Customer Journey Management in the Digital Age:

Implications for Multichannel Retailers

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ABSTRACT

The digitalization and the associated proliferation of new touchpoints are exchanging the traditionally linear path to purchase with a network-structured, more complex customer journey. Today's customers create their very own journey that is iterative and dynamic in nature and encompasses a variety of retailer-, competitor-, manufacturer-, and customer-owned touchpoints which mutually influence each other. The complex structure of customer journeys challenges retailers to come up with more sophisticated ways to develop targeted omni-channel strategies, measure and shape consumer behavior along the journey, ensure the effectiveness of each touchpoint, and allocate marketing budget accordingly. Four papers in this cumulative dissertation shed light on the customer journey in the digital age by identifying the most important touchpoints that shape the journey for different customers and in different industries, by investigating the interrelationships between touchpoints, and by examining marketing communication in crucial touchpoints of the journey. Paper 1 segments customers from four major retail industries by their use of specific touchpoints in the journey and sheds light on how the relationships between customer's product satisfaction, journey satisfaction, and loyalty intentions vary across segments. The results reveal five robust customer journey segments. Paper 2 examines how the internet has disrupted the customer journey in the health industry. The paper shows that digital touchpoints are an important information source for customers on their path-to-purchase of over-the-counter drugs. Furthermore, the results reveal that not all technology-enabled health services please customers in the same way. Paper 3 investigates how websites as information hubs may help retailers to steer customers along the journey. Results reveal that informational online-to-physical channel integration on a retailer's website may induce customers to switch to the retailer's physical store and that this effect is further qualified by the implicit communication of shopping benefits on a retailer's website. Paper 4 examines how the communication style used by brands from different status levels in social media can convey different levels of social distance to customers and thus shape brand positioning. The results depict that communication styles used by high- and low-status brands in social media differ in their usage of personal pronouns and that luxury and non-luxury brands may use communication styles to shape customers' brand status perceptions and intention to like the brand and its messages in social media. An umbrella article summarizes existing research on customer journey management, identifies the major research gaps, outlines how the four papers address the gaps, and synthesizes the findings of this dissertation in a ready-to-implement step-by-step process for managers.

ZUSAMMENFASSUNG

Die Digitalisierung und die damit verbundene Verbreitung neuer Kontaktpunkte ersetzen den linearen Kaufprozess durch eine komplexe und netzwerkstrukturierte Kundenreise. Die Kunden kreieren ihre individuelle und iterative Kundenreise, die eine Vielzahl verschiedener Kontaktpunkte mit Detailhändlern, deren Mitbewerbern, Herstellern und Kunden umfasst. Die komplexe Struktur heutiger Kundenreisen fordert Detailhändler heraus, neue Wege zu gehen, um zielgerichtete Omni-Kanal-Strategien zu entwickeln und umzusetzen. Die vier Artikel in dieser kumulativen Dissertation beleuchten die Kundenreise im digitalen Zeitalter, indem sie (1) die wichtigsten Kontaktpunkte in Kundenreisen unterschiedlicher Kundensegmente und in verschiedenen Branchen identifizieren, (2) die Wechselbeziehungen zwischen Kontaktpunkten untersuchen und (3) die Marketingkommunikation an entscheidenden Kontaktpunkten in der Kundenreise analysieren. Artikel 1 segmentiert Kunden anhand ihrer Nutzung spezifischer Kontaktpunkte in der Kundenreise und beleuchtet, wie sich die Beziehungen zwischen der Kundenzufriedenheit mit dem Produkt, der Kundenzufriedenheit mit der Kundenreise und der Kundenloyalität in den einzelnen Segmenten unterscheiden. Fünf robuste Kundensegmente mit unterschiedlichen Kundenreisen bilden das Ergebnis. Artikel 2 untersucht, wie stark das Internet die Kundenreise in der Gesundheitsindustrie verändert hat. Gemäss Artikel 2 sind digitale Kontaktpunkte eine wichtige Informationsquelle für Kunden beim Kauf von freiverkäuflichen Arzneimitteln. Die Ergebnisse zeigen auch, dass nicht alle digitalen Gesundheitsdienste den Kunden zusagen. Artikel 3 untersucht, wie Webseiten als Informationsdrehscheibe fungieren können, um Detailhändlern dabei zu helfen, die Kundenreise aktiv zu steuern. Laut Artikel 3 veranlasst die Bereitstellung von Informationen zum Ladengeschäft auf der Webseite (die sogenannte Online-zu-Offline Integration von Informationen) die Kunden dazu, zum Ladengeschäft zu wechseln. Dieser Effekt wird durch die implizite Kommunikation von Vorteilen beim Einkaufen im Ladengeschäft verstärkt beziehungsweise abgeschwächt. Artikel 4 untersucht, wie der Kommunikationsstil von Luxus- und Nichtluxusmarken in sozialen Medien unterschiedliche Ebenen von sozialer Distanz zum Kunden vermitteln und somit die Markenpositionierung prägen kann. Die Kommunikationsstile von Luxus- und Nichtluxusmarken unterscheiden sich in der Anzahl an Personalpronomen. Kunden stufen Marken, die viele Personalpronomen in ihrer Kommunikation verwenden, als weniger luxuriös ein, als andere Marken. Ein Dachartikel erläutert bestehende Studien zur Kundenreise, identifiziert Forschungslücken und fasst die Ergebnisse dieser Dissertation in einer Schritt-für-Schritt-Anleitung für Manager zusammen.

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A   UMBRELLA ARTICLE: HOW RETAILERS MAY BETTER UNDERSTAND AND SHAPE THE CUSTOMER JOURNEY

How Retailers May Better Understand and Shape the Customer Journey

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Abstract

This article provides a general overview of the cumulative dissertation and draws an overall conclusion from the insights gained in the four papers. First, it outlines the relevance of customer journey management in light of the challenges for multichannel retailers brought about by new market entrants, cross-border shopping, growing e-commerce, and ever more demanding and critical customers. Second, this article discusses relevant literature on the topic of customer journey management and identifies major research gaps. Third, this article summarizes the overall research strategy and the contribution of each of the four papers in this cumulative dissertation. Finally, this article provides a synthesis of the research findings and outlines the managerial relevance of each paper with the help of a step-by-step guide called the customer journey loop.

1 Introduction

Multichannel retailers around the world are confronted with tremendous changes in the retail landscape that threaten their competitiveness. First, globalization and its integration of trade, finance, and human capital into one global market have fueled global competition. Trade frictions such as transport costs, tariffs, and language barriers are being reduced, and local markets are threatened with new market entrants from all around the word (Greenwald and Kahn 2005). For instance, in Switzerland, the market entry of the German discount retailers Aldi in 2005 and Lidl in 2009 put a lot of pressure on local food and beverage prices. Pizzas for CHF 0.99 from Aldi and small loaves of bread for CHF 0.49 from Lidl challenge local incumbents such as Migros and Coop to defend their market share. Second, not only firms but also customers are increasingly crossing borders. So-called cross-border shopping, where customers are travelling to neighboring countries to shop, has become a popular phenomenon that threatens the profitability of local retailers. Since the discontinuation of the minimum exchange rate of CHF 1.20 per Euro in January 2015, Swiss customers in particular are shopping for groceries, cosmetics, and the like in the neighboring countries of Austria, Germany, France, and Italy (Rudolph, Nagengast, and Nitsch 2017). Third, online retail giants such as Amazon and Alibaba are disrupting traditional retailing with comparably low prices and convenient 24/7 shopping opportunities. For instance, more than half of the customers in Germany, Austria, and Switzerland prefer to purchase products such as flight tickets, holiday tickets, and admission tickets exclusively online (Rudolph et al. 2017). Today, online retail is no longer restricted to small items (e.g., books) or digital items (e.g., software); washing machines can easily be purchased via Amazon, and even buying a vehicle can be done with a single click on one of the many online platforms for cars. In light of recent developments, it is hardly surprising that, with a market capitalization of USD 890 billion, Amazon is more than three times the size of the traditional retailer Walmart, which is worth USD 260 billion (as of July 2018). Amazon's revenue has grown steadily since 2006 (+31% from 2016 to 2017; Statista 2018), and the company is preparing its entry into new markets, such as Switzerland. In the meantime, some of the world's largest traditional retailers, such as Toys "R" Us and American Apparel, have gone bankrupt, and J.C. Penney's share price has declined by 80% since 2016 (NYSE). Finally, the rise of the internet has not only fueled e-commerce but also changed consumer behavior as a whole. With the proliferation of new touchpoints (e.g., mobile apps, price-comparison portals, blogs, and social networking sites), customers can easily access information about the price, quality, and different features of products and compare them with other offerings (Verhoef, Kannan, and Inman 2015; Court et al. 2009). A touchpoint is any transactional or informational one-way or two-way interaction between a customer and a retailer, manufacturer, peer, or other customer (Neslin et al. 2006). The definition of a touchpoint is much broader in scope than the definition of a

channel. Touchpoints capture the customer's perspective and refer to all contacts between a customer and various stakeholders in the customer's purchasing process, whereas channels capture the retailer's perspective and summarize all means of communication and distribution offered by a specific firm to its customers. The same touchpoint (e.g., a customer complaint) can occur on different channels (e.g., in-store or via e-mail) and one channel can feature several touchpoints, but not every channel is suitable for every touchpoint (Baxendale, McDonald, and Wilson 2015). As the multitude of touchpoints available opens up new avenues of transparency, passive customers are turning into well-informed, critical stakeholders who take more control and actively design their very own purchasing process by pulling information from various sources (Lervik-Olsen, van Oest, and Verhoef 2015). While all of the abovementioned changes in retailing have made shopping more convenient, inspiring, and profitable for customers, they have also made it much more complex and challenging for retailers to attract customers and differentiate themselves from others in a highly competitive environment (Ailawadi and Farris 2017).

In light of fierce competition from online and multinational retailers, traditional retailers quickly realized that simply opening up an online shop in addition to their physical store presence could not ensure competitiveness. Rather, a retailer that operates online and offline channels (a so-called multichannel retailer), needs to integrate those channels in such a way that they create synergies for the retailer and its customers and help the retailer gain a competitive advantage over pure online retailers (Zhang et al. 2010). The conceptual work by Neslin et al. (2006, 95) was the first to clearly define multichannel management as the "design, deployment, coordination, and evaluation of channels through which firms and customers interact, with the goal of enhancing customer value…," thus paving the way for ample research to follow in this domain. In the last decade, numerous studies have been published in the domains of multi-, cross-, and omni-channel management. For a long time, these concepts have been used interchangeably in research and practice, which has led to blurred boundaries, especially between multi- and cross-channel management (Beck and Rygl 2015). Therefore, from 2015 onward, several researchers dedicated their work to defining the three concepts and carefully distinguishing them from one another (e.g., Ailawadi and Farris 2017; Beck and Rygl 2015; Brunner and Rudolph 2015; Verhoef et al. 2015). The general conclusion to be drawn from these works is that multi-, cross-, and omni-channel management differ with regard to how many and what channels are involved, how well they are integrated from a retailer's perspective, and how well they interact from a customer's perspective. Beck and Rygl (2015) provide vivid examples multi-, cross-, and omni-channel management in practice. For instance, if items purchased in the retailer's online shop can only be returned to its online shop, Beck and Rygl (2015) refer to multichannel retailing. If items purchased online can be returned to either the retailer's online shop or in its physical store, the authors

refer to cross-channel retailing. If items can be returned in any channel operated by the retailer and its partners, regardless of the channel that the customers bought the item from, the authors refer to omni-channel retailing (Beck and Rygl 2015).

Initially, omni-channel retailing (i.e., the complete integration and interaction of channels) was a buzzword used by business experts to describe the ultimate challenge that multichannel retailers need to overcome. Just recently, academic studies on omni-channel retailing were published (Ailawadi and Farris 2017; Brynjolfsson, Hu, and Rahman 2013; Verhoef et al. 2015). These studies highlight the importance of keeping both the retailer's and the customer's perspective in mind when engaging in omni-channel activities. For instance, Verhoef et al. (2015, 176) define omni-channel management as the "synergetic management of the numerous available channels and customer touchpoints, in such a way that the customer experience across channels and the performance over channels is optimized." A factor that renders omni-channel retailing even more challenging is the fact that touchpoints that affect customers when searching for and purchasing products are no longer bound to the retailer's sphere of influence (Baxendale et al. 2015). For example, a customer may start on the website of Retailer A, then visit an independent blog of another customer, then talk with a call-center employee of the product manufacturer, and finally complete the purchase in the physical store of Retailer B. The abundance of touchpoints accessible to customers calls for a better understanding of the different types of touchpoints available. Based on existing research (Baxendale et al. 2015; Lemon and Verhoef 2016; Neslin et al. 2014), one can differentiate between retailer-owned, partner-owned, competitor-owned, customer-owned, and independent touchpoints. Retailer-owned touchpoints, such as the retailer's physical and online stores, are designed and managed by the retailer. Partner-owned touchpoints, such as a mobile app that the retailer developed in cooperation with a technology start-up, are designed and management by the brand and one of its partners. Competitor-owned touchpoints (e.g., competitor's physical store), customer-owned touchpoints (e.g., "How-to" videos posted by another customer on YouTube or advice among friends), and independent touchpoints (e.g., search engines, newspapers) are outside a retailer's control and hard to monitor (Lemon and Verhoef 2016).

In light of the abundance of different touchpoints that may shape a customer's purchase decision, this dissertation takes a journey approach within the domain of omni-channel retailing. Drawing on previous research (Anderl, Schumann, and Kunz 2016; Baxendale et al. 2015), the customer journey can be defined as the sum of all the touchpoints between a customer and a retailer, its competitors, manufacturers, other customers, and independent providers that the customer encounters in the course of a potential purchasing process. Due to the abundance of product choices and information sources available in today's retail environment, it has become increasingly challenging for retailers to understand, shape, and

control the customer journey (Lemon and Verhoef 2016). Therefore, this dissertation aims to shed light on the customer journey in the digital age by identifying the most important online and offline touchpoints that shape the journey for different customers and in different industries, by investigating the interrelationships between different touchpoints along the journey, and by examining marketing communication in crucial touchpoints of the journey.

The next chapter will provide an overview of the existing research in the domain of customer journeys and summarize important research gaps. Chapter 3 will present the overall research strategy of this cumulative dissertation and will summarize each of the four papers and their contributions to customer journey management. Finally, Chapter 4 will provide a synthesis of the four research papers in the form of a step-by step guide for multichannel retailers that aim to better understand and shape the customer journey.

2 Prior Research and Research Gaps

2.1 The Customer Journey in Retail, Marketing, and Service Management

The customer journey is closely linked to customer experience management (Lemon and Verhoef 2016). The goal of customer journey management is to provide customers with an elevated, and ideally seamless, customer experience throughout the entire purchasing process while contributing to a firm's profitability (Brynjolfsson et al. 2013). Berry, Carbone, and Haeckel (2002) argue that, in order to stay competitive, retailers need to create a unique customer experience by combining functional offerings with emotional ones along the customer journey. Similarly, Bolton et al. (2014) stress that retailers need to focus on small details in the customer journey to create an individualized customer experience and thus set themselves apart from competition in an industry where similar performance levels and offerings across companies have led to intense price wars. They conduct management interviews to identify three differentiation strategies for retailers in the new digital age: (1) delivering touch and feel experiences, (2) creating experiences that appeal to customers on a highly emotional level, and (3) combining touch and feel with emotionally engaging experiences. Patrício, Fisk, and Cunha (2008) introduce customer experience blueprinting as a method for firms to better understand customers' individual needs along the journey and allocate resources to the touchpoint best suited to fulfill these needs. The authors applied customer experience blueprinting to a mortgage loan application of a multichannel bank. Their analysis showed that, while personal contact was the most important touchpoint for mortgage customers, customers' needs and touchpoint priorities varied across different stages of the mortgage process. The experience blueprinting method combined online-based mortgage services with personal contact at the physical loan office when most needed

throughout the entire mortgage process and thus ultimately enhanced the customer experience while reducing costs for the multichannel bank. Puccinelli et al. (2009) review existing research on customer experience creation along the journey and assess how consumer goals shape customer experiences along the customer journey. They argue that the same retail environment may produce very diverse reactions, depending on the goal that the consumer intends to achieve with the purchasing process. For instance, a crowded retail store may inspire a customer looking for entertainment while shopping, but the same environment may annoy a customer who simply wants to quickly finalize a habitual purchase. In a service context, Voorhees et al. (2017) review prior research on customer service experiences throughout the customer journey. They conclude that the majority of existing research focuses on the core service experience, which typically happens at one touchpoint, but fails to consider pre-core and post-core service encounters. The authors present a range of important questions for future research and highlight the importance of taking a holistic perspective on the customer journey.

Research on customer journeys had already begun in the 1960s, when Howard and Sheth (1969) described the process of buyer decision making with the help of the Stimulus-Organism-Output (S-O-R) formula. According to Howard and Sheth (1969), the customer journey starts as soon as buyers are confronted with stimuli (i.e., touchpoints). In the course of the journey, buyers filter these stimuli through their perceptual and learning subsystems and finally respond to the stimuli by purchasing the product. Similarly, in the context of marketing and advertising, the attention-interest-desire-action (AIDA) model emerged as a helpful tool to describe the stages a customer goes through when making a purchase (e.g., Lavidge and Steiner 1961). These models form the basis for vast research on the multichannel customer journey (e.g., Neslin et al. 2006; Li and Kannan 2014). Similar to Howard and Sheth (1969) and Lavidge and Steiner (1961), contemporary research also highlights that the customer journey spans several stages that customers go through on their path to purchase. According to Srinivasan, Rutz, and Pauwels (2015), customers traverse numerous stages in their journey that involve cognition (e.g., awareness), affect (e.g., liking), and conation (e.g., purchasing). Court et al. (2009) state that a customer journey starts with the consideration of a product, followed by its evaluation. Then the actual purchase takes place, and, finally, customers critically reflect on the purchase in the post-purchase stage. Similarly, Edelman (2010) denotes four customer journey stages (consider, evaluate, buy, advocate). He argues that the importance of different touchpoints along the journey varies according to the stage in which customers encounter the touchpoints. For instance, television ads and word of mouth are especially important to customers in the consideration stage, whereas comparison portals and customer reviews are crucial in the evaluation phase. The common assumption that each touchpoint in the journey is equally important for customer experience creation is also

challenged by Rosenbaum et al. (2017). With the help of a case study of a shopping mall, the authors find that less than 50% of all mall customers had experienced even 50 of the 60 touchpoints considered the most important by the mall's management team.

The digitalization and the associated proliferation of new touchpoints are exchanging the traditionally linear path to purchase with a network-structured, much more complex customer journey (Srinivasan et al. 2015). Today's customers do not simply travel from the search to the purchase and then to the post-purchase stage by using a few touchpoints offered by one retailer; rather, they create their very own journey that is iterative and dynamic in nature (Lemon and Verhoef. 2016). A customer's choice to visit a touchpoint may be influenced not only by the benefits that the touchpoint entails but also by the experiences that the customer had at touchpoints earlier in the journey (Lervik-Olsen et al. 2015) and by external factors, such as the weather (Verhoef et al. 2009). Importantly, retailers have to take into account how different touchpoints within a journey influence one another (Lemon and Verhoef 2016). In a service context, Tax, McCutcheon, and Wilkinson (2013) introduce the concept of a service delivery network (SDN) to shed light on the customer journey in the digital age. The authors stress the need to examine the entire network of a customer's multiple dyadic encounters with multiple service providers instead of focusing on each encounter in isolation. They exemplify the value of the SDN through a patient with back problems whose journey spans many service providers that form one big network centered on him and his goals (Tax et al. 2013). The authors conclude that managers are provided with a whole new set of opportunities to gain customers' trust and enhance the customer experience along the journey if they learn to take the customer's perspective when examining the journey and form relationships with external partners (or even former competitors). The increasingly complex structure of customer journeys and the interdependencies between touchpoints challenge retailers to come up with more sophisticated ways to develop targeted omni-channel strategies, measure and shape consumer behavior along the journey, ensure the effectiveness of each touchpoint in the journey, and allocate management effort and budget accordingly (Court et al. 2009; Leeflang et al. 2014; Van Bommel, Edelman, and Ungerman 2014).

2.2   The Benefits of Taking the Customer Journey Approach

From the customer's perspective, the main goal behind using more than one touchpoint in the customer journey is to benefit from comparative advantages that the different touchpoints offer (Verhoef, Neslin, and Vroomen 2007). Several studies have assessed distinct assortment, price, and service benefits of online and physical touchpoints from a customer's perspective. These studies find that the major benefits of the physical store, as opposed to the

online store, are its ability to provide touch-and-feel experiences with opportunities to try out products before purchase and to provide direct sales support that delivers personal advice to customers (Verhoef et al. 2007; Avery et al. 2012). Another benefit of the physical store is that its physical presence and personal contact with sales staff makes it easier for customers to trust in the retailer. A physical store presence may especially help those retailers that are relatively unknown in the market or do not offer feedback from other customers on their products online (Benedicktus et al. 2010). Online touchpoints were found to be more suitable for comparing products and prices and getting the best offer available (Noble, Griffith, and Weinberger 2005; Verhoef et al. 2007). This finding is not surprising, as online shops can be run at much lower costs than physical retail outlets in prime locations. In this context, Tang and Xing (2001) find that prices of pure online retailers are, on average, 14% lower than those of multichannel retailers. Another benefit of the online store is that it allows customers to conveniently shop whenever, wherever, and from anywhere they desire (Avery et al. 2012).

From a retailer's perspective, customers who use more than one touchpoint on their path-to-purchase and thus engage in a purchase journey, may be beneficial in two important ways. First, customers using more than one touchpoint and channel (so-called multichannel customers) may be more valuable to the firm than single-channel customers. Second, retailers may benefit from customers using several different types of touchpoints along the journey because these different types of touchpoints may help retailers to pursue different managerial objectives. Concerning the first point, ample research has dealt with the question of whether multichannel customers are more valuable to the firm than single-channel customers (e.g., Kumar and Venkatesan 2005; Kushwaha and Shankar 2015; Thomas and Sullivan 2005; Venkatesan, Kumar, and Ravishanker 2007). Kumar and Venkatesan (2005) find that characteristics such as purchasing across multiple product categories, an increased cross-buying propensity and customer duration, and higher purchase frequency are positively associated with customers' propensity to shop across traditional and digital channels (so-called multichannel shopping). The authors find that, in terms of past customer value, multichannel customers are more profitable than single-channel customers. Similarly, Thomas and Sullivan (2005) find that, in general, multichannel customers generate more revenues than single-channel customers and that adding another channel to a given, single-channel purchase situation increases customer value. Almost 10 years later, Kushwaha and Shankar (2015) take a more nuanced view on the claim that multichannel customers are the most valuable customer segment by comparing multichannel customers with single-channel customers in different product categories. They find that multichannel customers provide higher monetary value than single-channel customers for hedonic product categories, such as apparel or cosmetics. On the other hand, web-only, store-only, and catalog-only customers were found to be the most profitable for utilitarian products, such as office or garden supplies.

Montaguti, Neslin, and Valentini (2015) build on the claim that multichannel customers are more valuable and study how firms can develop and implement a multichannel marketing strategy that entices customers to engage in multichannel shopping behavior, which may ultimately increase the firm's profitability. In the course of a field experiment, they analyze the effects of four different multichannel marketing campaigns and find that a marketing campaign that highlights the benefits of multichannel shopping but does not provide monetary incentives increases the number of multichannel customers and, ultimately, the average profitability per customer.

