in which ambivalence becomes embedded in statuses and roles. Therefore, sociological ambivalence can be seen as being based on social structures. Sociological ambivalence can be further divided into subcategories, such as the ambivalence that is embedded in contradictory cultural values held by members of a society (Merton and Barber 1976).

As seen in the Table 3, the definition of sociological ambivalence has been synthesized with psychological ambivalence in the consumer context through the recognition that sociological ambivalence occurs at the social structural level of consumption, while psychological ambivalence occurs at the individual level (VOICE Group 2010). In another example, consumers may be ambivalent about their individual practices if they counter what is understood as normatively correct behavior (Connolly and Prothero 2008). Similarly, studies focusing on cultural ambivalence have recognized both psychological and cultural levels of ambivalence, and further specified cultural ambivalence as an antecedent of psychological ambivalence (Nelson and Ottes 2005). On the other hand, studies focusing on the individual level define ambivalence, for example, as mixed emotions (Wooten 2006), simultaneous resistance and reinforcement (Bonsu 2009), or coexisting positive and negative selves (Karanika and Hogg 2010). Furthermore, as is demonstrated by Table 3, many studies conceptualize ambivalence merely through its antecedents, which exist on the socio-cultural level of consumption.
<table>
<thead>
<tr>
<th>Antecedents of ambivalence</th>
<th>Ambivalence is...</th>
<th>Example</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not defined</td>
<td>Contradictory normative expectations (sociological level)</td>
<td>&quot;At the social structural level, sociological ambivalence has been viewed as contradictory normative expectations that occur in institutional resources and requirements (statuses, roles and norms). At the individual level, psychological ambivalence has been referred to as contradictions that are primarily subjective and evident in cognitions, emotions and motivation&quot; (p. 377)</td>
<td>VOICE Group (2010)</td>
</tr>
<tr>
<td>Conflicting values, norms, traditions, and practices</td>
<td>Mixed emotions</td>
<td>&quot;(…) the emergence of mixed or multiple emotions that arise from conflict among values, norms, traditions, and practices of different cultures not found within the same society&quot; (p. 89-90)</td>
<td>Nelson and Otnes (2005)</td>
</tr>
<tr>
<td>Not defined</td>
<td>Tension between past and present (on the level of culture and/or individual experience)</td>
<td>&quot;(…) a temporal ambivalence, a tension between past and present (…) The present is marked as an unsatisfactory place (…) The longed-for past, however, is marked as a place of satisfying plenitude (…) Again, the nostalgic experience is ambivalent. On the one hand, it plays out a narrative of loss (…) But at the same time it plays out a narrative, a fantasy, of recovery (…)&quot;</td>
<td>Higson (2014)</td>
</tr>
<tr>
<td>Not defined</td>
<td>Resistance and reinforcement</td>
<td>&quot;(…) ambivalence – their expressed resistance to the institutionalization of Africa as a subaltern subject and their unconscious reinforcement of colonial African imagery and vocabulary.&quot; (p. 7)</td>
<td>Bonsu (2009)</td>
</tr>
<tr>
<td>Not defined</td>
<td>Both positive and negative selves</td>
<td>&quot;The notions of the desired and undesired self, which are imagined selves (Markus and Nurius, 1986) - that can be positive or negative - within identity projects&quot; (p. 1092)</td>
<td>Karamika and Hogg (2010)</td>
</tr>
<tr>
<td>Combining masculinity and femininity</td>
<td>Not defined</td>
<td>&quot;(…) sexuality is expressed through combining qualities of the masculine (penetrative teeth) and the feminine (enveloping lips), thus generating a profound erotic ambivalence that destabilizes the representation of sexual roles. (p. 29) (…) The ambivalence towards gender created by the notion of vampirism accordingly disrupts traditional delineations of gender roles.&quot; (p. 33)</td>
<td>Goulding and Saren (2009)</td>
</tr>
<tr>
<td>Lack of understanding of “right” and “wrong”</td>
<td>Not defined</td>
<td>“Ambivalent, because of the general absence of clear-cut distinctions and certainties around what constitutes ‘right’ and ‘wrong’, ‘good’ or ‘bad’.” (p. 417)</td>
<td>Wicks, Nairn and Griffin (2007)</td>
</tr>
</tbody>
</table>
Conceptual problems also exist in the CCT stream. To the extent that the definitions in the CCT stream have a psychological basis, the issue of temporal vagueness exists also in this area. Furthermore, the number and valence of emotions included in mixed emotions is unclear. In addition, many definitions indicate the antecedents of ambivalence without first defining it. Finally, the definitions do not always contain the elements of “both” and “valence,” and thus do not follow the etymological meaning of the word (for example, defining ambivalence as a conflict of masculinity and femininity [Goulding and Saren 2009]). These issues will be covered in the premises and the section in which we contextualize our proposed conceptualization into the area of consumption.

**Summary of the definition analysis**

Table 4 includes a summary of the definition analysis according to the key criteria identified at the beginning of this paper. Vagueness, in terms of the temporal scope of ambivalence, the object of ambivalence, and the number and valence of emotions included in the definition of mixed emotions, are evidently common problems. Furthermore, it is unclear how ambivalence is different from its antecedents. Some definitions have departed from the etymological meaning of the word, and to what extent they can still be called “ambivalence” remains unclear. In Table 4, we present the corresponding premises to each definitional challenge to give an overview of how we address the challenges in our conceptualization of consumer ambivalence.

On the other hand, the existing definitions also involve positive and useful features, on which we can start to construct our conceptualization. As seen in Table 4, the challenges that we have discussed are not all found in each definition category. Many definitions of attitudinal ambivalence and mixed emotions involve clear statements of the definition of ambivalence,
and do not have the problem of definition through antecedents. Apart from a few exceptions in
the definitions of mixed emotions, these two categories also specify two opposing valences as
a part of the definition, thus following the etymological meaning of ambivalence. For these
reasons, we can use them to answer the key question of what consumer ambivalence is as we
develop premise 1. Many of the definitions in CCT, on the other hand, provide valuable insight
about the antecedents of ambivalence, and even though antecedents do not belong to the core
of definitions, they are extremely important to ambivalence in the context of consumption. The
definitions that are especially useful integrate the individual and sociocultural levels of
ambivalence (e.g. VOICE Group 2010; Nelson and Otnes 2005) because they serve as bridges
between psychological approaches to ambivalence and the more socio-cultural approach used
in the CCT literature. The rest of this study develops key premises and contextualizes
ambivalence in the field of consumer research against this background.
Table 4. Summary of the definition analysis

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Attitudinal ambivalence</th>
<th>Mixed Emotions</th>
<th>Ambivalence in CCT</th>
<th>Corresponding premise(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vagueness</td>
<td>1. Temporal scope</td>
<td>1. Temporal scope</td>
<td>1. Temporal scope</td>
<td>Premise 1, Premise 2, Premise 3</td>
</tr>
<tr>
<td></td>
<td>2. Objects of ambivalence</td>
<td>2. Objects of ambivalence</td>
<td>2. Number of emotions in “mixed emotions”</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Number of emotions in “mixed emotions”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definition through antecedents</td>
<td>Definitions only stating where ambivalence arises from</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interchangeable use of concepts</td>
<td>Mixed emotions used interchangeably with ambivalence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etymology</td>
<td>Definitions of mixed emotions, which refer to emotions of the same valence</td>
<td>Definitions not always containing “both valences”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key premises and a redefinition of consumer ambivalence

This study thus far represents an attempt to formulate a comprehensive picture of ambivalence in consumer research through an analysis of existing definitions. We find that ambivalence has been given such a variety of meanings in consumer research that it has become an ambiguous concept. A number of definitional challenges (Table 4) need to be resolved before an improved conceptualization of consumer ambivalence can be formulated. Therefore, three premises that address three key questions are presented in response to definitional challenges: What is consumer ambivalence? (premise 1); What does it concern? (premise 2); When and how does it occur? (premise 3). The conceptualization developed through the premises is broad enough to accommodate the richness of approaches to ambivalence in consumer research. However, because of its broadness, the conceptualization requires each researcher to define the central elements of the study (i.e., the consumption episode and the object of ambivalence). Therefore, these central elements are also discussed to the extent that they have implications for the
conceptualization of consumer ambivalence. Figure 1 illustrates the premises and serves as an organizing framework for the conceptualization developed in the following section.

**Figure 1.** Organizing framework of consumer ambivalence

**Premise 1: Consumer ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned.**

Premise 1 forms the core of consumer ambivalence, around which we begin the conceptualization process. In the following, we provide the argumentation for each component of this premise.

**Structural property of any evaluative psychological concept**

Etymologically, ambivalence could mean anything that has two valences, but attaching it to the term “consumer” also implies that it occurs within the consumer. Hence, only psychological concepts can have the property of ambivalence. This proposition is well-aligned with existing
definitions in which the antecedents of ambivalence, especially in the CCT stream, tend to be external to the consumer, such as conflicting “values, norms, traditions, and practices” (Nelson and Otnes 2005, p. 90). However, in most cases, when ambivalence is defined separately from its antecedents, it is internal to the consumer, which is in line with the conceptualization of sociological ambivalence as a source of psychological ambivalence (Merton and Barber 1976).

Using psychological ambivalence as a starting point, we turn to the existing definitions of attitudinal ambivalence to define consumer ambivalence further. In this stream, ambivalence is predominantly defined through other evaluative psychological concepts, for example, as “evaluative inconsistency” (Lorenzon and Russell 2012, p. 59). Ambivalence has even been attached to a wider spectrum of evaluative psychological concepts such as trust and distrust (Moody, Galletta and Lowry 2014; Ou and Sia 2010). Etymologically, ambivalence does not refer to any specific concept to which it should be assigned, which has enabled consumer researchers to generate important insights for a wide audience under the framework of ambivalence. Therefore, we advocate for an inclusive definition of consumer ambivalence. Accordingly, we define the “evaluative psychological concept” broadly, ranging from affective evaluations to more cognitive judgments (Cacioppo and Berntson 1994; Fazio 1995). As an example, we demonstrate ambivalence in the cognitive attitude component in Figure 1. However, a concept needs some precision to be useful for scientific inquiry (Strunz 2012), and the first boundary that we give to consumer ambivalence is specifying that it is a property of only evaluative concepts. This boundary implies that other consumer-related concepts such as personality traits are excluded from the scope of consumer ambivalence. In addition, we follow the existing literature in both psychology (Scott 1966) and consumer research (Jewell, Coupey and Jones 2002), in which ambivalence has been conceptualized as a property of evaluative concepts. This implies that ambivalence operates like an adjective that can be assigned to
various evaluative concepts. As a further specification, ambivalence occurs in the structure of evaluative psychological concepts (Krosnick and Petty 1995). Therefore, we assume that an evaluation consists of components, which can involve emotions, beliefs, or previous behavioral experiences with the object (Fazio 1995), and ambivalence exists in this evaluative structure. We demonstrate this in Figure 1, in which we use two conflicting beliefs as a simple example of ambivalence as a structural property of the focal cognitive attitude.

Two valences

Earlier, we discussed how valence originally meant “being strong” (Foy 1985), and how it carries both the meaning of positivity and negativity (Eagly and Chaiken 1993). Both aspects guide our definition of consumer ambivalence. By stating that ambivalence requires both positivity and negativity, we clarify its relationship to mixed emotions. Mixed emotions can be the structural components that make up consumer ambivalence when studied from a dimensional perspective with the assumption of positivity and negativity. However, mixed emotions do not need to be positive and negative. Cognitive appraisal theory assumes that emotions are associated with an individual’s appraisal of the environment along several cognitive dimensions besides positivity and negativity (Smith and Ellsworth 1985). This assumption implies that any emotions, including those of the same valence, can be mixed, and therefore the term “mixed” does not require opposing valences, as opposed to the term “ambivalence.” Hence, we argue that mixed emotions of the same valence do not correspond with ambivalence, and thus bring precision to Otnes, Lowrey, and Shrum’s (1997) original definition of consumer ambivalence. An important reason why the concepts of ambivalence and mixed emotions should be separated is that emotions are a complex concept that varies along multiple dimensions besides valence (such as certainty and control) (Smith and Ellsworth
1985), implying that two emotions of the same valence can have different behavioral consequences (Lerner and Keltner 2000). By forcing mixed emotions to only mean “mixed” in terms of valence, we exclude other key dimensions in which emotions can vary. Hence, we propose keeping the two concepts separate. However, a more detailed development of the concept of mixed emotions is outside of the scope of this paper.

Valence also means “being strong,” which has implications for the operationalization of objective ambivalence. Objective ambivalence traditionally presupposes a strength aspect: as the similarity in magnitude between the positive and negative components increases, the attitude becomes more ambivalent, and with similarity held constant, ambivalence increases directly with the intensity of the positive and negative components (Thompson, Zanna and Griffin 1995). However, one component often dominates the other, which means that an attitude is predominantly positive or negative, but nevertheless ambivalent (Priester and Petty 1996). This description does not appear to be in line with the etymological meaning of “both” and “being strong.” However, “strong” is a vague term and has received only arbitrary operationalizations in existing literature. For example, Maio, Bell, and Esses (1996) define the 33% of their participants with the lowest ambivalence scores as “not ambivalent.” However, such a limit is contingent upon the overall level of ambivalence among all of the participants. A more reasonable approach is to see ambivalence as a continuum. Thus, we argue that “being strong” should be defined through factors in the empirical context. For example, in some situations, even a small amount of negativity in a predominantly positive evaluation can entail meaningful ambivalence, or vice versa.²

² A rich literature exists suggesting different asymmetries between positivity and negativity. For example, in studies of within-alternative conflict, evaluations of different attributes take different weights (Luce, Jia and Fischer 2003), implying that a positively evaluated attribute can compensate for negatively evaluated attributes, if it is given more weight in the final evaluation, or vice versa. In another stream of literature focusing on biases, a negativity bias has gained support in numerous studies. The most important principle of negativity bias is that the holistic evaluation of an object is more negative than the algebraic sum of positivity and negativity in the
Premise 2: Consumer ambivalence has one clearly specified consumption-related object.

As visualized in Figure 1, consumer ambivalence has an object. The object should be specified in the operational definition of each study because “object” is a vague term that can indicate a wide variety of things, including social issues, situations, categories of people, specific individuals, as well as physical objects (Fazio 1995). Hence, the premise includes the expression “clearly specified.” This premise again clarifies the boundaries of consumer ambivalence because psychological concepts, which are not directed toward a specific object, such as moods (Eagly and Chaiken 2007), are excluded from the definition. This premise also clarifies how consumer ambivalence is related to other consumption-relevant conflicts. For example, because consumer ambivalence is directed toward one object, choice conflicts are excluded from the definition, as they refer to not knowing how to choose one alternative over others when the alternatives are equally attractive in all essential respects (Tversky and Shafir 1992).

Characteristics of different objects of ambivalence

While premise 2 states that ambivalence has only one object, it does not exclude the possibility of multiple ambivalences toward multiple objects in the same consumption episode because of the broad definition of “consumption episode” applied to this study (premise 3). After all, individuals can also evaluate different interrelated entities (Eagly and Chaiken 2007). For structure of the evaluation (Rozin and Royzman 2001), or in other words, evaluations tend to be affected more by negative than positive input (Cacioppo and Bertnson 1994). On the other hand, when evaluative activation is low, a positivity offset tends to prevail, meaning that people tend to evaluate objects more positively than negatively (Cacioppo and Bertnson 1994). While a more detailed review of these effects is outside of the scope of this manuscript, we encourage more discussion on the role of these asymmetries in ambivalence research.
example, a consumer can be ambivalent toward a salesperson (Bush, Yang and Hill 2015) while not being ambivalent toward the product that he/she is trying to sell. A consumer may also evaluate the salesperson negatively and his/her offering positively (Otnes et al. 1997). Both of these objects could further be seen as attributes of the experience of buying products and services, which in this case would involve ambivalence. This is what we present as an “object hierarchy” in Figure 1, where opposing evaluations of two objects (OBJ2 and OBJ3) constitute ambivalence in the evaluation of a higher-level object (in our example, the focal object OBJ1 would be the shopping experience, and OBJ2 and OBJ3 would be the salesperson and the offering). Further examination of object hierarchies is encouraged to advance this aspect of consumer ambivalence.

Another example of multiple objects is a situation in which a consumer evaluates an unhealthy dessert and piece of fruit jointly versus separately. This option is visualized in Figure 1 (in this example, OBJ1 would be the dessert and OBJ4 would be the piece of fruit). Even though ambivalence occurs toward one object, the presence of another object may change the evaluation (Hsee, Loewenstein, Blount and Bazerman 1999), and therefore shape ambivalence toward the focal object. For example, the presence of fruit might make the dessert’s taste seem even better in comparison, but the fruit might also make the unhealthiness of the dessert more salient. Hence, the positive and negative attributes of the dessert could become more intense, and ambivalence would be increased. Ambivalence could also depend on how consumption objects are construed and contextual cues and the consumer’s motivations may lead to a particular categorization (Fazio 2007). For example, in the context of evaluating a dessert on its own, self-indulgence may be elicited, and the dessert would be categorized as a well-deserved tasty treat, implying a more positive overall evaluation of the dessert, and therefore,

---

3 We would like to thank an anonymous reviewer for this excellent example.
less ambivalence. On the other hand, if the dessert and the fruit are presented simultaneously, a weight loss motivation could be elicited; since the dessert is categorized as fattening, evaluation of the dessert would be more negative. Ambivalence would take place when these two categorizations are activated and the object does not clearly fall into only one of them.

The object of consumer ambivalence has also more direct implications for the amount and type of consumer ambivalence. Certain objects, such as condom purchase, inherently have a tendency of arousing high levels of ambivalence (Dahl, Darke, Gorn and Weinberg 2005). The object of ambivalence can also influence the amount of consumer ambivalence through the accessibility of object evaluations. Specifically, objects can be associated with object-evaluation associations of varying strength, and the strength of the association determines whether an evaluation is activated from memory (Fazio 1995). Furthermore, different objects might arouse different types of ambivalence (Conner and Sparks 2002). Accordingly, the papers in our sample were investigated to explore which objects of ambivalence were studied in each category of definitions (i.e., attitudinal ambivalence, mixed emotions, CCT). The objects can be categorized on multiple levels (Table 5); the highest levels deal with the essential aspects of being human, such as morality and gender. The next level deals with political and societal issues, followed by rituals and relationships that represent social behavior. Definitions from CCT have predominated on these levels, which is natural because of their sociological background. All definition categories are found on the level of the behavior of individuals, represented by the acts of consumption and decision-making. Products, companies, brands, technologies, and countries have been studied as objects of ambivalence predominantly in terms of attitudinal ambivalence, whereas advertisements and experiences have been studied mostly in terms of mixed emotions. Whether this is simply an artifact of individual researchers’ interests or a reflection of actual systematic differences in the relevance of attitudinal
ambivalence, mixed emotions, or sociological ambivalence in terms of specific objects remains to be addressed by future research. However, because some research indicates that these differences may occur (Conner and Sparks 2002), researchers should pay attention to the implications of the object of ambivalence.
Table 5. Objects of ambivalence and corresponding ambivalence types in existing consumer research
*Note: ATT=attitudinal ambivalence; MIX=mixed emotions; CCT=definitions in CCT

<table>
<thead>
<tr>
<th>Category</th>
<th>ATT</th>
<th>MIX</th>
<th>CCT</th>
<th>Examples of objects</th>
<th>Sources (examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morality</td>
<td>x</td>
<td></td>
<td></td>
<td>Morality</td>
<td>Wicks et al. (2007)</td>
</tr>
<tr>
<td>Gender</td>
<td>x</td>
<td></td>
<td></td>
<td>Gender</td>
<td>Goulding and Saren (2009)</td>
</tr>
<tr>
<td>Political/societal issues</td>
<td>x</td>
<td></td>
<td>x</td>
<td>Presidential candidates</td>
<td>Jewell et al. (2002)</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>The Soviet regime</td>
<td>Keller (2005)</td>
</tr>
<tr>
<td>Relationships</td>
<td></td>
<td>x</td>
<td></td>
<td>Relationships with others</td>
<td>Heisley and Cours (2007)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>Being a target of teasing</td>
<td>Wooten (2006)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>Brand relationships</td>
<td>Fournier and Alvarez (2013)</td>
</tr>
<tr>
<td>Rituals</td>
<td>x</td>
<td></td>
<td></td>
<td>Death rituals</td>
<td>Darmody and Bonsu (2007)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>The trick-or-treating ritual</td>
<td>McKechnie and Tynan (2008)</td>
</tr>
<tr>
<td>Decisions</td>
<td></td>
<td>x</td>
<td></td>
<td>Decision to consider cadaveric organ donation</td>
<td>Lai, Derrymody and Hamner-Lloyd (2005)</td>
</tr>
<tr>
<td>Consumption</td>
<td>x</td>
<td></td>
<td></td>
<td>Food consumption</td>
<td>Olsen et al. (2005)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>Technology consumption</td>
<td>Buchanan-Oliver and Cruz (2011)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>Consumer practices</td>
<td>Connolly and Prothero (2008)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>Using Facebook</td>
<td>Anderson et al. (2014)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>Prospective consumption</td>
<td>Bee and Madrigal (2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>Shopping situations</td>
<td>Penz and Hogg (2011)</td>
</tr>
<tr>
<td>Technology</td>
<td></td>
<td>x</td>
<td></td>
<td>Technology</td>
<td>Ekici (2004); Davies (2014)</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>Mechanical heart</td>
<td>Lai (2012)</td>
</tr>
<tr>
<td>Products</td>
<td>x</td>
<td></td>
<td>x</td>
<td>Green products</td>
<td>Chang (2011)</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>Food products</td>
<td>Cornil et al. (2014)</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td>Products</td>
<td>Pang and Keh (2011)</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
<td>Branded products</td>
<td>Mileti et al. (2013)</td>
</tr>
<tr>
<td>Advertising/marketing communication</td>
<td>x</td>
<td></td>
<td></td>
<td>Advertisements</td>
<td>Johnson and Grier (2012); Lorenzon and Russell (2012)</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td>Mixed emotions appeals</td>
<td>Kramer et al. (2008)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>Corporate sponsorship of local community events</td>
<td>Ursavas and Hesapci-Sanaktekin (2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>Watching a film</td>
<td>Hong and Lee (2010)</td>
</tr>
<tr>
<td>Experiences</td>
<td>x</td>
<td></td>
<td></td>
<td>Goal pursuit experiences</td>
<td>Weinberger and Wallendorf (2012)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>The experience of nostalgia</td>
<td>Mukherjee et al. (2012)</td>
</tr>
<tr>
<td>Companies</td>
<td>x</td>
<td></td>
<td></td>
<td>Online seller/vendor</td>
<td>Higson (2014)</td>
</tr>
<tr>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>Company</td>
<td>Moody et al. (2014)</td>
</tr>
<tr>
<td>Multiple objects</td>
<td>x</td>
<td>x</td>
<td></td>
<td>Multiple objects related to: Wedding planning Colonialism</td>
<td>Nelson and Otnes (2005); Otnes, et al. (1997)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Motherhood</td>
<td>Bonsu (2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td>Nationhood</td>
<td>VOICE Group (2010)</td>
</tr>
<tr>
<td>Countries</td>
<td>x</td>
<td></td>
<td></td>
<td>Countries (of origin)</td>
<td>Russell et al. (2011)</td>
</tr>
<tr>
<td>Brands</td>
<td>x</td>
<td></td>
<td></td>
<td>Brands</td>
<td>Pang and Keh (2011)</td>
</tr>
</tbody>
</table>
Premise 3: Consumer ambivalence occurs in consumption episodes.