Concerning the second way a journey approach may benefit retailers, studies have found that the aptitude of different touchpoints for achieving different managerial goals varies. For instance, Verhoef and Donkers (2005) find that some online touchpoints are more suitable for customer retention (i.e., long-term objectives), whereas others are more suitable for cross-selling (i.e., short-term objectives). TV and radio advertising may help to increase cross-buying, and the retailer's website is most suitable to increase customer retention. Several studies examine the contribution of individual touchpoints to important retail metrics such as sales conversion (e.g., De Haan, Wiesel, and Pauwels 2016) or brand consideration (Baxendale et al. 2015). Baxendale, Macdonald, and Wilson (2015) use real-time experience tracking of customers' touchpoint frequency and touchpoint valence to understand the relative impact of six different touchpoint types (manufacturer-paid media, retailer-paid media, communications in the physical store, word of mouth, peer observation, and earned media) on changes in customers' overall brand perception They find that peer observations are an important but neglected touchpoint to influence brand consideration and that in-store communications are more influential than other advertising activities. Pauwels, Aksehirli, and Lackman (2016) examine the influence of different marketing activities on offline and online store traffic. They find that paid marketing activities are more important than online word of mouth to drive offline store traffic, but electronic word of mouth is more important than paid marketing activities in driving traffic to the online store. When determining the contribution of each touchpoint to the ultimate purchase, some researchers apply attribution models to identify the most important touchpoint at each stage of the journey and thus improve decisions on how to allocate marketing budget across touchpoints (Lemon and Verhoef 2016). For instance, De Haan et al. (2016) examine firm-initiated (television, radio, e-mail) and customer-initiated advertising touchpoints (referrals, price comparison sites, search engines) and their effectiveness in terms of conversion in different stages of the customer journey. They find that customer-initiated advertising whose content fits the touchpoints' editorial content (e.g., price promotions on a price comparison portal) is most effective in inducing conversion. Furthermore, their model shows that reallocating the advertising budget across the different touchpoints according to their effectiveness yields a 21% increase in revenue as

compared to the status-quo revenue for the retailer. Similarly, Danaher and Dagger (2013) analyze the effectiveness of a retailer's short term promotional sales advertised in 10 online and offline advertising channels (TV, radio, e-mail, direct mail, magazine, newspaper, social media, catalog, display ads, and sponsored search). They find that catalogs, direct mail, TV, e-mail, and sponsored search were most effective in inducing dollar sales and profits at the focal retailer.

Having examined how customers who use multiple touchpoints along their journey may benefit both retailers and customers, it is necessary to shed light on how customers typically travel along their journey. Therefore, the next section will summarize existing research on the most prevalent customer journey sequences, the contribution of these sequences to important retail metrics, and the dominant customer journey segments.

2.3   How Customers Travel Along Their Journey

Several research studies focus on sequences in the customer journey. Gensler, Verhoef, and Böhm (2012) examine customers channel choice intentions in retail banking to identify drivers of specific sequences to occur in the journey. They find that not only channel attributes but also channel experience and spillover effects influence customers' channel choice and thus highlight that touchpoints in a journey are interconnected. Experience effects occur when customers' prior experiences with a channel positively influence the likelihood that the customer will use this channel on a future purchase. Spillover effects occur when customers' use of a specific channel in one stage of the customer journey positively influences the customers' use of that channel in a subsequent stage of the journey. Richardson (2010) and Rosenbaum et al. (2017) discuss the benefits of customer journey mapping, which involves representing the sequence of touchpoints between customers and firms along the entire purchasing process, on a conceptual basis. The authors state that customer journey mapping may help retailers to better understand and manage the variety of touchpoints shaping the journey and thus create an outstanding customer experience.

A variety of empirical studies examine specific customer journey sequences and their effect on important retail metrics, such as sales conversion (e.g., Li and Kannan 2014) or store traffic (Pauwels et al. 2016). Some studies examine online customer journey sequences. For instance, Anderl et al. (2016a) analyze eleven online touchpoints by representing customer journey path data as first- and higher-order Markov walks. They find that paid search touchpoints (e.g., SEA) are often followed by paid and unpaid search (e.g., SEO) touchpoints, whereas unpaid search contacts are only followed by unpaid search contacts. Furthermore, they find that specific sequences contribute differently to sales conversion. In a different

research work, Anderl, Schumann, and Kunz (2016b) analyze customer clickstreams across eight online marketing channels with the help of cookie tracking. The authors find that past purchases at one touchpoint are the strongest predictor of future purchases at that touchpoint. Furthermore, they find that customers who first use a firm-initiated touchpoint (e.g., display or e-mail advertising) and then a customer-initiated touchpoint (e.g., price comparison portal, branded and generic search queries) show the highest purchase propensity. However, if customers switch from a branded customer-initiated touchpoint (direct type-in of the retailer websites URL, search queries that include typing of the brand's name) to a generic customer-initiated touchpoint (comparison portals, search queries that do not include brand name), purchase probability decreases. Using a similar empirical design as Anderl et al. (2016b), Becker, Linzmajer, and Wangenheim (2017) use cookie-tracking technology to analyze customer clickstreams and their varying effects on customers' purchase intent in three different industries. Among other things, they find that online customers visit only one or two channels on their path to purchase but that even single-channel purchases may involve several sequential clicks within the channel. Xu, Dhuan, and Whinston (2014) also analyze customer clickstreams to examine the effects of different online advertisements on purchase conversion. They find that clicks on display advertisements have only a small direct effect on purchase probability but may still be impactful in order to increase conversions; they stimulate clicks to search advertisements, which are much more likely to result in conversion than display advertisements. With this finding, Xu et al. (2014) challenge conversion as the sole measure of online marketing effectiveness and question the widely used last-click metric when attributing conversions. Li and Kannan (2014) also question the last-click metric; they find that this metric underestimates the contribution of display advertising, e-mail advertising, and referrals to conversion and overestimates the impact of organic search (as opposed to paid search where retailers' may pay the search engine provider for higher listings). The authors come to this conclusion after having analyzed how the prior visit of a specific online touchpoint may influence the probability of a subsequent visit of that same touchpoint (carryover effects) or the probability of a subsequent visit of another online touchpoint (spillover effects). Li and Kannan (2014) detect several carryover and spillover effects between the online marketing touchpoints and thus shed light into the interdependencies between touchpoints. Few studies examine customer journey sequences across online and traditional touchpoints. An insightful study in this domain is the work by Pauwels et al. (2016), which finds that more than a third of the variance in offline store traffic is created by indirect effects of TV and print ads via electronic word of mouth and organic search. Similar to Xu et al. (2014) and Li and Kannan (2014), Pauwels et al. (2016) claim that marketers often underestimate the effectiveness of various marketing activities by looking only at their direct

effects on performance instead of the whole customer journey and the interrelationships between different channels.

One of the most researched customer journeys, or customer journey sequences, is so-called research shopping. Research shopping is a practice whereby customers search in one touchpoint but end up purchasing through another (Verhoef et al. 2007). Whereas loyal research shoppers search and purchase in different touchpoints offered by the same retailer, competitive research shoppers (so-called free riders) search in one retailer's touchpoint but end up purchasing in another retailer's touchpoint (Van Baal and Dach 2005; Neslin and Shankar 2009). Verhoef et al. (2007) identify three important drivers of research shopping: (1) channels' differing attributes that benefit search and purchase in different ways; (2) lack of channel lock-in, which is a channel's disability to translate search directly into purchase; and (3) cross-channel synergies for the firm (e.g., economic benefits) and/or its customers (e.g., smart shopper feelings). The most prominent form of research shopping is webrooming, which is the combination of online search and a subsequent purchase in a physical store (Verhoef et al. 2007; Flavián, Gurrea, and Orús 2016). Arora and Sahney (2017) integrate the theory of planned behavior and the technology acceptance model to build a conceptual model on webrooming behavior. Within this model, the authors present several drivers of webrooming, such as perceived ease of online search and lack of trust in purchasing online. Flavián et al. (2016) examine how the previous interaction with a product online influences customers' purchase behaviors in-store. They find that combining online search and offline purchase for a target product, as compared to search and purchase in-store, increases customers' purchase intention, search process satisfaction, and choice confidence. Verhoef et al. (2007) present a few initiatives to increase online channel lock-in, rule out the shortcomings of online store retailing as compared to physical store retailing, and thus eventually counteract competitive webrooming. Those initiatives include adding a virtual service assistant to the online shop or remembering online customers' purchase histories and contact details. Another prominent form of research shopping is so-called showrooming. Showrooming occurs when consumers gather information in a retailer's brick-and-mortar store but end up purchasing the product/service online—either at the retailer's or a competitor's online shop (Lemon and Verhoef 2016). The mobile device has stimulated customers to engage in showrooming behavior, as it may help customers to easily compare product offerings and prices in-store with the offerings provided online (Rapp et al. 2015). Industry reports show that showroomers predominantly engage in competitive showrooming (i.e., purchasing at a competitor's online shop) and thus threaten brick-and-mortar retailers. Interestingly, getting the lowest price is not the only motivation for customers to engage in showrooming. Gensler, Neslin, and Verhoef (2017) conduct a survey among more than 500 US consumers to find that not only price-related factors but also perceived gains in product

quality, shorter waiting time for service in brick-and mortar stores, decreased online search costs and time pressure have an impact on showrooming decisions. If salespeople perceive showrooming among their customers, they may suffer from lower levels of self-efficacy and may show decreased performance (Rapp et al. 2015). However, the negative effects of showrooming can be mitigated if salespeople offer potential showroomers bundles of products that are not available in this form online and are thus hard to compare (Rapp et al. 2015). Another strategy to counteract showrooming is to invest in the benefits of physical store retailing, such as by offering value-added sales advice.

Not only studies on the most prevalent journey sequences and research shopping contribute to our understanding of how customers travel along the journey. Studies identifying the dominant multichannel customer segments may also shed some light on customers' paths to purchase. The majority of the multichannel segmentation studies categorize customers on the basis of their preferred purchase touchpoints (Bhatnagar and Ghose 2004; Keen et al. 2004; Thomas and Sullivan 2005). These studies deliver valuable insights regarding the most preferred touchpoint for purchase (e.g., retailer's physical store, retailer's online store, retailer's catalog) across different customer segments. Furthermore, these studies present the most important sociodemographic and psychographic characteristics of the different customer segments. However, these studies do not examine customers' usage of specific touchpoints in the search and post-purchase stage of the journey, and thus their contribution to customer journey research is limited. Three studies contribute significantly to our understanding of how customers travel along the customer journey. In 2008, Konus, Neslin, and Verhoef extend the abovementioned studies in multichannel customer segments by including the search phase into their segmentation analysis. Konus et al. (2008) identified three distinct customer segments that differ from each other in the perceived appropriateness of specific touchpoints for search and purchase along the journey: multichannel enthusiasts, store-focused customers, and uninvolved shoppers. Furthermore, they find that covariates such as shopping enjoyment and innovativeness predict segment membership and that the three segments apply to a variety of product categories. De Keyser, Schepers, and Konus (2015) replicated and extended the study by Konus et al. (2008) by including the post-purchase stage and a new touchpoint (the call-center) into their segmentation analysis. They identify six customer segments that differ from each other in the usage of specific touchpoints in the search, purchase, and post-purchase stage of the customer journey. Sands et al. (2016) use Latent Class Cluster analysis to segment customers based on the importance of specific touchpoints in the search, purchase, and post-purchase stage of the customer journey. They examine the importance of four distinct touchpoints (physical store, online store, mobile, and social media) to identify five multichannel customer segments. They identify three research shopper segments who prefer to research online and purchase offline and thus provide further proof for webrooming as the

most prevalent form of research shopping. Interestingly, they also find that one customer segment, which accounts for 15% of all customers, places high importance on using social media channels throughout all stages of the customer journey.

Having elaborated how customers travel along their journey from search to purchase and post-purchase, an important question comes up: How can retailers influence the customer's journey? Subtly steering customers along their journey and thus influencing their choices of touchpoints in specific journey stages may help retailers to benefit from distinct advantages of touchpoints. Therefore, the next section summarizes the existing research on how retailers may influence customers' choice of touchpoints and thus potentially shape the customer journey.

2.4   How Retailers Can Influence the Customer Journey

The term "customer steering" comprises all activities of a firm to subtly guide customers from one touchpoint to another along their journey (Myers, Pickersgill, and Van Metre 2004). Efficient customer steering has the firm's goal to guide consumers from search to purchase by balancing customer needs with the economics of a retailer's different channels (Myers et al. 2004). At the beginning of their relationship with the retailer, customers are more receptive to retailer actions influencing their touchpoint choice than they are later. In general, all customers are receptive to some form of steering, but only as long as customers do not get the feeling that the retailer is taking away his or her choices (Valentini, Montaguti, and Neslin 2011). Herhausen, Schögel, and Schulten (2012) and Trampe, Konus, and Verhoef (2014) point out the risks for retailers that force their customers to switch to other touchpoints. For instance, Herhausen et al. (2012) find that, in order to strategically steer customers from one proprietary channel to another, multichannel retailers may enlarge their assortment in one channel or reduce the assortment in all the other channels. However, such actions can also unintentionally drive customers to competitors. The authors show that this risk is especially high when customers have a strong relationship with the channel from which the retailer tries to lure them away or when customers are unfamiliar with the channel they are steered toward and would thus face significant learning investments when switching channels. In this context, Falk et al. (2007) examine how the status quo bias influences customers' usage intentions toward a new self-service online channel. They find that a customers' satisfaction with the offline channel may prohibit the use of a new online channel. Trampe et al. (2014) examine reinforced and forced steering strategies. They find that customers who are punished for their usage of a preexisting channel (i.e., forced steering, such as charging a fee for banking information sent per mail) show higher levels of reactance than those who are steered

to a specific channel with rewards (i.e., reinforced steering, such as providing a voucher to be redeemed in the new channel). There are two ways for retailers to shape the customer journey and thus have the chance to subtly steer customers along the journey. One way is to alter a retailer's channel portfolio by adding or eliminating specific touchpoints and channels. Another way is to integrate channels in the existing channel portfolio in such a way that customers' usage of one touchpoint or channel increases the probability of another touchpoint or channel to follow in the journey. The next two paragraphs will examine existing research on the first and second ways in detail.

As touchpoints and channels visited by customers along their journey influence one another (Voorhees et al. 2017), retailers may influence customers' perceived attraction to and usage of specific touchpoints in different stages of the journey by adding or eliminating specific channels. Konus, Neslin, and Verhoef (2014) examine how the elimination of a search channel (catalog) impacts a multichannel retailer that operates two purchase channels (telephone and internet). They find that search channel elimination decreases purchase incidence, especially for those customers who typically used the telephone for purchases, and shifts purchase channel choice from the telephone to the internet. The authors also find that the elimination leads to a net positive impact on the retailer's profits as the lower sales revenues are compensated by the cost savings from eliminating the catalog. Several studies examine how adding an online channel may influence a retailer's traditional channels. Van Nierop et al. (2011) examine how the introduction of a retailer's informational website—which is a website that allows customers to browse products but does not offer them the option to purchase online—influences the frequency of shopping trips taken to the retailer's physical store and the amount of money spent there. Interestingly, the authors find that the informational website decreases store visits and money spent in-store. Potential reasons for these negative effects could be that more product information during search increases customers' purchase planning (which in turn decreases the number of shopping trips taken) and decreases impulse buying in-store (which, in turn, decreases the amount of money spent). Another reason may be that switching costs to competitors decrease when customers search for products online. In a similar study, Pauwels et al. (2011) find that the revenue impact of a new information website on the retailer's physical store depends on the customer segment and the product category. Specifically, the impact of an informational website on in-store revenues is higher for sensory products, for customers who use the internet a lot, and for customers who live far away from the retailer's physical store. Li et al. (2015) segment customers based on their responses to the introduction of a new online shop for a retailer that used to provide only a call-center and a catalog. The authors find that the online channel introduction does not influence the purchases of frequent shoppers. Frequent shoppers simply shift some of their demand from offline to online channels. On the other hand, occasional

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shoppers increase their overall spending after the introduction of the online shop (same offline spending plus additional online spending). Li et al. (2017) study the interrelationships between retailer-owned and competitor-owned touchpoints. The authors examine how customers' adoption of a retailer's new online shop is influenced by their past shopping behavior at competing retailers. Results show that customers who visited a competitor's online shop for their last purchase are more likely to use the retailer's new online shop for their next purchase. Furthermore, they find that new customers are more likely to adopt the retailer's new online channels than existing customers who are more engaged with the existing catalog channel. Two studies examine how adding a physical store to a retailer's distribution network may influence consumer behavior. Avery et al. (2012) analyze how adding a physical store impacts a retailer's existing online and catalog channel. They find empirical evidence for decreased sales in the catalog in the short run, which indicates cross-channel cannibalization between the retailer's physical store and its catalog. However, they also find increased sales in the catalog and the online channel in the long run, which indicates cross-channel synergy between the retailer's channels. The reason for the positive long-term effect of the physical store introduction is that physical stores may act as a billboard and thus attract new customers to a retailer's catalog and online store. Pauwels and Neslin (2015) study how adding a physical store influences purchase frequency, return frequency, and order size in the retailer's existing catalog and online channels. They also find that the physical store introduction cannibalizes purchase frequency in the catalog but does not have a significant effect on purchase frequency online. In sum, Pauwels and Neslin (2015) find that purchases in the new physical store compensate for the loss in purchases in the catalog and thus increase overall purchase frequency.

The second way for retailers to shape the customer journey is to integrate their channels. Channel integration occurs when retailers provide access to and/or knowledge about one channel in another channel (Bendoly et al. 2005). For instance, a retailer's website that features in-store availability of specific products is a typical example of online-to-physical channel integration. Several studies examine this phenomenon. For instance, Bendoly et al. (2005) find that higher levels of online-to-physical channel integration may help multichannel retailers to reduce customers' likelihood of switching to competitors after having experienced a product availability failure in the retailer's online shop. Herhausen et al. (2015) examine the impact of two online-to-physical channel integration initiatives (i.e., in-store availability check online, purchase online, and return in-store) on customers' search intentions, purchase intentions, and willingness to pay in online and physical stores. They find that channel integration does not negatively affect physical store outcomes but indirectly increases online shop outcomes via perceived service quality of the online shop. Emrich and Verhoef (2015) study web designs in retailer online shops. Whereas the so-called homogeneous web design

features the same colors as the physical store, organizes its products analogical to in-store shelves, and provides product information corresponding to product labels in the physical store, the prototypical web design features multiple browsing features, a large search window on top of the page, and customer reviews in the product information section. The authors find that a store-oriented web design increases online patronage intentions for store-oriented shoppers, which is a highly valuable customer segment that is twice as likely to shop from the multichannel retailer on a monthly basis. Another study in the context of online-to-physical channel integration by Darke et al. (2016) finds that providing pictures of the retailer's office building and management staff on retailer websites can help reduce psychological distance between the customer and the retailer and may ultimately increase customers' trust and purchase intentions online (Darke et al. 2016). Bhargave, Manthonakis, and White (2016) study physical-to-online channel integration, examining whether the mere reminder that product information, which customers have encountered in-store, is also available online influences customers' purchase behavior in-store. They find that this so-called cue-of-the-cloud effect may increase customers' intention to buy and the amount of money spent in-store. Two studies examine channel integration on a more holistic level and thus provide insights into the different types of channel integration and their effects on a retailer's performance. Cao and Li (2015) identify four multichannel integration modes: (1) silo (firm operates different channels), (2) minimal integration (firm integrates marketing communication across channels), (3) moderate integration (firm integrates consumers' information access and order fulfillment across channels), and (4) full integration (firm integrates all communication and distribution channels to deliver a seamless customer experience). They find that a retailer's degree of channel integration is positively associated with its sales growth. Oh, Teo, and Sambamurthi (2012) study how IT-enabled channel integration can enhance a retailer's performance. They identify six different integration dimensions that can be mapped across the pre-purchase, purchase, and post-purchase stages (integrated promotions, integrated transaction information, integrated product and price information, integrated access to information, integrated order fulfillment, and integrated customer service). Analyzing those six dimensions, they find that IT-enabled channel integration improves the retailer's performance as measured by net profits, revenue growth, and return on investment. Some studies examine integration along dimensions of the retail mix. For instance, Emrich, Paul, and Rudolph (2015) analyze the impact of a retailer's multichannel assortment integration on customers' patronage intentions. They find that, in comparison with no assortment integration (i.e., offering different assortments in the online shop and in the physical store), full assortment integration (i.e., offering the same products in the retailer's physical store and online shop) increases customers' patronage intentions. In comparison to no assortment integration, asymmetrical assortment integration (i.e., the online

shop offers the full assortment of the physical store plus several other items) was found to decrease customers' patronage intentions in situations where assortments have substitutive relations. Kireyev, Kumar, and Ofek (2017) study price integration across channels and examine the factors that drive retailers to employ a self-matching price policy. This policy allows a customer to pay the lowest of a retailer's offline and online prices in a given channel, if the customer can provide evidence for the price being lower in another channel. They find that self-matching can decrease online competition (because retailers' that offer self-matching set higher prices online) and may open up opportunities for offline price discrimination in a duopoly setting.

A few recently published studies examine practical examples of channel integration. For instance, Bell, Gallino and Moreno (2017) study so-called showrooms, which are brick-and-mortar stores where customers can touch and try the products in-store but can only purchase them online. The authors find that showrooms may help to increase sales conversions, attract new customers, and reduce the number of returns. Gao and Su (2017) study how offering a click & collect service may contribute to a retailer's profits. They find that click & collect may help retailers to target new customers but may also decrease profits for existing customers because of increased fulfillment costs. Furthermore, the authors find that revenues gained from click & collect must be shared across online and physical channels in order to avoid conflicts between online and in-store personnel. Gallino, Moreno, and Stamatopoulos (2017) study the impact of a retailer's ship-to-store service on its sales dispersion. The ship-to-store service is similar to the click & collect service as it allows customers to ship products from the retailer's online shop to one of its physical stores if the product is not available in the physical store. The authors find that offering a ship-to-store service for 90% of the lowest-selling products increases the contribution of these products to total sales by 0.75%.

2.5   New Digital Touchpoints in the Customer Journey

Customers now visit a variety of new digital touchpoints, which are not only provided by the retailer but also by third parties, other customers, and even manufacturers (Lemon and Verhoef 2016). As many of these new digital touchpoints are difficult for the retailer to control, they have quickly disrupted the traditional customer journey. Social media touchpoints in particular, where customers engage in customer-to-customer interactions and thus mutually influence one another, are hard to control for retailers (Leeflang et al. 2014). Not only social media but also the mobile device has taken control from retailers as it enables customers to more easily compare products and prices and engage in showrooming behavior (Rapp et al. 2015). Social media and mobile applications and promotions are among the most

discussed new digital touchpoints in the customer journey because they offer the biggest growth opportunities for retailers in the upcoming years (Leeflang et al. 2014; Srinivasan et al. 2015). Therefore, this section will summarize the most important insights on the role of these touchpoints in the customer journey.

An abundance of research examines the power of customer-generated content in social media. Because bad news travels faster within and across channels than does good news, negative experiences with a brand that are reported by customers in social media may quickly destroy brand reputation (Hewett et al. 2016). In this context, Chevalier and Mayzlin (2006) find that the majority of customers' book reviews on amazon.com and BarnesandNoble.com are positive and that an increase in a book's review rating increases its sales. However, the authors also find that a bad book review holds more weight for customers than a good book review in their purchase decisions. Borah and Tellis (2016) mined text from customers' online chatter about 48 car models from four different brands on blogs, forums, and other social media platforms. They coded text data on the content of a conversation (e.g., safety) and its valence (e.g., negative) for all 48 car models. The authors find that negative chatter about one car model increases negative chatter about another model of the same brand and about similar models of other brands (so-called negative spillovers). They highlight the risks of customer-generated content in social media by showing that such negative spillover effects may negatively impact a retailer's sales. Several other studies examine brand-generated content in social media. The biggest risk for retailers in social media is that they cannot engage customers with brand-related activities but rather enrage them (e.g., by reacting poorly on a customer comment in social media; Leeflang et al. 2014). Furthermore, retailers have not yet figured out how to best measure their influence in social media and monitor the abundance of messages disseminated every day (Leeflang et al. 2014). Therefore, retailers struggle with how to set up their social media communication strategy and position their brand in this new medium (e.g., Barcelos et al. 2018). To better understand consumer behavior in social media, De Vries, Gensler, and Leeflang (2012) study the popularity of different brand posts in social media. They find that customers are more likely to press "like" or post a comment under an interactive and vivid brand post (e.g., one involving a question) and that the number of positive comments under a brand post is positively related to the popularity of the post. Kumar et al. (2013) contribute to the heated debate on whether social media marketing may contribute to actual sales. They propose a method to measure social media return on investment and test it for an ice cream retailer in India. Results show that social media marketing may contribute to a retailer's sales growth, return on investment, the spreading of positive word of mouth, and increased brand awareness. Srinivasan et al. (2015) trace customer activity across different touchpoints and examine the effects of these touchpoints on brand sales at a large US fast-moving consumer goods company. The authors find that

several online marketing touchpoints (including social media) account for 15% in sales variance and that "unliking" a brand on Facebook is a proxy for customers' disentanglement from the brand, which has a substantial negative effect on brand sales. From a journey perspective, they find that TV advertising can induce flow as it leads to clicks on paid search (cognitive state), followed by liking the brand on Facebook (affective state) and ultimately purchasing a product (conative state). Some studies examine both user- and firm-generated content in social media. For instance, Onishi and Manchanda (2012) analyze whether new, customer-generated media (blogs) and traditional, firm-generated media (TV ads) either damage or contribute to each other's effectiveness. The results of these cross-channel effects of media advertising show that TV advertisements stimulate blogging activity before the launch of a new product but are less effective after having the product's launch. Colicev et al. (2017) analyze the impact of earned social media (i.e., voluntary user-generated brand content) and owned social media (i.e., brand-generated brand content) on brand awareness, customer satisfaction, and purchase intention. They find that owned social media increases brand awareness and customer satisfaction but not purchase intent and that earned social media does affect purchase intention.

Some studies examine how the mobile device has disrupted consumer behavior along the journey. For instance, De Haan et al. (2018) investigate how customers' switching from the mobile phone to the desktop computer in the journey impacts conversion rates at an online retailer. They find that customers who switch from their smartphones to their desktop computers in the course of their journey show higher conversion rates. The authors highlight the importance of studying device switching along the customer journey and argue that calculating conversions solely based on a single device may significantly underestimate the role of mobile devices, which may indirectly induce conversion. Wang, Malthouse, and Krishnamurthi (2015) study mobile shopping via smartphones or tablets and analyze order frequency and monetary order size at an online-based grocery retailer. They find that, for low-spending customers, mobile shopping, as compared to shopping on the desktop computer, increases order size and purchase frequency. Furthermore, they find that the mobile device is typically used when shopping for habitual products, which is an activity where the convenience of shopping is most important. The authors advise managers to leverage the potential of mobile shopping but to keep in mind that for new products, for which customers want to consider the pros and cons of a purchase in detail, mobile devices may not be the best choice. Hui et al. (2013) study mobile promotions in order to show that the distance traveled by customers from one product to the other in a retailer's physical store is positively associated with the amount of unplanned spending. The authors use targeted mobile promotions to encourage customers to travel longer paths in-store. These promotions were found to increase customers' path length in-store and their unplanned spending by USD 21.

Some research works examine the role of mobile devices in the customer journey on a conceptual basis. For instance, Andrews et al. (2016) identify important questions for further research concerning the interaction of mobile and other touchpoints in the customer journey. The authors encourage researchers to study issues such as the factors that determine promotional investment shift from print to mobile and how showrooming behavior will affect the effectiveness of mobile promotions.

2.6   The Customer Journey in the Health Industry

The digitalization of the customer journey has been studied in many industries, such as groceries (e.g., Wang et al. 2015), telecommunication (e.g., De Keyser et al. 2015), and apparel (e.g., Kushwaha and Shankar 2015). However, few studies examine how the internet has disrupted the customer journey in the health industry. Due to technological advancements, the number of touchpoints shaping customers along their journey has also risen drastically in the health industry (Agarwal et al. 2010; McKoll-Kennedy et al. 2017a). Still, health executives are in doubt as to whether the internet can take over an industry that relies so heavily on the customer's trust in the product/service and its provider (Li et al. 2014). This section will summarize the most important insights from the few studies that examine the customer journey in the health industry.

Sweeney, Danahaer, and McColl-Kennedy (2015) stress the importance of examining not only dyadic interactions between the firm and the customer in health service delivery but also the customer's whole service network which includes interactions between various entities, such as the service firm, other firms that provide complementary therapy, the customer's private sources (e.g., peers, friends, family), and, most importantly, the customer him- or herself and his or her prior experiences. The authors argue that firms need to integrate all these touchpoints to benefit from their comparative advantages and thus create enhanced value for both the customer and the service firm. In this vein, McColl-Kennedy et al. (2017a) examine how health customers' interactions with medical staff, friends and family, and other customers increase their well-being. They find that adding interactions with other customers and friends and family to medical interactions significantly enhances the health customers' well-being. In another study, McColl-Kennedy et al. (2017b) map the customer journey of a health patient and highlight that all stages of the journey (so-called sub-events) and the actors in it (friends, family, doctors, nurses, etc.) shape the customer's health experience. The authors stress the importance of evaluating customers' emotions throughout the whole journey and also provide recommendations for health firms to better address these different emotions throughout the journey. Some of these recommendations include ensuring

emotional stability of the health staff and leveraging the potential of technology to create a supportive service environment. A study by Gallan et al. (2013) also highlights the importance of evaluating patients' emotions along their health service experience. They find that customers whose affective state during a health service experience is more positive are more likely to participate in the health service experience and thus co-produce the health service together with the health staff. Furthermore, the authors find that this participatory behavior of patients during health services delivery (e.g., sharing information on the current condition, preferred treatments, and major anxieties) increases patients' perceived quality of the health service organization and their satisfaction with the service experience.

2.7   Research Gaps

Table A-1 summarizes existing studies in the most important research areas of the customer journey. While these studies contribute substantially to our understanding of the customer journey and the various channels and touchpoints that shape the journey, several untapped but crucial issues in customer journey research can be identified.

First, even though existing multichannel segmentation studies deliver valuable insights into the customer journey (e.g., De Keyser et al. 2015; Konus et al. 2008; Sands et al. 2016), a clear understanding of how customer journeys differ among different customer segments in the new digital age is missing. With the proliferation of new touchpoints, customers' journey paths have become more versatile (Lemon and Verhoef 2016) and have given rise to a variety of customer journey segments. In order to deliver an elevated customer experience to these heterogeneous segments, retailers are confronted with strategic and operational challenges on how to allocate their budgets and management efforts across the various touchpoints (e.g., Leeflang et al. 2014). Existing multichannel segmentation studies focus on examining a retailer's online and offline channels and thus fail to account for the prevalence of competitor-owned, customer-owned, and external touchpoints shaping the customer journey (Baxendale et al. 2015). Furthermore, existing customer journey studies typically focus on conversion rates as the sole outcome of the journey (e.g., Anderl et al. 2016a; Xu et al. 2014) and thus fail to account for the journey's long-term effects, such as customer loyalty. Little is known about how customers from different segments travel along the journey and which touchpoints and metrics (e.g., product and journey satisfaction) are most important in increasing their loyalty toward the retailer.

Table A-1

Existing Research on the Customer Journey

Area of Research	Specific Topic	Representative Studies
Defining the customer journey	Customer journey stages	Court et al. 2009; Edelman 2010; Howard and Seth 1969; Lavidge and Steiner 1961; Srinivasan et al. 2015
	Customer experience and customer journey	Berry et al. 2002; Bolton et al. 2014; Lemon and Verhoef 2016; Patricio et al. 2008; Puccinelli et al. 2009; Voorhees et al. 2017
	The disruption of the customer journey in the digital age	Lemon and Verhoef 2016 ; Srinivasan et al. 2015; Tax et al. 2013; Van Bommel et al. 2014
Benefits of taking the customer journey approach	Comparative advantages of channels and touchpoints for the customer	Avery et al. 2012 ; Noble et al. 2005; Tang and Xing 2001; Verhoef et al. 2007
	The value of multichannel shoppers for retailers	Kumar and Venkatesan 2005; Kushwaha and Shankar 2015; Montaguti et al. 2015; Thomas and Sullivan 2005; Venkatesan et al. 2007
	The potential of touchpoints and channels to help reach managerial objectives	Baxendale et al. 2015; Danaher and Dagger 2013; De Haan et al. 2016; Pauwels et al. 2016 ; Verhoef and Donkers 2005
How customers travel along the journey	Journey sequences	Anderl et al. 2016a; Anderl et al. 2016b; Becker et al. 2017 ; Gensler et al. 2012; Li and Kannan 2014; Pauwels et al. 2016; Xu et al. 2014
	Research shopping	Arora and Sahney 2017; Flavián et al. 2016; Gensler et al. 2017; Neslin and Shankar 2009; Rapp et al. 2015; Van Baal and Dach 2005; Verhoef et al. 2007
	Multichannel customer segments	De Keyser et al. 2015; Konus et al. 2008; Sands et al. 2016
How retailers may influence the customer journey	Customer steering along the journey	Myers et al. 2004; Falk et al. 2007; Herhausen et al. 2012; Trampe et al. 2014
	Adding and eliminating channels and touchpoints	Avery et al. 2012; Konus et al. 2014; Li et al. 2015; Pauwels et al. 2011; Pauwels and Neslin 2015; Van Nierop et al. 2011
	Channel integration	Bhargave et al. 2016; Bell et al. 2017; Bendoly et al. 2005; Cao and Li 2015; Darke et al. 2016; Emrich and Verhoef 2015; Emrich et al. 2015; Gallino et al. 2017; Gao and Su 2017; Herhausen et al. 2015; Kireyev et al. 2017; Oh et al. 2012
The role of new digital touchpoints in the journey	Social media	Borah and Tellis 2016; Chevalier and Mayzlin 2006; Colicev et al. 2017; De Vries et al. 2012; Hewett et al. 2016; Leeflang et al. 2014; Onishi and Manchanda 2012; Srinivasan et al. 2015
	The mobile device	Andrews et al. 2016; De Haan et al. 2018 ; Hui et al. 2013; Wang et al. 2015
The customer journey in the health industry	Channels and touchpoints in the health journey	McKoll-Kennedy et al. 2017b; Sweeney et al. 2015
	Co-creation in health experiences	Gallan et al. 2013; McColl-Kennedy et al. 2017a

Second, as shown in Table A-1, few studies examine the customer journey in the health industry. The abundance of touchpoints that may influence customers along their health journey and the multitude of information providers involved in the customer's journey (e.g., doctors, pharmacists, druggists, pharmaceutical companies) call for a better understanding of what various customer segments value the most along their health journey. No other industry relies so heavily on personal contact between firm and customer and the customer's trust in the product/service and in its providers as the health industry does (Li et al. 2014). Therefore, there is an ongoing debate on whether the customer health journey can be digitalized and thus depersonalized to some extent without losing customers' trust (e.g., Agarwal et al. 2010; McColl-Kennedy et al. 2017b). In order to provide customers with an elevated customer experience along the health journey, pharmacies, drugstores, doctors, and pharmaceutical companies need to gain more insights into the types of customers who trust or do not trust information online and offline. Furthermore, health providers lack a clear understanding of the biggest opportunities and threats of digital health services. As customer's health information is very sensitive and may discredit a customer in society, health service providers need to protect their customers' health data and may not share it with third parties (Malhotra, Kim, and Agarwal 2004). Therefore, the question of whether health services can be digitalized without interfering with the customer's privacy is still unanswered.

Third, despite some valuable studies on customer steering listed in Table A-1 (e.g., Herhausen et al. 2012; Trampe et al. 2014), the question of how retailers may actually steer customers to strategically important channels remains. Comparative channel advantages (e.g., Avery et al. 2012; Verhoef et al. 2012) suggest that steering customers from one channel to another may benefit retailers and customers alike. Given the website's aptitude to attract a large number of customers early in their search phase (e.g., Pauwels et al. 2011) and the advantages of the physical store to increase cross-selling opportunities (Neslin and Shankar 2009) and customers' trust (Benedicktus et al. 2010), online-to-offline steering deserves particular attention. Existing studies on channel integrating suggest that retailers may shape customers' purchase intentions in different channels (e.g., Herhausen et al. 2015) by integrating their online and physical channels. However, no study has examined how providing explicit information about a retailer's physical store on its website may induce online-to-physical channel switching among customers. Furthermore, the existing research lacks a clear understanding of how subtle website cues, such as the implicit communication of shopping benefits that are either associated with the physical store or the online shop, may qualify the effect of the explicit communication of channel integration.

Finally, although several studies examine marketing communication in new digital touchpoints of the journey (Colicev et al. 2017; De Vries et al. 2012), brands still struggle with how to communicate with customers in social media (Barcelos et al. 2018). Social media

platforms have disrupted marketing communication, enabling brands to publicly communicate with their customers in a very personal way (Labrecque 2014). Luxury brands, whose exclusive image seems to collide with the personal communication norms of social media (Dion and Arnould 2015), are particularly challenged to tailor social media marketing communication in such a way that it appeals to a wide audience but does not jeopardize their image. Previous research has demonstrated that not only the volume, valence, and content of brand communication but also the way brands communicate (the so-called communication style) may influence customers' attitudes and behavioral intentions in social media (Barcelos et al. 2018; Gretry et al. 2017; Steinmann et al. 2015). Although existing research provides valuable insights into brand language effects in social media, it fails to analyze how brand characteristics influence the effect of brand communication styles in social media. Specifically, it is unclear how brands from different status levels (i.e., luxury and non-luxury brands) may use their communication style to position their brand in social media. Examining this relationship is important, however, because research on brand communication ignores the potential of communication style for brand positioning.

This cumulative dissertation aims to narrow the abovementioned gaps in the existing research by (1) identifying the most prevalent customer journey segments in the new digital age, (2) examining the scope of the digital disruption of the journey in the health industry, (3) shedding light on how website information may help to steer online customers to a retailer's physical store, and (4) examining brand communication styles in the new digital touchpoint social media. The next chapter presents the overall research strategy as well as the contribution of each of the four research papers.

3 Research Strategy

The aim of this dissertation is to help retailers better understand and shape the customer journey. Given the complexity of the customer journey in the new digital age, more research is needed in various areas that are centered on the customer journey (see Table A-1 for an overview of the most important areas of research in the customer journey literature). While existing research on customer journeys contributes to our understanding in all of these areas, several issues remain untapped. This dissertation follows a cumulative approach in order to address the four abovementioned gaps in customer journey research and thus shed more light on the customer journey. In order to address the four different research gaps, this cumulative dissertation encompasses four research papers. Table A-2 provides an overview of the four different papers, their underlying research questions, their publication status, and the coauthors involved.

Paper 1 received a revise and resubmit at the Journal of Retailing, is currently under revision, and will be resubmitted to the journal in August 2018. This paper aims to address the first research gap by identifying the most prevalent customer journey segments in light of the abundance of new touchpoints available along the customer journey. With the first paper, we aim to contribute to research on how customers travel along the journey (see Table A-1). In particular, we aim to extend research on multichannel customer segmentation (e.g., De Keyser et al. 2015; Konus et al. 2008; Sands et al. 2016) by examining not only retailer-owned but also competitor-owned and independently provided touchpoints (e.g., search engines, newspapers, personal advice from friends). Given that the first paper investigates customers' usage of various new digital touchpoints in the journey (e.g., mobile applications, social media, comparison portals), it also contributes to research on the role of new digital touchpoints in the journey (see Table A-1). Furthermore, the first paper examines the relationships between customer satisfaction and loyalty intentions across different journey segments and thus extends the research on the online customer journeys that focuses on conversion as the sole journey outcome (e.g., Anderl et al. 2016a; Xu et al. 2014).

Table A-2: Overview of Papers Within the Cumulative Dissertation

	Paper 1	Paper 2	Paper 3	Paper 4
Title	Customer Journey Segments and the Relationships between Customer Satisfaction and Loyalty Intentions	The Digital Disruption in Over-The-Counter Drug Retailing	Websites as Information Hubs - How Informational Channel Integration and Shopping Benefit Density Interact in Steering Customers to the Physical Store	Positioning High- and Low-Status Brands in Social Media: The Impact of Communication Style
Authors	Dennis Herhausen Kristina Kleinlercher Peter C. Verhoef Oliver Emrich Thomas Rudolph	Kristina Kleinlercher	Kristina Kleinlercher Oliver Emrich Dennis Herhausen Peter C. Verhoef Thomas Rudolph	Kristina Kleinlercher Tim Böttger Thomas Rudolph
Research questions	What robust customer journey segments can be defined in the new digital age? How does the rising importance of the mobile device in the customer journey affect existing customer segments? How does the relationship between customers' product satisfaction, journey satisfaction, and loyalty intentions vary across different customer journey segments?	Which sources of information do customers trust most when searching for and purchasing OTC drugs? What customer segments exist in today's retailing of OTC drugs? What are the most prevalent opportunities and threats of technology-enabled services in today's OTC drug retailing?	What is the effect of explicit informational online-to-physical channel integration (ICI) on customers' online-to-physical store switching (OSS)? How does the implicit website information on shopping benefits moderate the effect of ICI on OSS?	How do communication styles differ between high- and low-status brands in social media? What brand status levels do customers infer from socially close and socially distant communication styles in social media? How does a customer's luxury brand aspiration moderate the effect of a brand's communication styles on customers' brand status perceptions in social media? What are the downstream consequences of using socially close and distant communication styles for high- and low-status brands in social media?
Publication status	Under revision in *Journal of Retailing* (2nd review round)	Published in *Marketing Review St.Gallen*	Published in *Journal of the Association for Consumer Research*	To be submitted to *Journal of Marketing Research*
Conference presentations	Presented at EMAC 2017, European Marketing Conference in Groningen, NL.		Presented at the Baker Retailing Center Conference in Philadelphia, USA.	Presented at EMAC 2017, European Marketing Conference in Groningen, NL. Nominated for Best Paper Award based on a Doctoral Work (top 20 papers) at EMAC 2017.

Paper 2 was published in the Marketing Review St.Gallen in autumn 2017. This paper aims to address the second research gap by examining how the internet and digital technologies have disrupted the customer journey in the health industry. The paper aims to show that digital touchpoints are an important information source for customers on their path-to-purchase of OTC drugs, but it also shows that not all technology-enabled health services please customers along their journey. With these results, the second paper aims to contribute to the widely underexplored field of research that focuses on the customer journey in the health industry (see Table A-1). Furthermore, the second paper segments customers based on their trust in specific online information sources and thus extends research on multichannel segmentation (e.g., De Keyser et al. 2015; Konus et al. 2008; Sands et al. 2016) to the health industry. Finally, the second paper also contributes to research on the role of new digital touchpoints in the customer journey (see Table A-1) as it examines customers' trust in several new digital health touchpoints (e.g., live chat with the pharmacist, blogs and forums, social media).

Paper 3 has been accepted at the Journal of the Association for Consumer Research. The paper is available online as of June 2018 and will be printed in September 2018. This paper addresses the third research gap as it explores one of the most prominent questions in customer journey research: How can multichannel retailers integrate two of their most important channels in the journey (i.e., online shop and physical store) in order to successfully steer customers along these channels? This paper shows that informational online-to-physical channel integration on a retailer's website may induce online customers to switch to the retailer's physical store and that this effect is further qualified by the implicit communication of shopping benefits on a retailer's website. By showing that customers can actually be steered, this paper contributes to research on customer steering along the journey (see Table A-1). Furthermore, this paper examines informational online-to-physical channel integration on a retailer's website and thus contributes to research on channel integration (see Table A-1). Finally, the third paper also contributes to the fourth research gap, to some extent, as it examines how a retailer's implicit and explicit communication on its website may influence consumer behavior. A retailer's website is not a new digital touchpoint per se and clearly is easier for a retailer to control than are other new digital touchpoints (i.e., social media). Still, insights on the effectiveness of website communication gained from this study may also contribute to research on marketing communication in new digital touchpoints.

Paper 4 was presented at the European Marketing Conference in Groningen in May 2017 and was declared one of the Top 20 conference papers submitted by doctoral students. This paper will be submitted to the Journal of Marketing Research in August 2018. The fourth paper in this cumulative dissertation addresses the fourth research gap by dealing with the challenges of marketing communication in the new digital touchpoint of social media. Therefore, this paper aims to contribute to research by examining how retailers may best

address their customers via social media (e.g., Barcelos et al. 2018; De Vries et al. 2012). The paper shows that communication styles employed by brands in social media differ according to the brands' status levels. Given that customers infer different brand status levels from different brand communication styles in social media, the fourth paper stresses the potential of communication styles to shape brand positioning in social media. Research suggests that social media touchpoints are valuable to increase brand awareness and form close consumer-brand relationships in the customer journey (e.g., Leeflang et al. 2014). Our paper shows that brand communication styles need to be aligned with the image the brand intends to convey in order for social media marketing communication to be most effective.

Table A-3 provides an overview of the touchpoints investigated; the independent, dependent and moderating variables examined; and the retail industries studied in each of the four papers. As shown in Table A-3, there are several similarities to be found among the four papers. For instance, Paper 1 and Paper 2 both identify customer segments as a descriptive outcome. Paper 3 and Paper 4 both focus on the effects of a retailer's communication in different touchpoints of the customer journey on consumer behavior. Paper 1 and Paper 3 both deal with customers' switching behavior across channels in the customer journey. However, one can also identify major differences between the four papers, which highlight the fact that they complement one another in contributing to customer journey research. For instance, while Paper 1, Paper 2, and Paper 4 all examine new digital touchpoints in the journey, they focus on different types of touchpoints. Paper 1 predominantly focuses on the role of the mobile touchpoints in the journey; Paper 2 highlights the importance of touchpoints, such as the live chat with the pharmacist and blogs; and Paper 4 draws attention to social media touchpoints in the customer journey. Furthermore, the papers address a variety of different attitudinal and behavioral customer variables that may help to measure the outcome of retailers' customer journey initiatives. Paper 1 examines customer journeys in relation to satisfaction and loyalty. Paper 2 examines customers' trust in different touchpoints. Paper 3 examines customers' channel switching, and Paper 4 examines customers' brand perception and intentions to like a brand in social media. Finally, the four papers shed light on the customer journey in a variety of different industries, ranging from groceries to apparel, electronics, entertainment, cosmetics, and health. The following four sections will provide a short overview of each of the four papers in the cumulative dissertation.

Table A-3

Similarities and Differences Between the Four Research Papers

	Paper 1	Paper 2	Paper 3	Paper 4
Touchpoints investigated	Various	Various	Retailer website Retailer physical store	Social Media
New digital touchpoints	Mobile device used Comparison portal Social media	Live-chat Blogs and fora Price comparison portals Social media		Twitter
Independent variable	Touchpoint usage Customer satisfaction		Explicit communication of online-to-physical channel integration	Brand communication style
Dependent variable	Customer loyalty		Online-to-physical store switching	Brand status perception Amount of brand likes Intention to like a brand's message
Descriptive outcome	Customer journey segments	Customer segments		
Moderator	Customer journey segments		Implicit communication of shopping benefits	Brand status
Industry	Apparel Electronics Entertainment Cosmetics	Health	Apparel Electronics Entertainment Cosmetics Groceries	Apparel

3.1   Summary of Paper 1: Customer Journey Segments and the Relationships Between Customer Satisfaction and Loyalty Intentions

Purpose. With the advent of the internet, the proliferation of new channels enables customers to design their very own journey that spans a multitude of different traditional and online touchpoints provided by retailers, other customers, and external stakeholders, such as Google or manufacturing brands. In light of this new complexity added to customer journey research, little is known about the most prevalent customer journey segments and their touchpoint preferences in different stages of the journey. To address this gap, this study segments customers by their use of specific touchpoints in the journey and examines how the rise of the mobile device affects existing customer segments. Furthermore, we aim to shed light on how the relationships between customer's product satisfaction and journey satisfaction and customers' loyalty intention toward the retailer vary among different customer journey segments.

Method. To identify different customer journey segments, we collected survey data from customers in Germany, Austria, and Switzerland at two points in time, 2013 and 2016. In this survey we asked customers to reconstruct their most recent purchase at a multichannel retailer that sells its products both online and in physical stores. During the course of this reconstruction of the journey from search to purchase, customers indicated the multichannel retailer at which they had made a purchase, what they had bought, which touchpoints they had visited, and in which order they had visited the specific touchpoints. Furthermore, we included measures for customer satisfaction with the product, satisfaction with the journey, and loyalty intentions toward the retailer in our questionnaire. To ensure customers' accurate reconstruction of touchpoint usage and sequence, the interval between the purchase and the participation in our survey was limited to a maximum of three months. In sum, we collected data on 2,780 individual customer journeys in 2013 and 3,105 individual customer journeys in 2016. The most frequent product categories in our sample were apparel, cosmetics, electronics, and entertainment.

Results. We identify five robust customer journey segments. Each segment represents a unique combination of retailer, competitor, and external touchpoints that shapes the customer journey. The segments are as follows: multiple touchpoint users, pragmatic online shoppers, online research shoppers, online-to-offline webroomers, and pragmatic store shoppers. Importantly, we can confirm the stability of our segments over time, even if customers' mobile usage along the journey increased significantly. Concerning loyalty formation for different journey segments, we find that the relationships between customer satisfaction and loyalty intentions vary considerably across the five segments identified. Specifically, we find that journey satisfaction has a stronger relationship with customer loyalty toward a retailer than product satisfaction has for customers in the multiple touchpoint segment. Conversely, product satisfaction has a stronger relationship with customer loyalty toward a retailer than journey satisfaction has for the pragmatic online and the pragmatic store segment. Our results help marketers to identify the most important touchpoints for different segments in the search and purchase stage of the journey and to develop segment-specific marketing strategies

3.2 Summary of Paper 2: The Digital Disruption in Over-The-Counter Drug Retailing

Purpose. Although technology has already disrupted the customer journey in industries such as apparel and electronics, it has only begun to transform the health market. Health executives are still in doubt as to whether the internet can take over an industry that relies so heavily on the customer's trust in products, services, and their providers. This paper aims to

shed light onto the extent of the digital disruption in over-the-counter (hereinafter OTC) drug retailing in Switzerland by examining customers' trust in different digital and traditional touchpoints along the journey, identifying today's prevalent customer segments in OTC drug retailing, and assessing the most popular digital health services.