This premise arises from the issues of simultaneity and sequentiality of the two valences, which is common for the definitions analyzed in this study. Although simultaneity technically means two things occurring at the same time (Jammer 2006), referring to specific consumption episodes, as visualized in Figure 1, may be more appropriate in the consumer context. A consumption episode is defined in various and even contradictory ways in the literature. According to one view, it refers to a set of items that belong to the same event and occur in temporal proximity (Dhar and Simonson 1999). Accordingly, a consumption episode occurs along a continuum, as exemplified by a reference to having dinner: consuming three courses sequentially at the same restaurant constitutes a consumption episode, as opposed to dinner at the restaurant and dessert at home, which would constitute two episodes (Dhar and Simonson 1999). On the other hand, ordering and eating the food could also be seen as two separate episodes (Dubé and Menon 2000). Our approach to consumption episodes is inclusive, implying that depending on the research question, both the aforementioned definitions are suitable. For example, if the research interest is in whether a consumer has an ambivalent evaluation of a restaurant during his or her first visit and whether this ambivalence influences his or her intention to return, then the consumption episode could be defined as the entire visit. However, if the focus of interest is the influence of ambivalence during eating the main course on the choice of ordering dessert, the consumption episode of interest would be eating the main course, and eating the dessert would be a separate consumption episode.

Our inclusive definition of the consumption episode also implies that pre- and post-consumption can also be consumption episodes. For example, as visualized in Figure 1, a researcher might define pre-consumption such as choosing a restaurant, as one consumption
episode, and the positive and negative evaluations occurring during pre-consumption could belong to T1 ambivalence. The actual consumption experience of going to the restaurant would set the temporal boundaries for the next consumption episode, and therefore, the evaluations occurring during the visit would constitute T2 ambivalence and post-consumption evaluations would constitute T3 ambivalence. These time points can be related such that the positive, negative, or ambivalent evaluations formed during T1 can be remembered in the next stages as pre-existing evaluations and operate as sources of positive, negative, or conflicting information, further influencing ambivalence in the next stages. Naturally, there can be multiple consumption episodes before, during, and after the actual act of consumption. For example, a wedding planning process constitutes of multiple pre-consumption episodes, such as buying a wedding dress, choosing flowers, and deciding on invitations (Otnes et al. 1997).

We have visualized this example of what we term sequential ambivalence in Figure 1. Furthermore, consumption episodes have a beginning and an end point, and are inherently processes. Accordingly, consumer ambivalence is a dynamic concept in that it can fluctuate during a consumption episode. The function of the consumption episode is therefore to give temporal boundaries to consumer ambivalence, because by defining the episode, a researcher is also inclined to define which evaluations belong to the same ambivalence and which ones belong to another. We now turn to the characteristics of the consumption episode to shed light on its implications for the conceptualization and measurement of consumer ambivalence.

**Characteristics of the consumption episode**

Depending on the situational contingencies of the consumption episode, the amount and relative importance of different types of ambivalence, as well as the most appropriate measures, may vary. The episode can activate pre-existing evaluative tendencies and goals and provide
new input to pre-existing evaluations as well as standards against which the object is judged; new evaluative responses are then generated (Eagly and Chaiken 2007). For example, a person with a strong pre-existing positive attitude toward eating meat can become ambivalent while having dinner with vegan colleagues who can share new information about the problems involved in eating meat.

The characteristics of the consumption episode have implications for the successful measurement of ambivalence. When measuring objective ambivalence, separate positivity and negativity scores are obtained, and a formula is used to calculate ambivalence based on such scores (Priester and Petty 1996). Such measurements are often obtained without reference to the consumption episode, which is defendable at least in the case of attitudinal ambivalence because attitudes are relatively enduring (Cacioppo and Berntson 1994). However, because a consumption episode can generate new, potentially conflicting evaluations, the consumption episode of interest should be clear to the participants whose ambivalence is being measured.

While self-reported positive and negative evaluations measured after a consumption episode might be enough for many purposes, continuous measurements of ambivalence are encouraged for three main reasons. First, retrospective measures may not be accurate, especially in the case of emotions (Robinson and Clore 2002), potentially because individuals cannot always remember their emotions (Thomas and Diener 1990). As a solution, measures in which participants indicate their positive and negative emotions throughout an episode by pushing buttons (Larsen and McGraw 2011) or by moving a cursor (Larsen, Norris, McGraw, Hawkley and Cacioppo 2009) have been developed. Second, self-reports may be biased; third, they do not capture the unfolding of ambivalence during a consumption episode (Schneider, van Harreveld, Rotteveel, Topolinski, van der Pligt, Schwarz and Koole 2015). The last point is especially important because positive and negative evaluations can occur sequentially during a
consumption episode. To address these issues, mouse movements have been used to capture ambivalence in real time; however, they correlate more with subjective than objective ambivalence (Schneider et al. 2015), and it remains a question for future research why this might be the case.

Whether objective ambivalence turns into subjective ambivalence is contingent upon the characteristics of the consumption episode. For subjective ambivalence to take place in a consumption episode, both the positive and negative evaluations need to be accessible (Newby-Clark, McGregor and Zanna 2002). The situation (i.e., the buying episode) can influence the accessibility of attitudes (Eagly and Chaiken 2007). Hence, especially if one is interested in measuring subjective ambivalence, choosing a consumption episode in which both positive and negative components are likely to be accessible is important. An example is when commitment to one side of an issue is necessary, such as when a choice needs to be made, although some uncertainty about its consequences exists (van Harreveld, van der Pligt and Yael 2009). While self-reports are the most obvious measure of subjective experiences, they may be problematic for reasons already discussed pertaining to objective ambivalence. As a solution, modern technology enables promising solutions to measure the experience of ambivalence during the consumption episode through side-to-side movements on balance boards (Schneider, Eerland, van Harreveld, Rotteveel, van der Pligt, van der Stoep, and Zwaan 2013) or mouse movements (Schneider et al. 2015).

**Contextualizing consumer ambivalence**

Thus far, three key premises of consumer ambivalence have been developed and discussed. Because the aim of this study is to conceptualize consumer ambivalence instead of a more...
general ambivalence, in this final section, we will contextualize the definition within the field of consumer research. In light of existing research, both the micro (internal) and macro (socio-cultural) contexts of the consumer are outlined, and how consumer ambivalence is shaped by these contexts is discussed.

The internal context of consumption refers to the factors inherent in the consumer that can shape ambivalence. In Figure 1 we demonstrate how the internal context belongs to the same space as consumer ambivalence, that is, the area of consumer psychology. Personality is an important part of the internal context. For example, need for cognition, which refers to the tendency to engage in and enjoy effortful cognitive activities (Petty, Briñol, Loersch and McCaslin 2009), can decrease ambivalence, whereas personal fear of invalidity, which refers to concern with error or the consequences of decisions, can increase ambivalence; however, these results hold only for highly involved individuals (Thompson and Zanna 1995). Furthermore, the relationship between objective and subjective ambivalence is strongest for individuals with a high preference for consistency (Newby-Clark, McGregor and Zanna 2002). In addition, the individual’s consumption-related goals can elicit ambivalence. For example, a dieter might have positive emotions toward food because of its taste, but also negative emotions because of its calories (Stroebe, van Koningsbruggen, Papes and Aarts 2013). Hence, a conflict between a short-term goal and a long-term one leads to both positive and negative emotions toward food during a consumption episode (i.e., consumer ambivalence).

By defining consumer ambivalence as internal to the consumer, this study advocates a psychological approach to ambivalence. However, psychological ambivalence occurs within a broader social and cultural context to which individuals belong (Hillcoat-Nellétamby and Phillips 2011). We have visualized this context as external to consumer psychology in Figure
1. As the CCT and sociology literatures suggest, conflicting psychological states can be responses to conflicts in social structures, which are captured by sociological ambivalence (Merton and Barber 1976); however, the manifestation of ambivalence is on the level of the individual (Hillcoat-Nallétamby and Phillips 2011). For example, mothers-to-be come across varying ambivalent experiences during their role transition (VOICE Group 2010). Second, consumer ambivalence takes place in the cultural context of consumption, arising from “conflict among values, norms, traditions, and practices of different cultures not found within the same society” (Nelson and Otnes 2005 p. 89-90). Such cultural ambivalence does not need to be tied to national culture. For example, the experience of nostalgia can reflect a temporal ambivalence because a person perceives the values of the past as better than those of the present (Higson 2014). The social and cultural contexts are intertwined. For example, a subculture can become the site for conflicting norms, as in the case of the gothic subculture, in which traditional gender norms are challenged (Goulding and Saren 2009).

Conclusions

The aim of this study was to achieve an improved conceptualization of consumer ambivalence. As a result of an analysis of existing definitions, the formulation of three key premises, and the contextualization of consumer ambivalence, we have arrived at the following definition: *Consumer ambivalence is a structural property of any evaluative psychological concept to which two valences can be assigned; it occurs toward one clearly specified object during a consumption episode and within the internal and socio-cultural contexts of consumption.* Because the definition presents consumer ambivalence as a framework within which a number of evaluative concepts can be studied, it is inclusive enough to speak to a wide audience of consumer researchers, yet sufficiently narrow to avoid conceptual vagueness. We advocate this
approach because if ambivalence were defined as an independent concept of its own, its use would be unnecessarily restricted. Our definition enables exploring consumer ambivalence on a large scale, which is important given the prominence of ambivalence (Fazio 2007). By capturing more of the true complexity of consumer ambivalence, our definition contributes to existing conceptualizations, especially to the pioneering work of Otnes, Lowrey, and Shrum (1997). Yet, while developing the definition into this inclusive direction, we keep many elements of the existing definitions, and hence, enable future research to build on the existing work with increased precision.

In our reformulation of consumer ambivalence, we have paid special attention to the issue of conceptual vagueness in the existing definitions. One major source of vagueness is the temporal scope of ambivalence, which we resolved through the concept of consumption episodes (premise 3). Empirical testability of concepts requires conceptual precision (Strunz 2012), and we were accordingly able to provide guidelines for when different types of measures are most suitable. In addition, by clarifying the meaning of simultaneous and sequential ambivalence (premise 3), we enable more precise consideration of ambivalence over time, which is important because consumer behavior often involves different processes that extend over time (such as decision-making processes or buying processes). In a similar vein, by addressing vagueness around the valence component of ambivalence (premise 1), we have been able to resolve conceptual and methodological confusion around the interchangeable use of ambivalence and mixed emotions. We therefore remove some vagueness from the existing definitions by identifying the valence component as positivity and negativity, instead of “mixed or multiple emotions” (Otnes, Lowrey and Shrum, 1997, p. 82-83). We believe that appreciating the differences between ambivalence and mixed emotions enables more precise theorizing and measurement of both concepts in future consumer research. Finally, through a
more elaborate consideration of ambivalence objects (premise 2), we separate consumer ambivalence from other consumption-related conflicts, and demonstrate the thus-far neglected relevance of the object in terms of understanding consumer ambivalence. Consequently, we demonstrate multiple avenues for future research concerning consumer ambivalence towards different objects.

Finally, we have addressed the problem of definition through antecedents, which makes the empirical testing of the theoretical linkages between concepts and their antecedents challenging (MacKenzie 2003), and therefore inhibits theory development around consumer ambivalence. Through a precise definition of the psychological core of ambivalence, as well as its socio-cultural context, we synthesize the seemingly separate streams of consumer research, CCT and consumer psychology, whose conceptualizations of ambivalence still remain unnecessarily isolated from one another despite previous attempts at synthesizing them (e.g., Otnes, Lowrey and Shrum, 1997). The different conceptual conversations allow consumer researchers to cross-fertilize ideas, and thus support theoretical innovation and achievement (Arnould and Thompson 2005). Hence, we believe that our definition will appeal to a wide audience of consumer researchers, and consequently will advance consumer research from a holistic perspective.

Although the sample of articles used in this study was the result of a selective exclusion process, no reason exists to believe that this sample is not a representative and comprehensive body of ambivalence-related consumer research. Furthermore, evaluation criteria other than those used here could have been used for the definitions. Nevertheless, the chosen criteria show the major challenges in existing definitions of ambivalence in consumer research, and thus serve as a strong basis for critical evaluation. We hope that consumer researchers will find our
suggestions thought-provoking and will be inspired to further evaluate and develop the concept of consumer ambivalence.

References


*Choi, B. P., & Crandall, C. S. (2008). Permission to be prejudiced: Legitimacy credits in the evaluation of advertisements with black and white models. In A. Y. Lee & D. Soman (Eds.),


Publication II

Sipilä, J., Sundqvist, S., and Tarkiainen, A.

Winding paths: Ambivalence in consumers’ buying processes

Reprinted with permission from
Journal of Consumer Behaviour
16(6), pp. 93-112
© 2017, John Wiley and Sons
Winding paths: Ambivalence in consumers’ buying processes

ABSTRACT

This paper investigates ambivalence in the buying process. The existing literature has rarely studied ambivalence in longitudinal processes, and has therefore not been able to capture its dynamics. Those studies that have studied ambivalence longitudinally have focused on general attitudinal ambivalence rather than its subtypes (cognitive, affective, and intercomponent ambivalence) and have therefore ignored some of the more detailed dynamics. Hence, this study addresses these different types of ambivalence longitudinally, exploring what these different ambivalences consist of, what their roles are in the buying process, and how they occur under different types of involvement conditions. A longitudinal video diary method is used in conjunction with a multimodal analysis technique to explore not only the verbally expressed aspects of ambivalence but also its nonverbal expression, which further reveals differences between different types of ambivalence. The findings suggest that cognitive ambivalence involves conflicting evaluations of utilitarian brand and product aspects and is resolved through more effortful mechanisms, whereas intercomponent ambivalence involves conflicting evaluations of varying utilitarian, hedonic, and symbolic brand and product aspects and is resolved through both more and less effortful mechanisms. Finally, affective ambivalence involves conflicting anticipations about the outcome of the buying process, but is not resolved through similarly clear mechanisms. As the key outcome of the exploration, propositions and a synthesising framework about the different types of ambivalence in the buying process are developed for future research. This paper hence contributes to the ambivalence literature and offers managerial implications especially for marketers of multifaceted and high-involvement products.

Keywords: Ambivalence, buying process, consumer behaviour
This paper studies consumers’ ambivalence (i.e. possessing both positive and negative evaluations of the same consumption object) in the buying process, during which they search for information and evaluate products and brands over time before coming to a choice. Many of us have experienced ambivalence in such buying processes. For example, when buying a new bike, we might have both positive and negative beliefs about a specific model, such as when we find its colour beautiful, but also think its riding position is uncomfortable. We might also have moments of more affective ambivalence, such as when we are happy about buying a new bike but also frustrated because the act of buying a bike requires time and money, and we are short of both. Furthermore, our beliefs and feelings might conflict; perhaps one brand resonates with our identity and its advertising makes us happy, but it is also too expensive and does not have high enough quality. The focus of this paper is to understand these different types of ambivalence during high-involvement buying processes. Such insight is relevant because in a longitudinal, high-involvement buying process, consumers evaluate a number of consumption-related objects, such as products and brands, which might arouse different types of ambivalence (Conner and Sparks, 2002; Mucchi-Faina et al., 2009). These different types of ambivalence, in turn, can have varying implications for consumer behaviour (Costarelli and Colloca, 2004; Pacilli et al., 2013).

In this paper, we study different types of ambivalence in the high-involvement buying process. We choose this context because ambivalence involves conflicting evaluations of the important aspects of an object (Jewell et al., 2002), and is more likely to occur in high-involvement than
low-involvement settings (Puccinelli et al., 2009). There is little likelihood of experiencing ambivalence regarding unimportant issues (Priester and Petty, 2001), and ambivalence has been described as the problem of “too much interest and too many directions” (Kim et al., 2011: 2). Thus, ambivalence should flourish under conditions of involvement, defined broadly as “a person's perceived relevance of the object based on inherent needs, values, and interests” (Zaichkowsky, 1985: 342). However, existing studies on the relationship between ambivalence and the level of involvement have also found mixed results about whether involvement is associated with decreased (Lavine et al., 2000) or increased ambivalence (Thompson and Zanna, 1995). Hence, our first objective is to shed light on the relationship between ambivalence and involvement, and thereby explore the boundary conditions for the occurrence of ambivalence in the buying process. In this exploration, we turn to different types of involvement (i.e. enduring and situational), because due to their varying influence on consumers’ perceptions (Whang et al., 2016), they might account for the mixed results regarding the relationship between ambivalence and involvement. Our second objective relates to the concept of ambivalence itself. The existing literature suggests that ambivalence should be seen as a dynamic process during which ambivalent individuals go through different stages in trying to resolve ambivalence and consequently make choices (van Harreveld et al., 2009). While this dynamic nature of ambivalence has been recognised (Rudolph, 2011), and ambivalence has been investigated throughout the buying process (Otnes et al., 1997), existing research has not yet taken into consideration the varying roles of different types of ambivalence (i.e. cognitive, affective, and intercomponent) in the buying process. Accordingly, there have been calls for more studies on different types of ambivalence in consumer research (Penz and Hogg, 2011; Williams and Aaker, 2002), and specifically in longitudinal decision-making processes (Jewell et al., 2002). Hence, we aim to explore the dynamics of different types of ambivalence in the buying process.
In sum, our specific research questions are: *How do different types of ambivalence (i.e. cognitive, affective, and intercomponent) occur in buying processes under the conditions of different types of involvement (i.e. enduring and situational) and multifaceted consumption objects?* Furthermore, we ask: *How do consumers address these different types of ambivalence?* By addressing these questions, we contribute to the existing literature around ambivalence, first, by exploring its boundary conditions in terms of different types of involvement in the buying process. Our second contribution is the exploration of different types of ambivalence. We demonstrate that they are based on distinct factors, and involve different verbal and bodily expressions. Third, we show that consumers address different types of ambivalence differently, and therefore contribute to the literature around the role of ambivalence in decision-making. As a key outcome, we develop a number of propositions, which arise from our data, and integrate them into a synthesising framework. Managerially, we provide an enhanced understanding of how marketers can assist consumers in resolving different types of ambivalence during the buying process, and therefore increase the likelihood that their product will be chosen at the end of the process.

**THEORETICAL BACKGROUND**

In the following, we discuss each of the key concepts of our study based on the existing literature. In line with the exploratory objectives of this paper, we focus on defining the concepts and reviewing relevant findings, as well as identifying gaps in the existing literature.
Ambivalence is an established yet unclear concept in consumer research. The concept has its roots in attitude research, where it has been argued that instead of seeing attitudes as bipolar (i.e. either positive or negative), they could be seen as two-dimensional (i.e. both positive and negative) (Kaplan, 1972; Thompson et al., 1995). Ambivalence is a property of psychological concepts (e.g. Jewell et al., 2002) and thus needs to be defined through the concept to which it is assigned, which in this case is attitude. Attitudes are “general and enduring favourable or unfavourable feelings about, evaluative categorizations of, and action predispositions toward stimuli” (Cacioppo and Berntson, 1994: 401). The cognitive attitude component refers to beliefs and thoughts, whereas the affective component refers to the emotions and feelings associated with an attitude object (Zanna and Rempel, 1988). This definition of attitudes thus also includes emotions as a component of attitudes. Notably, the concept of mixed emotions is closely related to ambivalence in the affective attitude component, and the concepts have sometimes been used interchangeably (e.g. Penz and Hogg, 2011). However, the mixed emotions approach focuses on specific emotions (e.g. Hung and Mukhopadhyay, 2012; Lau-Gesk and Kramer, 2005; McGraw and Larsen, 2008), while ambivalence focuses on the valence dimension (positivity-negativity). For reasons of clarity, this paper will use the ambivalence term throughout while acknowledging the points of similarity between ambivalence and mixed emotions.

Attitudinal ambivalence has often been approached from a general perspective, by which we mean that the affective and cognitive attitude components involved in ambivalence are not separated (e.g. Chang, 2011; Olsen et al., 2009). Yet, based on the componental perspective to attitudes outlined above, two more fine-grained types of ambivalence have been identified,
namely, intracomponent and intercomponent ambivalence. Intracomponent ambivalence refers to ambivalence within an attitude component, such as when an attitude includes both positive and negative feelings or emotions (i.e. affective ambivalence), or both positive and negative beliefs or thoughts (i.e. cognitive ambivalence) (van Harreveld et al., 2009). While general attitudinal ambivalence dominates in consumer research, the intracomponent approach has also received some attention (e.g., Otnes et al., 1997; Nelson and Otnes, 2005; Penz and Hogg, 2011). On the other hand, intercomponent ambivalence refers to ambivalence between attitude components (i.e. positive affect and negative cognition or vice versa towards the same object) (van Harreveld et al., 2009). While intercomponent ambivalence has been recognised in prior psychological literature (Thompson et al., 1995; van Harreveld et al., 2009), it has been studied very little in consumer research, creating a call for more investigation of the concept (Roster and Richins, 2009). Accordingly, this paper explores different types of intra- and intercomponent ambivalence.

We have outlined above a variety of approaches to ambivalence from the existing consumer and psychological research. For the purposes of this study, we synthesize the above discussion and provide the following summary definition of ambivalence: *Consumer ambivalence is a structural property of attitudes involving both positive and negative cognitive and/or affective evaluations of the same consumption object.*
The multifaceted objects of consumption

Attitudes can be held with respect to a number of objects (Ajzen and Fishbein, 1977), and in a longitudinal buying process, consumers are faced with multiple objects towards which they can be ambivalent, including the product category from which the purchase will be made, as well as different brands and product options within that product category. These objects involve different aspects (i.e. utilitarian, hedonic, and symbolic), and ambivalence results from the evaluation of conflicting aspects of the same object (Fischer et al., 2000). Evaluations of the utilitarian aspects of consumption objects concern their instrumentality, i.e. how useful and beneficial they are (Batra and Ahtola, 1990), and are made predominantly cognitively (Spangenberg et al., 1997). Evaluations of the hedonic aspects of consumption objects, on the other hand, concern the pleasantness and agreeableness of the experiential affect associated with an object (Batra and Ahtola, 1990), and indicate how intrinsically pleasing the object is (Mano and Oliver, 1993), therefore reflecting more affective evaluations. Additionally, consumption objects can have symbolic aspects in that they help the consumer to develop a visible representation of him- or herself (Holman, 1981). Accordingly, consumption objects can be used for expressing one’s role to others, defining one’s unique character, or indicating common understandings in a marketplace (review in Ligas, 2000). From the three aspects (i.e. utilitarian, hedonic, and symbolic), hedonic and utilitarian have been compared to each other, and it has been suggested that they can be conflicting (Batra and Ahtola, 1990), which could potentially lead to intercomponent ambivalence involving conflicting evaluations of the utilitarian and hedonic aspects of a consumption object. However, the relationship of symbolic aspects with utilitarian and hedonic aspects remains unclear. Hence, we explore the types of ambivalence that involve conflicting evaluations of these different aspects of consumption objects.
Different types of involvement

This paper studies ambivalence in the high-involvement context. Involvement can be divided into enduring and situational types. Enduring involvement refers to the degree to which an object is related to one’s self-image – or the pleasure received from thinking about, or engaging in action with, the object (Higie and Feick, 1989) – and has been corresponded with importance in prior literature (Tudoran et al., 2012). Especially involvement towards product categories has been suggested to take such an enduring form (Bloch, 1981). Consumers can be positive and even defensive about attitudes, which are close to their self-concept (Lavine et al., 2000), and a relationship between enduring involvement and hedonic consumption has been suggested (Bloch and Bruce, 1984; Holbrook and Hirschman, 1982). Hence, existing literature suggests that enduring involvement might be related to positive attitudes towards a product category, but evidence remains scarce about the relationship between enduring involvement and ambivalence.