Method. At two points in time, survey data of customers purchasing OTC drugs in Switzerland were collected. The final sample consisted of 722 customers in 2014 and 900 customers in 2017. Within the questionnaire, customers were asked to indicate their level of trust in information sources provided by pharmacists and druggists, doctors, manufacturers, peers, and other customers when purchasing OTC drugs. Furthermore, customers were asked to report on the importance of price, service, and assortment when choosing a pharmacy/drugstore for purchasing OTC goods. Finally, customers had to rate how much it would please or bother them if their pharmacist/druggist started to offer a number of technology-enabled services, such as click & collect or electronic health records. Several descriptive analyses and an analysis of variance conducted in SPSS were used to analyze the data.

Results. Results show that online touchpoints are an important information source in the customer journey of OTC drugs and that technology-enabled services are rapidly disrupting OTC drug retailing. Specifically, the author finds that online information sources, such as the pharmacy's website, the manufacturer's website, and the pharmacy's newsletter, are trustworthy information sources for more than one-third of customers. Furthermore, results yield that customers differ in their degree of trust in online touchpoints provided by the pharmacy and by independent providers (i.e., manufacturers or other customers). The relative importance customers place on product, price, and service when choosing a pharmacy to purchase OTC drugs differs significantly across the four segments. In general, customers who trust online information sources are more demanding when it comes to price-, service- and product-related issues. Finally, results show that services that integrate online and offline channels (so-called cross-channel services) please a large proportion of OTC customers. Conversely, services that reduce personal contact with the sales personnel or store proprietary customer data bother a large proportion of customers.

3.3 Summary of Paper 3: Websites as Information Hubs - How Informational Channel Integration and Shopping Benefit Density Interact in Steering Customers to the Physical Store

Purpose. Multichannel retailers should entice customers to switch from their website to their physical store because customers' spending tends to increase if they visit a retailer's

physical store in the course of their journey. In light of the ongoing debate regarding whether and how retailers may subtly steer customers to strategically important channels (Lemon and Verhoef 2016), this paper proposes that a retailer can steer customers from its website to its physical store by providing information about its physical store on its website. Therefore, we aim to examine how customers' propensity to switch from the retailer's website to its physical store is influenced by the explicit communication of the physical store's resources on the website. Furthermore, we draw on research about subtle website cues and their influence on consumer behavior to investigate how the effect of a retailer's explicit communication on customers' online-to-physical store switching depends on other, subtle website information about shopping benefits, which is communicated alongside the explicit information about the retailer's physical store.

Method. We investigate the role of a retailer's website in inducing online-to-offline store switching in a field setting with behavioral customer and objective firm data in major retail categories in Germany, Austria, and Switzerland. We collected customer data with the help of an online survey that asked customers to reconstruct their last purchase at a multichannel retailer that sells its products both in physical retail outlets and online. As our study focused on how customers processed a retailer's website information, we analyzed only those customers who visited the retailer's website in the course of their journey. We collected retailer data via manual website coding. Within three months after the customer survey, the first author manually searched all websites of retailers that were mentioned by at least five customers in the customer survey for informational channel integration cues and for information on shopping benefits. Our final sample consists of 1,479 customers from 104 multichannel retailers. We conducted a Multilevel Logistic Regression Analysis with customers' online-to-physical store switching as the dependent variable, the degree of informational online-to-physical channel integration as the independent variable, and the amount of subtle website cues on different shopping benefits as moderators.

Results. We find that the degree of informational online-to-physical channel integration on a retailer's website is positively associated with customers' likelihood of switching from the retailer's website to its physical store. We provide a readily observable measurement scale for retailers to assess their degree of informational online-to-physical channel integration and thus subtly steer customers along their journey. Furthermore, we find that the success of steering customers with the help of informational online-to-physical channel integration depends largely on other website cues about shopping benefits that customers associate more strongly with the physical or the online store. Specifically, website cues about assortment benefits or immediate and personal service, alongside information about the physical store, is most effective in steering customers to the physical store. Conversely, if retailers highlight price information on their website, they prevent customers from visiting the physical store in

the course of their journey. In sum, our results highlight opportunities for customer steering that arise from designing the website as an information hub.

3.4   Summary of Paper 4: Positioning High- and Low-Status Brands in Social Media: The Impact of Communication Style

Purpose. Social media have disrupted marketing as they enable brands to publicly communicate with their customers in a very personal way and build close consumer-brand relationships. However, for some brands, this social closeness to its customers may be less beneficial in terms of brand popularity than for others and may even be harmful in terms of brand positioning. In particular, high-status, luxury brands whose exclusive image seems to collide with the personal communication norms in social media struggle with how to position their brand in this new touchpoint of the customer journey. This paper aims to examine how the ways brands from different status levels communicate in social media (i.e., their communication style) can convey different levels of social distance to customers in social media and thus shape brand positioning.

Method. Two text analyses and three online experiments investigate the relationship between brand communication styles and brand status levels in social media. In the first two studies, we analyze 49,402 real-life tweets (i.e., posts on the social network Twitter) from 102 fashion brands to explore what linguistic devices mark socially close and distant communication styles in social media and how communication styles in social media vary across brands from different status levels. In the next step, we actively manipulate a socially close and a socially distant communication style to test whether the way brands communicate a message in social media influences customers' brand status perception. In the fourth study, we aim to replicate the results of the third study. Furthermore, the fourth study examines different degrees of luxury brand aspiration among customers to shed light on the psychological process behind customers' associations of communication styles with brand status levels. Finally, the fifth study aims to provide insight into the downstream consequences of different social media communication styles by analyzing how different communication styles employed by brands from different status levels influence customers' intention to like a brand message on Twitter. We employ a stylometric and dictionary-based text analysis in the first two studies and a mixed-model approach with fixed and random effect terms in the latter three studies.

Results. Studies 1a and 1b find that communication styles used by high- and low-status brands in social media differ in their usage of personal pronouns, which may convey different levels of social distance. Specifically, high-status brands use significantly fewer personal

pronouns than do low-status brands. Study 2a finds that customers infer a more luxurious brand status from socially distant communication styles and vice versa. Results from study 2a indicate that brands from different status levels may use communication styles for brand positioning in social media. Study 2b replicates the findings from Study 2a. Furthermore, Study 2b finds that a customer's luxury brand aspiration amplifies the effect of communication style on brand status perception in such a way that for high-luxury brand aspirers, a socially distant communication style will elicit a higher brand status perception than a socially close communication style. Study 3 examines the downstream consequences of using socially close and distant communication styles in social media and finds that for low-status brands, tweets with a more close communication style elicit higher like intentions among customers than tweets with a more distant communication style. Customers' intention to like a tweet posted by a high-status brand does not vary between close and distant communication styles. This indicates that customers seem to accept a socially distant communication style used by luxury brands even in a close medium.

4   Synthesis and Managerial Relevance

The previous chapter discussed how this dissertation aims to contribute to existing research and addresses specific research gaps. This chapter will synthesize the findings of this cumulative dissertation from a managerial perspective. Successful customer journey management may help retailers to provide their customers with an enhanced experience across the pre-purchase, purchase, and post-purchase stages (e.g., Lemon and Verhoef 2016) and may contribute significantly to important retail metrics such as sales growth, conversion rate, and return on investment (e.g., Anderl et al. 2016a; Cao and Li 2015; Oh et al. 2012). However, the increasingly complex structure of customer journeys and the interdependencies between different touchpoints challenge retailers to develop more sophisticated ways to effectively manage customer journeys in the new digital age (e.g., Leeflang et al. 2014; Van Bommel et al. 2014). Therefore, this chapter intends to provide a step-by-step guide for retailers to better understand and shape the customer journey. The author refers to this ready-to-implement guide as the customer journey loop. As shown in Figure A-1, the customer journey loop spans six different stages: (1) understand your customers, (2) identify key touchpoints, (3) plan your strategy, (4) implement initiatives, (5) measure impacts, and (6) reflect on insights. Importantly, investing management effort and monetary resources in order to better understand and control the customer journey is a process that is as versatile and iterative as the various journeys themselves. It is of utmost importance that retailers continuously develop their customer journey management. Therefore, this process is depicted as an infinite loop. Managers may adapt the order of the six steps in the loop in such a way

that it fits the specific situation of their company better. However, the order in which the steps of the loop are organized in Figure A-1 should be useful for most the majority of managers. The following paragraphs will outline how the key findings of the four papers in this cumulative dissertation contribute to the six steps in the customer journey loop.

Figure A-1
The Customer Journey Loop
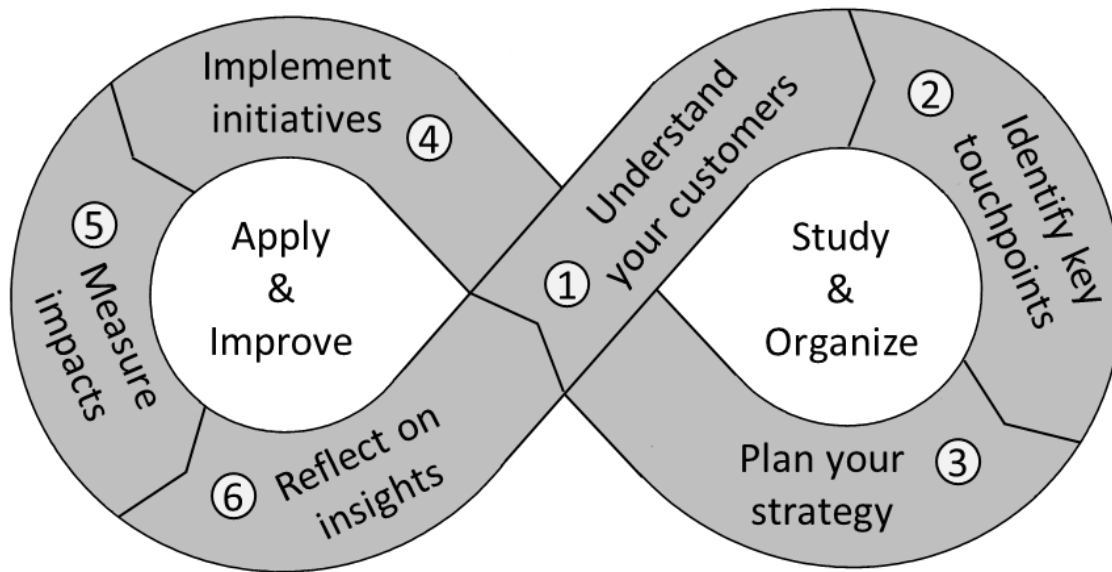
Step 1: Understand your customers. In the first step of the customer journey loop, managers should study their customers carefully to better understand their individual needs and preferences. Specifically, managers would be well-advised to identify the most important customer journey segments and assess which factors (e.g., price, service, or assortment) customers from different segments value most in their journey. Paper 1 provides managers with insights into the five most prevalent customer journey segments in today's retailing landscape and analyzes a variety of different sociodemographic and psychographic covariates that help to describe typical customers in each of the five segments. For instance, whereas customers using multiple touchpoints along their journey are typically younger and more involved than others and show high levels of online and offline experience, pragmatic online shoppers are typically older than others, predominantly female, and more price-conscious than customers belonging to other segments. Managers can build on the insights from Paper 1 to assess which of these segments the majority of their customers fit into and thus better identify crucial touchpoints for their different segments. Paper 2 segments customers in the health industry on the basis of their level of trust in digital touchpoints and assesses how much

importance customers from different segments attribute to assortment, price, and service benefits along the journey. The author encourages managers to follow this approach and examine which factors are most important to their crucial customer segments. In the health industry, customers who trusted digital touchpoints were found to be more demanding in terms of broad assortments, low prices, and excellent service than were other customers. This suggests that, in general, technology-savvy customers may be harder to please along their journey than other customers.

Step 2: Identify key touchpoints. Previous research has shown that not all touchpoints are equally important to retailers and their customers in the journey (Edelman 2010; Rosenbaum et al. 2017). Therefore, in the second step of the customer journey loop, managers should identify the key touchpoints in the customer journey and allocate resources accordingly. When assessing the most important touchpoints in the journey, managers should take the perspective of not only the retailer itself but also of the customer. From the retailer's perspective, key touchpoints in the customer journey should be in line with the retailer's overall strategy and unique selling proposition. Thus, the key touchpoints from the retailer's perspective should be those that contribute most to reaching managerial objectives. Paper 3 shows how key touchpoints from a retailer's perspective may vary. Based on existing research on comparative channel advantages, Paper 3 shows that a retailer's online shop may be more important in the journey for retailers that aim to attract a large number of new customers early in their search phase. However, if a retailer's main goal is to retain customers and increase their loyalty and trust, the physical store may be more important in the customer journey than the online shop. From the customer's point of view, the key touchpoints to invest in should be those that the customer frequently uses and values most in the course of her or his journey. Paper 1 provides valuable insights into the key touchpoints of different journey segments. After having identified the most prevalent customer segments for their company in Step 1, managers may draw on the results from Paper 1 to assess their key touchpoints from the customer's perspective in the second step.

Step 3: Plan your strategy. Through the first and second steps of the customer journey loop, managers should have assessed their most important customers (in terms of prevalence and monetary value), the key touchpoints that shape their customer journey, and the key touchpoints to reach managerial objectives. In the third step of the customer journey loop, managers should plan their overall omni-channel strategy. Most importantly, this strategy will capture how the key touchpoints identified in Step 2 should be aligned to best cater to the needs of the most prevalent customer journey segments identified in Step 1. As shown in Paper 1, retailers may require different strategies for different customer journey segments in order to increase customer loyalty. The loyalty of customers who use multiple touchpoints along their journey is associated far more with their satisfaction with the journey (i.e., the

process of purchasing) than with their satisfaction with the product (i.e., the outcome of purchasing). However, increasing customer loyalty for pragmatic shoppers who use, on average, fewer than three different touchpoints in their journey may require a stronger focus on product satisfaction than on journey satisfaction. Another goal of the omni-channel strategy is to plan how a multichannel retailer should design its key touchpoints and its interactions with customers at these touchpoints in order to deliver a consistent, easily recognizable brand image along the entire journey. In this sense, Paper 4 demonstrates that luxury brand managers may need to discard the common communication norms of social media in order to avoid jeopardizing their image along the customer journey.

Step 4: Implement initiatives. Having elaborated the omni-channel strategy in Step 3, managers need to launch specific initiatives in order to implement the strategy on an operational level. Depending on the retailer's omni-channel strategy, these initiatives may vary significantly. For instance, Paper 3 provides concrete implications for retailers on how to design a website as an information hub and steer customers to strategically important touchpoints. If steering customers from the website to the physical store is part of a retailer's omni-channel strategy, retailers may feature specific website cues about the physical store's resources and about implicit shopping benefits that are associated with physical store retailing on their website. Importantly, Paper 3 reveals that retailers might not be aware of the power of implicit website cues in influencing customers' channel-switching behaviors when they are placed alongside explicit website cues. Paper 4 provides easy-to-implement guidelines on how to tailor a brand's social media communication style in light of its intended positioning strategy. If conveying an aspirational and not-for-everybody brand image is part of a retailer's omni-channel strategy, the retailer might want to avoid using personal pronouns in its social media brand communication.

Step 5: Measure impacts. In the fifth step of the loop, managers should measure the impact of the initiatives implemented. Existing customer journey practices predominantly measure the impact of individual touchpoints and journey initiatives on the basis of conversion rates (e.g., Anderl et al. 2016a; Xu et al. 2014). Given that this last-click metric does not account for a touchpoint's indirect effect on the ultimate outcome, managers should consider using additional customer journey metrics. This cumulative dissertation examines a variety of journey metrics. Paper 1 describes customer loyalty, product satisfaction and journey satisfaction as crucial outcomes of customer journey management. Paper 2 highlights the importance of customers' trust in different touchpoints. Paper 3 examines actual online-to-physical channel switching as a behavioral journey metric. Finally, Paper 4 suggests that a customer's brand perception may be an important variable to measure the impact of marketing initiatives in specific touchpoints of the journey.

Step 6: Reflect on insights. In the sixth step of the customer journey loop, managers should critically reflect on the outcome of customer journey initiatives. In order to detect avenues for improvement and provide customers with innovative solutions along their journey, managers should share the insights gained in the loop with cross-functional teams. On the path toward successful customer journey management, retailers should foster a culture of continuous change, innovation, and learning, which motivates employees from all divisions (online retail, offline retail, logistics, etc.) to work toward the common goal of enhancing the customer journey from a retailer's and from a customer's perspective (Brunner and Rudolph 2015). Clearly, the sixth step in the journey loop is not the final step. In today's dynamic retail environment, existing touchpoints may change rapidly, and new touchpoints may appear from out of nowhere and quickly evolve into game changers in the customer journey. Therefore, managers are well-advised to not only reflect on the outcomes of previously run customer journey loops but rather take a forward-looking perspective and connect the insights gained from these loops with new developments in the market. Retailers should never stop seeking new ways of improving the customer journey and may thus never exit the customer journey loop depicted in Figure A-1.

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B   PAPER 1: CUSTOMER JOURNEY SEGMENTS AND THE RELATIONSHIPS BETWEEN CUSTOMER SATISFACTION AND LOYALTY INTENTIONS

Customer Journey Segments and the Relationships Between Customer Satisfaction and Loyalty Intentions

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Abstract

The proliferation of new touchpoints empowers today's shoppers to design their very own journeys from search to purchase. To address this new complexity, we segment shoppers by their use of specific touchpoints in the customer journey, investigate the associations among several predictors and segment membership, consider the rise of mobile devices as a potential "game changer" for existing segments, and explore how the relationships among customer journey satisfaction, product satisfaction, and loyalty intentions differ across segments. Based on anticipated utility theory and by using latent class analyses on large-scale data from two samples of 2,443 and 2,649 shopper journeys, we identify five time-consistent segments—multiple touchpoint users, pragmatic online shoppers, online research shoppers, online-to-offline webroomers, and pragmatic store shoppers—and their segment-specific covariates. We further find that journey satisfaction is particularly crucial to creating customer loyalty intentions for the multiple-touchpoint user segment. Our results can help managers to better allocate their budgets across touchpoints, identify the most valuable segments in light of the retailer's objectives, and optimize their marketing strategies for different segments.

Conference Presentations

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1 Introduction

Due to the explosion of digital technologies and the rise of new channels and new devices, shoppers now interact with retailers through a myriad of touchpoints (Grewal, Roggeveen, and Nordfält 2016; Shankar et al. 2011; Verhoef, Kannan, and Inman 2015). In addition, a multitude of different multichannel behaviors has emerged. These behaviors include showrooming and webrooming, whereas single-channel shopping is becoming less prominent (De Keyser, Schepers, and Konus 2015; Konus, Neslin, and Verhoef 2008). As a result, customer journeys are becoming more extensive and versatile (Edelman and Singer 2015). To manage these complex customer journeys successfully, retailers need to identify and understand different journey segments and their unique characteristics. This highly relevant topic requires more attention, as most retailers segment customers based on information about own touchpoints, but not partner, competitor, and independent touchpoints, which are also part of the customer journey and may affect its overall assessment (Baxendale, Macdonald, and Wilson 2015).

Identifying customer journey segments is becoming even more challenging due to the increasing importance of mobile devices (Andrews et al. 2016; Verhoef et al. 2017). Despite the popularity of mobile devices among customers, knowledge about the impact of these devices on the customer journey is still limited (Shankar et al. 2016), and the major question of whether mobile is disputing existing customer segments or whether it is "just another device used to shop" has not yet been answered (Lemon and Verhoef 2016, p. 80). As mobile devices may influence different multichannel behaviors, for instance by making showrooming behavior much easier for the customer (Gensler, Neslin, and Verhoef 2017; Rapp et al. 2015), mobile devices may disrupt existing shopper segments.

Another top priority among retailers is to understand how the behaviors of shoppers change throughout the customer journey, such as through the use of specific touchpoints. Indeed, the Marketing Science Institute (2016) cites the understanding of sources of satisfaction during the customer journey as one of its most important research challenges, particularly given the increasing number and complexity of touchpoints and the belief that creating a positive experience will improve relevant outcomes such as customer loyalty. However, existing research has focused strongly on conversion as the sole outcome of digital journeys (e.g., Kannan, Reinartz, and Verhoef 2016) while failing to consider long-term loyalty effects (Lemon and Verhoef 2016). However, it is crucial that retailers create customer loyalty by satisfying customers during their journeys (Edelman and Singer 2015).

In response to the gaps outlined above, the purpose of this research is to address two research objectives associated with customer journeys, customer satisfaction, and shopper marketing (Lemon and Verhoef 2016; Marketing Science Institute 2016; Shankar et al. 2011).

First, we identify shopper segments by their use of specific touchpoints in the customer journey, including retailer, partner, competitor, and independent touchpoints. Second, we investigate the contribution of customer satisfaction in terms of journey and product satisfaction to explain customer loyalty intentions for different shopper segments.

We address these research objectives by examining two samples of 2,443 and 2,649 journeys from retail customers in 2013 and 2016, respectively, with different usage rates of mobile devices. First, we employ latent class analyses to segment customers by their usage of several retailer-owned, partner-owned, competitor-owned, and independent touchpoints. With these analyses, we identify five robust journey segments—multiple touchpoint users, pragmatic online shoppers, online research shoppers, online-to-offline webroomers, and pragmatic store shoppers—and their segment-specific covariates. The usage of individual touchpoints differs among the segments, and each segment represents a unique combination of different touchpoints. Second, we derive segment-specific hypotheses to investigate the relationships between journey satisfaction, product satisfaction, and customer loyalty intentions. These relationships vary considerably across shopper segments.

Our study contributes to the literature in several ways. First, compared with prior shopper and multichannel segmentation studies, we take an omnichannel perspective by considering more touchpoints, including partner, competitor, and independent touchpoints. This approach results in five distinct segments with different journey patterns and different "moments of truth" in the journey. Second, our study is the first to examine how the increasing usage of mobile devices changes customer journeys and shopper segments. We find that our segments are stable despite the increasing use of mobile devices. Third, this is the first study within the customer journey domain that explicitly focuses on loyalty outcomes. Our results highlight how journey satisfaction contributes to loyalty beyond existing constructs such as product satisfaction.

The rest of this paper is organized as follows. First, we introduce existing customer journey research, summarize previous multichannel shopper segmentation studies, and present our conceptual development. Second, we explore different journey segments and their covariates. Third, we hypothesize and investigate the relationships among journey satisfaction, product satisfaction, and customer loyalty for different shopper segments. We conclude with theoretical contributions, managerial implications, limitations, and issues for further research.

2 Previous Research and Conceptual Development

2.1 Research on Customer Journeys

In a multichannel environment, channels used to be defined as contact points or as media through which retailers and customers interact (Neslin et al. 2006). In an omnichannel environment, channels are considered more broadly and are now frequently referred to as customer touchpoints (Verhoef et al. 2015). Lemon and Verhoef (2016) distinguish among brand-owned, partner-owned, customer-owned, and independent touchpoints, highlighting that customers may interact with each of these touchpoints at each stage of their journey.

Research on customer journeys began as early as the 1960s when Howard and Sheth (1969) described the buying process, in which customers move from need recognition to purchase and then to evaluation of the purchased product. Extending the Attention-Interest-Desire-Action model, their framework describes the customer decision-making process that occurs during the purchase of products. However, as a result of digitalization and the associated proliferation of new touchpoints, this linear path to purchase is changing and expanding into a much more complex journey (Elzinga, Mulder, and Vetvik 2009; Srinivasan et al. 2016).

Today's shoppers do not simply move from search to purchase by using one or two channels offered by one retailer; rather, they create their very own journey that includes touchpoints operated by the retailer, competitors, manufacturers, independent providers, and even other customers (Grewal et al. 2016; Lemon and Verhoef 2016). The abundance of touchpoints available along the customer journey calls for a better understanding of specific usage patterns. The few existing studies in this area have assessed the influence of customer touchpoints on brand consideration (Baxendale et al. 2015) or sales (Anderl, Schumann, and Kunz 2016; De Haan, Wiesel, and Pauwels 2016) and are often limited to digital touchpoints. Thus, a clear understanding of how journeys differ among different shopper segments is missing.

2.2 Prior Multichannel Shopper Segmentation Studies

As summarized in Table B-1, our customer journey segmentation builds on previous studies that advance knowledge in the domain of multichannel shopper segmentation. Existing studies segment shoppers based on which products they prefer to buy online and offline (Bhatnagar and Ghose 2004), the importance they attribute to factors such as price in their purchase decisions (Keen et al. 2004), their responses to the introduction of a new channel (Pauwels et al. 2011), their channel preferences (Konus et al. 2008), and their channel

choices (Thomas and Sullivan 2005; Kushwaha and Shankar 2013). While Pauwels et al. (2011) and Kushwaha and Shankar (2013) investigate segment-specific revenues, no study to date has related different multichannel shopper segments to customer satisfaction and loyalty intentions.

The majority of multichannel segmentation studies analyze shoppers across the channels commonly used by retailers: online shop, physical store, and catalog. Using this approach, Konus et al. (2008) identified three prevalent segments: multichannel enthusiasts, store-focused shoppers, and uninvolved shoppers. The multichannel enthusiast segment typically prefers using multiple channels, while the store-focused segment has a strong preference for the physical store. Uninvolved shoppers tend to not have a strong preference for any channel. De Keyser et al. (2015) extended the study of Konus et al. (2008) by including the call-center as a touchpoint. They redefine the multichannel enthusiast segment by splitting that segment into two sub-segments, research-shoppers and web-focused shoppers, and find evidence for a call-center-prone segment. The latter result highlights that the introduction of new touchpoints may influence existing customer segments. Industry studies of shopping segments (e.g., Sopadjieva, Dholakia, and Benjamin 2017) highlight that multichannel shoppers are more valuable to retailers than are online-only shoppers and store-only shoppers.

Within the multichannel literature, researchers have also acknowledged and studied the existence of more specific shopper segments. Verhoef, Neslin, and Vroomen (2007) were the first to identify research shoppers as a distinct segment. Research shoppers search in one channel and purchase in another channel. More recently, researchers have distinguished between showrooming and webrooming as two distinct forms of research shopping (Verhoef et al. 2015). For example, Gensler et al. (2017) show that lower online prices and in-store waiting time increase a shopper's tendency to engage in competitive showrooming behavior.

While the studies listed in Table B-1 have contributed significantly to our understanding of multichannel shopper segments, they do not (1) address new digital and mobile touchpoints sufficiently, (2) differentiate among retailer-owned, partner-owned, competitor-owned, and independent touchpoints, (3) relate customer journeys to customer satisfaction and loyalty intentions, or (4) account for changes in the segments over time. In this study, we aim to address these gaps. Thereby, we take an omnichannel perspective by including a broad set of touchpoints that can be used in the customer journey. We explicitly account for the notion that shoppers may switch between retailers within their journey; this approach is a major difference that distinguishes our study from prior studies that only consider general channel preferences and channel usage for a specific retailer. Accounting for the use of competitive touchpoints is highly relevant as research shopping, e.g., showrooming, becomes more prevalent (e.g., Gensler et al. 2017; Rapp et al. 2015). In addition, insights on partner-owned

and independent touchpoints are important for multichannel retailers, which strive for channel integration as a way to provide a seamless shopping experience and thus increase customer loyalty (e.g., Edelman and Singer 2015; Herhausen et al. 2015; Shankar et al. 2011).

Table B-1: Empirical Multichannel Shopper Segmentation Studies

Authors	Covariates			Multiple Categories	Multiple Phases	Use of Mobile Devices	Partner / Competitor / Independent Touchpoints	Outcomes	Multiple Datasets over Time
	Socio	Psych	Other						
This Study	✓	✓	✓	✓	✓	✓	✓	*Journey satisfaction, product satisfaction, customer loyalty intentions*	✓
Gensler et al. 2017		✓	✓	✓					
Chang and Zhang 2016			✓						
Cervellon et al. 2015	✓		✓						
De Keyser et al. 2015	✓	✓	✓		✓				
Kushwaha and Shankar 2013	✓		✓	✓				Monetary value	
Kollmann et al. 2012	✓		✓		✓				
Pauwels et al. 2011	✓		✓	✓				Offline revenue	
Konus et al. 2008	✓	✓	✓	✓	✓				
Verhoef et al. 2007			✓	✓	✓				
Knox 2005			✓	✓					
Thomas and Sullivan 2005			✓						
Bathnagar and Ghose 2004	✓		✓	✓					
Keen et al. 2004			✓	✓					

Note: Socio = sociodemographic covariates; Psych = psychographic covariates. Other = other covariates.

2.3   Conceptual Development

Prior segmentation studies convincingly analyze shopper goals in different environments in order to explain the presence of different shopper segments (e.g., Inman, Shankar, Ferraro 2004). In line with previous multichannel segmentation studies, we base our conceptual development on anticipated utility theory (Quiggin 1982). Thus, we consider customer decision-making as a forward-looking process in which shoppers make decisions regarding the use of certain touchpoints by considering the impact that those decisions (i.e., the marginal utility) will have on the total utility they gain from their overall journey. From the perspective of anticipated utility theory, journeys are a combination of touchpoints that express shoppers' assessments of the benefits and costs associated with each touchpoint as they seek to maximize their utility.

The distinction of retailer-owned, partner-owned, competitor-owned, and independent touchpoints in our study is based on existing literature (e.g., Baxendale et al. 2015; Lemon and Verhoef 2016) and on insights from a longitudinal survey that began in 2011 on the most prevalent touchpoints within customer journeys. During the course of this survey, every three years, we asked retail customers to indicate their usage of various touchpoints when purchasing products. Furthermore, we conducted several expert interviews in which the upper management of multichannel retailers was asked to report on their most important touchpoints. These efforts resulted in the list of the 12 most common touchpoints used by shoppers, presented in Table B-2.[1]

Based on anticipated utility theory, the usage of each touchpoint depends on the anticipated utility for each individual shopper. This anticipated utility in terms of monetary savings, time savings, and search costs, for example, is influenced by individual shopping goals and the shopping context (De Keyser et al. 2015). These shopping goals can be explained by psychographic, sociodemographic, and situational factors. We summarize our predictions for these covariates in Table B-3. We do not include specific predictions or hypotheses, as we determine the segments *ex-post* in latent class analyses (Kamakura and Wedel 1999).

Individual psychographic differences among shoppers should elicit different benefits and costs from certain touchpoints, different marginal utilities, and thus different touchpoint preferences and usage patterns. In line with prior research, our segmentation analysis considers price consciousness, time pressure, and involvement. We further expect that anticipated utility from touchpoint usage is predicted by different sociodemographic characteristics (Konus et al. 2008): age, gender, income, education, household size, and

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[1] The longitudinal survey and expert interviews revealed that—in contrast to their popularity among insurance customers (De Keyser et al. 2015)—call-centers are not an important touchpoint for retailing customers.

urbanization. Next to these individual characteristics, we also account for other co-variates, allowing us to better understand the derived segments. First, we include the duration of the customer journey, which should be related to the number of touchpoints used, as shorter journeys are more focused and likely to include fewer touchpoints. Second, we include multiple shopping-related variables: online and offline channel expertise, customer duration, buying frequency, and spending.

Moreover, we extend our model to the impact on customer loyalty formation. In today's highly competitive landscape, retailers must find ways to compete not only over their products but also over the journey involved in purchasing products. Consequently, researchers have noted the need to analyze not only product satisfaction but also journey satisfaction when considering loyalty consequences (Lemon and Verhoef 2016). Thus, we consider the segment-specific influence of customer satisfaction[2] on customer loyalty intentions, where we *ex ante* hypothesize about the relationship among journey satisfaction, product satisfaction, and loyalty in different segments. Figure B-1 provides an overview of our research.

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[2] Given the breadth of the domains that encompass satisfaction and customer journeys, we differentiate between journey decision satisfaction and product consumption satisfaction (e.g., Keiningham et al. 2017; Lemon and Verhoef 2016: Puccinelli et al. 2009; Verhoef et al. 2009).

Table B-2

Touchpoints Considered in the Customer Journey

Touchpoint	Definition	Example (Purchase of Apple iPhone at Best Buy)
Retailer-Owned Touchpoints		
Physical Store	Physical store operated by the retailer.	Visiting a Best Buy physical store.
Online Store	Online store operated by the retailer.	Visiting a Best Buy online store.
Catalog	Catalog dispatched by the retailer.	Consulting a Best Buy catalog.
Partner-Owned Touchpoints		
Search Engine	Sear engine operated by a third party.	Searching for the term "Apple iPhone" at google or yahoo.
Brand Website	Website of the manufacturer of a product.	Visiting the apple website to get information about the iPhone.
Comparison Portal	Price or product comparison portal of a third party.	Using PriceGrabber to compare prices of the Apple iPhone.
Competitor-Owned Touchpoints		
Competitor Physical Store	Physical store operated by a competitor of the retailer.	Visiting a physical Wal Mart store.
Competitor Online Store	Online store operated by a competitor of the retailer.	Visiting www.amazon.com.
Competitor Catalog	Catalog dispatched by a competitor of the retailer.	Consulting a Target catalog.
Independent Touchpoints		
Social Media	Social media site operated by a third party (e.g., community, blog, social networking service).	Following a discussion on the Apple iPhone in Facebook.
News Portals and Newspaper	News provided by a third party online or offline.	Reading an article in The New York Times or on www.nytimes.com about Apple iPhone.
Offline Word of Mouth	Product-related offline conversations among customers.	Speaking with family members and friends about the functionality of the Apple iPhone.

Note: We further include the category "Other Touchpoints" for the usage of touchpoints not grouped in the other categories.

Overview of Predictions for Covariates

Covariate	Prediction and Selected References
Psychographic Covariates	
Price Consciousness	Price conscious customers are more likely to belong to segments that use more touchpoints to learn where they can have the best price and that switch between own and competitive touchpoints to gain information about potential cost savings (Gensler et al. 2017, Konus et al. 2008, Rapp et al. 2015).
Time Pressure	Customers with time pressure are more likely to belong to segments that use few touchpoints as time is scarce for them. They do not want to use multiple touchpoints to search (Kleijnen et al. 2007).
Involvement	Customers with a higher involvement are more likely to belong to segments that use more and more diverse touchpoints given their high involvement in the buying process, which creates benefits to shop by using more touchpoints (De Keyser et al. 2015).
Sociodemographic Covariates	
Age	Older customers are more likely to belong to segments that use only few and primarily physical touchpoints, and that have a lower usage of mobile devices (Kushwaha and Shankar 2013; Wang et al. 2015).
Gender	Male customers are more likely to belong to segments that use many and more innovative touchpoints because they are more inclined to try new touchpoints (Li et al. 2015; Narang and Shankar 2016; Strebel et al. 2004).
Income	Customers with a higher income may be more likely to belong to segments that use many touchpoints because income may signal the means to shop across a variety of touchpoints. Alternatively, these customers may be more likely to belong to segments that use less touchpoints because it may also signal that customers are less price focused (Konus et al. 2008; Kumar and Venkatesan 2005; van Nierop et al. 2011).
Education	Customers with a higher education are more likely to belong to segments that use more and more diverse touchpoints. They possess sufficient analytical training to extract benefits of extensive search in multiple touchpoints (Kumar and Venkatesan 2005; van Nierop et al. 2011; Strebel et al. 2004).
Household Size	Customers with a higher household size are more likely to belong to segments that use more diverse touchpoints because they strive for the best deal and may need to take into account the preferences of more members, leading to more extensive search across touchpoints (Kushwaha and Shankar 2013).
Urbanization	Customers from urban regions are more likely to belong to segments that use primarily physical touchpoints because urbanization may increase the availability of and reduce the distance to physical touchpoints (Inman et al. 2004; Konus et al. 2008).
Other Covariates	
Duration of Journey	Customers with a longer journey duration are more likely to belong to segments that use many touchpoints as shorter journeys will be more focused and are likely to include less touchpoints (Lemon and Verhoef 2016).
Online Channel Expertise	Customers with a higher online channel expertise are more likely to belong to segments that use primarily online touchpoints because channel expertise may drive customers to use the same channel over time as well as to stay within the same channel (Gensler et al. 2012).
Physical Channel Expertise	Customers with a higher physical channel expertise are more likely to belong to segments that use primarily physical touchpoints because channel expertise may drive customers to use the same channel over time as well as to stay within the same channel (Gensler et al. 2012).
Customer Duration	Customers with a longer customer duration are more likely to belong to segments that use only few and primarily physical touchpoints because a long customer history may predict use of store-focused touchpoints (Konus et al. 2008).
Buying Frequency	Customers with a higher buying frequency are more likely to belong to segments that use only few touchpoints because a higher buying frequency may lead to a less extensive search and comparison across different touchpoints (Kushawa and Shankar 2013).
Spending	Customers with higher spending are more likely to belong to segments that use many touchpoints because a higher spending may lead to a more extensive search and comparison across different touchpoints (Kushawa and Shankar 2013).

Figure B-1

Overview of the Research
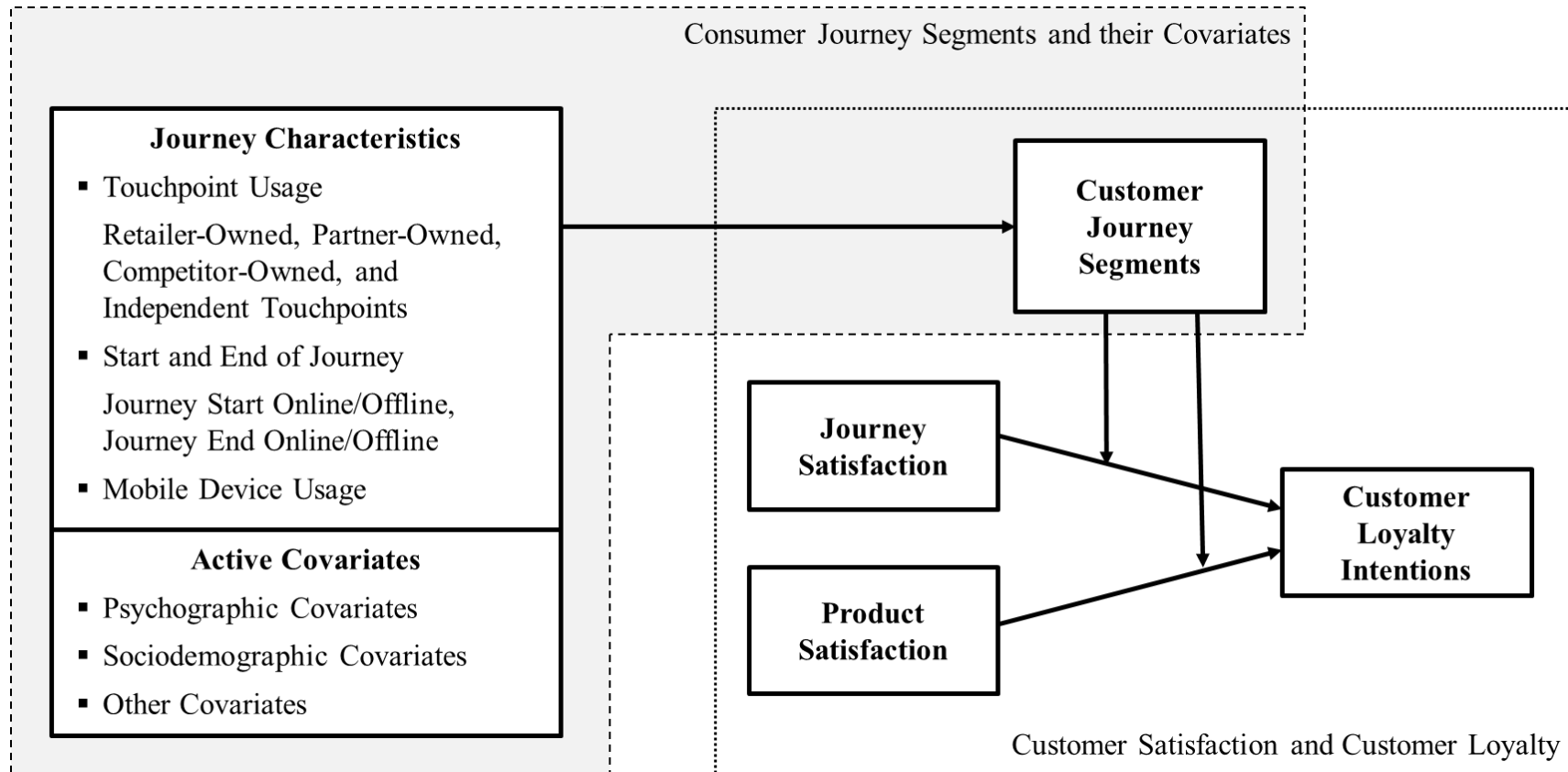
Note: We include age, gender, income, education, household size, and urbanization as sociodemographic covariates; involvement, time pressure, and price consciousness as psychographic covariates; and duration of journey, online channel expertise, physical channel expertise, customer duration, buying frequency, and spending as other covariates. We further control for category (apparel, cosmetics, electronics, entertainment, and other category).

3 Customer Journey Segments and Their Covariates

3.1 Data Collection

To identify different journey segments, we followed Lemon and Verhoef's (2016) recommendation to map the journey from the customer perspective and collected survey data from a representative sample of customers in Austria, Germany, and Switzerland at two points in time, 2013 and 2016[3]. Both samples were drawn randomly from the same population, with quotas for age and gender. An independent panel provider collected the data using an online questionnaire, and respondents received monetary compensation for participating. More than 80% of respondents completed the questionnaire in both years. In line with the omnichannel perspective, we asked participants to reconstruct their most recent purchase at a multichannel retailer. During the course of this reconstruction, participants indicated the multichannel retailer at which they had made the purchase, what they had bought, how much time had passed since they bought the item(s), and which touchpoints they had visited during the purchasing process (search and purchase stage). We focus on multichannel retailers because they offer both online and offline touchpoints with the goal of providing a seamless experience across channels (Edelman and Singer 2015; Shankar et al. 2011; Verhoef et al. 2015). Similar to previous research (e.g., De Keyser et al. 2015; Heitmann, Lehmann, and Herrmann 2007), the interval between the purchase and participation in the study was limited to a maximum of three months to ensure accurate recollection of touchpoint usage.[4]

In sum, we collected data on 2,780 individual journeys in 2013 and 3,105 individual journeys in 2016 (the most frequent product categories were apparel, cosmetics, electronics, entertainment, and groceries). We did not include journeys from the groceries category because grocery shoppers differ from shoppers in other categories due to a much higher buying frequency and the presence of a still-very-dominant offline retail channel. Less than six percent of European grocery shoppers are currently using online touchpoints in this category (Nielsen 2015). Thus, our final samples consisted of 2,443 journeys in 2013 and 2,649 journeys in 2016 (including usage, importance, and order of different touchpoints during the specific journey).

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[3] The datasets from 2013 and 2016 which were used for this study were drawn from a longitudinal study conducted by the Institute of Retail Management at the University of St.Gallen (Rudolph et al. 2014; Rudolph et al. 2017).

[4] Like other studies on purchase decisions and search behavior, we rely on the recall of past behavior (e.g., De Keyser et al. 2015; Heitmann et al. 2007; Ratchford, Lee, and Talukdar 2003). Thus, following previous work, we tested whether "forgetting touchpoint usage" had a significant impact on the data by splitting the sample into two groups: those who reported purchasing a product within the last two weeks and those who reported purchasing a product within more than two weeks. We did not find systematic differences in the use of touchpoints across the groups.

3.2 Measures

Segmentation basis. We segmented the customer journeys based on the use of specific touchpoints, whether customers started and ended their journey online or offline, and the use of mobile devices, all captured with dummy variables. We included 12 indicators that reflect the usage of specific touchpoints during the journey: three retailer-owned touchpoints, three partner-owned touchpoints, three competitor-owned touchpoints, and three independent touchpoints (see Table B-2). We also measured the importance of each touchpoint used to capture the customers' "moments of truth" during the journey and the order of all touchpoints used.

Active covariates. Relying on theory and previous empirical research, we included several active covariates that may influence segment membership (e.g., De Keyser et al. 2015; Konus et al. 2008). An overview of these covariates appears in Table B-3. All measures are provided in Appendix 1. Due to space restrictions, all controls were captured with single-item measures.

Outcomes. In addition, and in order to investigate segment-specific customer satisfaction and its consequences in the second part of this paper, we included measures for journey satisfaction, product satisfaction, and customer loyalty intentions. Given the importance of customer decision making during the purchase journey (e.g., Puccinelli et al. 2009; Verhoef et al. 2009), we captured journey decision satisfaction with a scale based on Fitzsimons (2000) and Heitmann et al. (2007; $\alpha = .85/.84$). We measured product consumption satisfaction with a scale from Crosby and Stephens (1987; $\alpha = .88/.85$). We used a scale from Zeithaml, Berry, and Parasuraman (1996; $\alpha = .89/.89$) to measure customer loyalty intentions and included a marker item to control for common method variance.[5]

Appendix 3 displays all correlations, and Table B-4 describes the data obtained in 2013 and 2016. Both datasets are comparable (all Cohen's $d \leq .17$), with the exception of mobile device usage, which increased from 4% in 2013 to 19% in 2016. This increase is expected given that mobile device usage is increasing rapidly (Shankar et al. 2016). The use of mobile devices is significantly related to the use of partner-owned ($r = .17$, $p < .01$), competitor-owned ($r = .12$, $p < .01$), and independent touchpoints ($r = .17$, $p < .01$), indicating that mobile devices are positively associated with the number of alternatives searched.

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[5] We used principal components analysis to obtain the orthogonal factors from the multi-item scales. The results of the exploratory factor analyses show that a four-factor solution explains 76 (75) percent of the variation (see Appendix 2). Additional confirmatory factor analyses confirm our solutions: the goodness-of-fit index is .93 (.99), the confirmatory fit index is .95 (.99), and the root mean squared error of approximation is .09 (.04). All squared correlations were smaller than the average variance extracted, indicating discriminant validity.

Table B-4
Data Description 2013 and 2016

	2013		2016				
			Mean	SD	Difference	*p*-Value	Cohen's d
Number of Touchpoints	3.68	2.10	3.75	2.36	.07	.26	.03
Retailer-Owned Touchpoints	*100%*	—	*100%*	—	—	—	—
Physical Store	61%	.49	63%	.48	+2%	.09	.04
Online Store	67%	.47	62%	.49	-5%	.00	.10
Catalog	17%	.38	17%	.38	0%	.76	.00
Partner-Owned Touchpoints	*56%*	*.50*	*52%*	*.50*	*-3%*	*.03*	*.06*
Search Engine	41%	.49	41%	.49	0%	.91	.00
Brand Website	21%	.41	17%	.38	-4%	.00	.10
Comparison Portal	20%	.40	16%	.37	-4%	.00	.10
Competitor-Owned Touchpoints	*61%*	*.49*	*59%*	*.49*	*-2%*	*.15*	*.04*
Competitor Physical Store	26%	.44	26%	.44	0%	.57	.00
Competitor Online Store	42%	.49	42%	.49	0%	.88	.00
Competitor Catalog	11%	.31	9%	.29	-2%	.03	.07
Independent Touchpoints	*29%*	*.45*	*30%*	*.46*	*1%*	*.44*	*.02*
Social Media	9%	.29	12%	.32	+3%	.01	.10
News Portals and Newspaper	9%	.28	8%	.27	-1%	.47	.04
Offline Word of Mouth	18%	.39	19%	.39	+1%	.52	.03
Other Touchpoints	*17%*	*.38*	*24%*	*.43*	*+7%*	*.00*	*.17*
Journey Start Online	46%	.50	53%	.50	+7%	.00	.14
Journey End Online	50%	.50	46%	.50	-4%	.00	.08
Mobile Device Used	4%	.20	19%	.39	+15%	.00	.47
Active Covariates							
Psychographic Covariates							
Price Consciousness	5.10	1.78	5.14	1.71	+.04	.37	.02
Time Pressure	4.84	1.74	4.84	1.84	.00	.91	.00
Involvement	5.16	1.58	5.12	1.66	-.04	.30	.02
Sociodemographic Covariates							
Age	5.12	1.60	5.22	1.69	+.10	.02	.06
Gender Female	.50	.50	.50	.50	.00	.94	.00
Income	3.28	1.11	3.23	1.13	-.05	.08	.04
Education	2.73	1.00	2.75	.96	+.02	.36	.02
Household Size	2.46	1.24	2.40	1.26	-.06	.05	.05
Urbanization	.60	.49	.57	.50	-.03	.03	.06
Other Covariates							
Duration of Journey	6.36	4.09	6.38	3.89	+.02	.87	.01
Online Channel Expertise	4.77	1.74	4.81	1.80	+.04	.43	.02
Physical Channel Expertise	5.15	1.47	5.31	1.54	+.16	.00	.11
Customer Duration	5.55	1.57	5.68	1.58	+.13	.00	.08
Buying Frequency	4.17	2.22	3.98	2.26	-.19	.00	.08
Spending	148.07	579.79	154.39	497.91	+6.32	.68	.01
Outcomes							
Journey Satisfaction	5.20	1.31	5.19	1.35	-.01	.85	.01
Product Satisfaction	6.21	.99	6.13	.93	-.07	.01	.08
Customer Loyalty Intentions	5.38	1.21	5.32	1.25	-.06	.10	.05
Categories							
Apparel	36%	.48	36%	.48	0%	.84	.00
Electronics	27%	.45	30%	.46	+3%	.02	.07
Entertainment	17%	.37	12%	.33	-5%	.00	.14
Cosmetics	7%	.26	8%	.27	+1%	.48	.04
Other	12%	.33	14%	.34	+2%	.15	.06

Note: N for 2013 = 2,443 customer journeys, N for 2016 = 2,649 customer journeys. Appendix 1 explains the measurement of all variable

3.3 Model and Analysis

We conducted latent class analyses (LCA) to identify different customer journey segments (Kamakura and Wedel 1999). The LCA models categorize respondents on the basis of their usage status for different touchpoints, the starting/ending point of the journey, and the use of mobile devices; these models also consider the impact of all active covariates on class membership. We use the following model specification:

$$(1) \qquad f\left(y_i \big| z_i{}^{act\_cov}\right) = \sum_{x=i}^{C} \prod_{j=1}^{J} f\left(y_{ij} \big| x\right) P\left(x \big| z_i{}^{act\_cov}\right)$$

where y_i denotes a set of J indicators that measure customer i's touchpoint use, online/offline start and ending, and mobile device usage, and y_j is an indicator of a customer's usage status. The latent variable (x) is categorical, with C classes. C is not predicted a priori but is determined by the model selection criteria. $z_i{}^{act\_cov}$ indicates the vector of active covariates that could affect the latent variable, and $f(y_{ij}|x)$ represents the probability distribution of customer i's response to a particular indicator j, given that customer i belongs to class x, and $f(y_i|z_i{}^{act\_cov})$ is the joint probability function of customer i's response to all indicators.