The second type of involvement studied in this paper is situational involvement, reflecting a person’s concern with a specific situation (Laurent and Kapferer, 1985). Situational involvement has been directly associated with buying decisions through the concept of purchase-decision involvement, which is defined as “the extent of interest and concern that a consumer brings to bear upon a purchase-decision task” (Mittal, 1989: 150) and implies that the consumer sees the choice of the “right” brand as important (Mittal, 1989). Accordingly, the risk of mispurchase evokes involvement, and especially when the price is high, the risks associated with the purchase are also high (Laurent and Kapferer, 1985). Perceived risk of purchase and perceived negative consequences of mispurchase increase the extensiveness of
the decision process (Laurent and Kapferer, 1985), which might increase ambivalence, because when exposed to a great amount of information, our attitudes are continuously challenged by counterarguments (van Harreveld et al., 2012). Further, a broader information search might lead to overload, because generally, the more information there is to be processed, the more there is information overload (Mukherjee and Hoyer, 2001), which in turn has been associated with increased ambivalence (Otnes et al., 1997). Yet, to our knowledge there is a lack of research comparing ambivalence under conditions of situational and enduring involvement.

**Ambivalence reduction**

In the previous section, we discussed the possibility that consumers are generally positive towards product categories, towards which they have enduring involvement. Hence, the idea of buying such products should also involve positive anticipation. On the other hand, in this paper, we focus on buying processes, the outcome of which is a choice. For ambivalent consumers, the choice and the rejection of an alternative is accompanied by the anticipation of both positive and negative outcomes, which are uncertain (van Harreveld et al., 2009). By recognizing this, consumers can experience anticipated regret about the outcome of the purchase, which makes them vulnerable to ambivalence (Janis and Mann, 1968). Hence, the outcome of the buying process can involve both positive and negative anticipation, because by choosing any option, the consumer will be able to acquire a product, which will generate positive feelings, but at the same time the consumer will have to face the potential problems of choosing the “wrong” option, possibly resulting to regret. These conflicting anticipations might underlie affective ambivalence, and we will explore this possibility later in this paper.
In order to make a choice despite these uncertain consequences, consumers have to integrate their conflicting evaluations and reduce ambivalence to a level at which a choice can be made to accept or reject the ambivalence-inducing object (van Harreveld et al., 2009). Ambivalence reduction occurs through coping (van Harreveld et al., 2009), which refers to a person’s efforts to manage demands that are appraised as taxing or exceeding that person’s resources (Folkman et al., 1986), and can be generally divided into emotion-focused and problem-focused coping.

Emotion-focused coping aims at reducing or managing the distress associated with the situation (Carver et al., 1989), and includes the strategies of procrastination and redefinition of the situation, for example through the denial of responsibility for one’s decisions (van Harreveld et al., 2009). In this study, however, we are interested in a context in which consumers will make a choice, and cannot feasibly transfer responsibility of the choice to other people or situational factors. Hence, we expect to see problem-focused rather than emotion-focused strategies. Problem-focused coping aims at problem solving (Carver et al., 1989), and includes increasing effort to become more confident about one’s choice and possibly changing one’s attitude so that ambivalence is reduced (van Harreveld et al., 2009). There are also less effortful problem-focused coping strategies, such as biased or heuristic processing (van Harreveld et al., 2009). Individuals’ use of coping strategies is adaptive, so that they may use low-effort or high-effort strategies depending on their motivation and ability in a given situation (van Harreveld et al., 2009). These findings, however, have been obtained by studying general attitudinal ambivalence, and we will therefore explore, whether there are differences in the ways in which consumers cope with different types of ambivalence, thus generating a more fine-grained understanding of coping with ambivalence.
Research gaps and theoretical framework

Thus far, we have reviewed the existing literature around ambivalence and involvement. We have identified gaps in the literature, which we aim to fill with our empirical study. In Figure 1, we synthesize the literature review. The first area in the Figure represents the context of our study, the high-involvement buying process. Based on our review, ambivalence should be generally increased in high-involvement contexts, but there is a lack of understanding of ambivalence under different types of involvement conditions. Once we have shed light on the context, we proceed to address different types of ambivalence consisting of conflicting evaluations of various aspects of consumption objects. In this regard, our literature review shows that while cognitive and affective ambivalence are likely to consist of conflicting evaluations of the utilitarian and hedonic aspects of consumption objects, respectively, especially intercomponent ambivalence is not similarly understood. Finally, while our literature review suggest that ambivalence is generally coped with especially when choices need to be made, there is a lack of understanding of how consumers reduce different types of ambivalence. The basic sequence of relationships between our key concepts is therefore based on the existing literature, and next we turn to our empirical study in order to extend the current understanding of ambivalence in high-involvement buying processes by addressing the gaps in the literature.
THE STUDY

This paper proceeds by discussing the chosen video diary method, which provides unique advantages for exploring ambivalence over self-reports and retrospective data collection methods. Furthermore, the context of buying a dance pole will be discussed, which will help in understanding the findings of this study.

Data collection method

Video diaries were chosen as the data collection method, because they enabled collecting in-depth and nearly real-time data. This was important, because the memory of ambivalence may decrease over time (Aaker et al., 2008). Diaries therefore enabled the participants to describe details that might have been forgotten during a traditional interview (Wind and Lerner, 1979), and created the possibility for participants to have their own space where they could relive their experiences (deMarrais and Tisdale, 2002). The participants were also relatively young and fluent with technology; therefore, it was deemed most convenient for them to record video clips. Importantly, video diaries enabled the investigation of the whole buying process, as well
as the collection of both verbal and non-verbal data. This was important because verbal and non-verbal expression can operate simultaneously, so that one supports another, or on the other hand changes the meaning of another (Stivers and Sidnell, 2005). In either case, different types of expression, while conveying information about the same episode, can include information that another type of expression leaves out (McNeill, 1992), making video diaries an effective tool for a holistic and in-depth understanding of ambivalence. The data collection process started with a briefing session, after which the video diary process started. To situate the sample (Elliott et al., 1999), an interview was also conducted to find out more about the participants’ socio-demographic backgrounds. The interview was conducted either during the briefing session or in a separate meeting, depending on the participants’ schedules. To motivate the participants to finish the process, they were given gift cards to a web shop. Additionally, one of the participants received a dance pole from Brand A based on a lottery after the data collection process.

An event-contingent procedure was used for the collection of video diaries, meaning that the participants were asked to record a video clip every time a pre-established event took place (Nezlek, 2001). The traditional buying process model served as an underlying process framework, with the five stages of need recognition, information search, evaluation, buying decision, and post-buying decision (Puccinelli et al., 2009). In this paper, the focus is on how consumers arrive at buying decisions, and thus the post-buying stage was excluded from the data collection. Accordingly, the participants were asked to record a clip of their need recognition, information search, evaluation, and buying decision stages. Further, as they searched for information from different sources at different times, they were instructed to make a recording after each search event. The participants were explained in the instructions (Appendix A) what a buying process is and what its stages are, and were given a written as
well as an oral description of each stage. During the buying process, they used these instructions to determine, which stage they were in. To help the participants in the efficient and focused recording of video diaries, they were provided with open-ended questions as examples of what kinds of issues could be discussed in the videos (Appendix A). Even though the participants were given a list of questions, the questions were presented more as semi-structured than structured questions, because in the verbal briefing session, the participants were encouraged to address only those questions, which they deemed suitable. Additionally, the participants were asked to report any issues that they felt were relevant to their decision-making and were encouraged to talk freely on the videos so as to minimise the risk of priming (Scherer, 2005). This approach provided an effective and convenient means for the participants to record the video diaries, while also enabling the collection of detailed data about their attitudes. The questions were originally focused on the participants’ feelings, which was deemed to be a broad and accessible concept to the participants. The participants extensively discussed their general attitudes, cognitions, as well as emotions towards a wide range of topics in the video diaries, indicating that the use of the term “feelings” did not constrain them. The data collection resulted in 52 video clips and a total of 5 hours and 9 minutes of video material, as well as seven interviews, totalling to 2 hours and 36 minutes of interview material. Table 1 includes a description of the number, topic, and duration of the video diary clips and interviews.
<table>
<thead>
<tr>
<th>Source (pseudonym)</th>
<th>Data</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kate</td>
<td>Personal interview</td>
<td>32 mins</td>
</tr>
<tr>
<td></td>
<td>VC*: Need recognition</td>
<td>8 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, commercial sources</td>
<td>12 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, commercial sources</td>
<td>7 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, personal contacts</td>
<td>15 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, discussion forum and trials</td>
<td>14 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, trials</td>
<td>7 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Final evaluation and buying decision</td>
<td>15 mins</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7 videos, 1 interview</td>
<td>1 h 50 mins</td>
</tr>
<tr>
<td>Lauren</td>
<td>Personal interview</td>
<td>20 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Need recognition</td>
<td>7 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, commercial sources and discussion forum</td>
<td>8 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, discussion forum</td>
<td>4 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, trial + buying decision</td>
<td>9 mins</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4 videos, 1 interview</td>
<td>48 mins</td>
</tr>
<tr>
<td>Hannah</td>
<td>Personal interview</td>
<td>26 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Need recognition</td>
<td>5 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, personal contacts</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, commercial sources</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, discussion forum and personal contacts</td>
<td>4 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Discussions with co-workers and general description of pole dancing as a hobby</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, personal contacts</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Final evaluation</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Buying decision</td>
<td>1 minute</td>
</tr>
<tr>
<td></td>
<td>VC: General description of pole dancing as a hobby</td>
<td>3 mins</td>
</tr>
<tr>
<td>TOTAL</td>
<td>9 videos, 1 interview</td>
<td>54 mins</td>
</tr>
<tr>
<td>Sarah</td>
<td>Personal interview</td>
<td>11 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Need recognition</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, commercial sources</td>
<td>2 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, discussion forum</td>
<td>2 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, commercial sources</td>
<td>2 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, commercial sources</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, discussion forum</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Evaluation</td>
<td>1 min</td>
</tr>
<tr>
<td></td>
<td>VC: Evaluation</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Evaluation</td>
<td>2 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Buying decision</td>
<td>4 mins</td>
</tr>
<tr>
<td>TOTAL</td>
<td>10 videos, 1 interview</td>
<td>36 mins</td>
</tr>
<tr>
<td>Susan</td>
<td>Personal interview</td>
<td>25 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Need recognition</td>
<td>12 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Need recognition</td>
<td>3 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Need recognition</td>
<td>2 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, commercial sources</td>
<td>16 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, personal contacts</td>
<td>8 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, discussion forum and social media</td>
<td>11 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Information search and evaluation, trials</td>
<td>8 mins</td>
</tr>
<tr>
<td></td>
<td>VC: Final evaluation and buying decision</td>
<td>16 mins</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8 videos, 1 interview</td>
<td>1 h 46 mins</td>
</tr>
<tr>
<td>Lisa</td>
<td>Personal interview</td>
<td>33 mins</td>
</tr>
</tbody>
</table>
Participants

When choosing participants, the key was to identify people who were at the beginning of the buying process and who were ready to commit to the data collection, which involved the recording of the whole buying process. All respondents were recruited from a pole dancing forum or the forum’s equivalent Facebook page. A comment with contact information was posted on the forum or Facebook page, which asked interested people to contact the first author. During the process, out of the original 15 interested people, five dropped out before the data collection started, while three dropped out during the process because of personal time restrictions. A total of seven participants was accepted as sufficient for the exploratory purposes of the study. During the background interview, the participants were asked about their age and professional status, revealing that the sample consists of relatively young females who were either university students or young professionals. They had a relatively high level of education and did not have children, except for one participant. Table 2 includes a description of the participants based on the background interviews. In addition to the information included
in Table 2, all participants were female, their nationality was Finnish, and they had pole dancing as a hobby.

Table 2. Description of the participants

<table>
<thead>
<tr>
<th>Participant (pseudonym)</th>
<th>Age</th>
<th>Occupation</th>
<th>Education</th>
<th>Family</th>
<th>Income level (approx./year after taxes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kate</td>
<td>24</td>
<td>University student, also working part-time in a law firm</td>
<td>Studying Master’s degree in Law</td>
<td>In a domestic partnership, no children</td>
<td>8 000-10 000 €</td>
</tr>
<tr>
<td>Lauren</td>
<td>23</td>
<td>Working full-time as an educational counsellor</td>
<td>Bachelor of Social Services</td>
<td>In a domestic partnership, no children</td>
<td>25 000 €</td>
</tr>
<tr>
<td>Hannah</td>
<td>33</td>
<td>Working full-time as an educational expert</td>
<td>Bachelor of Business Administration</td>
<td>In a domestic partnership, no children</td>
<td>34 500 €</td>
</tr>
<tr>
<td>Sarah</td>
<td>23</td>
<td>University student</td>
<td>Studying Master’s degree in Mechanical Engineering</td>
<td>In a domestic partnership, no children</td>
<td>7 000 €</td>
</tr>
<tr>
<td>Susan</td>
<td>34</td>
<td>Working full-time as a research strategist</td>
<td>Master’s degree in Arts</td>
<td>Married, two children</td>
<td>36 000 €</td>
</tr>
<tr>
<td>Lisa</td>
<td>29</td>
<td>Working full-time as a project coordinator</td>
<td>Master’s degree in Engineering</td>
<td>Single, no children</td>
<td>36 000 €</td>
</tr>
<tr>
<td>Heidi</td>
<td>25</td>
<td>Working full-time as a researcher</td>
<td>Master’s degree in Business Administration</td>
<td>In a relationship, no children</td>
<td>18 000 €</td>
</tr>
</tbody>
</table>

Multimodal analysis procedure

In order to fulfil the goals of this study and take full advantage of the video diary data, a multimodal analysis of the video diaries was conducted. The modalities analysed were vocal-aural, which involves spoken language and prosody, and visuospatial, which involves gestures and body postures (Stivers and Sidnell, 2005). The modalities and their use are described in the following.
The vocal-aural modality. In order to study spoken language, the video data were transcribed and analysed using qualitative content analysis, which is a technique for the controlled analysis of texts within their contexts, following specific analytical rules, but without quantifying the data (Mayring, 2000). Because the goal of the present study is to extend previous research on existing concepts, the content analysis started with a directed approach, meaning that prior literature served as a basis for the coding scheme for the central concepts (i.e. ambivalence, involvement, aspects of consumption objects, and coping mechanisms) (Hsieh and Shannon, 2005). Since it was necessary to identify and categorise all instances of ambivalence in the data, we first read the whole transcript and highlighted all text that appeared to represent ambivalence (Hsieh and Shannon, 2005). Next, we coded for all the highlighted passages, using the codes which were based on prior literature (Hsieh and Shannon, 2005). For each passage, we coded for the type of ambivalence first (“coding step 1” in Appendix B); the consumption object towards which ambivalence was directed and the aspects of that object mentioned by the participant (utilitarian, hedonic, and symbolic) (“coding step 2” in Appendix B); and the coping mechanism for ambivalence (“coding step 3” in Appendix B). The passages categorized as cognitive, affective, and intercomponent ambivalence were then studied separately to identify the common themes within each ambivalence category. For example, the passages categorized as cognitive ambivalence were examined in separation to identify, which aspects of consumption objects, and which coping mechanisms applied for cognitive ambivalence. The same was done for affective and intercomponent ambivalence. A similar directed coding was conducted for the involvement types. In order to analyse ambivalence under different types of involvement conditions, the objects towards which involvement was directed were coded, as well as the valence (positive and/or negative) of the evaluations towards those objects. The common themes within different types of involvement were then searched. The coding scheme for spoken language is included in Appendix B. Besides the content of spoken language, speech
patterns were also analysed. Periods of silence (i.e. pauses) among the participants’ speech were taken as indicators of the planning of forthcoming speech (Kircher et al., 2004) and cognitive load (Khawaja et al., 2008). Furthermore, filler words, such as “umm” were taken as indicators of uncertainty (Krahmer and Swerts, 2005). The transcription conventions used for prosody are shown in Appendix C.

*The visuospatial modality.* The visuospatial modality was used to obtain a deeper insight into the vocal-aural modality. Hence, this modality was analysed as a final step (“visuospatial interpretation” in Appendix B) together with prosody. The facial expression of smile indicates positive affect, whereas frowning indicates negative affect (Voutilainen et al., 2014). These two facial expressions were used as indicators of the participants’ affective state during an episode while speaking about an object. In addition to positive affect, smiles were used as indicators of embarrassment and discomfort (McClintock and Hunt, 1975). Whether a smile was an indicator of positive affect or embarrassment was determined by the simultaneous interpretation of the text and the facial expression. From head movements, nods and head shakes were analysed. Both come in many forms, and carry varying meanings besides simple affirmation or negation (McClave, 2000). Therefore, they were also interpreted in concert with the vocal-aural modality. For example, a nod accompanied by a simultaneous frown indicates processing, whereas a nod can also indicate emphasis (Poggi et al., 2010). Similarly, head shakes were interpreted as an indicator of intensification or uncertainty, depending on what the participants said during the head shake; head shakes combined with verbal expressions such as “I guess” or “I think” were interpreted as uncertainty, whereas head shakes combined with expressions such as “very” or “great” were interpreted as intensification (McClave, 2000). Furthermore, side-to-side movement of the body was used as a direct indicator of attitudinal...
ambivalence (Schneider et al., 2013). The transcription conventions used for visuospatial modality are shown in Appendix C.

The pole dancing context

In line with the qualitative tradition, this study places emphasis on the context (Elliott et al., 1999). The first author had approximately three years of personal experience as a pole dancer and pole dance teacher at a local health club. She was oriented towards pole dancing as a form of fitness training, similarly to the participants of this study. She was also demographically similar to the participants. Given that pole dancing is a niche hobby, the first authors’ experience enabled a considerably more elaborate understanding of the data and the context than would have otherwise been possible. The buying process of a dance pole was an ideal context for our study because it enabled studying all of our concepts of interest – ambivalence, involvement, and different aspects of the consumption objects. Dance poles are likely to elicit enduring involvement, because they are used for a hobby, which reflects one’s self-image and is perceived as enjoyable. Furthermore, dance poles are relatively expensive, especially taking into account that many of the participants were still students with limited income. During the data collection, which took part in Finland, the prices ranged between 299-1299 € for Brand A’s product options; between 225-910 € for Brand B’s product options; and the sole product sold by Brand C was priced at 169 €. They are also durables, which implies that the buyer normally uses the product for many years. Therefore, choosing the “right” option is highly important, and the financial risk associated with the purchase is relatively high. In addition, the purchase may involve performance and physical risks, because it is unsafe and even impossible to perform pole dancing moves without proper friction between the skin and the dance pole.
Thus, a product, which does not allow sufficient friction, might be useless. Hence, situational involvement can be argued to be high during the buying process of a dance pole.

Buying a dance pole also involves a number of considerations, including evaluations of different brands, their offerings, and various sales channels, which involve hedonic, utilitarian, and symbolic aspects. Dance poles are used for an enjoyable hobby, and therefore involve hedonic aspects. They must also meet certain criteria in order to be useful; therefore, the buying process involves utilitarian considerations. The symbolic aspects are involved especially because of the dual image of pole dancing. The traditional view of pole dancing as an erotic form of dance still lives but is now accompanied by an image of fitness pole dancing, which is the focus in this study. The dual image of pole dancing also increases the social risk of the decision, which refers to the possibility that significant others have unfavourable opinions about a chosen product (Dholakia, 2001). For example, by choosing a product, which represents the “wrong” type of pole dancing, one could receive negative feedback from one’s friends. Given this complexity, we expected that some of the aspects of dance poles will be evaluated positively and others negatively. Therefore, the context was expected to involve ambivalence. In addition, due to the high-involvement nature of the buying process and the complexity of the considerations required for decision-making, the buying process for a dance pole was expected to be longitudinal, which enabled the investigation of ambivalence over time.

FINDINGS

The findings are presented next. We begin by exploring the relationship between ambivalence and two types of involvement (i.e. enduring and situational). We then continue to address each
type of ambivalence (i.e. affective, cognitive, and intercomponent) separately. In each section, we provide propositions, which arise from our data. We conclude by formulating a synthesis of our findings, which demonstrates how the propositions are related to each other. The names of the participants are pseudonyms, which were invented to protect the privacy of the participants.

Involvement and ambivalence

In the theoretical section, we outlined two different types of involvement, enduring and situational, and in this section we explore ambivalence under these different involvement conditions. Our first finding is that the participants described receiving pleasure from thinking about, and engaging in action with, the product category, and talked about how pole dancing is a part of their self-image, all of which are components of enduring involvement. Accordingly, none of the participants showed any ambivalence towards the product category. For example, in the quote below, Heidi shows enduring involvement towards dance poles: they are related to Heidi’s identity, and she receives pleasure from thinking about pole dancing, as indicated by her verbal expression as well as the almost constant smiling while talking about dance poles. Hence, as a part of this enduring involvement, Heidi has positive emotions towards the product category, but no negative ones. The following quote demonstrates these observations:

*Well the feeling state is of course maybe generally that I’m (.) I’m Δ high-spirited Δ I’m (.) energetic and (.) really (.) @ excited (1 sec.) about the sport @ (1 sec.) I don’t (.) at least right now I have the kind of feeling like (.) that like, now I saw last, last umm weekend I went to see the Finnish pole dance championships so @ I’m again even more motivated and*
excited (.) again a (.) about the whole sport a and (.) everything @ so then somehow it’s like a feeling that I’d want to do it even more (.) and I’d like to have a pole at home (.) and ” maybe also that it’s a part of my identity ” […] Kind of when I think of myself @ as a pole dancer (.) then it’s somehow (1 sec.) it’s (.) also like, you have a pole at home @ (Heidi, video clip 1)

Similarly, Kate smiles almost constantly when speaking about her feelings about engaging in action with the product category, indicating enduring involvement as well as positive affect towards the product category:

I felt that somehow I was so excited about the whole sport that I wanted to, like (1 sec.) kind of, get the pole. I wanted to, wanted to, get the pole and wanted to be like, (.) @ to really immerse myself completely into the (.) sport (.) kind of (1 sec.) @ Generally then, about (1 sec.) my feelings towards pole-, (.) um (.) of course (.) now that I’ve (1 sec.) that I’ve @ done this sport as a hobby, of course the feelings related to po-, poles are pretty positive and (.) I feel like everything re-, related to poles, it makes me feel immediately, like, joyful, joyful and good when (.) speaking about pole-, poles gen-, generally so like (.) indeed kind of, I feel that if there was now (.) a pole standing behind me, it would indeed make me feel good like (1 sec.) like somehow they are (1 sec.) are after all a kind of (1 sec.) addiction in a way @ (Kate, video clip 1)

As also demonstrated in the quotes, enduring involvement took place towards the product category (dance poles); however, we did not find indicators of similar involvement towards individual brands or product options. Hence, under conditions of enduring involvement, there
appears to be strong positive affect towards the product category, and very little negative evaluations. Consequently we suggest the following:

P1a. Under conditions of enduring involvement, consumers have more positive evaluations and therefore reduced ambivalence towards the product category.