The LCA models were estimated using a robust maximum-likelihood estimator (Asparouhov and Muthén 2014). To avoid converging on a local solution, we estimated each LCA with 1,000 random sets of start values to ensure the best log likelihood value was adequately replicated; we performed 100 iterations for these random starts and retained the 100 best solutions for final stage optimization. Following methodological recommendations from Nylund, Asparouhov, and Muthén (2007), we began by testing and evaluating the fit of a one-segment model to the data against decision criteria that involved both empirical and theoretical considerations. We then repeated this process, each time specifying an additional segment, until several fit indices and theoretical considerations were reconciled and optimized. Once the "optimal" number of segments was determined, the relationships between these discrete classes and various covariates and outcome variables were modeled. For each customer journey, we determined the most likely class membership (i.e., the segment to which a customer journey most likely belongs) on the basis of the distribution of classification probabilities from the LCA. We then assessed the relationships between the covariates and the pattern solution, taking into consideration the most likely class membership and classification error rate. Following the recommendations of Lanza et al. (2013), we analyzed the covariates and distal outcomes separately.

3.4 Results of LCA and Robustness Test

We estimated our model for solutions with one to eight classes and applied the adapted Akaike Information Criterion (AIC3) to select the best model (Andrews and Currim 2003), with segment interpretability as a supplementary selection criterion. We obtained a minimum AIC3 for a five-segment solution, in both the 2013 and 2016 data (Appendix 4). Moreover, the five-segment solution was easy to interpret, so we chose it as our final model. To test for the robustness of our solution, we conducted split-half cross-validations and randomly split both samples into two halves. The results are consistent with the solutions from the full samples (Appendix 5). Importantly, all five segments can be found in all categories, underlying the general applicability of the five-segment solution (Appendix 6). In Table B-5, we provide descriptive statistics for all variables in each segment. Our results display a clear split among the five segments regarding the number of touchpoints used, the starting and ending points of the journey, and the use of mobile devices (Figure B-2). We label our five segments as follows: multiple touchpoint users, pragmatic online shoppers, online research shoppers, online-to-offline webroomers, and pragmatic store shoppers.

Table B-5: Description of Segments in 2013 and 2016

Segment Name	Multiple Touchpoint Users		Pragmatic Online Shoppers		Online Research Shoppers		Online-to-Offline Webroomers		Pragmatic Store Shoppers		Test for Mean Equality	
Year	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016
Number of Touchpoints	6.87	6.81	2.36	2.29	4.38	3.92	4.07	4.57	2.22	2.01	667.30**	716.08**
Retailer-Owned Touchpoints	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*—*	*—*
Physical Store	86%	67%	13%	11%	22%	6%	100%	100%	98%	99%	1169.99**	1757.15**
Online Store	90%	100%	100%	100%	100%	100%	44%	46%	7%	3%	1154.52**	1513.26**
Catalog	48%	40%	24%	17%	8%	3%	3%	14%	14%	13%	93.55**	53.83**
Partner-Owned Touchpoints	*84%*	*83%*	*23%*	*25%*	*93%*	*90%*	*81%*	*78%*	*14%*	*11%*	*548.46***	*491.62***
Search Engine	68%	72%	11%	16%	75%	73%	62%	61%	6%	7%	366.53**	319.67**
Brand Website	44%	33%	11%	10%	28%	22%	28%	24%	6%	3%	65.45**	56.75**
Comparison Portal	33%	29%	1%	1%	40%	33%	29%	26%	2%	1%	134.06**	113.64**
Competitor-Owned Touchpoints	*90%*	*89%*	*27%*	*24%*	*86%*	*87%*	*75%*	*78%*	*45%*	*35%*	*213.52***	*289.11***
Competitor Physical Store	60%	53%	5%	11%	14%	10%	33%	32%	35%	26%	112.89**	75.07**
Competitor Online Store	67%	73%	17%	10%	81%	84%	58%	66%	3%	4%	379.75**	531.59**
Competitor Catalog	36%	23%	7%	5%	6%	2%	6%	10%	10%	8%	64.04**	32.05**
Independent Touchpoints	*73%*	*72%*	*19%*	*12%*	*27%*	*20%*	*22%*	*34%*	*24%*	*22%*	*96.55***	*137.41***
Social Media	27%	34%	2%	2%	15%	13%	9%	15%	1%	2%	58.88**	88.64**
News Portals and Newspaper	25%	23%	4%	2%	7%	1%	6%	11%	9%	6%	34.16**	44.35**
Offline Word of Mouth	54%	51%	14%	8%	10%	7%	11%	18%	16%	17%	86.05**	94.25**
Other Touchpoints	*24%*	*37%*	*24%*	*31%*	*17%*	*24%*	*10%*	*21%*	*12%*	*12%*	*15.59***	*28.05***
Journey Start Online	23%	42%	45%	66%	75%	99%	81%	74%	0%	0%	397.33**	553.36**
Journey End Online	45%	78%	99%	99%	100%	99%	0%	0%	0%	0%	3979.10**	5182.47**
Mobile Device Used	5%	58%	5%	16%	9%	24%	1%	12%	1%	1%	15.40**	174.06**
Psychographic Covariates												
Price Consciousness	5.56	5.36	4.60	5.00	5.76	5.71	5.37	5.16	4.48	4.81	252.09**	97.27**
Time Pressure	4.52	5.46	4.91	5.41	4.80	5.71	5.04	4.47	4.78	3.90	17.49**	437.28**
Involvement	5.54	5.29	5.01	5.13	5.32	5.13	5.29	5.24	4.85	4.86	54.97**	22.38**
Sociodemographic Covariates												
Age	4.55	4.34	5.47	5.69	5.11	5.17	5.05	5.24	5.14	5.34	69.57**	172.83**
Gender Female	65%	59%	61%	60%	36%	36%	36%	38%	55%	56%	119.89**	108.30**
Income	3.07	3.26	3.25	3.27	3.53	3.48	3.31	3.11	3.17	3.17	47.70**	29.83**
Education	2.74	2.80	2.59	2.67	2.90	2.90	2.74	2.72	2.69	2.75	27.32**	14.00**
Household Size	2.63	2.72	2.44	2.24	2.54	2.47	2.46	2.34	2.33	2.37	15.02**	29.90**
Urbanization	62%	59%	59%	51%	54%	54%	67%	51%	60%	59%	17.76**	15.25**
Other Covariates												
Duration of Journey	8.75	8.42	4.71	4.77	6.13	5.82	7.83	7.61	5.62	5.59	294.35**	326.75**
Online Channel Expertise	4.65	5.01	5.05	5.19	5.36	5.48	4.78	4.77	3.98	4.04	200.38**	203.50**
Physical Channel Expertise	5.38	5.34	4.94	5.08	4.96	5.07	5.35	5.46	5.26	5.45	41.53**	31.93**
Customer Duration	5.60	5.82	5.84	5.84	5.21	5.30	5.48	5.64	5.60	5.70	48.11**	23.18**
Buying Frequency	4.04	4.05	4.69	4.46	3.86	3.43	3.74	3.61	4.40	4.22	70.08**	71.48**
Spending	321.75	262.82	91.49	104.18	180.24	160.18	153.08	154.00	73.52	132.20	195.18**	168.25**

Note: N for 2013 = 2,443 customer journeys, N for 2016 = 2,649 customer journeys. **p < .01, *p < .05, †*p* < .10, two-tailed tests. All means are based on most likely class membership. The three-step method is used to test for mean equality across segments of active covariates (Asparouhov and Muthén 2014).

Figure B-2

Main Characteristics of Segments in 2013 and 2016

Panel A: Number of Touchpoints Used

	2013	2016
Multiple Touchpoint Users	6.87	6.81
Pragmatic Online Shoppers	2.36	2.29
Online Research Shoppers	4.38	3.92
Online-to-Offline Webroomers	4.07	4.57
Pragmatic Store Shoppers	2.22	2.01
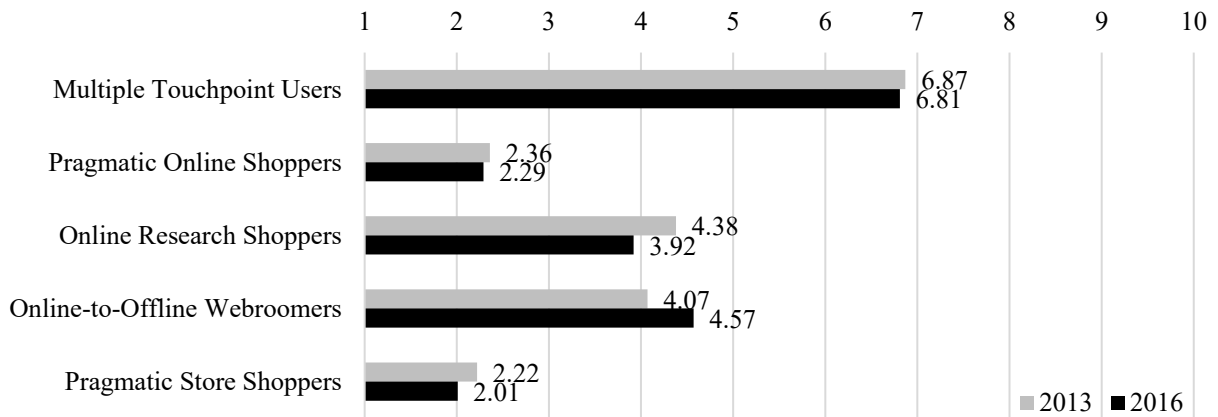
Panel B: Journey Start Online and Journey End Online

	Journey Start Online 2013	Journey End Online 2013	Journey Start Online 2016	Journey End Online 2016
Multiple Touchpoint Users	23%	45%	42%	78%
Pragmatic Online Shoppers	45%	99%	66%	99%
Online Research Shoppers	75%	100%	99%	99%
Online-to-Offline Webroomers	81%	0%	74%	0%
Pragmatic Store Shoppers	0%	0%	0%	0%
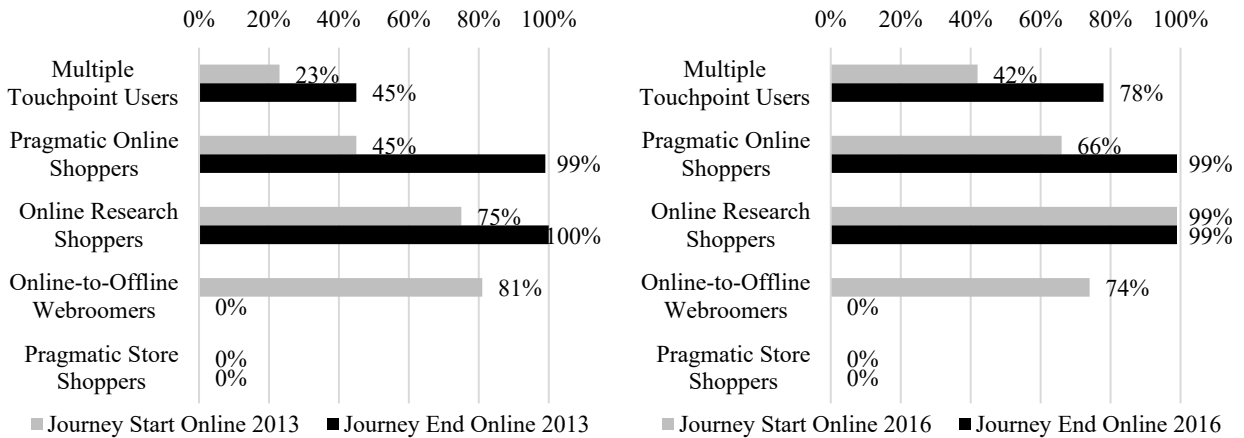
Panel C: Mobile Device Used

	2013	2016
Multiple Touchpoint Users	5%	58%
Pragmatic Online Shoppers	5%	16%
Online Research Shoppers	9%	24%
Online-to-Offline Webroomers	1%	12%
Pragmatic Store Shoppers	1%	1%

70
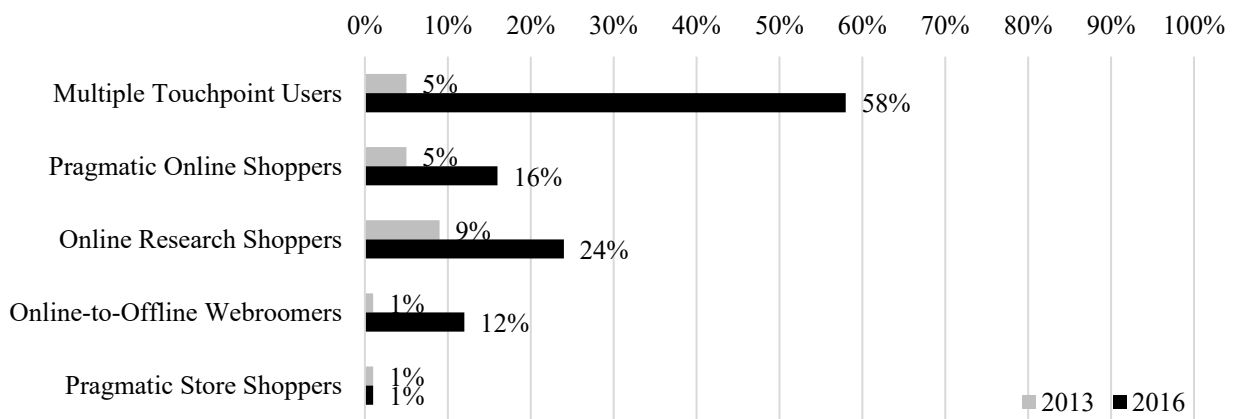
3.5 Latent Class Predictors of Segment Membership

After having established five segments, we next investigated the predictors of segment membership. To model covariates as latent class predictors of segment membership, we used the three-step method for predictors of the latent class variable (Asparouhov and Muthén 2014). The first step is a regular LCA using only the latent class indicators. In the second step, the nominal most likely class variable N is created using the latent class posterior distribution obtained during the LCA estimation. That is, for each observation, N is set to be the class c for which $P(C = c|U)$ is the largest, where U represents the latent class indicators and C is the latent class variable. The classification uncertainty rate for N is computed as follows:

$$(2) \qquad P_{c_1,c_2} = P(C = c_2|N = c_1) = \frac{1}{N_{c_1}} \sum_{N_i=c_1} P(C_i = c_2|U_i)$$

where N_{c1} is the number of observations classified in class c_1 by the most likely class variable N, N_i is the most likely class variable for the ith observation, C_i is the true latent class variable for the ith observation, and U_i represents the class indicator variables for the ith observation. The probability $P(C_i = c_2|U_i)$ is computed from the LCA model as follows:

$$(3) \qquad q_{c_1,c_2} = P(N = c_1|C = c_2) = \frac{p_{c_1,c_2} N_{c_1}}{\sum_c p_{c,c_2} N_c}$$

where N_c is the number of observations classified in class c by the most likely class variable N. This shows that N can be treated as an imperfect measurement of C with measurement error defined by $q_{c1,c2}$. In the third step, the most likely class variable is used as a latent class indicator variable with uncertainty rates prefixed at the probabilities $q_{c1,c2}$ obtained in the second step, and the N variable is specified as a nominal indicator of the latent class variable C with logits $log(q_{c1,c2}|q_{K,c2})$, where K is the last class. In this way, the measurement error in the most likely class variable N is taken into account when assessing whether an increase in an antecedent variable results in a higher probability that a customer journey belongs to one class over another class, predicted as follows:

$$(4) \qquad C = \alpha_c + \beta i_c PC + \beta j_c SC + \beta k_c OC + \beta l_c CA + \varepsilon$$

where C is the latent class fixed to misclassification, PC are psychographic covariates, SC are sociodemographic covariates, OC are other covariates, and CA are the categories.

Table B-6 provides the results for the latent class predictors of segment membership, with pragmatic store shoppers as the reference category because it is the most traditional segment in terms of touchpoint usage (Konus et al. 2008). These coefficients represent the impact of each covariate on membership in each segment compared to the reference category.

Therefore, a positive (negative) coefficient means that customers who score high on that antecedent are more (less) likely to appear in the respective segment. We focus our discussion on consistent findings across the 2013 and 2016 data. Importantly, however, we did not find any significant contradictory effects across both data sets. Interestingly, none of the variables of income, urbanization, time pressure, or buying frequency are predictors of segment membership (with pragmatic store shoppers as the reference category). This finding highlights that none of the aforementioned covariates can explain differences in customer journeys. In the following section, we focus on differences among journey segments that are relevant for retailers in addressing their customers.

Predictors of Segment Membership

Segment Name	Multiple Touchpoint Users		Pragmatic Online Shoppers		Online Research Shoppers		Online-to-Offline Webroomers	
Year	2013	2016	2013	2016	2013	2016	2013	2016
Psychographic Covariates								
Price Consciousness (βi_3)	.49**	.03	.02	-.19**	**.48****	**.63****	.23**	.06
Time Pressure (βi_2)	-.10	-.03	.02	.45**	-.09	.22**	.09*	.05
Involvement (βi_1)	**.29****	**.64****	-.04	-.01	.20**	-.06	**.18****	**.15****
Sociodemographic Covariates								
Age (βj_1)	**-.34****	**-.62****	**.20****	**.15****	-.04	-.16**	-.10	-.13**
Gender Female (βj_2)	1.20**	.27	**.33***	**.36****	**-.39***	**-.62****	**-.35***	**-.43****
Income (βj_3)	-.24*	-.04	-.08	-.06	.16	.08	.01	-.16*
Education (βj_4)	.06	.02	-.07	.00	**.35****	**.28****	.05	.00
Household Size (βj_5)	**.20***	**.15***	.14*	-.07	.08	.03	.11	.04
Urbanization (βj_6)	.34	.16	.18	.27	-.31	-.16	.34*	.06
Other Covariates								
Duration of Journey (βk_1)	**.22****	**.26****	**-.07****	**-.07****	-.02	.03	**.14****	**.15****
Online Channel Expertise (βk_2)	**.14***	**.37****	**.57****	**.55****	**.71****	**.70****	**.21****	**.24****
Physical Channel Expertise (βk_3)	.02	-.24**	**-.53****	**-.50****	**-.56****	**-.43****	-.03	-.01
Customer Duration (βk_4)	-.01	.04	.07	.00	**-.28****	**-.27****	-.12*	-.05
Buying Frequency (βk_5)	.06	.00	-.03	-.01	-.04	-.16**	-.01	-.02
Spending (βk_6)	**.90****	**.96****	**.50****	**.52****	**.77****	**.62****	**.34****	**.45****
Category								
Apparel (βl_1)	-.38	.10	-.04	.20	-.05	-.09	-.14	-.44
Electronics (βl_2)	-.18	-.01	-1.10**	-.29	-.07	.55	**.68***	**.10****
Entertainment (βl_3)	.08	.39	.36	.53	.67*	.51	.50	.56*
Cosmetics (βl_4)	-.34	.26	.26	.16	-.10	.26	-.46	-.64

Note: N for 2013 = 2,443 customer journeys, *N* for 2016 = 2,649 customer journeys. **p < .01, *p < .05, two-tailed tests. We used "Pragmatic Store Shoppers" as the reference category because it is the most traditional segment in terms of touchpoint usage (e.g., Konus et al. 2008).

3.6 Results for Customer Journey Segments

Multiple-touchpoint users. Retailers that count young and highly involved customers as their core target group will increasingly have to cope with a segment that visits an average of almost seven touchpoints before making a purchase (far more than all other segments; all $t > 17.24$, $p < .01$) and frequently includes partner-owned (84% and 83%), competitor-owned (90% and 89%) and independent touchpoints (73% and 72%; all $t > 12.88$, $p < .01$, compared with other segments) in their journey. Members of this segment are most likely younger ($p < .01$), from a larger household ($p < .05$) and more involved ($p < .01$); they have a longer journey duration ($p < .01$), have more online expertise ($p < .05$), and spend more ($p < .01$) than shoppers belonging to other segments. As a counterintuitive finding, those young, technology-savvy, and involved shoppers place a high value on both the physical store (mean = 5.64) and the online store (mean = 5.80), and they see offline word of mouth as the most important non-retailer-owned touchpoint (mean = 5.38). Similarly, retailers dealing with multiple touchpoint users have to rely on a broad mix of marketing instruments, as multiple-touchpoint users have the highest usage rate of catalogs (all $t > 7.20$, $p < .01$), partner brand websites (all $t > 3.24$, $p < .01$), competitor physical stores (all $t > 6.98$, $p < .01$), competitor catalogs (all $t > 6.14$, $p < .01$), social media (all $t > 4.13$, $p < .01$), news portals and newspapers (all $t > 5.11$, $p < .01$), and offline word-of-mouth (all $t > 11.71$, $p < .01$). Comparing the years 2013 and 2016, the development of this segment points to an increasing usage of online touchpoints for the start (23% to 42%, $F = 29.24$, $p < .01$) and end (45% to 78%, $F = 90.76$, $p < .01$) of the journey. The strong increase in the use of mobile devices during the journey is largely driven by multiple touchpoint users (from 5% to 58%, $F = 305.69$, $p < .01$; all $t > 9.95$, $p < .01$); this development suggests that mobile usage will foster a parallel use of touchpoints rather than lead to a decline in the use of offline touchpoints.

Pragmatic online shoppers. If the target group is older and largely female, retailers should be aware of a segment that visits fewer than three touchpoints before ending their journey in the online shop (99% and 99%). That is, members of this segment are probably older ($p < .01$) and female ($p < .05$); they have a shorter journey duration ($p < .01$), have more online ($p < .01$) and less offline expertise ($p < .01$), and spend more ($p < .01$) than other shoppers. Although this progressive segment has a stronger online orientation (to specific retailers), they regard offline word of mouth as the most important non-retailer-owned touchpoint (mean = 5.30). Targeting pragmatic online shoppers can be fruitful for retailers, as this segment seldom visits partner-owned touchpoints (23% and 25%) and has the lowest usage of competitor-owned (27% and 24%; all $t > 3.99$, $p < .01$) and independent touchpoints (19% and 12%; all $t > 2.31$, $p < .05$) of all segments. Moreover, pragmatic online shoppers have the

shortest journey duration (all $t > 3.95$, $p < .01$) but the highest buying frequency (all $t \geq 1.95$, $p \leq .05$) of all segments. Mobile may become a key instrument in this segment, as mobile device usage is growing strongly (from 5% to 16%, $F = 41.95$, $p < .01$).

Online research shoppers. We find that online research shoppers are increasingly difficult for retailers to capture, as they have the highest usage of competitor online stores (81% and 84%; all $t > 3.76$, $p < .01$), the highest price consciousness (all $t > 1.85$, $p < .07$), the highest online expertise (all $t > 2.67$, $p < .01$), and the lowest customer journey duration (all $t > 2.72$, $p < .01$). Compared to pragmatic online shoppers, customers profiled as online research shoppers are more likely male (all $t > 7.21$, $p < .01$), have a lower buying frequency (all $t > 6.36$, $p < .01$), and have higher spending (all $t > 4.34$, $p < .01$). Because they regard comparison portals as the most important non-retailer-owned touchpoint (mean = 5.74), online research shoppers are an attractive target group for retailers that are highly competitive with regard to price. These highly educated customers visit a diverse range of touchpoints and favor mobile usage (from 9% to 24%, $F = 39.53$, $p < .01$).

Online-to-offline webroomers. For retailers with a significant share of highly involved, online-savvy, male customers with an affinity for electronics, one segment will become central. Online-to-offline webroomers typically start their journey online (81% and 74%), visit four to five touchpoints, and always end their journey offline (100% and 100%). This segment is responsible for the abovementioned research-shopper phenomenon (Verhoef et al. 2007). These shoppers value comparison portals as the most important non-retailer-owned touchpoint (mean = 5.29) while still appreciating the importance of the physical store as the endpoint of the journey (mean = 5.78). As illustrated by their hesitant but steady mobile adoption (from 1% to 12%, $F = 48.40$, $p < .01$), online-to-offline webroomers seem to be initially reluctant to adopt new technologies when shopping, but they adapt over time.

Pragmatic store shoppers. Retailers with a high share of store-oriented shoppers might want to reorganize their investments to focus on the retailer-customer relationship. Interestingly, pragmatic online shoppers are on average older than store-oriented shoppers, indicating that online shopping is no longer a matter of age. Although competition with other touchpoints is low and thus favors the retailers' physical store, pragmatic store shoppers spend comparably less (all $p < .01$). Whereas this segment corresponds with previous segmentations by Konus et al. (2008) and De Keyser et al. (2015), our analysis reveals that this segment is both the least profitable and the least progressive one. However, price consciousness and time pressure is comparably lowest and buying frequency is high for this segment. This indicates that retailers have not managed yet to fully exploit the potential to increase spending among pragmatic store shoppers. Retailers targeting this segment may want to highlight cross-selling

opportunities in-store to increase sales. When targeting this segment, however, retailers need not consider mobile developments in the near future (1% in both years).

4 Customer Journey Satisfaction and Customer Loyalty

4.1 Customer Journeys and Customer Satisfaction

Decades ago, Howard and Sheth (1969) connected customer decision processes with customer experience satisfaction, and since then, researchers have highlighted the importance of experiential aspects of customer behavior (e.g., Holbrook and Hirschman 1982). However, only recently have researchers and practitioners alike recognized the management of the customer experience during journeys as one of the most promising marketing skills. In today's highly competitive landscape where shoppers can choose from a variety of options, retailers must find ways to compete not only in the realm of products but also in the realm of the customer's journey when purchasing products (Grewal, Levy, and Kumar 2009; Schmitt 2011). Thus, researchers emphasize the need to analyze journey experience satisfaction in addition to product satisfaction when studying customer–retailer relationships (Lemon and Verhoef 2016). In this study, we focus on satisfaction as a measure of customer experience because to date "no strong customer experience scales have been developed" (Lemon and Verhoef 2016, p. 81) and because customer satisfaction has been suggested as a proxy for the assessment of the customer experience (e.g., Keiningham et al. 2017). Thus, we focus on both journey and product satisfaction. Journey satisfaction encompasses all the experiences a shopper has while searching for a product (i.e., during the path to purchase), whereas product satisfaction encompasses a shopper's experiences with the chosen outcome (i.e., with the purchased product). Therefore, journey and product satisfaction are closely related to process and outcome satisfaction. While both types of satisfaction likely affect relevant outcomes such as customer loyalty, their relative levels of importance may differ. In the following, we derive formal hypotheses about the expected segment-specific relationships among journey satisfaction, product satisfaction, and customer loyalty intentions.

4.2 Journey Satisfaction, Product Satisfaction, and Customer Loyalty

Recent research emphasizes journey satisfaction – in addition to product satisfaction – as an important determinant of loyalty toward a retailer (e.g., Lemon and Verhoef 2016). The importance of these different satisfaction types for loyalty depends on the utility that a shopper assigns to the evaluation of the search process versus the overall consumption evaluation as

determined by the outcome. Thus, the relationship of journey versus product satisfaction and loyalty is conceptually related to the process-oriented versus outcome-oriented evaluation of the shopping experience. Process-oriented shoppers consider the quality of the different steps involved in forming an evaluation, whereas outcome-oriented shoppers only focus on the end-state as the consumption outcome (Thompson, Hamilton, and Petrova 2009). Therefore, the importance of the distinct facets of satisfaction for loyalty formation may differ strongly among segments, depending on the emphasis that shoppers place on the shopping process versus the shopping outcome. Additionally, variety-seeking and task orientation are often discussed as two complementary concepts for explaining differences in customer journeys (e.g., Grewal et al. 2009; van Kenhove, Wulf, Waterschoot 1999). Variety seeking is the need to maintain an ideal level of stimulation in the form of novelty, complexity, or change (Menon and Kahn 1995). Task orientation refers to the tendency to be highly goal-oriented and to focus on the requirements of the purchase task (Homburg, Müller, and Klarmann 2011).

Shoppers who derive a higher utility from using several touchpoints are likely to be particularly concerned with the process of decision-making because they seem to optimize information access during different stages of the customer journey. Multiple-touchpoint users and online research shoppers use many different types of touchpoints. Therefore, they are more likely to be concerned with optimizing the process that leads to a decision and to place more emphasis on journey satisfaction. Product satisfaction is likely to have a comparably smaller influence on loyalty because the exposure to versatile sources of influence may lead to a weaker attribution of purchase outcomes to the retailer. Moreover, the outcome for these shoppers is likely to be less diagnostic for ex-post evaluation of the retailer than is the journey itself. In addition, members of these segments may use different types of touchpoints to gain access to more product and price information in order to maintain the high stimulation level associated with variety-seeking. Accordingly, these shoppers may be more attached to retailers that help them to maximize their journey satisfaction. Thus, we hypothesize the following:

> *H1: Journey satisfaction has a stronger relationship with loyalty intentions toward a retailer than does product satisfaction for (a) multiple touchpoint users and (b) online research shoppers.*

By contrast, members of the pragmatic online and store segments are likely to have a stronger orientation toward the outcome compared with the process. Pragmatic store shoppers are characterized by their tendency to begin and end their customer journey in the physical channel of a retailer. Their journey only encompasses two touchpoints on average, focusing mainly on retailer-owned touchpoints. The journey of pragmatic online shoppers is also short, with two touchpoints on average, and these shoppers are also less likely to include touchpoints

from other sources. This self-imposed shortening of the search process indicates the low importance of the process. In addition, a task-orientation rather than a variety-seeking orientation may motivate the shopper's relationship with the retailer because task-oriented shoppers prefer to accomplish the buying task as efficiently as possible (Balasubramanian, Raghunathan, and Mahajan, 2005). Thus, these two segments are likely to attribute purchase outcomes to the retailer, as they focus their search efforts mainly on the retailer's informational resources. In sum, the pragmatic shopping segments are less likely to emphasize the journey and will put more weight on the purchased product when they are evaluating the retailer:

H 2. Product satisfaction has a stronger relationship with loyalty intentions toward a retailer than does journey satisfaction for (a) pragmatic store shoppers and (b) pragmatic online shoppers.

The expected relationship of journey versus product satisfaction and loyalty is ambiguous for the online-to-offline webrooming segment. On the one hand, members of this segment may use their customer journey to optimize the process and to achieve smart shopper feelings as reported by Verhoef et al. (2007). On the other hand, they may also be concerned with the outcome while switching channels (Verhoef et al. 2007). Similarly, it is not straightforward to categorize their behavior as variety-seeking or goal-orientation. Thus, we do not put forward a directional hypothesis but rather explore differences in the importance of journey and product satisfaction for online-to-offline webroomers.

4.3   Model and Analysis

We used the three-step method from Asparouhov and Muthén (2014) to model product satisfaction and journey satisfaction as segment-specific predictors of customer loyalty. In our analysis, we also control for potential effects of socio-demographic, psychographic, and other covariates and the product categories because they may affect customer loyalty (e.g., Homburg et al. 2011). Thus, customer loyalty is predicted as follows:

(5) $CL = \alpha_c + \beta 1_c \, PS + \beta 2_c \, JS + \beta i_c PC + \beta j_c \, SC + \beta k_c \, OC + \beta l_c \, CA + \varepsilon$

where *CL* is customer loyalty, *PS* is product satisfaction, *JS* is journey satisfaction, *PC* are psychographic covariates, *SC* are socio-demographic covariates, *OC* are other covariates, and *CA* are the categories. All coefficients α_c, $\beta 1_c$, $\beta 2_c$, βi_c, βj_c, βk_c, and $\beta 1_c$ depend on the latent class variable *C*. We further analyzed the same model for the full sample without considering latent class membership *C* of the customer journeys.

4.4 Empirical Results

The estimates are presented in Figure B-3 and Appendix 7. When considering the full samples, both product ($\beta 1_{2013}$ = .27, p < .01; $\beta 1_{2016}$ = .32, p < .01) and journey satisfaction ($\beta 2_{2013}$ = .22, p < .01; $\beta 2_{2016}$ = .25, p < .01) are significantly related to customer loyalty intentions, and Wald-tests of parameter equality are not significant ($\chi 2_{\text{diff\_2013}}$ = 1.31, ns; $\chi 2_{\text{diff\_2016}}$ = 1.31, ns). Thus, product and journey satisfaction have similar relationships with loyalty.

Segment-specific analyses reveal a more complex view of the relationship between journey satisfaction, product satisfaction, and customer loyalty intentions. For multiple-touchpoint users, only journey satisfaction is significantly related to customer loyalty intentions ($\beta 2_{2013}$ = .50, p < .01; $\beta 2_{2016}$ = .36, p < .01) but not product satisfaction ($\beta 1_{2013}$ = .07, ns; $\beta 1_{2016}$ = .00, ns; $\chi 2_{\text{diff\_2013}}$ = 9.74, p < .01; $\chi 2_{\text{diff\_2016}}$ = 4.02, p < .05), supporting Hypothesis 1a. For online research shoppers, both product ($\beta 1_{2013}$ = .27, p < .05; $\beta 1_{2016}$ = .32, p < .01) and journey satisfaction ($\beta 2_{2013}$ = .24, p < .01; $\beta 2_{2016}$ = .28, p < .01) are significantly related to customer loyalty intentions, and Wald tests are not significant ($\chi 2_{\text{diff\_2013}}$ =.03, ns; $\chi 2_{\text{diff\_2016}}$ = .05, ns). Thus, Hypothesis 1b is not supported.

For pragmatic online shoppers, both product ($\beta 1_{2013}$ = .42, p < .01; $\beta 1_{2016}$ = .48, p < .01) and journey satisfaction ($\beta 2_{2013}$ = .23, p < .01; $\beta 2_{2016}$ = .19, p < .01) significantly relate to customer loyalty intentions, with product satisfaction having a significantly higher parameter than journey satisfaction ($\chi 2_{\text{diff\_2013}}$ = 3.14, p < .10; $\chi 2_{\text{diff\_2016}}$ = 6.45, p < .05), supporting Hypothesis 2a. For pragmatic store shoppers, both product ($\beta 1_{2013}$ = .40, p < .01; $\beta 1_{2016}$ = .42, p < .01) and journey satisfaction ($\beta 2_{2013}$ = .16, p < .01; $\beta 2_{2016}$ = .20, p < .01) are significantly associated with customer loyalty intentions, with product satisfaction having a significantly larger parameter than journey satisfaction ($\chi 2_{\text{diff\_2013}}$ = 5.81, p < .05; $\chi 2_{\text{diff\_2016}}$ = 5.24, p < .05), supporting Hypothesis 2b.

For online-to-offline webroomers, both product ($\beta 1_{2013}$ = .37, p < .01; $\beta 1_{2016}$ = .44, p < .01) and journey satisfaction ($\beta 2_{2013}$ = .17, p < .01; $\beta 2_{2016}$ = .22, p < .01) are significantly related to customer loyalty intentions: product satisfaction has a significantly stronger relationship with loyalty than does journey satisfaction ($\chi 2_{\text{diff\_2013}}$ = 3.28, p < .10; $\chi 2_{\text{diff\_2016}}$ = 6.07, p < .05). Thus, although their journeys involve different touchpoints, these customers focus more strongly on journey outcome than on the journey itself.

Figure B-3
Effects of Customer Satisfaction on Customer Loyalty Intentions

Panel A: Full Sample — Wald Test = 1.31 / 2.62. Product Satisfaction and Journey Satisfaction with 2013 and 2016 bars.

Panel B: Multiple Touchpoint Users — Wald Test = 9.74** / 4.02*. Product Satisfaction and Journey Satisfaction with 2013 and 2016 bars.

Panel C: Pragmatic Online Shoppers — Wald Test = 3.14† / 6.45**. Product Satisfaction and Journey Satisfaction with 2013 and 2016 bars.

Panel D: Online Research Shoppers — Wald Test = = .03 / .05. Product Satisfaction and Journey Satisfaction with 2013 and 2016 bars.

Panel E: Online-to-Offline Webroomers — Wald Test = 3.28† / 6.07*. Product Satisfaction and Journey Satisfaction with 2013 and 2016 bars.

Panel F: Pragmatic Store Shoppers — Wald Test = 5.81* / 5.24*. Product Satisfaction and Journey Satisfaction with 2013 and 2016 bars.

Note: **$p < .01$, *$p < .05$, †$p < .10$, two-tailed tests.

5 General Discussion

This study contributes to the emerging literature on customer journeys by conducting an in-depth segmentation analysis of 5,092 customer journeys across several product categories. The segmentation analysis differentiates among retailer-owned, partner-owned, competitor-owned, and independent touchpoints, accounts for changes in the segments over time due to mobile devices, and relates customer journeys to customer satisfaction and customer loyalty intentions. Across both data sets, we find strong evidence of five distinct journey segments: multiple touchpoint users, pragmatic online shoppers, online research shoppers, online-to-offline webroomers, and pragmatic store shoppers. These segments differ in several ways, particularly in the number of touchpoints used, whether the journey starts and ends online or offline, and the customers' usage of mobile devices. The five segments are stable over time and also remain unchanged even though the relevance of mobile devices has increased drastically. Moreover, we find that by examining journey satisfaction and its varying impacts on loyalty across segments, customer loyalty can be explained beyond existing constructs such as product satisfaction.

5.1 Theoretical Implications and Extensions

The five identified customer journey segments complement and update existing segmentation schemes. We extend Konus et al.'s (2008) segments of "multichannel enthusiasts" by finding strong evidence for a touchpoint-enthusiastic segment that consists of shoppers who extensively use different touchpoints. The existence of the financially attractive multiple touchpoint user segment underscores the importance of channel integration and customer journey management to orchestrate all touchpoints of a retailer. Given that we also examined the use of external touchpoints, we were able to deliver insights into the usage of non-retailer-owned touchpoints among members of this segment. Multiple touchpoint users consider several partner-owned, competitor-owned, and independent touchpoints. Thus, retailers who wish to address this segment need to manage the role of partners and external influencers in the customer journey. In line with prior studies, we also demonstrate the existence of a pragmatic store-focused segment that consists of shoppers who are strongly oriented toward the brick-and-mortar store. We could not find evidence for a segment of "uninvolved shoppers" characterized by no preference for any channel because we segmented customers based on touchpoint usage and not attitude towards touchpoints (Konus et al. 2008). Our inclusion of more touchpoints, as well as our focus on the actual usage of touchpoints, may explain this finding.

The endurance of pragmatic store shoppers is interesting, as it underlines the importance of physical stores in times of increased usage of the internet and mobile devices (Shankar et al. 2016). However, our results should also be seen as a warning sign for retailers that do not fully exploit the benefits of their physical stores. Shoppers in this segment spend less than other shoppers, and their loyalty is more strongly determined by product than by journey satisfaction. The latter finding questions the effectiveness of using physical stores as vehicles to create brand experience and inspire customers during the journey (e.g., Johnson 2011). Nevertheless, comparably low price consciousness among pragmatic store shoppers indicates that retailers may increase in-store sales by highlighting cross-selling opportunities.

Furthermore, we extend more recent segmentation research, which has highlighted the existence of a web-focused segment (De Keyser et al. 2015). However, while this research did not differentiate among different web-focused shoppers, we find evidence for two very distinct web-focused segments: pragmatic online shoppers and online research shoppers. While the former do not often visit partner-owned, competitor-owned, and independent touchpoints, the latter are extensive touchpoint users. Moreover, online research shoppers have lower buying frequency and higher spending. These differences suggest that retailers need to address web-focused shoppers differently according to their segment-specific preferences and psycho-demographic characteristics.

Finally, we find further support for a research shopper segment (Verhoef et al. 2007). Interestingly, while we identify a segment of online-to-offline webroomers who start their journey online and purchase the product offline, we do not find a dedicated showrooming segment, as reported by Gensler et al. (2017), for example. Though surprising, this lack of a showrooming segment is in line with previous segmentation studies (Konus et al. 2008, De Keyser et al. 2015), recent industry studies (Sopadjieva et al. 2017), and research indicating that shoppers far more often engage in "reverse showrooming" (i.e., webrooming) than in showrooming (Sevitt and Samuel 2013). These results indicate that the thread of showrooming may be overrated for multichannel retailers, while more research is warranted on webrooming behavior and retailers' opportunities to steer online shoppers to their physical stores.

Our analyses further contribute to the identification of important "moments of truth" in the customer journey. While some practitioners propagate the "zero moment of truth" of search engines (Lecinski 2011), our results provide a more nuanced view on the importance of touchpoints. Although search engines are indeed the most prominent of all partner-owned and independent touchpoints in terms of usage, the importance of comparison portals (mean = 5.38) and offline word of mouth (mean = 5.29) is rated higher than the importance of search engines (mean = 4.88, all $p < .05$). Segment-specific analyses confirm the observation that

either comparison portals or offline word of mouth (i.e., touchpoints not fully controlled by the retailer) were rated as the most important external influence. These findings suggest that in addition to prioritizing search engine optimization, multichannel retailers should cooperate with comparison portals and improve their reputations in order to attract customers.

The increasing importance of mobile devices raises the question of whether mobile is disrupting both customer shopping behavior and existing multichannel segments. Since we collected data at two points in time from comparable samples of shoppers that differ in mobile device usage, we were able to explicitly address this question. In line with Brasel and Gips (2015) and Rapp et al. (2015), we find that mobile device usage is related to the number of alternatives searched. This indicates that mobile devices indeed ease information search. However, we find no evidence that mobile devices are disrupting the segments or that they lead to a "mobile-only" segment.

Investigating the segment-specific effects of customer satisfaction on customer loyalty intentions explicitly addresses the thus-far-unanswered research question of how satisfaction with the customer journey relates to other constructs and their consequences (e.g., Lemon and Verhoef 2016). When considering the full sample, both the satisfaction with the purchased product and the satisfaction during the journey equally predict customer loyalty intentions. However, segment-specific analyses reveal meaningful differences in the relationship among journey satisfaction, product satisfaction, and customer loyalty intentions. While journey satisfaction is more important than product satisfaction for multiple-touchpoint users, and while both types of satisfaction are equally important for online research shoppers, product satisfaction still prevails over journey satisfaction for pragmatic online shoppers, pragmatic store shoppers, and online-to-offline webroomers. The distinct characteristics of the five segments thus help retailers to develop segment-specific customer journey strategies and channel their efforts.

5.2   Managerial Implications

Our findings contribute substantially to managerial practice because the existence of five distinct and stable customer journey segments across multiple shopping categories enables retailers to develop segment-specific shopper marketing strategies. As we find significant differences in average spending and customer loyalty among the segments, our extended segmentation scheme has clear managerial value.

First, the existence of different customer journey segments suggests the need for multichannel retailers to develop specific marketing strategies for each segment. Our segmentation results can be used to assess whether a retailer's customer base is likely to complete specific journeys. For example, if a retailer targets older customers, this retailer is

better off with fewer touchpoints that offer a fast and pragmatic customer journey. Moreover, retailers targeting predominantly male customers may want to look out for online-to-offline webroomers and, if identified, make sure that these webroomers are not lost to physical stores run by competing retailers. As the number of touchpoints managed by a retailer increases while the media budget remains constant, retailers need to constantly monitor their touchpoint portfolios and rule out inefficiencies. Assessing a retailer's customer base according to the five segments offers further insights into how to allocate marketing budgets and management efforts across touchpoints. Touchpoints that are almost never used by the retailer's customers can be detected and eliminated, while investments into crucial touchpoints can be increased. For example, retailers who aim to address financially attractive multiple-touchpoint users must not only coordinate all retailer-owned touchpoints but also extend coordination to partner and independent touchpoints.

Second, retailers can use insights from the five segments to provide integrated communication targeted to individual segment characteristics across different touchpoints. For example, as online research shoppers were found to be especially price-conscious, retailers should communicate and advertise their price advantages on all the touchpoints that these shoppers frequently use (i.e., retailer online store, search engine, comparison portal). By contrast, if retailers aim to target pragmatic store shoppers, they need to focus on offline touchpoints in their communication and advertisement strategies.

Third, the lack of a showrooming segment indicates that the threat of showrooming may be overrated for multichannel retailers. However, webrooming (reversed showrooming) is a consistent behavior over time. Retailers should thus expand their online marketing efforts if they want to reach out to online-to-offline webroomers and provide specific measures to move shoppers from online touchpoints to the offline store. As an example, to attract customers to its physical stores, Best Buy focuses on the store pickup of large electronic items for which customers have typically already searched online.

Finally, our findings provide recommendations for customer journey strategies. While Edelman and Singer (2015, p. 90) claimed that "journeys are becoming central to the customer's experience of a brand—and as important as the products themselves in providing competitive advantage", our results provide a more nuanced view. Both the satisfaction with the purchased product and the satisfaction during the journey may predict customer loyalty, but the relative effectiveness of each type of satisfaction depends on the segment targeted. Enhancing journey satisfaction only pays off substantially for multiple-touchpoint users and online research shoppers—two segments that are both financially attractive but also complex to target given their heavy usage of non-retailer-owned touchpoints. In the other segments,

retailers should mainly focus on product satisfaction. These insights can help retailers to develop appropriate marketing strategies to target the different segments.

5.3 Limitations and Directions for Future Research

Although our research is based on a large data collection at two points in time across multiple retailers and product categories, and although we were able to replicate the segments and results in both samples, our study has some limitations that offer promising directions for future research. In line with other studies of actual channel usage (De Keyser et al. 2015; Kushwaha and Shankar 2013), we were only able to examine successful customer journeys. However, given that we asked a random sample of participants to reconstruct their most recent journey that ended with a purchase, we believe that the insights generated may still generalize. Further, we have focused specifically on customer journeys at multichannel retailers, and we did not include purchases at pure online retailers. Therefore, our findings that no showrooming segment exists may also indicate that multichannel retailers can capture only a small share of these shoppers, whereas customers from this segment may have a stronger preference for finalizing their purchase at pure online retailers. Examining this assumption more closely would be an interesting direction for future research. Furthermore, the anonymity of participants prevented us from collecting behavioral data regarding customer loyalty. Although using an intentional measure of customer loyalty is in line with other studies (e.g., Homburg et al. 2011), it would have been desirable to complement our measurement with objective data to capture true loyalty, where attitudes translate into behavior (Wolter et al. 2017). In addition, we did not examine post-purchase touchpoints of the customer journey. While the usage of post-purchase touchpoints is rare among retail customers, we strongly encourage researchers to investigate the role of post-purchase touchpoints in service settings. Other potential research directions move beyond our limitations. One potential research direction is to further examine how retailers may influence partner-owned touchpoints in their favor, given their widespread use. Second, further research could pursue an understanding of how retailers react to the presence of very different journey segments. Third, though the journey segments we identify are similar across both years, their covariates are less consistent. Therefore, researchers should study how changing environments, such as the rise of mobile devices, might interfere with the effects of the covariates. Finally, more research is needed on how retailers can intervene in journeys and move customers in specific directions during their journeys.