We also found situational involvement towards the buying process, characterised by being concerned about choosing the “right” option. Especially for those participants who were students at the time of data collection, the price was equivalent to a significant part of their monthly income, indicating that there was a risk involved with mispurchase. Searching for information about the prices of different product options made this risk more salient, and consequently, the excitement about acquiring the product was accompanied with negative affect. For example, in the following quote, Heidi is excited about purchasing the product, but resource constraints make its negative side (i.e. losing money) more salient, and Heidi also becomes “shocked” and “careful” as a result.

So I could say I’m excited (2 secs). But then after I (.) I saw the prices I was a little shocked (.) The prices have increased obviously, and umm (2 sec.) well, but still, I mean, excited (.)

Maybe = a bit kind of = careful (Heidi, video clip 2)

Similarly, in the case of Lauren, the choice of the “right” option is important, and she also mentions the high prices of the products as a contributor to “seriousness”, indicating that they make the negative aspects of buying the product more salient. Lauren’s ambivalence is also expressed in her body movements, as she leans towards one side when speaking about positive
feelings, and the other side when speaking about negative feelings, which further supports our interpretation of ambivalence towards the buying decision.

Now that I looked at these [poles] with the thought that I’ll make the decision now, I had a very serious feeling, perhaps, because it’s a large amount of money that you spend on the pole […]. So kind of, maybe the excitement and (.) well yeah, the excitement was maybe still there but the kind of joy and fun that I had in the beginning (leans right ear towards right shoulder) when I started to look at these is gone (leans left ear towards left shoulder) and now I’m just very serious, like what’s the right (1 sec.) right pole that I should buy. (Lauren, video clip 4)

In sum, ambivalence was increased under conditions of situational involvement, because it made salient the risks of mispurchase and thus increased the participants’ awareness of the negative aspects of the buying decision, which conflicted with the pre-existing positive anticipations towards buying the product. Hence, the following is proposed:

P1b. Ambivalence in consumers’ buying processes is increased under conditions of situational involvement.

Affective ambivalence

Affective ambivalence most often involved coexisting positive and negative anticipations regarding the outcome of the buying process (i.e. choosing and acquiring a product). For example, in this first quote, Kate talks about her affective ambivalence, which consists of being both excited and scared about acquiring the product.
And since I’m not completely sure what would be the best option for m-, me (1 sec.) me, though, so Δ(2 sec.)Δ, I’m like, excited about the, this process but (.) on the other hand, then again, I’m a little bit scared about like, like, if I like (0.5 secs.) buy a pole and then realise that it’s not good after all (Kate, video clip 1)

The second form of affective ambivalence found in the data involved both positive and negative feelings towards the act of information search, and is exemplified in the following quote from Lauren. On the one hand, she is excited about searching for information, but on the other hand she is also frustrated and confused for not getting coherent information. She verbally expresses her experience of ambivalence (I have a little mixed feel-, (. a bit mixed feelings), and with a side-to-side head movement she further communicates the complexities of the discussion forum as an information environment. Long pauses in her speech (1-3 secs.) indicate cognitive load, which indicates difficulty of processing all the information involved in the decision-making. Finally, she smiles while saying “although others can’t decide for you”, which appears to be an embarrassed smile, given that she does not simultaneously speak about any positive issues. The fact that she wishes that others could make the decision for her indicates that she does not feel confident about her ability to choose the best option, even though she is embarrassed about the idea of transferring the responsibility of her choice to others. Thus, her body language reveals uncertainty, which accompanies her affective ambivalence.

And (. I have a little mixed feel-, (. a bit mixed feelings and a bit of frustration maybe when read those (. read and have those conversations (. because (. some have one opinion and others have another opinion, naturally, of what’s the best, which poles have = the best grip and which size is the best, where it’s easiest to buy from = (. [...] So on the one hand
searching for this information was also (. ) it was nice, exciting, but on the other hand it was also very frustrating because there was not as much information available, maybe, as I would have hoped. (3 sec.) [...] And (. ) yeah the feelings have been kind of, a little bit mixed (1 sec.) I’m still excited, like, I want information (. ) more and more (. ) but also, then, kind of a (. ) a bit frustrated and confused feeling like, please decide now (1 sec.) what’s the best @ option (. ) although others can’t decide for you @ (Lauren, video clip 3)

In sum, affective ambivalence involved either positive and negative anticipations about the outcome of the buying process or positive and negative emotions towards the act of searching for information. Consequently, the following is proposed:

\[ P2. \text{Affective ambivalence involves conflicting anticipations about the outcome of the buying process or conflicting emotions towards the act of searching for information.} \]

**Cognitive ambivalence**

Cognitive ambivalence, based on the utilitarian aspects of different brands and product options, was commonly found in each stage of the buying process. Interestingly, cognitive ambivalence was reduced by emphasizing some of the utilitarian aspects of the consumption objects during the buying process, which were also given considerable weight in the final evaluations. To illustrate this process, we demonstrate it during Heidi’s buying process. In the following quote, Heidi discusses her attitudes towards Brand A during information search from commercial sources. She mentions a utilitarian aspect of Brand A (the fact that the product only uses the tension between the floor and the ceiling to stay in place), which she perceives both positively and negatively. The fact that she keeps talking about the same attribute repeatedly indicates
that it is an important attribute. Furthermore, she repeats the same concern twice (*whether it’s really going to stay in place*), and the second time, she emphasises the concern with nods (*will it then ∆ really stay there ∆*), further indicating attribute importance.

Which is in itself a positive thing that [Brand A’s products] don’t leave any marks then (.) but the (.) top part which is attached to the ceiling, I mean, it’s really small compared to Brand B and that’s why I started to think that (.) whether it’s really going to stay in place if it’s just based on like, the tension between the floor and the ceiling, I mean, it’s after all so (.) so small, the (.) area (1 sec.) that’s attached to the ceiling [...] I mean how does it work then, when it’s that small (.) the area in the ceiling, I mean will it then ∆ really stay there ∆ (Heidi, video clip 2)

Heidi continues talking about the conflicting utilitarian aspects of both Brand A and Brand B on the same video. The assembly mechanism is a central topic also in these later quotes, and the fact that she repeatedly talks about the same attribute indicates that it continues to be an important attribute. However, another important attribute enters the decision-making process: by nodding while saying “it is more affordable”, she now also emphasizes the importance of price. Side-to-side movement while she compares the two brands on these important attributes indicates conflicting evaluations on these important attributes.

*Brand B had like, many nuts that you had to rotate with one of those keys and everything so (.) @ that could @ Brand A could after all then be, like (.) easier (1 sec.) easier to handle (2 sec.) So in that sense (.) = it’s more expensive (.) but it sounds simpler (.) = Whereas Brand B is umm (.) = more affordable (1 sec.). It seems a bit like (2 sec.) not so sporty, like = (.) it’s*
fancy but it’s not so (1 sec.) kind of (1 sec.) practical (1 sec.) ∆ But it’s more affordable ∆ (Heidi, video clip 2)

In the following quote, Heidi continues to discuss the same important attribute, the assembly mechanism, as she makes her final evaluation of the different brands and product options. The following quote demonstrates how Heidi’s evaluation of Brand B polarizes to a more negative direction based on this important attribute. As she talks about difficulties related to assembling Brand B’s product, she frowns, further indicating negative evaluation. Interestingly, even though Heidi’s bodily expressions emphasized the importance of the affordability of Brand B earlier (c.f. the previous quote from video diary clip 2), in the following quote her body does not show a reaction when she talks about affordability.

And it [model from Brand A] is also easy (1 sec.) umm (1 sec.) like (1 sec.) to assemble because it only consists of two parts, there aren’t all of these “so many extra screws and” (.) other things, it’s also easy to transport and carry from one place to another (1 sec.) [...] And then the [model from Brand B] again, um, it’s cheaper (.) silvery, like this (.) it would fit my interior (1 sec.) [...] In the [model from Brand B] again, umm (.) also the moving and transporting is a bit more difficult (.) compared to Brand A (.) and I have after all been pretty much umm, @ (1 sec.) of a moving sort lately so umm (.) @ that’s also one, kind of a (.) “maybe negative side”. (Heidi, video clip 6)

In the following quote, Heidi explains her buying decision. The two attributes, which she considered throughout the process, the assembly mechanisms and price, continue to generate ambivalence. Similarly to the examples outlined thus far, Heidi resolves this ambivalence by focusing on the negative aspects of Brand B, especially based on other users’ experiences. She
frowns while talking about the negative aspects of Brand B, which further indicates that she indeed has a negative evaluation of the brand. On the other hand, she downplays the positive aspect of Brand B, which is the price (*the price doesn’t mean so much*). All of this leads to her final choice of Brand A.

*Yeah and then the mobility, that was also one big criterion (1 sec.), which umm (1 sec.) was also, now that I’ve been moving so much lately and (.) I’ve been taking the pole down and moving it and a (.) erm (.) a so (.) that’s why umm (.) Brand A sounded a lot better because it has less of those screws [...] somehow even though Brand A is more expensive but (.) still (.) all of these (.) negative sides that I was now “thinking about (.) and” that I read about, like, from other users’ experiences (.) umm (1 sec.) somehow it’s after all so that the price doesn’t mean so much (.) as long as the product (.) is (.) good (.) (Heidi, video clip 7)*

To demonstrate the prevalence of these findings in our data, we provide two more illustrative examples showing the same process. In the following, Lauren shows cognitive ambivalence based on the utilitarian aspects of brands while searching for information from brand A’s online reseller. Lauren’s body movements (head leans to one direction while she talks about negative aspects and to the other direction when she talks about positive aspects) further indicate that she is ambivalent. While she is almost ready to reject the brand based on one attribute (size), another attribute (domestic brand) proves to be even more important, and she is even ready to compromise on the other important attribute (size) because the brand is domestic. The fact that she repeatedly talks about Brand A being a domestic brand further indicates that the attribute is indeed important, and interestingly, in her final video clip she tells that she ends up choosing Brand A, and that one of the main criteria behind this choice is that it is domestic. Thus,
similarly to Heidi, Lauren resolves ambivalence towards Brand A based on an important attribute, which eventually has an influence on the final choice.

*I found it eventually (.) but they didn’t have it in the 50-millimeter size (.) so (.) on the one hand I like, rejected (right ear leans towards right shoulder) but on the other hand then again, it would be a domestic brand (left ear leans towards left shoulder) (.) And after all it always pays off to buy domestically, so therefore I wouldn’t reject it quite yet after all, but I’d have to test this (.) I don’t know (.) where I could do that (.) but (.) like, it’s something that would be interesting anyway. And I think they had a 48 [millimeter size] (1 sec.) so that could be a suitable size after all (1 sec.) So the, indeed umm (1 sec.) it has quite a lot of influence after all (.) that it’s domestic (1 sec.) I guess, on my own decisions in the end especially when I think (.) what pole “I’ll really order because” (.) I trust domestic after all quite a lot, it’s durable. (Lauren, video clip 2)*

In this final quote, we demonstrate the same finding in the case of choosing between two product options from the same brand. Susan was choosing between two product options from Brand A, and chose an option, which was approximately four times more expensive than the other option she considered. In the following quote, she admits that her choice is very expensive, but nods while speaking about its reselling value, therefore emphasizing the importance of that attribute. She also verbally emphasises another positive attribute of the chosen product (the spin feature\(^1\)), which further supports her positive final evaluation. On the other hand, while speaking about the less expensive option (the custom pole), her body moves from side to side, which indicates remaining ambivalence towards the rejected option. Hence,

\(^1\) The difference between a spinning pole and a static pole is that the former spins on its own. The benefit of the feature is that there is a continuous spinning movement, even if the dancer is in a static pose.
similarly to Heidi and Lauren, the body language and verbal expression of Susan indicate that she was able to resolve ambivalence towards the option that she chose by emphasizing its positive attributes in her final evaluation.

It’s indeed really expensive (.) but (.) but umm it also has a really good reselling value […] But umm (.) but like, kind of like, so then (1 sec.) then Δ they also have a really good Δ reselling value, value (.) so kind of so, so, so if I buy ↔ a custom pole then with that it’s like ↔ (.) it’s more of a, like, the type of purchase that like, that is very unlikely to suit anyone else. And then there’s of course the spin attribute, so that (.) that it was ↔ so high ↔ high, the space, that (.) that at [company A] they did not recommend the spin, like, spin option but that like, that it would be just static (.) and umm (.) umm (.) and then like (.) with [a model from Brand A] I can work out (.) also with a spinning pole. (Susan, video clip 8)

Overall, we found that cognitive ambivalence consisting of conflicting evaluations of the utilitarian aspects of brands and product options was resolved by emphasising the valence of the most important attributes. Interestingly, the data revealed relatively early in the buying process, which attributes were most important to the final evaluation, and therefore provided cues about the direction to which the final evaluations would polarize. In sum, we propose the following:

P3a. Cognitive ambivalence towards brands and product options consists of conflicting evaluations of the utilitarian aspects of a consumption object.

P3b. Cognitive ambivalence is reduced by emphasising the valence of the evaluation of the most important attributes when forming attitudes towards different consumption objects.
Intercomponent ambivalence

We begin this final section by demonstrating quotes, which reflect intercomponent ambivalence involving conflicting evaluations of the symbolic and utilitarian aspects of consumption objects. Interestingly, the symbolic aspects were discussed in the early stages of the buying process, and influenced the participants’ decisions to reject a brand (in this case, the erotically positioned Brand C), therefore serving as decision-making heuristics. The following quote, for example, illustrates how Brand C was rejected based on its symbolic aspects, even though it in fact also involved positively evaluated utilitarian aspects. In the quote, Sarah laughs shortly while speaking about the positive utilitarian aspects of Brand C, which appears to indicate downplaying of the positive aspects. She explicitly states that she will not consider the brand because of its brand image, which is indeed the case in her subsequent video diary clips. Hence, the brand is rejected because of its symbolic aspects.

On the discussion forum (.) they mentioned some poles from Brand C and it’s apparently some (.) adult entertainment (.) store (.) The poles seemed pretty (.) decent (.) though (.) You @ [laughs shortly] can actually do something with them (.) But (.) they have maybe such a brand image that @ I’d leave them out of consideration (.) even though they’re more affordable (Sarah, video clip 4)

However, when the remaining options were generally acceptable in terms of their symbolic aspects (in this case, the fitness dance poles of Brand A and B), the symbolic aspects could still be components of ambivalence, but they did not influence the final evaluations. For example, in the quote below, Hannah becomes aware of the negative utilitarian aspects of her preferred brand. Consequently, a positive attitude towards Brand B, which has mainly been based on its
symbolic aspects (i.e. girl candy; glamour; bling-bling) turns into ambivalence, and she becomes more uncertain about her choice. The final sentence in the quote lends further support to our interpretation; as Hannah concludes that her positive attitude has been conflicted (would I re-, really like the pole then), she moves from side to side, indicating ambivalence. In sum, Hannah’s recognition of the negative utilitarian aspects of a brand, which she used to prefer based on its symbolic merits, is visible in her speech and her body.

But (.) the only thing that for me (.) me its- (. ) for me from what I read there that elicited the contradict-, contradiction was that, as I’ve said that (.) that from the beginning (.) I thought a bit that the (.) pole from Brand B would (. ) would maybe be the smarter option, or the nicer option for me just because (.) the po-, the web store where they are sold umm (.) exactly their, like, the glamour and bling-bling (.) they’re better at bringing like, this (.) so-called girl candy into their product pages and company image (.) And that’s then real- (. ) really what made me also (1 sec.) made me lean more towards that direction (.) But what I then (.) read on the forum that made me doubt this (.) choice of Brand B is that (.) many say that it should be somehow pre-warmed (.) to get like a good (1 sec.) good, like, grip (.) [...] Then I started to really think that if it’s really so ↔ slippery and so tricky that (.) that would I re-, really like the pole then ↔ (Hannah, video clip 4)

Later on the same video, as she proceeds in her decision-making, the positive symbolic aspects of Brand B do not influence her decision-making anymore. Rather, the symbolic aspects have been overruled by a cognitive evaluation of the utilitarian aspects of the brand. In the following quote, she expresses cognitive ambivalence consisting of conflicting evaluations of the utilitarian aspects of Brand B, which she addresses similarly to the examples shown in the
previous section. While she acknowledges the positive aspects of Brand B, she places more importance on its negative aspects, and in the end chooses Brand A.

I was sure pretty much until the end that (. . .) that even though I had read how much more difficult [product from Brand B] is (. . .) that it would be my choice (. . .) exactly because at the same time I would learn (. . .) to operate with (. . .) two different pole ty- (. . .) pole types or pole materials (. . .) so (. . .) that would be the thing (. . .) but (. . .) then the more and more I read about how (. . .) pole materials burn the skin (. . .) and how much more trouble (shows quotation marks in the air) you have to go through (. . .) to get (. . .) enough grip from the pole so that there’s enough friction (. . .) So then I start, well, started to think that (. . .) no, really (. . .) that will I bother to go through that trouble and is the trouble such (. . .) that I would enjoy it (. . .) that even like a after a couple of months a when the first excitement about finally having the pole at home (. . .) ends (. . .) will I still have the energy to do these (. . .) things (. . .) to the pole, the I started to think that (. . .) that no (. . .) that I don’t think that it would be my thing that I would have the energy for that (Hannah, video clip 4)

Thus far we have focused on ambivalence involving conflicting evaluations of utilitarian and symbolic aspects of consumption objects. In this final quote, we demonstrate another type of intercomponent ambivalence, involving conflicting evaluations of the hedonic and utilitarian aspects of consumption objects. For example, in the following quote from Kate’s evaluation stage, she compares different options and summarizes her attitudes towards each. Kate nods to emphasize that Brand A “draws her towards itself”, and there are multiple occasions on which she nods while talking about how safe she feels when using Brand A, and how she can trust the brand, and this affective evaluation eventually gets the most weight in her final evaluation.
These observations indicate that intercomponent ambivalence based on conflicting hedonic and utilitarian aspects is ultimately resolved similarly to cognitive ambivalence.

But maybe like exactly this (. ) feeling I have or like kind of, if I, speak based on my feelings, then the, like, brand A somehow (. ) Brand A um (. ) somehow draws me ∆ towards itself ∆ the most like [...] umm Brand A, then again, in many ways has, in my opinion, been pretty safe (. ) I often have a pretty ∆ safe feeling when I work out on it ∆. I mean, with, somehow with Brand B I’m more nervous (. ) so it’s not so nice so I mean maybe (1 sec.) maybe kind of like, exactly the (1 sec.), I mean even though these have their pros ∆ and cons ∆ (. ) I mean (. ) what gets the most weight is exactly that (. ) Brand A is also for me just like (. ) I ∆ trust it (. ) more, the most (. ) ∆ out of these poles. [...] But then maybe, like Brand A then = again (1 sec.) = for some parts feels a bit (1 sec.) a bit lik-., that it has something after all, that it makes me feel good [laughs shortly] @ (. ) So maybe it’s just kind of, that it’s (. ) just because I’ve had fun working out with it and I’ve got the kinds of feelings of success @ that I haven’t gotten with Brand B ∆ (. ) because I’ve trusted it more ∆ (. ) (Kate, video clip 6)

In sum, our findings suggest that when the utilitarian and symbolic aspects of consumption objects are in conflict, the symbolic aspects get more weight in the beginning of the process, whereas the utilitarian aspects are more important later in the process. On the other hand, if there are conflicting evaluations of the utilitarian and hedonic aspects, ambivalence is resolved by giving more weight to either of the components in the final evaluation. Thus, the following propositions arise from the data:

P4a. Intercomponent ambivalence towards brands and product options involves conflicting evaluations of their utilitarian, hedonic, and symbolic aspects.
P4b. Symbolic aspects of brands and product options serve as decision-making heuristics early in the decision-making process, by enabling the rejection of unacceptable options.

P4c. In the case of conflicting evaluations of the utilitarian and hedonic aspects of a consumption object, ambivalence is reduced by emphasising the valence of the most important attributes when forming attitudes towards the consumption object.

Synthesis: Different types of ambivalence in the high-involvement buying process

We have thus far outlined our findings regarding the roles of different types of ambivalence in high-involvement buying processes, and developed propositions based on those findings. Our findings extend the existing literature by filling the gaps discussed in the literature review and visualized in Figure 1. We started our investigation by exploring ambivalence under two types of involvement conditions. Our data reveals that enduring involvement inherently involves positive evaluations of the product category, therefore giving little room for ambivalence. Hence, the first sequence of arrows in Figure 2 indicates that under conditions of enduring involvement, consumers focus on the positive hedonic aspects of the product category, and there is very little ambivalence and thus no need to cope. Situational involvement, on the other hand, increases the salience of the risk of mispurchase, and thus contributes to increased ambivalence.

Cognitive, affective, and intercomponent ambivalence took different forms in the verbal as well as non-verbal data. Affective ambivalence involved conflicting positive and negative anticipations about the outcome of the buying process. However, we did not find coping mechanisms for affective ambivalence in our data. We will discuss this issue in the concluding section. Cognitive ambivalence, on the other hand, involved conflicting evaluations of the
utilitarian aspects of brands and products. In order to resolve cognitive ambivalence, the participants emphasised few important attributes, and their attitudes towards each option were polarized to the direction of the evaluations of those key attributes. Consequently, they were able to form a relatively univalent positive attitude towards the option, which was ultimately chosen. Finally, two types of intercomponent ambivalence were found. The first type involved conflicting symbolic and utilitarian aspects of consumption objects, and the participants resolved this type of ambivalence by rejecting a symbolically unacceptable option early in the buying process, despite of its utilitarian benefits. Among the remaining options, which were acceptable in terms of their symbolic aspects, ambivalence was resolved similarly to cognitive ambivalence. The second type involved conflicting hedonic and utilitarian aspects, which the participants also resolved similarly to cognitive ambivalence. The process, which we have outlined, is presented in visual form in Figure 2.
**DISCUSSION**

This paper has explored ambivalence in consumers’ buying processes and as a result developed a number of propositions and a synthesizing framework. We began our empirical exploration from ambivalence under situational and enduring involvement, and based on our findings we proposed that there is less ambivalence under enduring involvement, and more ambivalence under situational involvement. We then turned our attention to the different types of ambivalence, namely, affective, cognitive, and intercomponent ambivalence, and found that these different types of ambivalence are distinct psychological states with varying verbal and non-verbal expressions. Cognitive ambivalence consisted of conflicting evaluations of the utilitarian aspects of different brands and product options, and often involved emphasising the most important utilitarian aspects verbally and/or nonverbally. On the other hand, affective ambivalence consisted of conflicting anticipations regarding the outcome of the buying
process. Finally, two types of intercomponent ambivalence were found. The first type was similar to prior literature (van Harreveld et al., 2009), and involved conflicting affective and cognitive evaluations of a consumption object. The second type, however, is less familiar to the literature, and involved conflicting evaluations of the utilitarian and symbolic components of the object. Interestingly, the symbolic aspects of consumption objects gained more weight in the beginning of the buying process, when they enabled the rejection of a symbolically unacceptable brand despite its utilitarian benefits, therefore operating as decision-making heuristics. On the other hand, later in the buying process, more weight was given to utilitarian than symbolic aspects.

**Theoretical contributions.** Our results bring novel insight into the role of ambivalence in buying processes. Our findings regarding the relationship between involvement and ambivalence shed light on the boundary conditions of ambivalence in the buying process by demonstrating that ambivalence occurs especially when consumers’ involvement is situational in nature. Through these findings, we also bring clarity to the existing literature, which suggests that involvement can be related to decreased (Thompson and Zanna, 1995; Lavine et al., 2000) or increased ambivalence (Thompson and Zanna, 1995). Our findings suggest that the contradictions in the existing literature could be addressed through the moderating role of involvement type, and therefore contribute to both the involvement and ambivalence literatures. Our main contribution lies in the exploration of the roles and the dynamics of different types of ambivalence in the buying process. Previous literature addressing similar issues (van Harreveld et al., 2009) is based on general attitudinal ambivalence, and our findings therefore extend the literature by shedding light on these dynamics when consumers have different types of ambivalence. In the case of intercomponent ambivalence based on conflicting utilitarian and symbolic evaluations, consumers appear to use the lower-effort coping
mechanism of heuristic processing. This finding is in line with the existing literature, which suggests that biased predecision processing might be pronounced especially when an attitude object has value-expressive function, and such processing can be used in the early stages of decision-making to bolster an initial preference for one option, which can lead to selective attention to information about an attitude object (van Harreveld et al., 2009). In the present case, the reason for these findings might be that both of the brands, which were not rejected as unacceptable, represented a fitness-oriented approach to pole dancing. Even though their brand images were somewhat different, the two brands nevertheless belonged to the same symbolic category (fitness brands), whereas the rejected brand, by representing an erotic approach to pole dancing, was categorically different from the other two options. This would imply that the role of symbolic aspects is to serve as preliminary decision-making heuristics; however, when a choice is made between brands, which belong to a generally acceptable category (i.e. fitness dance poles), even a symbolically inferior brand can be chosen if the utilitarian aspects are evaluated positively.

In the case of cognitive ambivalence, in turn, consumers appeared to use more effortful mechanisms, especially emphasising few important utilitarian attributes and making a choice based on those attributes. In some cases, the participants emphasised the important aspects already during information search, indicating that the important aspects determining the choice could potentially be predicted from consumers’ nonverbal expressions in the early stages of the buying process, which would be an interesting avenue for future research. Finally, affective ambivalence was different from cognitive and intercomponent ambivalence in that we did not find clear coping mechanisms for affective ambivalence. The reason might be that affective ambivalence is reduced indirectly when cognitive and intercomponent ambivalence are reduced, because by gaining more coherent evaluations of different brand and product options,
consumers also become less uncertain about the outcome of the buying process (i.e. their ability to make the “right” choice) and therefore have less negative anticipations.

**Managerial implications.** Managerially, the findings suggest that involvement could be used more broadly as a segmentation tool. Instead of considering consumers’ level of involvement, managers could take consumers’ involvement types into account. Consumers with an enduring involvement towards a product category need less intensive marketing efforts, because they already evaluate the product category positively and are also less likely to be ambivalent. However, consumers with situational involvement towards the buying process need more support to resolve their ambivalence. While they might be generally excited about purchasing the product, they are also very aware of the risks of mispurchase. Marketers can reduce the perceived risks by offering flexible return policies or opportunities to try the product before purchase. Our findings regarding cognitive ambivalence also indicate that the important aspects of products and brands, to which consumers give most weight in their final choice, can be detected from their prosody and gestures relatively early in the buying process. This has implications especially for personal selling, where salespeople can be trained to read consumers’ body language and react accordingly. For example, if a consumer talks about the safety features of a product option repeatedly, and places emphasis on those features, the salesperson could effectively influence the consumers’ choice by making sure that the consumers’ evaluation of the safety features is strongly positive. Finally, the findings provide tools for the strategic use of the symbolic aspects of brands. In the early stages of the buying process, it is important to find out, whether a consumer is comparing brands from different symbolic categories. For example, when a consumer is considering to purchase a car, and is comparing electric vehicles to SUVs, a marketer might appeal to the consumers’ self-concept (e.g. “Young, trendy and environmentally conscious people buy electric vehicles, would you
like to be one of them?”). Later in the buying process, when the consumer is comparing two electric vehicles, a marketer should instead emphasise the positive utilitarian aspects of their product, especially focusing on those aspects, which are the most important to the consumer (e.g. “This electric vehicle’s battery life is longer than any other electric vehicles”).

Limitations and suggestions for future research. Naturally, this study is not free of limitations. A logical next step would be to validate the propositions of this study through a larger-scale quantitative investigation. A limitation of the video diary method is that it is not known how the participants ended up reporting what they reported. For example, prior research suggests that participants may find it easier to generate cognitive components of their attitudes, while other studies have found that the affective component is more accessible (Conner and Sparks, 2002). Thus, the participants might have reported only a part of their true ambivalence in the video diaries. Further, even though the participants were instructed relatively freely, they were nevertheless instructed to undergo all stages of the buying process and to report a buying decision. Thus, it would be interesting to study buying processes that are not finished and to examine what role ambivalence has in consumers’ decisions to withdraw from the buying process. There are also individual factors that can influence the experience of ambivalence, such as a need for cognition (Rudolph and Popp, 2007), cultural background (Aaker et al., 2008), and a tendency to accept duality (Williams and Aaker, 2002). These factors might provide further insight into the findings. Further, the participants in the present study already had some experience with the product category, because pole dancing was their hobby. Thus, it would be interesting to study ambivalence paths with products that are unfamiliar to the buyer. Moreover, the sales channels were all online in our case. Online buying behaviour is different from offline buying behaviour, and while prior research has not found conclusive evidence that ambivalence would be different in these contexts (Penz and Hogg, 2011), it
would be interesting to continue investigating ambivalence paths in both online and offline channels. Finally, while the post-purchase stage was out of our scope, prior research suggests that ambivalence also has post-consumption consequences (Olsen et al., 2005; Tudoran et al., 2012). Extending this literature through an investigation of the relative importance of different types of ambivalence in generating post-consumption consequences would be an interesting step in extending the findings of this study to create a more comprehensive picture of ambivalence in the buying process.
REFERENCES


Appendix A. Instructions provided to the participants for the video diary process

The questions are presented below. Please read the question carefully before answering. You do not have to answer the questions in the specific order in which they are asked. However, it is very important that the adoption process proceeds from need recognition through information search to final evaluation and adoption decision. It is recommended to use normal language and to tell about things in a normal, everyday manner, as if you were talking to a friend. The length of the video diary has no meaning as long as everything relevant is said.

*General affective state* refers to a possibly long-lasting feeling state, which the respondent is in before answering the questions. General affective state can include moods, tiredness, and generally feeling good or bad. It may be difficult to trace the origins of general affective states, and it has no specific target.

*Adoption* refers to a decision to accept and become a regular user of a product. In adoption a consumer includes a product or a brand to his or her life and uses it regularly. In this context adoption refers to the actual purchase of the pole and its post-purchase use. *Adoption process* refers to the process, which ultimately leads to adoption. The stages of the adoption process in this research are need recognition, information search, evaluation, and adoption. The adoption process may also lead to a rejection decision.
Need recognition

Describe need recognition in as detailed a way as possible by answering the questions below.

- Describe your general affective state at the moment when you recognized the need to purchase a pole.
- Indicate where the need to purchase a pole came from. Why do you want a pole? What feelings did you have behind need recognition?
- Describe your feelings related to poles in general, different pole brands, and the adoption process. What feelings did they generate, and how do those feelings affect your adoption decision?
- Are there some brands in the market that you do not even consider to purchase? Why? Focus on feelings.

Information search, stage 1: Commercial sources

Commercial sources include advertisements, company web pages, salespeople, and packages. Find commercial information on different poles and answer the questions. If you look for information from different commercial sources in different points of time, make a separate video clip every time.

- Describe your general affective state at the moment when you looked for information from commercial sources.
- List the brands on which you looked for information.
• Describe your feelings related to poles in general, different pole brands, and the adoption process. What feelings did the commercial information generate, and how do those feelings affect your adoption decision?

• Have your feelings towards poles, some brands, or the adoption process changed because of commercial information?

• Are there some brands in the market that you do not even consider to purchase after looking for commercial information? Why? Focus on feelings.

**Information search, stage 2: Personal contacts**

Personal contacts include for example conversations with friends, family members, neighbours or acquaintances. Discuss with your personal contacts and answer the questions. If you attend different conversations, make a separate video clip every time.

• Describe your general affective state in the moment when you had conversations.

• List the brands on which you had conversations.

• Describe your feelings related to poles in general, different pole brands, and the adoption process. What feelings did the conversations generate, and how do those feelings affect your adoption decision?

• Have your feelings towards poles, some brands or the adoption process changed because of the conversations?

• Are there some brands in the market that you do not even consider to purchase after looking for commercial information? Why? Focus on feelings.
Information search, stage 3: Media

Media refers to non-commercial mass media such as the Internet, magazines and TV. Search information from different types of media and answer the questions. Make a separate video clip every time you have searched for information from one source.

- Describe your general affective state in the moment when you searched for information from the media.
- List the brands on which you searched for information.
- Describe your feelings related to poles in general, different pole brands, and the adoption process. What feelings did the media generate, and how do those feelings affect your adoption decision?
- Have your feelings towards poles, some brands, or the adoption process changed because of the media?
- Are there some brands in the market that you do not even consider to purchase after searching information from the media? Why? Focus on feelings.
Information search, stage 4: Trial

Trial means the physical experimenting of different poles. Try as many poles as you can and share your experiences.

- Describe your general affective state in the moment when you tried the poles.
- List the brands that you tried.
- Describe your feelings related to poles in general, different pole brands, and the adoption process. What feelings did the trial generate, and how do those feelings affect your adoption decision?
- Have your feelings towards poles, some brands, or the adoption process changed because of the trial?
- Have you rejected some brands or started to consider totally new brands? Why? Focus on feelings.

Evaluation

In the evaluation stage the consumer makes his or her final evaluation on the different products or brands. This evaluation finally leads to buying decision. Answer the questions below.

- Describe your general affective state at the moment when you evaluated the products/brands.
- List the brands that you evaluated.
- What is your final evaluation of the product category, different brands, and the adoption process? How did you end up making this evaluation? Describe especially the feelings
that were associated with the evaluation and how those feelings affect you final evaluation about the product, brand, and adoption decision.

Adoption decision

Adoption decision, or purchase, is the final stage of this research, where the consumer either adopts or rejects a brand or a product. Even if you did not decide to purchase a pole, tell specifically why you ended up in this decision. Answer the questions below.

- Describe your general affective state at point of adoption decision.
- Did you decide to adopt a brand/product? Why? Describe especially the feelings that leaded to this decision.
- What products did you reject (mention products that you considered in the final evaluation but then rejected). Why did you reject those brands? Focus on feelings.
## Appendix B. Coding categories and examples

<table>
<thead>
<tr>
<th>Coding step 2:</th>
<th>Coding step 1: Ambivalence type</th>
<th>Coding step 3: Coping mechanisms</th>
<th>Visuospatial interpretation</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>Object of ambivalence</td>
<td>Aspects of the ambivalence object</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand A</td>
<td>Utilitarian aspects (positive): Assembly mechanism</td>
<td>Utilitarian aspects (negative): Price</td>
<td>More weight to positive aspects of Brand A and less weight to its negative aspects</td>
<td>Heidi takes relatively many breaks and uses filler words while speaking about the assembly mechanism attribute, which might indicate cognitive load and processing related to her attempt to resolve ambivalence. Heidi frowns while talking about the negative aspects of Brand B, further indicating that she has a negative evaluation of the brand. Yeah and then the mobility, that was also one big criterion (1 sec.), which umm (1 sec.) was also, now that I’ve been moving so much lately and ( ) I’ve been taking the pole down and moving it and ( ) erm ( ) it so ( ) that’s why umm ( ) Brand A sounded a lot better because it has less of those screws […] somehow even though Brand A is more expensive but ( ) still ( ) all of these ( ) negative sides that I was now “thinking about ( ) and” that I read about, like, from other users’ experiences ( ) umm (1 sec.) somehow it’s after all so that the price doesn’t mean so much ( ) as long as the product ( ) is ( ) good ( ) (Heidi, video clip 7)</td>
</tr>
<tr>
<td>Searching for information about the product</td>
<td>Positive affect: Excitement</td>
<td>Affective ambivalence</td>
<td>No coping</td>
<td>Lauren communicates the complexity of the discussion forum as an information environment with a side-to-side head movement. Long pauses in her speech (1-3 secs.) indicate cognitive load and therefore difficulty of processing all the information involved in the decision-making. Lauren smiles while saying “although others can’t decide for you”, which might indicate embarrassment, given that she does not simultaneously speak about any positive issues. And ( ) I have a little mixed feel-, ( ) a bit mixed feelings and a bit of frustration maybe when read those ( ) read and have those conversations ( ) because ( ) some have one opinion and others have another opinion, naturally, of what’s the best, which poles have = the best grip and which size is the best, where it’s easiest to buy from = ( ) […] So on the one hand searching for this information was also ( ) it was nice, exciting, but on the other hand it was also very frustrating because there was not as much information available, maybe, as I would have hoped. (3 sec.) […] And ( ) yeah the feelings have been kind of, a little bit mixed (1 sec.) I’m still excited, like, I want information ( ) more and more ( ) but also, then, kind of a ( ) a bit frustrated and confused feeling like, please decide now (1 sec.) what’s the best @ option</td>
</tr>
<tr>
<td></td>
<td>Negative affect: Frustration</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Brand B | Symbolic aspects (positive): Glamour, bling-bling, "girl-candy" | Inter-component ambivalence | More weight to utilitarian aspects of Brand B | As Hannah concludes that her positive attitude has been conflicted (would I re-, really like the pole then), she moves from side to side, indicating ambivalence. But (.) the only thing that for me (.) me its- (.) for me from what I read there that elicited the contradict-. contradiction was that, as I’ve said that (.) that from the beginning (.) I thought a bit that the (.) pole from Brand B would (.) would maybe be the smarter option, or the nicer option for me just because (.) the po- the web store where they are sold umm (.) exactly their, like, the glamour and bling-bling (.) they’re better at bringing like, this (.) so-called girl candy into their product pages and company image (.) And that’s then real- (.) really what made me also (1 sec.) made me lean more towards that direction (.) But what I then (.) read on the forum that made me doubt this (.) choice of Brand B is that (.) many say that it should be somehow pre-warmed (.) to get like a good (1 sec.) good, like, grip (.) [...]
Then I started to really think that if it’s really so ↔ slippery and so tricky that (.) that would I re-, really like the pole then ↔ (Hannah, video clip 4) |
| Brand A | Utilitarian aspect (negative): The brand has cons (not specified in more detail) Hedonic aspect (positive): Feels safe, makes Kate feel good, working out on it is fun | Inter-component ambivalence (cognitive-affective) | More weight to hedonic aspects of Brand A | By nods, Kate emphasises the attractiveness of Brand A. She also repeats words and uses filler words, indicating cognitive processing. // Nodding while speaking about feeling safe could indicate both positive attitudes but also an emphasis of an important aspect of the product, because the nods only occur when she talks about its trustworthiness. She also verbally expresses the importance of the products’ trustworthiness. Simultaneous nodding while speaking about the cons of the products indicates that Kate still acknowledges that none |
|           |             |             |             | But maybe like exactly this (.) feeling I have or like kind of, if I, speak based on my feelings, then the, like, brand A somehow (.) Brand A umm (.) somehow draws me towards itself (.) the most like (.) [...] // umm Brand A, then again, in many ways has, in my opinion, been pretty safe (.) I often have a pretty safe feelings when I work out on it. I mean, with, somehow with Brand B I’m more nervous (.) so it’s not so nice so I mean maybe (1 sec.) maybe kind of like, exactly the (1 sec.), I mean even though these have their pros A and cons A (.) I mean (.) what gets the most weight is exactly that (.) Brand A is also for me just like (.) I trust it (.) now., the most (.) A out |
of the options is perfect, therefore showing some remaining ambivalence. // In the beginning of the passage, Kate moves her head from side to side and also shakes her head while preparing a sentence about Brand A’s benefits. Perhaps she again has trouble finding cognitive reasons for preferring Brand A. Again, a nod while speaking about trustworthiness indicates that the aspect is important to Kate. Simultaneous smiling while speaking about the positive feelings accompanied by using Brand A give the consistent message that Kate has positive feelings towards Brand A.

of these poles. And maybe it’s like, something after all that (1 sec.) t-, to which I, like, maybe give the most weight (.) after all (.) then or like, what would influence the (.) buying decision and (.) in the future use g (.) the most // But then maybe, like Brand A then = again (1 sec.) = for some parts feels a bit (1 sec.) a bit lik... that it has something after all, that it makes me feel good [laughs shortly] @ @ (.) So maybe it’s just kind of, that it’s (.) just because I’ve had fun working out with it and I’ve got the kinds of feelings of success @ that I haven’t gotten with Brand B? A (.) because I’ve trusted it more A (.) (Kate, video clip 6)
### Appendix C. Transcription conventions

**VOCAL-AURAL MODALITY**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timed pause</td>
<td>(1 sec.)</td>
<td>Measured in seconds, silence between words</td>
</tr>
<tr>
<td>Short pause</td>
<td>(.)</td>
<td>Short pause (less than 0.5 seconds) between words</td>
</tr>
</tbody>
</table>

**VISUOSPATIAL MODALITY**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two-headed arrow</td>
<td>↔ ↔ ↔ ↔ ↔</td>
<td>Side-to-side movement of the body</td>
</tr>
<tr>
<td>Triangles</td>
<td>Δ Δ Δ Δ Δ</td>
<td>Head nodding</td>
</tr>
<tr>
<td>Equal signs</td>
<td>= =</td>
<td>Side-to-side head movement (ear to shoulder)</td>
</tr>
<tr>
<td>Alpha</td>
<td>α α α α α</td>
<td>Head shake</td>
</tr>
<tr>
<td>@ signs</td>
<td>@@</td>
<td>Smile</td>
</tr>
<tr>
<td>Quotation marks</td>
<td>&quot; &quot;</td>
<td>Frown</td>
</tr>
</tbody>
</table>
Publication III

Sipilä, J., Herold, K., Tarkiainen, A., and Sundqvist, S.
The influence of word-of-mouth on attitudinal ambivalence during the higher education decision-making process

Reprinted with permission from
Journal of Business Research
80(November), pp. 176-187
© 2017, Elsevier
THE INFLUENCE OF WORD-OF-MOUTH ON ATTITUDINAL AMBIVALENCE DURING THE HIGHER EDUCATION DECISION-MAKING PROCESS

Abstract

This study investigates the influence of word-of-mouth (WOM) on consumers’ attitudinal ambivalence in the context of higher education decision-making. Construal level theory (CLT) is combined with attitudinal ambivalence literature to generate hypotheses about how different types of WOM (i.e., praise and activity) received during the decision-making process reduce attitudinal ambivalence. The subsequent consequences of attitudinal ambivalence for decision-making are also studied. A two-wave survey of applicants to international higher education programs is used to test the hypotheses. This study contributes to the ambivalence literature by showing that different types of WOM information reduce attitudinal ambivalence depending on the temporal closeness of a choice and the consumption of a service. The findings have implications for the management of attitudinal ambivalence and WOM throughout the consumer decision-making process and consequently for assisting consumers in making choices.

Keywords: Consumer; Ambivalence; Attitude; Word-of-mouth; Decision-making process; Choice
THE INFLUENCE OF WORD-OF-MOUTH ON ATTITUDINAL AMBIVALENCE DURING THE HIGHER EDUCATION DECISION-MAKING PROCESS

1 INTRODUCTION

Each year, many young adults have to decide whether to pursue their master’s degree studies at a particular higher education (HE) institution. In their decision-making process, these HE applicants have to evaluate an institution based on a number of service attributes (Cubillo-Pinilla et al., 2009; Joseph & Joseph, 1998; Soutar & Turner, 2002). For example, they may consider whether an institution is reputable and highly ranked, whether it is located in a safe country, the kinds of job prospects they could expect after graduating from the institution, or whether the institution has an active student life. In many cases, some attributes are likely to be evaluated negatively while others are evaluated positively, which forces the applicants to make difficult trade-offs between the attributes (Soutar & Turner, 2002). For example, an HE applicant might think that an institution offers high-quality education, but the costs of studying there would be extremely high. Having both positive and negative evaluations of the same consumption object is called attitudinal ambivalence (Priester & Petty, 1996), which is likely to be particularly pronounced in high-involvement contexts (Puccinelli et al., 2009) such as HE (Cubillo-Pinilla et al., 2009).

Attitudinal ambivalence has multiple implications for consumer behavior. Ambivalent attitudes are less durable and impactful (Tormala & DeSensi, 2008), and worse predictors of behavior than univalent (i.e., predominantly positive or negative) attitudes are (Glasman & Albarracín, 2006). Furthermore, attitudinal ambivalence negatively influences behavioral intentions (Costarelli & Colloca, 2004) and actual consumption (Berndsen & van der Pligt, 2004), and
can result in residual doubt (Jewell et al., 2002) and reduced satisfaction (Olsen et al., 2005) after choices are made. In addition, attitudinal ambivalence is a prominent concept in consumer behavior because it is rare for a given object not to have some attributes that are evaluated positively and others that are evaluated negatively (Fazio, 2007). Thus, attitudinal ambivalence is problematic for marketers, and its reduction should be an important marketing goal in HE institutions worldwide because of the increasing competition for students (Durvasula et al., 2011). Based on the existing literature (Olsen et al., 2005), when applicants have less pre-choice attitudinal ambivalence, they are likely to be more satisfied with their chosen institution. Satisfaction, in turn, can be expected to increase their likelihood of recommending the institution and decrease their likelihood of changing to another institution or quitting their studies, based on previous research (Selnes, 1993).

Ambivalence is also problematic for HE applicants because choice-making (in this study, the choice of whether to being studies in an institution), is challenging when one’s evaluations towards the attitude object (HE institution) are conflicting (van Harreveld et al., 2009). One way of reducing attitudinal ambivalence is by utilizing additional information, which may enable the applicant to become more favorable or unfavorable towards the institution (Hodson et al., 2001). However, the existing research does not show whether some types of information are more useful in this regard than others in the multi-stage decision-making process. This gap is important because consumers may use different types of information in different stages of the decision-making process (Bettman & Park, 1980). Hence, the present study uses construal level theory (CLT) to contribute to the attitudinal ambivalence research. According to CLT, when the final choice of an object (in this case the HE institution) becomes temporally closer, its evaluation becomes increasingly concrete and detailed (Trope & Liberman, 2010). Thus,
different types of information with varying levels of abstractness might be beneficial at different stages of the HE decision-making process.

In the present study, this proposition is examined by analyzing WOM information because WOM, which refers to the “informal communications between consumers concerning the ownership, usage or characteristics of particular goods, services and/or their sellers” (De Matos & Rossi, 2008, p. 578) is an important information source for consumers especially in the service context (Bansal & Voyer, 2000; Mangold et al., 1999; Murray, 1991; Sweeney et al., 2008). Services are perceived as more challenging than goods to evaluate prior to purchase because they are intangible, heterogeneous, and perishable (Murray, 1992). WOM can be used to simplify this complexity and reduce perceived risk (Berger, 2014). Furthermore, consumers are likely to rely on WOM in making important decisions because it is perceived as a trustworthy source of information (Berger, 2014). Hence, WOM plays a significant role in shaping consumers’ attitudes (Brown & Reingen, 1987; Martin & Lueg, 2013) and service evaluations (Lim & Chung, 2011; Mangold et al., 1999; Murray, 1991; Sweeney et al., 2008). Especially in the HE services context, WOM is a key source of information (Chapman, 1981; Johnston, 2010), and HE applicants are persuaded by the comments and advice of their friends and family members (Chapman, 1981; Mazzarol & Soutar, 2002). Different WOM types have been identified in the existing literature, such as content richness and negative WOM (Sweeney et al., 2012; Sweeney et al., 2014). In this study, however, we focus on WOM praise and WOM activity because they vary in their level of abstractness, which enables advancing ambivalence literature through CLT.

We therefore pose the following research question: *How do different types of WOM information with varying abstractness influence attitudinal ambivalence during two stages of the HE decision-making process?*
decision-making process (search and choice)? Hence, the present study contributes to the attitudinal ambivalence literature by demonstrating the reduction of attitudinal ambivalence at different time points. This understanding is important because decision-making often involves a multi-stage process (e.g., Puccinelli et al., 2009). Investigations of only one point of the process yield only a partial understanding of consumption-related phenomena, such as attitudinal ambivalence. However, by studying two types of information, this study contributes to the attitudinal ambivalence literature by demonstrating that in terms of attitudinal ambivalence reduction, information about different levels of abstraction is required depending on the consumer’s temporal distance from the final choice. From a managerial perspective, our results show which types of WOM should be promoted at different stages of the decision-making process to assist consumers in attitudinal ambivalence reduction, especially with regard to the marketing of HE services. Furthermore, we discuss potential ways of promoting these different types of WOM. This paper will begin by proposing a conceptual model and developing hypotheses. The model is then tested using regression analysis, and the results are discussed from both theoretical and managerial perspectives.

2 THEORETICAL BACKGROUND

2.1 Attitudinal ambivalence

An attitude refers to “general and enduring favorable or unfavorable feelings about, evaluative categorizations of, and action predispositions toward stimuli” (Cacioppo & Berntson, 1994, p. 401). Traditionally, attitudes have been conceptualized as unidimensional, that is, as either positive or negative (Jewell et al., 2002). However, attitudes toward an object can also consist of both positive and negative components, meaning that they are ambivalent (Thompson et al.,
Ambivalence is a property of attitudes (Jewell et al., 2002), meaning that it operates similarly to an adjective. Hence, attitudes can be described as univalent or ambivalent. In addition, a summary evaluation such as an attitude consists of components that can involve emotions, beliefs, or previous behavioral experiences with the object (Fazio 1995). When there are both positive and negative components in the evaluative structure, the attitude is ambivalent (Krosnick & Petty, 1995). Services are often evaluated based on several attributes that can be perceived positively or negatively. For example, an HE applicant may hold both negative beliefs (e.g., high costs of studying in the institution or inactive student life) and positive beliefs (e.g., the institution is highly ranked and located in a country that has a good academic reputation) about an HE institution. These conflicting beliefs then constitute an ambivalent summary evaluation of the HE institution.

According to cognitive dissonance theory, people are inherently motivated to resolve psychological conflicts (Festinger, 1964) mainly because they are uncomfortable (van Harreveld et al., 2012). In the case of ambivalence, the uncomfortable feeling arises when both positivity and negativity are simultaneously accessible, leading to the awareness of attitudinal ambivalence (Newby-Clark et al., 2002). This case may apply particularly when there is a need to commit to a choice, leading to uncertainty-induced physiological arousal (van Harreveld et al., 2012). In addition, when the decision-making process involves a choice (in the present case, whether to start studies in a particular HE institution or decline the offer), an ambivalent consumer may anticipate regret for making the wrong choice. For example, the HE applicant

---

3 Dissonance differs from ambivalence because it occurs after committing to a particular choice or behavior that is in conflict with a person’s attitude, whereas ambivalence occurs before a person has committed to one option (van Harreveld et al., 2009). Furthermore, dissonance involves a conflict between attitude and behavior, whereas ambivalence involves a conflict between two attitudinal components, such as beliefs about an attitude object (van Harreveld et al., 2009). Hence, dissonant individuals try to feel good about a choice that they have already made, whereas ambivalent individuals have not yet committed to a choice and try to make the best possible decision (van Harreveld et al., 2009).
may anticipate the thought, “I should not have started my studies in this institution”. Furthermore, attitudinal ambivalence involves both positive and negative evaluations of the important aspects of an object (Jewell et al., 2002). Hence, HE applicants are likely to be motivated to reduce attitudinal ambivalence during decision-making.

The existing literature has studied various coping mechanisms that may help people to resolve attitudinal ambivalence and therefore make a favorable or unfavorable choice. When regret about making a bad decision is anticipated and a decision is important, an accuracy motivation is likely to prevail, leading to effortful problem-focused coping based on the need to make the best possible decision (van Harreveld et al., 2012). Thus, people are likely to increase their decision-making efforts in order to increase their confidence in making the decision (van Harreveld et al., 2009). We expect this to be the case in HE decision-making because of the importance and investment-like nature of the HE decision. One effortful way to reduce attitudinal ambivalence is to acquire additional information (Hodson et al., 2001; Jonas et al., 1997). Because WOM is a key source of information for HE applicants (Chapman, 1981; Johnston, 2010), we propose that it has an influential role in this process.

2.2 Word-of-mouth

WOM has been studied from both the sender and the receiver perspectives, and this study focuses on the latter. Prior WOM research from the receiver’s perspective has focused on source characteristics including expertise and tie strength (e.g., Bansal & Voyer, 2000; Gilly et al., 1998; Voyer & Ranaweera, 2015; Wangenheim & Bayón, 2007); message characteristics including valence and richness of the message (Laczniak et al., 2001; Sweeney et al., 2012; Sweeney et al., 2014); and situational characteristics including involvement (Voyer &
Ranaweera, 2015; Wangenheim & Bayón, 2007). These have been shown to influence the effectiveness of WOM. The receivers’ felt need for information and advice is one of the most frequent triggers of WOM in service decision-making (Mangold et al. 1999), which implies that receivers tend to actively seek WOM (Berger, 2014). Hence, WOM can be perceived as discussion-like because it can include casual conversations as well as in-depth information sharing by the receiver of WOM. This implies that the receiver of WOM can be both active and passive. Consumers who actively engage in seeking and obtaining WOM information are more affected by WOM (Bansal & Voyer, 2000), especially during high-risk decisions (Fang, Lin, Liu & Lin, 2011). Receivers rely on WOM information because it reduces decision-making risk, simplifies complexity, and increases their confidence (Berger, 2014).

In this study, WOM is conceptualized as consisting of two dimensions: WOM praise and WOM activity. WOM praise refers to the level of favorableness or valence, whereas activity refers to the amount and detail of WOM information (Harrison-Walker, 2001). This conceptualization was developed specifically for the services context (Harrison-Walker, 2001), and WOM praise and WOM activity represent different levels of information abstractness, which enables answering the research question. WOM activity is a detailed and concrete form of information. WOM praise, in contrast, consists of more abstract, coherent, and unambiguous information because it includes simple cues of general favorability rather than specific details. Furthermore, in positive WOM, abstract language leads to the receiver’s perception that the sender has a favorable attitude toward a consumption object (Schellekens et al., 2010), which implies a relationship between WOM praise and abstractness. In terms of the WOM source, this study focuses on strong-tie sources, that is, WOM senders who know the receiver personally (Duhan et al., 1997). Specifically, friends and family were selected as the WOM sources in this study. Strong-tie sources are more readily available and perceived as more influential than weak ties,
such as distant acquaintances (Brown & Reingen, 1987). Accordingly, HE applicants are persuaded by their comments and advice (Chapman, 1981; Mazzarol & Soutar, 2002), and they are the most influential sources of information in university decision-making (Johnston 2010).

2.3 The influence of WOM on attitudinal ambivalence

This study focuses on the influence of different types of WOM information (praise and activity) on attitudinal ambivalence in two different stages (search and choice) of the HE decision-making process. The search stage involves seeking information about the attributes of each HE institution, which ends with the application decision (Chapman, 1986). The choice stage involves choosing whether to accept a place in one of the (normally only one or a few) institutions that offered a place to the applicant (Chapman, 1986). We apply construal level theory (CLT) to theorize the types of WOM information that are the most relevant in each stage of the decision-making process. CLT assumes that as an individual mentally moves further away from the “here and now” (i.e., psychological distance), he or she will build increasingly higher-level mental construals about the distant object (Trope & Liberman, 2010). High-level construals are abstract, coherent, simple, unambiguous, and superordinate mental representations of issues, involving only their central features (Trope & Liberman, 2010). Hence, when the actual consumption of an object is in the distant future, it will be evaluated based on its intrinsic desirability (Kim et al., 2009). Furthermore, when temporal distance increases, the pros of issues become more salient than the cons because the former are higher-level construals (Herzog et al., 2007). Hence, by representing the general favorableness of

---

6 Cons are subordinate to pros because the importance of pros does not depend on the existence of cons, whereas cons are only important when pros exist (Trope et al., 2007). For example, if beginning studies in a HE institution does not have any pros, an applicant would not be very interested in its cons either; instead, the applicant simply would not consider the institution. However, an applicant would be interested in an institutions’ pros whether there were cons or not (Trope et al., 2007; example adapted to the HE context).
WOM, WOM praise is expected to have a central role in reducing attitudinal ambivalence toward a HE institution in the search stage. Because this study examines the attitudinal ambivalence of applicants toward an institution, it is likely that their attitudes will tend to lean towards positivity even though they involve ambivalence. Hence, WOM praise should decrease (rather than increase) attitudinal ambivalence by further strengthening positivity in the attitudes. Consequently, it is expected that general evaluations of favorableness informed by WOM praise reduce attitudinal ambivalence at the search stage\textsuperscript{7}. However, WOM activity is expected to play a less important role in the search stage due to its detailed and concrete nature.

\textit{H1: WOM praise received in the search stage reduces attitudinal ambivalence in the search stage to a greater extent than WOM activity does.}

The subsequent choice stage involves the resolution of within-alternative conflicts between the remaining option(s) before the formulation of a summary evaluation, which serves as the basis for “go/no-go” decisions about the HE institution (Luce et al., 2003). Because the final choice as well as the actual beginning of studies are now temporally closer to the consumer, according to CLT, consumers build lower-level construals that serve to preserve detailed information about an object for immediate use (Trope & Liberman, 2010). Lower-level construals are concrete and detailed (Trope & Liberman, 2010), and hence better informed by WOM activity than WOM praise. Thus, the influence of WOM activity on reducing attitudinal ambivalence is likely to be more pronounced than that of WOM praise at the choice stage. Therefore the following hypothesis is stated:

\textsuperscript{7} Applicants may encounter negative WOM in the search stage, which could increase ambivalence because it counters the pre-existing attitude, which we assume leans towards positivity. However, because this study focuses on ambivalence reduction, the influence of negative WOM is not considered.
H2: WOM activity received in the choice stage reduces attitudinal ambivalence in the choice stage to a greater extent than WOM praise does.

2.4 The role of attitudinal ambivalence in the decision-making process

Attitudinal ambivalence is likely to have different consequences for decision-making in different stages. In the search stage, the applicant does not have to commit to the choice and can apply to several institutions that have pros and cons, therefore “remaining on the fence” concerning the final choice (van Harreveld et al., 2009). In the HE domain, consumers apply to HE institutions that are “at least minimally acceptable on all major dimensions” (Chapman, 1986, p. 248), but for the consumer, no option may be perfect (Priester et al., 2007). Because the applicant does not have to make the final choice at the search stage and because there is no “perfect option,” it is expected that a certain amount of attitudinal ambivalence is not resolved in the search stage, which increases attitudinal ambivalence in the choice stage. Thus, the third hypothesis states the following:

H3: Attitudinal ambivalence in the search stage has a positive influence on attitudinal ambivalence in the choice stage.

Finally, the existing literature suggests that ambivalent attitudes are less predictive of actual behavior than univalent attitudes are (Glasman & Albarracín, 2006). Hence, if an applicant’s attitude toward a HE institution leans toward positivity, as we assume in this case, increasing attitudinal ambivalence turns the net attitude into a more negative direction, and therefore leads to decreased intention to begin studies in the HE institution. In a similar vein, attitudinal ambivalence has been found to have a negative influence on behavioral intentions (Costarelli
& Colloca, 2004), as well as actual consumption (Berndsen & van der Pligt, 2004). Therefore, it is expected that:

**H4:** *Attitudinal ambivalence in the choice stage has a negative influence on the final choice (i.e., decreases the likelihood of accepting a place in the HE institution).*

Thus far, we have stated hypotheses concerning the antecedents and consequences of attitudinal ambivalence in two stages of the HE decision-making process. The hypotheses are synthesized in Figure 1. In the following section, we introduce the methodology used in the analyses, which consist of the three regression models (A-C) shown in Figure 1.

**Figure 1.** Theoretical framework. The relationships shown with dashed lines are assumed non-significant. Age, gender, nationality, and number of WOM channels are included in each model (A-C) as control variables. Additionally, perceived social pressure is used as a control variable in Models B and C.
3 METHOD

3.1 Participants and data collection procedure

The sample consists of applicants to international master’s degree programs at four Finnish HE institutions. The applicants applied to at least one of these four Finnish HE institutions, and they could also apply to other HE institutions in Finland or in other countries. An email with a link to an online questionnaire using Qualtrics software was sent to the applicants. The first data collection (T1) was conducted in the spring of 2012 shortly after the search stage but before the applicants had received any acceptance information from the HE institutions. The second data collection phase (T2) was undertaken shortly after the applicants had received acceptance letters from one or more universities, had made their final choice, but had not yet begun their studies. The sample in the search stage (T1) was (N = 1,718, response rate = 43.8%). Of these, 1,110 respondents participated in a panel through which the second point (T2) of the data collection was conducted in August 2012. The second data collection period yielded 481 responses (response rate = 43.3%). Of the respondents, 213 were selected for subsequent analyses because they had been accepted by a Finnish institution to which they had applied and therefore they actually made a choice of whether to begin studies in that institution or not. Of these, 39% had been accepted only by the Finnish institution to which they had applied, 30.5% had been also accepted by other institutions (in Finland or other countries) but would start their master level studies at one of the four studied Finnish institutions, and 30.5% had been accepted by one of the four Finnish institutions but chose to begin their studies at another institution. The mean age of the respondents was 24 years, and 53% were male. The respondents were from a range of countries, but the majority were from Asian, Middle-Eastern, and European countries. A subsample of these respondents was extracted for each analysis.
3.2 Measures

The attitudinal ambivalence measure was composed of choice criteria that were originally measured by 23 attributes known to influence HE applicants’ choices (e.g., Joseph & Joseph, 1998; Mazzarol & Soutar, 2002). The respondents were asked, “To what extent do you agree or disagree that the following factors are associated with university X,” and they indicated their responses on a seven-point Likert scale of 1 = strongly disagree to 7 = strongly agree. Because attitudinal ambivalence involves both positive and negative evaluations of the important aspects of an object (Jewell et al., 2002), the 10 most important criteria were chosen to calculate the degree of attitudinal ambivalence toward the institution. The importance of each criterion was determined by asking each respondent to rate the importance of the choice criteria on a seven-point Likert scale from 1 = not at all important to 7 = very important. Attitudinal ambivalence scores were calculated using the Griffin formula, which is one of the most commonly used attitudinal ambivalence formulas: \((P + N)/2 - |P - N|\), where \(P\) is the positivity score, and \(N\) is the negativity score (Thompson et al., 1995; see Appendix A for details). WOM praise and WOM activity measures were adapted from Harrison-Walker (2001). The WOM praise measure included two items, and the WOM activity measure included three items measured on a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. Both strong-tie sources (family and friends) were measured separately by asking the

8 Typical choice criteria identified in previous research include tuition fees and other costs, reasonable entry requirements, academic reputation of the university and country, good career prospects, campus atmosphere, friends’ choice of university, and family opinion. Among the most important criteria in the evaluation of an institution, also known as “pull” factors, are reputation, career prospects, and academic value (e.g., Mazzarol & Soutar, 2002, Soutar & Turner, 2002). However, cost-related criteria relating to tuition fees, which is a significant evaluation criterion (e.g., Soutar & Turner, 2002), were excluded from the study because only two of the participating universities charged tuition fees. All other major choice criteria based on prior research in the HE literature are included in our attitude ambivalence construct. Thus, we are confident that our choice to focus on the 10 most important criteria based on self-reports provides a valid description of the complexity of HE decision making.
respondents to respond to the WOM questions first in terms of friends and next in terms of family members. In case they did not receive WOM from one of these sources (e.g., the family source), they responded only once to the WOM questions in terms of the source from which they received WOM (e.g., friends). Choice was operationalized as whether an applicant chose to begin studies at a Finnish HE institution to which he/she had applied and been accepted by and was therefore a binary variable (yes/no). Ambivalence was measured toward the same university.

In addition, age, gender, number of sources from which WOM was received, perceived social pressure to begin studies at the HE institution, and nationality were included as control variables. The number of WOM sources refers to whether the respondent had received WOM praise from both family and friends (number of sources = 2) or only one of these sources (number of sources = 1). In T1, six respondents did not respond to both WOM praise and WOM activity items for all of the sources from which they reported receiving WOM. For example, they might have reported receiving WOM from friends, but answered only to the questions concerning WOM praise from friends, and left the questions concerning WOM activity from friends unanswered. Because the vast majority of respondents responded to both WOM praise and WOM activity items, having separate control variables for the number of sources from which WOM praise and WOM activity were received would have resulted in multicollinearity problems in the regression analyses, which were used to test the hypotheses. Additionally, it cannot be known with certainty whether the respondents left a part of the questions unanswered because they did not receive WOM praise/activity or because of some other reason. Hence, only two control variables were eventually created: number of WOM sources in T1 and number of WOM sources in T2. In this process, it was necessary to exclude those respondents who had not answered all questions (T1: 6 respondents; T2: 3 respondents). Additionally, the nationality
of the respondents was controlled for by using dummy variables. The groups used in the
dummy coding were European countries (reference group), African countries, Asian countries,
and American countries (including North and South America). Finally, an item that captured
the perceived social pressure to begin studies at a particular HE institution was included as a
control variable. This item was “I feel social pressure to start my masters’ degree studies at
university X”, and it was measured on a seven-point scale from 1 = strongly disagree to 7 =
strongly agree. All scales were measured at both T1 and T2 time points, except the final choice
and perceived social pressure, which were measured at T2. The measures are presented in detail
in Appendix B, including the items, scale types, and scale points.

4 RESULTS

4.1 Validity and reliability of the measures

The items used to measure WOM praise and WOM activity were verified using confirmatory
factor analysis (CFA) (LISREL 8.80). Before conducting the CFA, the mean of each
measurement item for the friends and family source of WOM was calculated. The measurement
model showed a good fit (Table 1). The standardized loadings of the items ranged between .58
and .85. All the composite reliabilities were acceptable, exceeding the recommended level of
.60 (Bagozzi & Yi, 1988). The average variances extracted (AVE) were also satisfactory,
exceeding .50 (Hair et al., 1998). The CFA showed a good fit: $\chi^2$ adjusted by the degrees of
freedom was .942, which is well below the recommended level of 3.0 (Iacobucci, 2009).
Furthermore, discriminant validity was assessed by the Fornell-Larcker criterion (Fornell &
Larcker, 1981), and the results confirmed that the discriminant validity was acceptable.
Table 1. Confirmatory Factor Analysis

<table>
<thead>
<tr>
<th></th>
<th>p-value</th>
<th>χ²(d.f.)</th>
<th>RMSEA</th>
<th>CFI/GFI</th>
<th>NNFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. WOM praise T1</td>
<td>.544</td>
<td>22.600(24)</td>
<td>.000</td>
<td>1.000/.971</td>
<td>1.002</td>
</tr>
<tr>
<td>2. WOM activity T1</td>
<td>.664</td>
<td>1.000</td>
<td>.482</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>3. WOM praise T2</td>
<td>.554</td>
<td>.508</td>
<td>.744</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>.794</td>
<td>.509</td>
<td>.571</td>
<td>.665</td>
<td>.723</td>
</tr>
<tr>
<td>S.D.</td>
<td>.761</td>
<td>.805</td>
<td>.873</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVE</td>
<td>.602</td>
<td>.571</td>
<td>.665</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>.750</td>
<td>.856</td>
<td>.723</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There were moderate to high correlations among the independent variables, which raised concerns about multicollinearity (Table 2). However, the tolerance values ranged between .561 and .987, and the variance inflation factor (VIF) values ranged between 1.013 and 1.783 in all analyses, which indicated that multicollinearity was not an issue (Hair et al., 1998). Finally, prior to the regression analyses, the WOM variables were mean-centered to account for individual differences in the use of scales, which was a potential concern because of the multicultural sample. All analyses were conducted using SPSS 23, except for the bootstrapping procedure used to test Model A, which was conducted using SPSS 24 including the bootstrap function.
<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.227***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African nationality</td>
<td>.192**</td>
<td>-.441***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian nationality</td>
<td>-.047</td>
<td>-.22***</td>
<td>-.353***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American nationality</td>
<td>-.064</td>
<td>.096</td>
<td>-.031</td>
<td>-.353***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 # WOM channels T1</td>
<td>.010</td>
<td>-.051</td>
<td>.082</td>
<td>.038</td>
<td>-.069</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 # WOM channels T2</td>
<td>.041</td>
<td>.032</td>
<td>.058</td>
<td>-.059</td>
<td>-.006</td>
<td>.056</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social pressure</td>
<td>-.042</td>
<td>.041</td>
<td>.057</td>
<td>.000</td>
<td>-.069</td>
<td>.119</td>
<td>.151*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 WOM activity T1</td>
<td>.051</td>
<td>.039</td>
<td>.223***</td>
<td>.026</td>
<td>-.129</td>
<td>.150</td>
<td>.038</td>
<td>-.045</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 WOM activity T2</td>
<td>.068</td>
<td>.046</td>
<td>.183**</td>
<td>.043</td>
<td>-.088</td>
<td>.225**</td>
<td>.215**</td>
<td>-.048</td>
<td>.480***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 WOM praise T1</td>
<td>.036</td>
<td>.064</td>
<td>.077</td>
<td>.018</td>
<td>.010</td>
<td>.153*</td>
<td>-.006</td>
<td>-.053</td>
<td>.479***</td>
<td>.259**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 WOM praise T2</td>
<td>-.007</td>
<td>.114</td>
<td>.171*</td>
<td>-.164*</td>
<td>.124</td>
<td>.125</td>
<td>.140</td>
<td>.059</td>
<td>.351***</td>
<td>.579***</td>
<td>.477***</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Ambivalence T1</td>
<td>.049</td>
<td>-.034</td>
<td>-.112</td>
<td>-.043</td>
<td>-.040</td>
<td>-.193**</td>
<td>-.004</td>
<td>-.011</td>
<td>-.379***</td>
<td>-.320***</td>
<td>-.419***</td>
<td>-.318***</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Ambivalence T2</td>
<td>-.028</td>
<td>-.120</td>
<td>-.165</td>
<td>-.045</td>
<td>-.074</td>
<td>-.183*</td>
<td>-.140</td>
<td>.075</td>
<td>-.355***</td>
<td>-.537***</td>
<td>-.295***</td>
<td>-.371***</td>
<td>.613***</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>15 Choice</td>
<td>.041</td>
<td>.173*</td>
<td>.031</td>
<td>-.008</td>
<td>.002</td>
<td>.004</td>
<td>.003</td>
<td>-.013</td>
<td>.220**</td>
<td>.822**</td>
<td>.822</td>
<td>.222**</td>
<td>.012</td>
<td>-.219**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Note: Significance ↑<.1; *=<.05; **=<.01; ***=<.001
4.2 Model A: Explaining attitudinal ambivalence at the search stage

In order to test Hypothesis 1, a hierarchical multiple regression was performed (Table 3). In Model 1, the control variables (gender, age, dummies for nationality, and number of WOM sources) were introduced. This model was not statistically significant (F[6,152] = 1.077, p = .379), and the control variables did not have a significant influence on T1 attitudinal ambivalence, except the dummy variable indicating that the respondent was from an African country. In Model 2, WOM praise and WOM activity at T1 were introduced. This model was statistically significant (F[8,150] = 5.431, p < .001). Both WOM praise (β = -.290, p < .001) and WOM activity (β = -.231, p < .01) had a negative influence on T1 attitudinal ambivalence. The model predicted 22.5% of the variance in T1 attitudinal ambivalence, implying that adding the WOM variables considerably increased the model’s ability to predict T1 attitudinal ambivalence.

Alternative analyses were also run, in which WOM sources were controlled for using dummy variables. The dummy variables were: has received WOM only from friends (T1 and T2) and has received WOM only from family (T1 and T2). The group which had received WOM from both family and friends was used as a reference group in both time points. The results remained similar to those reported in the manuscript for Model A and Model B.
Table 3. Model A: Results

<table>
<thead>
<tr>
<th>Dependent variable:</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 158</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.039(.067)</td>
<td>-.050</td>
<td>-2.590</td>
<td>.001(.061)</td>
</tr>
<tr>
<td>Age</td>
<td>.007(.011)</td>
<td>.059</td>
<td>.632</td>
<td>.007(.010)</td>
</tr>
<tr>
<td>Africa (dummy)</td>
<td>-.412(.168)</td>
<td>-.244*</td>
<td>-2.460</td>
<td>-.211(.157)</td>
</tr>
<tr>
<td>America (dummy)</td>
<td>-.121(.169)</td>
<td>-.064</td>
<td>-2.715</td>
<td>-.111(.154)</td>
</tr>
<tr>
<td>Asia (dummy)</td>
<td>-.065(.083)</td>
<td>-.075</td>
<td>-.768</td>
<td>-.008(.077)</td>
</tr>
<tr>
<td># of WOM channels</td>
<td>-.033(.069)</td>
<td>-.033</td>
<td>-2.470</td>
<td>-.211(.157)</td>
</tr>
<tr>
<td>WOM praise T1</td>
<td>-.141(.040)</td>
<td>-.290***</td>
<td>-3.522</td>
<td>-.141(.040)</td>
</tr>
<tr>
<td>WOM activity T1</td>
<td>-.117(.045)</td>
<td>-.231**</td>
<td>-2.730</td>
<td>-.117(.045)</td>
</tr>
<tr>
<td>R²</td>
<td>.041</td>
<td></td>
<td>.225</td>
<td></td>
</tr>
<tr>
<td>Sig. F change</td>
<td>.379</td>
<td></td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

Note: Significance †= <.1; *= <.05; **= <.01; ***= <.001

While the results seem to suggest that WOM praise reduces ambivalence to a greater extent than WOM activity, it was necessary to test whether the difference in their standardized beta weights was statistically significantly different, i.e., whether WOM praise reduces T1 ambivalence to a greater extent than WOM activity. Therefore, their corresponding 95% confidence intervals were estimated using a bias corrected bootstrap (1,000 re-samples). If the confidence intervals overlap by less than 50%, the beta weights can be considered statistically different from each other at the level of p<.05 (Cumming, 2009). The amount of overlap was determined by a calculation (Table 4), in which half of the average of the overlapping confidence intervals was calculated (.076) and added to the WOM activity beta weight lower bound estimate (-.349), which yielded -.276. Because the WOM praise upper bound estimate of -.114 exceeds the value of -.276, the confidence intervals overlap by more than 50%. Thus, the difference between the WOM activity and WOM praise standardized beta weights (Δ.59) was not considered statistically significant. Therefore, H1 is not supported because although WOM praise appears to reduce T1 ambivalence to a greater extent than WOM activity, the difference is not statistically significant.
Table 4. Calculation used to determine the statistical significance of the difference between the standardized beta weights of WOM activity and WOM praise.

<table>
<thead>
<tr>
<th></th>
<th>Lower bound</th>
<th>Point</th>
<th>Upper bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOM activity T1</td>
<td>-.349</td>
<td>-.231</td>
<td>-.068</td>
</tr>
<tr>
<td>WOM praise T1</td>
<td>-.393</td>
<td>-.290</td>
<td>-.114</td>
</tr>
</tbody>
</table>

Calculation

WOM activity T1: Difference between point and lower bound .118
WOM praise T1: Difference between point and upper bound .176
Average of the two differences between point and lower bound .147
Average divided by two .0735
WOM activity lower bound+average divided by two (above) .2755

Conclusion -.114>.276; difference not significant

4.3 Model B: Explaining attitudinal ambivalence at the choice stage

In order to test hypotheses H2 and H3, another hierarchical multiple regression was performed (Table 5). In Model 1, the control variables (gender, age, dummies for nationality, number of WOM sources, and perceived social pressure) were introduced. This model was statistically significant (F[7,154] = 3.128, p<.01) and explained 12.4% of the variance in T2 attitudinal ambivalence. Having an Asian nationality (β = -176, p<.1) or American nationality (β = -155, p<.1) were marginally significant, and having an African nationality (β = -.233, p<.05) and the number of WOM sources (β = -1.18, p<.05) were significant predictors of T2 attitudinal ambivalence. In Model 2, attitudinal ambivalence from T1 was introduced. This model was statistically significant (F[8,153] = 13.005, p<.001). Attitudinal ambivalence at T1 had a positive influence on attitudinal ambivalence at T2 (β = .548; p<.001). In addition, the number of WOM sources had a marginally significant influence on T2 attitudinal ambivalence (β = -.121; p<.1). Introducing T1 attitudinal ambivalence into the model accounted for the largest change in R², indicating that it was an important predictor of T2 attitudinal ambivalence. In Model 3, WOM praise and WOM activity from T2 were introduced. This model was
statistically significant ($F[10,151] = 16.035, p<.001$) and explained 51.5% of the variance in T2 attitudinal ambivalence. T1 attitudinal ambivalence had a positive influence ($\beta = .467; p<.001$), and WOM activity had a negative influence ($\beta = -.392, p<.001$) on T2 attitudinal ambivalence. No other relationships were significant. Therefore, both Hypothesis 2 and Hypothesis 3 were supported.
<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
<th></th>
<th>Model 3</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B(S.E.)</td>
<td>Beta</td>
<td>t-value</td>
<td></td>
<td>B(S.E.)</td>
<td>Beta</td>
<td>t-value</td>
<td></td>
<td>B(S.E.)</td>
<td>Beta</td>
<td>t-value</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.117(.072)</td>
<td>-.132</td>
<td>-1.609</td>
<td></td>
<td>-.055(.060)</td>
<td>-.062</td>
<td>-0.908</td>
<td></td>
<td>-.037(.055)</td>
<td>-.042</td>
<td>-.679</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.019(.012)</td>
<td>-.135</td>
<td>-1.505</td>
<td></td>
<td>-.016(.010)</td>
<td>-.112</td>
<td>-1.511</td>
<td></td>
<td>-.015(.009)</td>
<td>-.111</td>
<td>-1.652</td>
<td></td>
</tr>
<tr>
<td>Asia (dummy)</td>
<td>-.172(.090)</td>
<td>-.176†</td>
<td>-1.914</td>
<td></td>
<td>-.083(.075)</td>
<td>-.085</td>
<td>-1.108</td>
<td></td>
<td>-.032(.069)</td>
<td>-.033</td>
<td>-.462</td>
<td></td>
</tr>
<tr>
<td>America (dummy)</td>
<td>-.287(.164)</td>
<td>-.155†</td>
<td>-1.811</td>
<td></td>
<td>-.145(.137)</td>
<td>-.076</td>
<td>-1.061</td>
<td></td>
<td>-.175(.125)</td>
<td>-.091</td>
<td>-1.399</td>
<td></td>
</tr>
<tr>
<td>Africa (dummy)</td>
<td>-.503(.198)</td>
<td>-.233*</td>
<td>-2.537</td>
<td></td>
<td>-.242(.167)</td>
<td>-.112</td>
<td>-1.452</td>
<td></td>
<td>-.067(.155)</td>
<td>-.031</td>
<td>-.436</td>
<td></td>
</tr>
<tr>
<td># of WOM channels</td>
<td>-.228(.097)</td>
<td>-.178*</td>
<td>-2.338</td>
<td></td>
<td>-.156(.081)</td>
<td>-.121†</td>
<td>-1.922</td>
<td></td>
<td>-.044(.077)</td>
<td>-.034</td>
<td>-.569</td>
<td></td>
</tr>
<tr>
<td>Social pressure</td>
<td>.015(.020)</td>
<td>.059</td>
<td>.770</td>
<td></td>
<td>.041(.016)</td>
<td>.055</td>
<td>.870</td>
<td></td>
<td>.006(.015)</td>
<td>.025</td>
<td>.426</td>
<td></td>
</tr>
<tr>
<td>Ambivalence T1</td>
<td>.552(.065)</td>
<td>.548***</td>
<td>8.488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.470(.063)</td>
<td>.467***</td>
<td>7.471</td>
<td></td>
</tr>
<tr>
<td>WOM activity T2</td>
<td>-.190(.038)</td>
<td>-.392***</td>
<td>-5.181</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.199(.041)</td>
<td>.040</td>
<td>.535</td>
<td></td>
</tr>
<tr>
<td>WOM praise T2</td>
<td>.022(.041)</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Significance †<=.1; *<=.05; **<=.01; ***<=.001
4.4 Model C: Explaining choice

To test Hypothesis 4, a hierarchical logistic regression was conducted in which choice was the dependent binary variable (Table 6). In Model 1, the control variables (gender, age, dummies for nationality, and perceived social pressure) were introduced. A test of the full model against a constant-only model showed marginal significance, indicating that the predictors marginally distinguished between those who chose to begin studies in the HE institution and those who did not ($\chi^2 = 10.848, p<.1$ with d.f. = 6). Nagelkerke’s $R^2$ was .085, indicating a relatively weak relationship between prediction and grouping. Overall prediction success was 70.7% (negative choice = 5.7%, positive choice = 99.2%). The Wald criterion demonstrated that only age made a significant contribution to the prediction ($p<.01$). In Model 2, T2 attitudinal ambivalence was introduced. A test of the full model showed significance, indicating that the predictors distinguished between positive and negative choice ($\chi^2 = 17.341, p<.05$ with d.f. = 7). Nagelkerke’s $R^2$ was .134, indicating a relatively low yet improved relationship between prediction and grouping compared to Model 1. Overall prediction success was 71.3% (negative choice = 18.9%, positive choice = 94.2%). These results showed that the prediction success of negative choices improved after T2 attitudinal ambivalence was introduced. The Wald criterion implied that attitudinal ambivalence ($p<.05$) and age ($p<.05$) were significant contributors to prediction. The odds ratio indicated that when attitudinal ambivalence increased by one unit, the odds that a HE applicant would choose to begin studies at a HE institution were reduced to a third ($Exp[B] = .368$). Therefore, Hypothesis 4 was supported.
Table 6. Model C: Results

<table>
<thead>
<tr>
<th>Dependent variable: Choice</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>N = 174</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>B(S.E.)</th>
<th>Wald</th>
<th>Exp(B)</th>
<th>B(S.E.)</th>
<th>Wald</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-4.920(2.045)</td>
<td>5.788*</td>
<td>.007</td>
<td>-5.261(2.060)</td>
<td>6.520*</td>
<td>.005</td>
</tr>
<tr>
<td>Gender</td>
<td>.579(.372)</td>
<td>2.430</td>
<td>1.785</td>
<td>.462(.378)</td>
<td>1.493</td>
<td>1.588</td>
</tr>
<tr>
<td>Age</td>
<td>.224(.081)</td>
<td>7.583**</td>
<td>1.251</td>
<td>.206(.081)</td>
<td>6.448*</td>
<td>1.229</td>
</tr>
<tr>
<td>Asia (dummy)</td>
<td>.302(.442)</td>
<td>.467</td>
<td>1.353</td>
<td>.174(.451)</td>
<td>.149</td>
<td>1.190</td>
</tr>
<tr>
<td>America (dummy)</td>
<td>-.240(.837)</td>
<td>.082</td>
<td>.787</td>
<td>-.473(.859)</td>
<td>.303</td>
<td>.632</td>
</tr>
<tr>
<td>Africa (dummy)</td>
<td>.215(1.252)</td>
<td>.030</td>
<td>1.240</td>
<td>-.346(1.279)</td>
<td>.073</td>
<td>.707</td>
</tr>
<tr>
<td>Social pressure</td>
<td>-.003(1.00)</td>
<td>.001</td>
<td>.997</td>
<td>.041(1.03)</td>
<td>.019</td>
<td>1.015</td>
</tr>
<tr>
<td>Ambivalence T2</td>
<td></td>
<td></td>
<td></td>
<td>-999(.400)</td>
<td>6.229*</td>
<td>.368</td>
</tr>
</tbody>
</table>

χ² statistic (Model)        | 10.848 (d.f. = 6); p = .093 | 17.341 (d.f. = 7); p = .015 |
χ² statistic (Step)         | 10.848 (d.f. = 6); p = .093 | 6.493 (d.f. = 1); p = .011 |
Nagelkerke R²               | .085     | .134    |
% of correctly classified observations: neg. choice | 5.7  | 18.9 |
% of correctly classified observations: pos. choice | 99.2 | 94.2 |
% of correctly classified observations: total | 70.7 | 71.3 |

Note: Significance †=<.1; *= <.05; **= <.01; ***= <0.001
5 DISCUSSION

The results of this study provided empirical evidence that consumers’ attitudinal ambivalence can be reduced by WOM and that abstract, positive information (i.e., WOM praise) helps to reduce attitudinal ambivalence early in the decision-making process, whereas its importance is reduced as the final choice becomes temporally closer. In addition, the reduction of attitudinal ambivalence requires detailed and concrete information (i.e., WOM activity) throughout the HE decision-making process. Finally, attitudinal ambivalence carries from one decision-making stage to another, and any remaining attitudinal ambivalence has a negative influence on the final choice, which indicates the importance of reducing attitudinal ambivalence from a marketing perspective.

5.1 Theoretical contributions

This paper provides an improved understanding of the role of ambivalence in the decision-making process. The existing studies provide insight into the role of attitudinal ambivalence in decision-making at the face of choice (e.g., Pang et al., 2017; Sparks et al., 2001; van Harreveld et al., 2009), and many studies point to the conclusion that ambivalence has negative consequences to choice-making (e.g., Berndsen & van der Pligt, 2004; Costarelli & Colloca, 2004; Penz & Hogg, 2011; Sparks et al. 2001). Our results are in line with this existing body of literature because it was found that ambivalence at the choice stage has a negative influence on choice-making. In addition, however, this paper challenges the prevailing dominance of choice-stage ambivalence in the existing studies by demonstrating that attitudinal ambivalence has a role also in other stages, and its development in the previous stages might shape choice-stage ambivalence. This paper extends a previous study, which also takes different decision-
making stages into account (Jewell et al., 2002) by showing that different types of information influence attitudinal ambivalence in different stages. In addition, the finding that attitudinal ambivalence in the choice stage originates partly in the search stage supports prior suggestions about the dynamic nature of attitudinal ambivalence (Jewell et al., 2002; Schneider et al., 2015). This influence was relatively strong, which further indicated the importance of attitudinal ambivalence reduction by implying that unresolved attitudinal ambivalence in an earlier stage could increase attitudinal ambivalence in the choice stage. These findings add to the existing literature of attitudinal ambivalence in decision-making by turning attention towards attitudinal ambivalence during the decision-making process, and reveal that even though attitudinal ambivalence may be most “burning” at the face of choice, its role cannot be ignored in the earlier stages of the decision-making process.

Additionally, this study contributes to prior research with regard to the factors that can reduce attitudinal ambivalence (e.g., Hodson et al., 2001; Hänze, 2001; Jonas et al., 1997; Maio et al., 1996; van Harreveld et al., 2009). The existing research indicates that individuals use high-effort strategies to reduce ambivalence given that they have sufficient motivation and ability to do so (van Harreveld et al., 2009). Accordingly, ambivalence can be reduced through additional information (Hodson et al., 2001; Jonas et al., 1997), and information can help people develop positive or negative attitudes towards an object (Maio et al., 1996). This paper extends these findings by demonstrating that all information is not the same in this regard, and that the relative importance of different types of information varies across different stages of the decision-making process. Consequently, this paper extends the existing research, which has found that consumers use different types of information in different stages of the decision-making process (Bettman & Park, 1980) by showing that this is indeed the case also in terms of attitudinal ambivalence reduction. CLT was brought into attitudinal ambivalence literature
as a useful framework for theorizing about attitudinal ambivalence reduction when the
temporal closeness to the final choice changed. The finding that WOM praise had a role in the
search stage is in line with the predictions based on CLT. Contrary to the predictions of CLT,
however, the concrete and detailed WOM activity reduced attitudinal ambivalence in both
stages of the HE decision-making process. This result might have been due to the nature of the
HE decision-making process. By the end of the search stage, the applicants made an application
decision. Although it was not the final choice, they were likely to be motivated to apply to
institutions that were satisfactory and therefore had a high accuracy motivation. Hence, these
results indicated that WOM activity might reduce attitudinal ambivalence in the search stage
of the HE decision-making process. Therefore, the findings highlight the importance of
studying attitudinal ambivalence reduction in the context of various decision-making
situations.

Finally, while this paper mainly aims to contribute to attitudinal ambivalence research, the
findings also contribute to the WOM literature as they bring insight into what happens after
WOM is received, and how it affects marketing-relevant outcomes (Martin, 2014; Martin &
Lueg, 2013; Yang et al., 2012). The existing WOM research suggests that consumers’
utilization of WOM influences their attitudes, which further influences their purchase
intentions (Martin & Lueg, 2013). We extended these findings by demonstrating similar effects
when the attitude was ambivalent, using actual choices instead of purchase intentions. Studying
actual, “real-life” choice behavior instead of intention-based measures is rare also in
ambivalence studies (Roster & Richins, 2009), and therefore this paper makes a
methodological contribution to both WOM and ambivalence research.
5.2 Managerial implications

The findings demonstrate the importance of considering attitudinal ambivalence in the marketing of HE services. Because the findings imply that the consequences of attitudinal ambivalence are negative, its reduction is an important marketing goal. In this regard, the findings imply that ambivalence can be reduced through the use of WOM information with varying degrees of abstractness, and the types of WOM required in the search stage and the choice stage differed. Therefore, the first step by HE marketers should be to recognize the applicants' decision-making stage. Because the search stage ends when an applicant makes an application decision (Chapman, 1986), marketing efforts directed at the search stage should be conducted prior to a HE institution’s deadline for applications. In the choice stage, however, efforts should be made after the applicants have been notified of their acceptance but before they make their final choice of whether to begin studies at the institution by which they have been accepted. In terms of concrete marketing tools, WOM can be influenced through indirect and direct marketing efforts (Lang & Hyde, 2013). Indirect efforts include general advertising, such as testimonials, teaser campaigns, and celebrity endorsements, whereas direct efforts include incentivized WOM and the direct targeting of influencers (Lang & Hyde, 2013).

In promoting WOM activity, marketers could provide much detailed information to both friends and family through indirect efforts, such as creating shareable content on the institution’s website. They can also use direct efforts, such as email campaigns in which the receivers are encouraged to forward the message to their friends or family members, and providing informative event marketing for HE applicants and their families (e.g., campus visits). The families and friends of the applicants were chosen as the focus of this study because they are both strong-tie sources (Duhan et al., 1997). In the context of HE decision-making,
they are also central sources of WOM (Chapman, 1981; Mazzarol & Soutar, 2002). Importantly, however, the media usage behavior of strong-tie sources may differ. For example, because friends are generally younger than family members are, they might be more responsive to social media campaigns, whereas traditional marketing communications, such as mass-media advertising, might be more effective in targeting family members (Deloitte, 2015).

Furthermore, because the findings indicated that WOM praise received in the search stage reduces attitudinal ambivalence, it is important to create a positive impression among strong-tie sources of WOM, perhaps by using indirect efforts such as ad campaigns that have emotional content or generate conversation. Furthermore, managing the post-purchase WOM of current customers effectively promotes WOM (Lang & Hyde, 2013), and it is a relatively manageable way to approach WOM (Buttle, 1998). The alumni and current students of universities are good examples of post-purchase WOM influencers who could be asked to share their positive experiences with their friends and family members in order to promote WOM praise. Finally, the receiver has been shown to trigger WOM discussions by starting conversations, which happens when receivers gain information by seeking advice or solving problems (Berger, 2014). Therefore, marketers could target HE applicants through both direct and indirect marketing to promote both WOM praise and WOM activity.

5.3 Limitations and suggestions for further research

The results of the present study provide the first step toward understanding attitudinal ambivalence in different stages of the decision-making process. An additional explanation supporting our results regarding the central role of WOM activity in decision-making is based on multi-process theories of influence, such as the elaboration likelihood model and the
heuristic systematic model, which assume that information processing operates through two separate routes (Petty, 1994). The first route relates to high levels of elaboration, and the receiver focuses on the central merits of issue-relevant information in information processing. The second route requires less elaboration, and simple cues of information or heuristics can affect attitudes without extensive thought (Petty et al., 2013). When consumers analyze information deeply, they form strong attitudes that are durable and resistant to change (Petty et al., 2013). Thus, our results indicate that WOM activity may enable the cognitive processing of information to a greater extent than WOM praise, and therefore has the strongest influence on decision-making in the choice stage. Hence, future research is encouraged to use an information processing perspective to understand changes in attitudinal ambivalence during the decision-making process. Future research could also address additional dimensions of WOM, such as negative WOM (Sweeney et al., 2014), cognitive content, and content richness (Sweeney et al., 2012). Additionally, future studies should compare the findings between strong-tie and weak-tie sources, as well as investigate other sources of information and their interactive influence on attitudinal ambivalence, including TV and the Internet.

Because skeptical attitudes toward advertising (Chang, 2011) and the simultaneous trust and distrust of an online seller (Moody et al., 2014) can increase attitudinal ambivalence, different contexts would enable more comprehensive modeling of the antecedents of attitudinal ambivalence. In terms of personality factors, need for cognition (NFC) and personal fear of invalidity (PFI) have an influence on attitudinal ambivalence (Thompson & Zanna, 1995), and tolerance for ambiguity and NFC have an influence on coping with ambivalence (Nowlis et al., 2002). By taking into account these personality factors, future research would capture a larger share of attitudinal ambivalence. Moreover, HE decision-making is different from many other decision-making processes, and although the current findings may be generalizable to high-
involvement, investment-type decision-making, WOM might have different influences on attitudinal ambivalence in different types of decision-making contexts. Importantly, the HE decision-making process involves two decisions (i.e., the decision to apply and the choice of beginning studies in an institution by which the applicant had been accepted). Because applying to the Finnish HE institutions (towards which ambivalence was studied) is free of charge, there were many applicants, but only a relatively small part of the applicants became accepted by the institutions. In this study, we were interested in the influence of WOM on attitudinal ambivalence and subsequent choice towards only one institution per applicant. Only the part of the applicants who were accepted to that particular HE institution made a choice about whether to begin studies at the institution, and therefore only they were included into the sample of this study. However, in future studies it would be important to study whether those applicants who were rejected received WOM about other institutions and how it influenced their subsequent ambivalence and decision-making towards alternative HE institutions. We encourage future research to measure WOM and ambivalence towards multiple HE institutions to investigate these broader decision-making processes between multiple options. Finally, although the present study focused on the cognitive component of attitudes, an interesting future study could investigate ambivalence in the affective attitude component or take an intercomponent (i.e., affective-cognitive) approach to attitudinal ambivalence (van Harreveld et al., 2009).
REFERENCES


Appendix A. Calculation of positivity, negativity, and attitudinal ambivalence

The chosen criteria scales were first recoded using a scale ranging from -3 to +3. Next, the scale was split at the middle point. Because all the original choice criteria were labeled positively, the values from -3 to -1 reflected negativity, and the values from 1 to 3 reflected the positivity of each choice criterion. In order to calculate the attitudinal ambivalence score using the choice criteria, the positivity and negativity values of each criterion were aggregated. Because there were different numbers of positive and negative responses for many of the items, the positivity score was calculated by dividing the sum of positive responses to all items by the total number of the items (i.e., 10), and the same was done for the negative responses. Table 1 below shows two examples of the calculation of positivity and negativity scores of hypothetical participants.

Table 1. Examples of the Calculation of the Positivity and Negativity Scores

<table>
<thead>
<tr>
<th>Choice criteria</th>
<th>R1, original response</th>
<th>R1, recoded response</th>
<th>R2, original response</th>
<th>R2, recoded response</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The degrees offered have academic value</td>
<td>1</td>
<td>-3</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2) The degrees offer good job prospects</td>
<td>3</td>
<td>-1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>(3) The program fulfills my academic needs</td>
<td>6</td>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>(4) A clean and safe study environment</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>-2</td>
</tr>
<tr>
<td>(5) Country’s high academic reputation</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>(6) Institution is well-known for its reputation</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>-1</td>
</tr>
<tr>
<td>(7) Reasonable living costs (accommodation, food, traveling, etc.)</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>(8) A high level of security in the host country</td>
<td>5</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>(9) University’s high-ranking position</td>
<td>2</td>
<td>-2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>(10) An active student life</td>
<td>3</td>
<td>-1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Sum of negative responses</td>
<td>-7</td>
<td>-1</td>
<td>-3</td>
<td></td>
</tr>
<tr>
<td>Sum of positive responses</td>
<td>9</td>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Negativity score</td>
<td>-0.7</td>
<td></td>
<td>-0.3</td>
<td></td>
</tr>
<tr>
<td>Positivity score</td>
<td>0.9</td>
<td></td>
<td>1.4</td>
<td></td>
</tr>
</tbody>
</table>

Note: R1=Respondent 1; R2=Respondent 2

Next, the positivity and negativity scores were combined into an overall attitudinal ambivalence score according to the following formula: \((P + N)/2 - |P - N|\), where \(P\) is the positivity score and \(N\) is the negativity score (Thompson et al., 1995). Because both positivity and negativity components should be inserted into the equation with a positive sign, the negativity scores were first multiplied by -1. Thus, the values for attitudinal ambivalence could range from -1.5 (i.e., univalent positive or negative attitude) to 3 (when both positivity and negativity scores are 3). In the example above, the attitudinal ambivalence score is \((0.9+0.7)/2-|0.9-0.7| = 0.6\) for Respondent 1, and \((1.4+0.3)/2-|1.4-0.3| = -0.25\) for Respondent 2, indicating that Respondent 1 was more ambivalent.
## Appendix B. Measures

<table>
<thead>
<tr>
<th>Items</th>
<th>Scale points</th>
<th>Cronbach’s α</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WOM activity</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) The university has been frequently mentioned in discussions</td>
<td>Five-point Likert scale; 1='strongly disagree'; 5='strongly agree'</td>
<td>T1: α = .749 T2: α = .852</td>
<td>Harrison-Walker (2001)</td>
</tr>
<tr>
<td>(2) I have had more discussions about the university than about other universities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) The discussions about the university tend to be in great detail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WOM praise</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) In the discussions, the university was praised</td>
<td>Five-point Likert scale, 1='strongly disagree'; 5='strongly agree'</td>
<td>T1: α = .763 T2: α = .710</td>
<td>Harrison-Walker (2001)</td>
</tr>
<tr>
<td>(2) The discussions have only been on good things about the university</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Choice criteria (Criteria used for attitudinal ambivalence calculation, i.e., the most important criteria)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) The degrees offered have academic value</td>
<td>Seven-point Likert scale; 1='strongly disagree'; 7='strongly agree'</td>
<td>N.A.</td>
<td>Joseph &amp; Joseph (1998); Mazzarol &amp; Soutar (2002)</td>
</tr>
<tr>
<td>(2) The degrees offer good job prospects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) The program fulfills my academic needs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) A clean and safe study environment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) Country’s high academic reputation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6) Institution is well-known for its reputation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Reasonable living costs (accommodation, food, traveling, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) A high level of security in the host country</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9) University’s high-ranking position</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10) An active student life</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other choice criteria originally measured</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(11) A low level of racial discrimination in the host country</td>
<td></td>
<td>N.A.</td>
<td>Joseph &amp; Joseph (1998); Mazzarol &amp; Soutar (2002)</td>
</tr>
<tr>
<td>(12) University’s cost of education/tuition fees is/are reasonable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(13) The possibility of studying for a doctoral degree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(14) Reasonable entry/admission requirements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(15) The university is centrally located</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(16) A positive city image</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(17) The possibility to work during one’s studies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(18) The availability of advice and help with organizing everyday life in the host country</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(19) The availability of financial help/scholarships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(20) Recommendations from alumni or current students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(21) My friends are applying to the same university</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(22) I know someone who has studied or is currently studying at the university</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(23) I know someone who has studied or is currently studying in the country</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Importance of choice criteria</strong></td>
<td>Seven-point Likert scale; 1='not at all important'; 7='very important'</td>
<td>N.A.</td>
<td>Joseph &amp; Joseph (1998); Mazzarol &amp; Soutar (2002)</td>
</tr>
</tbody>
</table>

The same items were used as in the choice criteria measure.
Publication IV

Sipilä, J., Tarkiainen, A., and Sundqvist, S.
The influence of organizational buyers’ ambivalence on a company website on their behavioral intentions

The influence of organizational buyers’ ambivalence on a company website on their behavioral intentions

Abstract

This paper studies the influence of organizational buyers’ ambivalence on their behavioral intentions. A combination of facial recognition, clickstream, and questionnaire data is used to derive insight on how ambivalence on different types of web pages influences organizational buyers’ intentions to proceed in the organizational buying process. The results suggest that ambivalence might have a negative or positive influence on the intention to proceed in the buying process, depending on the type of web page on which it occurs. The results extend prior literature in organizational buying behavior by shedding light on the role of ambivalence in the area, and also contribute to the literature of ambivalence by showing how ambivalence might have different consequences in different contexts. Managerial implications for website design in the B2B context are discussed at the end of the paper.

Keywords: Ambivalence, organizational buying, intentions

Track: Industrial and Business Relationship Marketing
Introduction

This paper investigates organizational buyers’ emotional ambivalence on a website to fill a gap in prior literature about how ambivalence on web pages with different types of information influence organizational buyers’ intentions to proceed in the buying process. Thus, this paper answers to recent calls for more investigations on the role of emotional issues (e.g. Leek and Christodoulides, 2011) and ambivalence (Ashforth et al., 2014) in the organizational context. While prior research has found that ambivalence has an impact on behavioral intentions (e.g. Sparks et al., 2001; Costarelli and Colloca, 2004), it is not yet understood how this finding holds in the organizational online buying context. Such an understanding would, however, be relevant in terms of understanding organizational information search, which increasingly takes place in online contexts (Marshall et al., 2012), with solution provider websites being a primary source of information for B2B buyers (Grewal, 2015). Against this background, this paper uses the combination of face reading and clickstream data to investigate how emotional ambivalence on different types of web pages influences behavioral intentions in the organizational online context. Theoretically, this paper contributes to research in organizational buying behavior by studying the role of emotional ambivalence in the formation of organizational buyers’ behavioral intentions. This paper also contributes to research on emotional ambivalence by studying the boundary conditions of the ambivalence-intention relationship. While prior research has mostly stated that ambivalence has a negative influence on behavioral intentions (e.g. Sparks et al., 2001; Costarelli and Colloca, 2004), this paper reveals that this finding might not hold on different types of web pages, and thus emphasizes the importance of taking the context into account on a very detailed level when studying the effects of ambivalence. Managerially, this paper helps in understanding website conversion much more deeply than mere clickstream measures. By knowing the consequences of ambivalence on different types
of web pages, website designers and marketing managers can make more informed decisions about guiding an organizational buyer through information search with a higher likelihood of staying in the buying process.

Theory

*Emotional ambivalence*

The conceptualization of psychological ambivalence has its roots in attitude research. According to the componential approach to attitudes, an attitude refers to “general and enduring favorable or unfavorable feelings about, evaluative categorizations of, and action predispositions toward stimuli” (Cacioppo and Berntson 1994, p. 401). The central thesis in ambivalence research is two-dimensionality (Thompson, Zanna and Griffin, 1995), allowing attitudes to be both positive and negative at the same time. In this paper, the focus is on the affective attitude component, which refers to the emotions and feelings that an object evokes in an individual (Zanna and Rempel, 1988). Within the emotional ambivalence area, there have been different approaches to what exactly constitutes emotional ambivalence. Some authors have investigated positive and negative emotion dimensions (Hershfield and Adler, 2012), whereas others have investigated pairs of specific, single emotions (McGraw and Lau-Gesk, 2008), sometimes called mixed emotions. In this paper, the discussion is kept on the level of the positivity and negativity dimensions, thus being closer to the ambivalence literature than the mixed emotions literature. Thus, emotional ambivalence is defined as both positive and negative emotions towards the same object.
Organizational buying involves a complex process containing potentially conflicting decision criteria, and often takes place over an extended period of time, and requires information from multiple sources (Webster and Wind, 1972). Because organizational buying processes extend over time, a reasonable intention of interest besides the ultimate purchase intention is whether a buyer will proceed in the buying process. While forming a product evaluation through information search on a company website, organizational buyers are likely to be ambivalent, because it is rare to find a product with only positive or only negative features (Sengupta and Johar 2002), and a company website will make such inconsistent features salient to the buyer. Prior research suggests that attitudinal ambivalence more generally (Sparks et al., 2001), and emotional ambivalence more specifically, has a negative influence on behavioral intentions (Costarelli and Colloca, 2004). Furthermore, ambivalence has been found to correlate negatively with readiness for action, and positively with avoidance tendencies (Hänze, 2001). The underlying reason behind such findings might be that ambivalence does not fit the desire for consistent action tendencies (Cacioppo Gardner and Berntson, 1997). Since prior research has found that ambivalence has a negative influence on intention across a variety of contexts (including different retail contexts in Penz and Hogg, 2011; environmentally friendly behavior intentions in Costarelli and Colloca, 2004, and consumption of different foods in Sparks et al., 2001), we expect to find a negative influence of ambivalence on the intention to proceed in the buying process, regardless of the page category. Thus, we investigate two different page categories and hypothesize that: *H1: Ambivalence on product information pages has a negative influence on intentions to proceed in the buying process. H2: Ambivalence on the landing page has a negative influence on intentions to proceed in the buying process.*
Method

Data collection

Upon arrival, the participants were led to a controlled laboratory setting, where they were first briefed, after which they signed an informed consent form. They were then seated in front of a 23-inch Full HD computer screen with a 1920 x 1080 resolution, and were asked to fill a pre-questionnaire. In the instructions, which were given both verbally and in written form on the screen, they were asked to imagine that they had been assigned to purchase a professional services automation (PSA) software to a small or medium sized (SME) company that they were currently employed at. Their task was to search for information and evaluate the suitability of the PSA software presented on the website for their company’s PSA needs. They were allowed to chat with sales representatives via an automatically opening chat window, but were not allowed to use any other websites during the task. They were asked not to start a 30-day free trial, which was offered on the website. The participants were given a time limit of 20 minutes to finish their evaluation. After the search task, the participants were presented with a questionnaire, in which behavioral intentions and a number of control variables were measured (the measures are discussed in more detail later). After the questionnaire, they were debriefed, and they left the laboratory. The whole session took 45 to 60 minutes.

Two measurements were conducted throughout the whole session when the participants did the information search task on the company website. (1) First, each URL that they opened was recorded using an eye tracking software (Tobii Studio). (2) Second, the faces of the participants were recorded with a video camera (Microsoft LifeCam) at a sampling rate of 30 Hz. The video data was recorded through the Tobii Studio software to make sure that all the measurements started at the same moment; however, it was exported and analyzed with a separate face reading
software (Noldus FaceReader, v. 5). The measurements produced a total of 417 minutes (6.95 hours) of recording.

The website was a company website presenting a PSA software product mainly targeted for SMEs in the fields of IT/consulting, advertising, engineering/architecture, accounting, and other expert organizations. The website was divided into page categories based on the contents of each page. Each participant started the task on the same landing page, which welcomed the buyers to the website and consisted of a large pictorial element, a brief text element, and multiple menus. The second category was product information pages, including an overview page of the product and a page for each element included in the product, such as project management, financial management or resource management. This category also included pages of additional features and the mobile version of the product. The product pages included the most important factual information about the product.

The following sampling criteria were used for selecting participants: they had to be more than 18 years old, and have some prior work experience. Accordingly, the participants were recruited from professional events, email lists, and social media forums, which were targeted for university graduates or students in their final years of study. A total of 29 participants took part in the study, out of which one was excluded for not following the instructions, and three because their faces were not properly identified by the FaceReader. Thus, the final sample size is 25 participants. Their ages ranged from 19 to 60 years, the average age being 34 years.

Measures and data reduction

The ambivalence measure was constructed from the emotion measurements conducted with Noldus FaceReader. In line with prior research (e.g. McGraw and Larsen, 2008), happiness
and sadness were used for operationalizing the positive and negative emotion dimensions. In the raw data exported from the FaceReader, each emotion can have a value between 0 and 1, 0 meaning that the emotion is not expressed on the face, and 1 meaning a very strong expression of that emotion on the face. For both emotions, there was thus a value between 0 and 1, measured 30 times per second, and these values were used for calculating an ambivalence index. Multiple ambivalence indices exist, but the most common one is the similarity-intensity index, sometimes also referred to as the Griffin score (Thompson, Zanna and Griffin, 1995). The index includes two parts, the first of which indicates similarity, and the other one indicates intensity. The similarity index is calculated as: \( (P+N)/2 \), P meaning positivity and N meaning negativity. The intensity index is the absolute value of \( P-N \). The ambivalence score is then calculated by subtracting the first index from the second index. In this case, the score could range between \(-0.5\) (when one of the emotions has the value of 0 and the other one has the value of 1) and 1 (when both emotions have the value of 1). The higher the value of the score, the more there is ambivalence.

In line with prior literature, the facial expression data was collapsed over time and page category to obtain an overall mean for each participant (Dimberg and Lundqvist, 1990). The following procedure was taken to preprocess the data in Microsoft Excel: (1) The ambivalence score calculation was performed for each observation of happiness and sadness pairs. (2) The clickstream data was combined with the FaceReader data through event marking. Each change of URL was marked as an event into the raw data from FaceReader. This enabled isolating the times during which a participant was viewing a specific page category, for the calculation of averages. (3) Missing values, which result from the FaceReader not being able to recognize the face, were eliminated from the calculation of the average. (4) For each participant separately, the ambivalence scores were averaged (excluding missing values) per each page category by
summing all the ambivalence scores of a participant in one page category, and dividing the summed value by the number of observations.

Three behavioral intentions were used to find out how the participants would have proceeded after the task. The intentions were measured on a slider scale ranging between 0 (very unlikely) and 100 (very likely). A summated scale was calculated based on these items. The items were “I would send a request for an offer”; “I would schedule a demo with a sales person” and “I would start trial”. Cronbach’s alpha for this scale was 0.885, indicating good reliability. Perceived risk related to the decision was used as a control variable. It was measured on a three-item scale adopted from Sitkin and Weingart (1995). The question was “How would you characterize the decision at hand?”, and the items were ”significant opportunity - significant threat”; “potential for loss - potential for gain”; “positive situation - negative situation”. Cronbach’s alpha for the scale was 0.713, indicating acceptable reliability. Product evaluation items were adapted from Mukherjee and Hoyer (2001) and measured on a scale from 0 (totally disagree) to 100 (totally agree). The items were: “This software seems good”; “I like this software”; “This software is useful”; “This software is high quality”. Cronbach’s alpha for the items was 0.915, indicating very good reliability.

Analysis and results
Hierarchical multiple regression was performed to with SPSS 22 to investigate the ability of ambivalence on the landing pages and product information pages to predict levels of behavioral intentions. In the first step of hierarchical multiple regression, the control variables (perceived risk and product evaluation) were introduced. This model was statistically significant \( F(2,22)=11.58; \ p < .001 \), and explained 51.3 % of variance in behavioral intentions. After entry of ambivalence on landing page and ambivalence on product information page in Step 2 the total
variance explained by the model as a whole was 59.9% \( F(4,20) = 7.458; p < 0.001 \). In the final model, all predictor variables were statistically significant, except for perceived risk. The results show that positive product evaluations and ambivalence on the landing page have a positive influence on behavioral intentions, while ambivalence on product pages has a negative influence (Table 1). Thus, hypothesis 1 is supported and hypothesis 2 is rejected.

Table 1. Regression results

<table>
<thead>
<tr>
<th>Step</th>
<th>Independent variables</th>
<th>B</th>
<th>SE B</th>
<th>( \beta )</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceived risk</td>
<td>-6.693</td>
<td>6.294</td>
<td>-0.175</td>
<td>-1.063</td>
</tr>
<tr>
<td></td>
<td>Product evaluation</td>
<td>1.129</td>
<td>0.299</td>
<td>0.623***</td>
<td>3.779</td>
</tr>
<tr>
<td>2</td>
<td>Perceived risk</td>
<td>-7.222</td>
<td>6.042</td>
<td>-0.189</td>
<td>-1.195</td>
</tr>
<tr>
<td></td>
<td>Product evaluation</td>
<td>0.930</td>
<td>0.301</td>
<td>0.513**</td>
<td>3.094</td>
</tr>
<tr>
<td></td>
<td>Ambivalence, landing page</td>
<td>85.610</td>
<td>48.333</td>
<td>0.307*</td>
<td>1.771</td>
</tr>
<tr>
<td></td>
<td>Ambivalence, product information pages</td>
<td>-128.613</td>
<td>69.835</td>
<td>-0.311*</td>
<td>-1.842</td>
</tr>
</tbody>
</table>

Discussion and conclusions

This paper has studied the influence of emotional ambivalence on different types of web pages on organizational buyers’ intentions to proceed in the buying process. Hypothesis 1 suggested that ambivalence on product information pages has a negative influence on intentions to proceed in the buying process, and was supported by our empirical study. This finding supports prior literature on the influence of ambivalence on intentions and behavior, and extends research on organizational buyer behavior by showing the importance of ambivalence in this area. Perhaps more interestingly, however, the second hypothesis, which suggested that ambivalence on the landing page has a negative influence on intentions to proceed in the buying process, was rejected, and the influence was actually positive. This finding resonates with prior research suggesting that in some conditions, ambivalence might also have a positive influence on behavioral intentions (e.g. Jonas, Diehl and Brömer, 1997). However, further research is warranted based on our results, to shed more light on why ambivalence might have a negative or positive influence on behavioral intentions depending on the type of web page on which it
has occurred. It might be that ambivalence on product information pages is more problematic because if one cannot formulate a consistent opinion about a product based on its important attributes, it is hard to find a reason to proceed in the buying process. On the other hand, ambivalence on pages including less central product information, such as the landing page, might not bother the buyer during the information search task on the website, but might be resolved later during the buying process, possibly by investing more effort in the decision-making process in order to increase one’s confidence about the final choice (van Harreveld et al., 2012). Further research aiming to understand the underlying mechanism behind our results might thus find it beneficial to focus on the information content of the web pages. More generally the findings raise the importance of the role of context in studying ambivalence, since the results suggest that ambivalence has a different influence on behavioral intentions depending on where it has occurred, even within the same website. From the perspective of website design, the results suggest that it is of key importance to keep information-rich pages as simple as possible to minimize the opportunities for ambivalence, and also to provide buyers with some tools to cope with ambivalence immediately on these pages. For example, online chat services on product information pages might be a useful tool to help buyers address their ambivalence with the help of a sales person. On the landing page, such tools may not be as critical, and too much ambivalence reduction might actually even have detrimental effects, because it could prevent the buyer from having interest in finding out more information and proceeding in the buying process.

We emphasize that the results are preliminary and the data analysis still carries limitations. One obvious limitation is the small sample size. Furthermore, in order to carry out the analyses, a great amount of data was aggregated into one average ambivalence score. Such an approach enabled the generation of overall understanding about ambivalence in different page categories.
across the participants, but a closer inspection of the data shows that each participant has a unique ambivalence path on each page, and a more accurate way of analyzing the data in the future would involve a more fine-grained event marking, perhaps based on the specific elements of the web pages (i.e. pictures, videos, text) that the participants are looking at. Despite these limitations, we hope that the results will encourage more research into the role of ambivalence in organizational buying decisions.

References


743. KHAN, RAKHSHANDA. The contribution of socially driven businesses and innovations to social sustainability. 2017. Diss.

744. BIBOV, ALEKSANDER. Low-memory filtering for large-scale data assimilation. 2017. Diss.


746. GAST, JOHANNA. The coopetition-innovation nexus: Investigating the role of coopetition for innovation in SMEs. 2017. Diss.


752. SHI, SHANSHUANG. Development of the EAST articulated maintenance arm and an algorithm study of deflection prediction and error compensation. 2017. Diss.

753. CHEN, JIE. Institutions, social entrepreneurship, and internationalization. 2017. Diss.


757. AGAFONOVA, OXANA. A numerical study of forest influences on the atmospheric boundary layer and wind turbines. 2017. Diss.

758. AZAM, RAHAMATHUNNISA MUHAMMAD. The study of chromium nitride coating by asymmetric bipolar pulsed DC reactive magnetron sputtering. 2017. Diss.


760. AL HAMDI, ABDULLAH. Synthesis and comparison of the photocatalytic activities of antimony, iodide and rare earth metals on SnO2 for the photodegradation of phenol and its intermediates under UV, solar and visible light irradiations. 2017. Diss.


DEVIATKIN, IVAN. The role of waste pretreatment on the environmental sustainability of waste management. 2017. Diss.


KASURINEN, HELI. Identifying the opportunities to develop holistically sustainable bioenergy business. 2017. Diss.


STADE, SAM. Examination of the compaction of ultrafiltration membranes with ultrasonic time-domain reflectometry. 2017. Diss.

KOZLOVA, MARIIA. Analyzing the effects of a renewable energy support mechanism on investments under uncertainty: case of Russia. 2017. Diss.

KURAMA, ONESFOLE. Similarity based classification methods with different aggregation operators. 2017. Diss.

LYYTIKÄINEN, KATJA. Removal of xylan from birch kraft pulps and the effect of its removal on fiber properties, colloidal interactions and retention in papermaking. 2017. Diss.

GAFUROV, SALIMZHAN. Theoretical and experimental analysis of dynamic loading of a two-stage aircraft engine fuel pump and methods for its decreasing. 2017. Diss.


SAARI, JUSSI. Improving the effectiveness and profitability of thermal conversion of biomass. 2017. Diss.


SIKIÖ, PÄIVI. Dynamical tree models for high Reynolds number turbulence applied in fluid-solid systems of 1D-space and time. 2017. Diss.