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Appendix B
Appendix 1: Measurement and Operationalization

	2013	2016
Journey Decision Satisfaction	*α = .85;*	*α = .84;*
(Fitzsimons 2000; Heitmann et al. 2007)	*AVE = .62*	*AVE = .62*
▪ Several good options were available for me to choose between.	.61	.64
▪ I thought the choice selection was good.	.84	.81
▪ I would be happy to have the same options on my next purchase occasion.	.95	.94
▪ I found the process of deciding which product to buy interesting.	.70	.73
Product Consumption Satisfaction	*α = .88;*	*α = .85*
(Crosby and Stephens 1987)	*AVE = .72*	*AVE = .71*
▪ How would you rate the purchased product? "satisfied vs. dissatisfied"	.91	.85
▪ How would you rate the purchased product? "pleased vs. displeased"	.85	.86
▪ How would you rate the purchased product? "favorable vs. unfavorable"	.78	.81
Customer Loyalty Intentions	*α = .89;*	*α = .89;*
(Zeithaml et al. 1996)	*AVE = .67*	*AVE = .64*
▪ Say positive things about [X] to other people.	.95	.90
▪ Recommend [X] to someone who seeks your advice.	.92	.91
▪ Encourage friends and relatives to buy something from [X].	.86	.86
▪ Consider [X] your first choice to buy a similar product.	.65	.66
▪ Buy more from [X] in the next few years	.66	.60

Touchpoint Usage
0 = not used, 1 = used (physical store, online store, catalog, search engine, brand website, comparison portal, competitor physical store, competitor online store, competitor catalog, social media, news portals/newspaper, offline word of mouth, other touchpoints)

Touchpoint Importance
How important was [touchpoint X] for you? (1 = not important at all to 7 = very important)

Start and End of Customer Journey
Indicates whether the customer journey starts and ends at online or offline touchpoints.

Mobile Device
Indicates whether a mobile device was used to access online touchpoints during the customer journey.

Duration of Journey *(Marmorstein et al. 1992)*
How much time was between first idea to buy [Product X] and your actual purchase? (1 = a few moments, 2 = less than an hour, 3 = 1 to 2 hours, 4 = 3 to 4 hours, 5 = 5 to 8 hours, 6 = 9 to 12 hours, 7 = a day, 8 = 2 to 3 days, 9 = 4 to 6 days, 10 = a week, 11 = 2 weeks, 12 = weeks, 13 = a month, 14 = 2 to 3 months, 15 = 4 to 6 months, 15 = 7 to 12 months, 16 = more than one year)

Involvement *(Slama and Tashchian 1985)*
How important is [Product X] for you? (1 = not important at all to 7 = very important)

Customer Duration
Since when are you a customer of [X]? (1 = very new customer to 7 = already customer for a long time)

Buying Frequency *(Hess et al. 2003)*
How frequently do you buy [Product X]? (1 = not frequently at all to 7 = very frequently)

Spending
Spending for [Product X] measured in Euro

Time Pressure *(Noble et al. 2006)*
When I shop, I want to find what I'm looking for in the least amount of time. (1 = do not agree at all to 7 = fully agree)

Price Consciousness *(Noble et al. 2006)*
I often compare product prices to get the lowest price. (1 = do not agree at all to 7 = fully agree)

Online Channel Expertise *(Novak et al. 2000)*
How experienced are you in buying [Product X] in online stores? (1 = not experienced at all to 7 = very experienced)

Physical Channel Expertise *(Novak et al. 2000)*
How experienced are you in buying [Product X] in physical stores? (1 = not experienced at all to 7 = very experienced)

Age
1 = below 14 years, 2 = 15 to 18 years, 3 = 19 to 24 years, 4 = 25 to 34 years, 5 = 35 to 44 years, 6 = 45 to 54 years, 7 = 55 to 64 years, 8 = above 65 years

Gender
0 = male, 1 = female

Income
Monthly income (1 = below 1000€, 2 = 1000€ to 200€, 3 = 2001€ to 3000€, 4 =3001€ to 4000€, 5 = more than 4000€)

Education
1 = basic education, 2 = secondary school, 3 = high school degree, 4 = university degree

Household Size
Number of persons in household

Urbanization
0 = rural area, 1 = urban area

Category
Differentiation into the following categories: apparel, cosmetics, entertainment, electronics, other category

Marker Item
I like philosophical discussions. (1 = do not agree at all to 7 = fully agree)

Appendix 2: Results of Principal Components Analysis

Item	2013 (N = 2,443)				2016 (N = 2,649)			
	1	2	3	4	1	2	3	4
Customer Loyalty Intentions								
Say positive things about [X] to other people.	***.835***	.162	.247	-.014	***.834***	.189	.247	.019
Recommend [X] to someone who seeks your advice.	***.864***	.167	.206	.011	***.848***	.198	.241	.005
Encourage friends and relatives to buy something from [X].	***.861***	.151	.133	-.009	***.830***	.183	.180	-.020
Consider [X] your first choice to buy a similar product.	***.762***	.202	.117	-.019	***.766***	.223	.119	-.017
Buy more from [X] in the next few years.	***.756***	.172	.080	.022	***.752***	.155	.079	.023
Product Consumption Satisfaction								
How would you rate the purchased product? "satisfied vs. dissatisfied"	.205	.135	***.835***	.000	.188	.144	***.819***	.040
How would you rate the purchased product? "pleased vs. displeased"	.161	.123	***.881***	.022	.206	.168	***.819***	-.020
How would you rate the purchased product? "favorable vs. unfavorable"	.187	.121	***.896***	.006	.198	.133	***.891***	-.007
Journey Decision Satisfaction								
Several good options were available for me to choose between.	.115	***.830***	.054	.032	.156	***.828***	.072	.049
I thought the choice selection was good.	.214	***.854***	.171	-.045	.208	***.843***	.209	.009
I would be happy to have the same options on my next purchase occasion.	.177	***.847***	.160	-.068	.190	***.829***	.171	-.035
I found the process of deciding which product to buy interesting.	.216	***.686***	.067	.116	.223	***.682***	.083	.037
Marker Item								
I like philosophical discussions.	-.009	.031	.021	***.993***	.002	.042	.010	***.998***

Note: All items have been measured with 7-Point Likert scales.

Appendix 3: Correlations

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.
1. Journey Start Online		.30	.11	-.02	.03	-.03	-.06	.00	.20	.10	.19	-.04	-.03	-.08	.02	.02	.02	-.04	.03	-.01	-.01	-.07	.13	.02	-.10	-.01
2. Journey End Online	.20		.20	-.11	.03	.02	.05	-.01	.34	.08	.22	-.09	.00	.06	.08	.02	.03	-.06	.09	.04	.05	.08	-.07	.01	.00	-.03
3. Mobile Device Used	.04	.14		.07	.03	.03	.02	.00	.12	-.01	.09	-.01	-.23	.10	.03	-.03	.09	-.04	.03	.02	.07	.04	-.04	.00	-.01	.00
4. Duration of Journey	.01	-.15	.01		.04	-.09	-.24	.16	-.10	-.01	-.12	-.06	-.05	-.07	-.01	.05	-.01	.03	-.04	-.05	-.08	-.15	.16	-.09	-.06	.13
5. Involvement	.04	.02	.01	.03		.14	.08	.09	.21	.14	.09	.14	.07	.00	-.05	-.14	-.01	-.01	.33	.33	.34	-.11	.08	.01	.03	.02
6. Customer Duration	-.02	.00	.02	-.11	.15		.34	-.02	.14	.07	.20	.32	.12	.08	.06	-.02	.00	-.01	.21	.22	.39	.02	-.10	.03	.08	.01
7. Buying Frequency	-.08	.06	.01	-.24	.09	.32		-.10	.12	-.01	.15	.24	.00	.17	.05	.03	.06	-.01	.16	.13	.23	.26	-.41	.16	.23	-.15
8. Spending	.01	-.02	.01	.15	.09	.00	-.08		.00	.01	-.05	-.03	.03	-.06	.03	-.03	-.03	-.01	.06	-.01	.01	-.10	.10	-.08	-.06	.13
9. Time Pressure	.00	-.01	-.01	-.06	.03	.00	.02	-.01		.36	.24	.04	.06	.04	.03	-.10	-.02	-.03	.22	.15	.22	.01	-.02	.00	.01	.01
10. Price Consciousness	.13	.05	.00	.10	.08	-.03	-.14	.05	.09		.10	.00	.01	.02	-.07	-.05	.03	-.02	.07	.06	.09	-.03	.08	-.05	-.01	-.01
11. Online Channel Expertise	.16	.22	.03	-.09	.13	.20	.16	.02	.01	.21		.40	-.04	-.08	.07	.06	.01	.02	.09	.12	.06	.01	.03	.12	-.10	-.08
12. Physical Channel Expertise	.00	-.12	-.01	-.04	.13	.26	.23	.01	-.07	.04	.42		.03	.03	.01	.03	-.01	.09	.13	.16	.18	.09	-.11	.04	.03	-.04
13. Age	-.02	.05	-.12	-.05	.08	.08	.00	.03	.12	.00	-.04	-.03		-.10	.05	-.10	-.33	-.03	.12	.02	.03	-.14	.11	-.04	.00	.09
14. Gender (female)	-.13	.04	-.02	-.07	.03	.07	.21	-.09	-.08	-.14	-.09	.00	-.10		-.08	-.04	.07	-.05	.03	.04	.12	.26	-.33	-.03	.16	-.02
15. Income	.05	.06	.03	.00	-.03	.02	.00	.08	-.02	-.03	.08	.03	.05	-.14		.19	.31	-.12	.00	.00	-.03	.00	.00	-.01	.00	.01
16. Education	.03	.01	-.01	.07	-.10	-.03	.02	.02	.04	.01	.04	.02	-.08	-.05	.11		.03	.12	-.13	-.13	-.13	.05	-.03	.00	.00	-.02
17. Household Size	.04	.03	.06	.01	.01	.01	.03	.00	-.09	.05	.03	.00	-.24	.03	.30	-.05		-.17	-.02	.00	.00	.08	-.07	.00	.02	-.02
18. Urbanization	.02	-.05	-.04	.00	-.01	-.04	-.04	.00	.03	.01	-.02	.02	-.04	-.07	-.10	.18	-.20		-.03	-.02	-.04	.03	.03	-.04	.01	-.05
19. Journey Satisfaction	.02	.10	.03	-.04	.33	.17	.17	.06	-.09	.00	.11	.12	.13	.02	.02	-.15	.02	-.08		.37	.47	.00	-.04	-.03	.10	.00
20. Product Satisfaction	.02	.00	-.02	-.04	.30	.19	.12	.04	.00	.04	.09	.13	.09	.03	.03	-.10	.01	-.02	.31		.44	-.06	-.06	.08	.09	.01
21. Customer Loyalty Intentions	.01	.09	.04	-.05	.37	.33	.24	.05	-.01	-.06	.05	.10	.06	.15	.01	-.11	.03	-.05	.43	.40		.04	-.13	-.01	.10	.05
22. Category: Apparel	-.09	.03	.02	-.07	-.11	-.02	.17	-.07	-.11	-.23	-.07	.04	-.18	.26	-.08	.02	.03	.02	-.03	-.08	.00		-.50	-.28	-.22	-.30
23. Category: Electronics	.16	-.09	-.02	.20	.02	-.06	-.44	.12	.02	.24	.05	-.07	.08	-.35	.08	-.01	-.01	.00	-.03	-.01	-.09	-.47		-.24	-.19	-.26
24. Category: Entertainment	.00	.08	.01	-.11	-.02	.08	.22	-.08	.04	.03	.16	.06	.01	-.01	.05	-.01	.02	-.01	.02	.04	.00	-.34	-.27		-.11	-.15
25. Category: Cosmetics	-.06	-.03	.00	-.08	.04	.02	.18	-.05	.08	-.03	-.11	-.01	.07	.15	-.06	.03	-.05	.01	.07	.04	.08	-.21	-.17	-.13		-.12
26. Category: Other	-.04	.01	-.01	.03	.13	.01	-.04	.07	.03	.01	-.05	-.02	.09	-.01	-.01	-.03	-.02	-.02	.02	.06	.06	-.28	-.23	-.17	-.10	

Note: 2013 (2016) correlations are reported below (above) the diagonal. For both years, |r| ≥ .04 is significant at $p < .05$ and |r| ≥ .06 is significant at $p < .01$ (two-tailed tests).

Appendix 4: Log-Likelihood Statistics for Model Selection

		2013				2016			
		LL	AIC	BIC	AIC3	LL	AIC	BIC	AIC3
Model 1	1-Class Solution	-18,799.85	37,629.70	37,720.31	37,644.70	-20,908.28	41,846.57	41,937.18	41,861.57
Model 2	2-Classes Solution	-16,817.29	33,696.58	33,883.84	33,727.58	-17,283.32	34,628.64	34,815.90	34,659.64
Model 3	3-Classes Solution	-15,990.00	32,074.00	32,357.92	32,121.00	-16,837.30	33,768.59	34,052.51	33,815.59
Model 4	4-Classes Solution	-15,288.62	30,703.23	31,083.80	30,766.23	-14,692.86	29,511.73	29,892.29	29,574.73
Model 5	**5-Classes Solution**	**-14,760.14**	**29,678.28**	**30,155.50**	**29,757.28**	**-13,781.51**	**27,721.01**	**28,198.23**	**27,800.01**
Model 6	6-Classes Solution	-14,914.36	30,018.71	30,592.59	30,113.71	-15,741.72	31,673.44	32,247.32	31,768.44
Model 7	7-Classes Solution	-14,921.75	30,065.50	30,736.02	30,176.50	-14,873.02	29,968.05	30,638.57	30,079.05
Model 8	8-Classes Solution	-14,993.79	30,241.59	31,008.76	30,368.59	-15,560.28	31,374.56	32,141.73	31,501.56

Note: LL = Log-Likelihood, AIC = Akaike Information Criterion, BIC = Bayesian Information Criterion, AIC3 = adapted Akaike Information Criterion with a so-called magic number 3. Robust maximum likelihood estimation. We primarily apply AIC3 for model selection (Andrews and Currim 2003), and use classification error and segment interpretability as supplementary selection criteria.

Appendix 5: Split-Half Robustness Analysis of Classification

Panel A: 2013 Data

	First Half (N = 1,221)						Second Half (N = 1,222)				
Full Sample (N = 2,443)	1.	2.	3.	4.	5.		1.	2.	3.	4.	5.
1. Multiple Touchpoint Users	*248*	0	15	0	0		*247*	0	14	0	0
2. Pragmatic Online Shoppers	0	*192*	0	50	6		0	*209*	0	40	0
3. Online Research Shoppers	18	0	*253*	11	0		14	0	*268*	4	0
4. Online-to-Offline Webroomers	27	0	0	*123*	0		49	5	2	*102*	0
5. Pragmatic Store Shoppers	0	0	0	20	*258*		0	4	0	58	*206*

Panel B: 2016 Data

	First Half (N = 1,324)						Second Half (N = 1,325)				
Full Sample (N = 2,649)	1.	2.	3.	4.	5.		1.	2.	3.	4.	5.
1. Multiple Touchpoint Users	*179*	1	4	4	0		*159*	21	13	0	0
2. Pragmatic Online Shoppers	8	*263*	13	0	0		0	*285*	3	0	1
3. Online Research Shoppers	9	2	*165*	0	0		0	8	*168*	0	0
4. Online-to-Offline Webroomers	12	0	0	*325*	5		23	0	0	*321*	12
5. Pragmatic Store Shoppers	0	0	0	4	*330*		0	0	0	0	*311*

Appendix 6: Segments per Product Category

Category	Multiple Touchpoint Users		Pragmatic Online Shoppers		Online Research Shoppers		Online-to-Offline Webroomers		Pragmatic Store Shoppers	
	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016
Apparel	14%	17%	29%	27%	17%	11%	15%	18%	26%	28%
Electronics	14%	12%	10%	14%	28%	18%	33%	39%	16%	17%
Entertainment	10%	10%	31%	26%	24%	13%	18%	29%	18%	21%
Cosmetics	7%	15%	27%	25%	16%	9%	12%	13%	39%	38%
Other	15%	16%	26%	19%	20%	12%	17%	27%	22%	25%
Total	13%	14%	23%	22%	21%	13%	20%	26%	22%	24%

Appendix 7: Customer Satisfaction Predicting Customer Loyalty Intentions

	Customer Loyalty Intentions											
	Full Sample		Multiple Touchpoint Users		Pragmatic Online Shoppers		Online Research Shoppers		Online-to-Offline Webroomers		Pragmatic Store Shoppers	
	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016	2013	2016
Intercept (α)	.93**	.88**	1.74†	.88	.33	.63	1.23†	1.01	.61	.61	-.06	.06
Psychographic Covariates												
Price Consciousness (βi_3)	-.03*	.00	-.05	-.19	-.04	.03	-.05†	-.05	-.03	.02	-.02	-.01
Time Pressure (βi_2)	.01	.05**	.04	-.09	.01	.00	.03	.10†	-.01	.07*	.00	.03
Involvement (βi_1)	.14**	.10**	.12	.18†	.00	.09*	.23**	.12*	.14**	.07*	.15**	.08*
Sociodemographic Covariates												
Age (βj_1)	-.02	-.04**	.05	.08	-.04	-.08**	-.05†	-.03	.00	-.03	-.02	-.07*
Gender Female (βj_2)	.23**	.09*	.30	.05	.12	-.01	.24*	-.17	.24*	.21*	.22*	.22*
Income (βj_3)	.01	-.03	.10	.18	.02	.00	-.03	-.02	.05	-.08*	-.01	-.03
Education (βj_4)	-.04†	-.03	-.09	-.24*	-.09†	.04	.02	-.07	-.07	-.02	-.01	-.07
Household Size (βj_5)	.02	-.01	-.07	.05	.00	.00	.05	-.04	-.02	-.03	.05	.00
Urbanization (βj_6)	.00	-.05	.11	-.66**	.17†	-.07	-.12	-.17	.06	.01	-.08	.06
Other Covariates												
Duration of Journey (βk_1)	.00	-.01	-.03	-.04	.01	-.03**	-.01	.01	.00	-.01	.00	.00
Online Channel Expertise (βk_2)	-.03*	-.06*	.08	.02	.03	.00	-.03	-.11†	-.09**	-.09**	-.06*	-.04
Physical Channel Expertise (βk_3)	-.03	.03	-.05	.23*	.00	-.02	-.05	.02	.02	.09**	-.06†	-.04
Customer Duration (βk_4)	.16**	.20**	.10	.36**	.20**	.14**	.10**	.17**	.12**	.10**	.24**	.36**
Buying Frequency (βk_5)	.05**	.03*	-.06	-.08	.03	.04*	.04	.01	.08**	.05*	.05*	.02
Spending (βk_6)	.06**	.00	-.20	-.09	.05	.04	.04	.01	.08*	.06†	.09*	.04
Customer Experience												
Product Satisfaction $(\beta 1)$	**.27**	**32**	**.07**	**.00**	**.42**	**.48**	**.27***	**.32**	**.37**	**.44**	**.40**	**.42**
Journey Satisfaction $(\beta 2)$	**.22**	**25**	**.50**	**.36**	**.23**	**.19**	**.24**	**.28**	**.17**	**.22**	**.16**	**.20**
R²	.30	.33	.41	.58	.29	.35	.33	.32	.30	.35	.36	.43
Wald Test	1.31	2.62	**9.74**	**4.02***	**3.14†**	**6.45***	.03	.05	**3.28†**	**6.07***	**5.81***	**5.24***

Note: N for 2013 = 2,443 customer journeys, N for 2016 = 2,649 customer journeys. **p < .01, *p < .05, †p < .10, two-tailed tests. We used a Three-Step Approach to model the distant outcome of the latent classes (Asparouhov and Muthén 2014; Nylund-Gibson et al. 2014). We control for category (apparel, electronics, entertainment, cosmetics, and other category as reference) in all analyses

C PAPER 2: THE DIGITAL DISRUPTION IN OVER-THE-COUNTER DRUG RETAILING

The Digital Disruption in Over-The-Counter Drug Retailing

Authors

Kristina Kleinlercher

Abstract

While technology has disrupted retail industries such as electronics or apparel, it has just started to transform the health industry. This paper sheds light on the digital disruption in retailing of over-the-counter drugs in Switzerland, different customer segments purchasing over-the-counter drugs, and technology-enabled health services.

Publication Status

Management Summary

Problem Setting

Cross-border shopping, the rising e-commerce and new market entrants are challenging traditional pharmacies and drugstores in Switzerland to defend their market shares.

Little knowledge exists on how they can harness the potential of digital technologies to differentiate themselves from others.

Insights into the trustworthiness of different information sources, today's prevalent customer segments, and the most popular digital health services help to assess the extent of the digital disruption in over-the-counter (OTC) drug retailing.

Main Propositions

1) Whether or not traditional pharmacies and drugstores will be able to keep their crucial role in the customer journey depends on their ability to offer an increased customer experience by integrating online and offline channels.

2) Pharmacies and drugstores should identify their traditional and online-prone customers and adapt their services and channel offerings to the individual preferences of these segments.

3) Technology-enabled services, such as live-chats, should complement personal interactions between the customer and the pharmacist/druggist instead of replacing them.

Lessons Learned

1) Customers' trust in online information sources such as websites or blogs when purchasing OTC drugs has risen.

2) Customers who trust in online information are more demanding when it comes to price, product and service.

3) Cross-channel services, such as Click & Collect or loyalty cards, are the most appreciated digital services.

4) 50% of customers purchasing OTC drugs are/would be bothered by digital sales advice in the pharmacy/drugstore.

1   Introduction

Based on manufacturers' delivery prices, sales of over-the-counter (hereinafter OTC) drugs amounted to 769 million Swiss Francs, or 13.7% of total sales for drugs, in Switzerland in 2016. The fact that 84% of these OTC drug sales were generated in pharmacies and drugstores (Interpharma 2017), highlights the substantial market power of these retail formats. While technologies have already disrupted retail industries such as consumer electronics or apparel (Lemon and Vehoef 2017), the digital transformation in retailing with OTC drugs is still in its infancy. Nevertheless, there are several developments that point to an approaching disruption in OTC drug retailing in Switzerland. In 2016, every fifth traditional pharmacy in Switzerland has only gained a pre-tax profit of less than 50'000 CHF. At the same time, the Swiss retail giant Migros teamed up with the online pharmacy Zur Rose in order to offer OTC drugs at cheaper prices via shop-in-shop formats (Alich 2017). While experts argue that the digitalization in the health market may disrupt the entire value chain, there are hardly any insights on how quickly this development may proceed (e.g., Atluri et al. 2016). Furthermore, the question arises how traditional pharmacies can harness the potential of digital technologies (Roland Berger 2016). This paper aims to find out to what extent digital technologies have disrupted retailing of OTC drugs in Switzerland in the last three years. It focuses on customers' trust in online and offline health information sources, the most prevalent customer segments that purchase OTC drugs and the biggest opportunities and threats of technology-enabled health services.

2   Customers' Trust in Health Information Sources

Despite recent developments toward a digitalized world, health executives are still in doubt whether the internet can take over an industry that relies so heavily on the customer's trust in the product/service provider (Li et al. 2014). While there are many definitions of customer trust across disciplines, this paper defines trust as a customer's expectation that the significant other will behave promotive toward him/her, despite the fact that the significant other could choose among additional alternatives (Koller 1988). As online and offline trust have the same denominator, namely the exchange between two parties, and rely on the same aspects, such as risks, costs and fear (Shankar 2002), the abovementioned definition of trust, which was formulated long before the rise of digital technologies, still holds true in today's digital environment. However, the building of online trust is much more complex than that of offline trust. Whereas customers' trust in an offline setting is typically focused on a specific person or company, online customers have to trust not only the company per se but also its online activities (e.g., its website) and the technology around it (the internet per se) (Shankar 2002). Trusting the intangible and faceless online shop is much harder than trusting the sales staff

one has just met in person (Ozdemir 2007). Nevertheless, there are some indications, that trusting health information online is possible. Maloney-Krichmar and Preesce (2005) did an ethnographic research in an online health support community. They found that there is a high level of trust among community members and that the virtual community has the power to give members social support and improve their quality of life.

In today's digitalized world there are more and more contributors to online health information, such as manufacturers, pharmacies, drugstores, doctors, government agencies, and insurances (Agarwal et al. 2010). Mobile applications that monitor customers' health status, online doctors that comment on specific products and communities where customers share their experience empower the customer to critically reflect on information. The proliferation of new distribution and communication channels and the empowerment of health customers, raise the questions which of all these channels and information sources customers trust most when purchasing OTC drugs. Hardly any health studies investigate online trust in this business-to-customer-relationship (Agarwal et al. 2010).

RQ1: Which sources of information do customers trust most when searching for and purchasing OTC drugs in the new digital age? How did customers' trust in different information sources change over the last three years?

3   Customer Segments Purchasing OTC Drugs in Switzerland

Companies that extensively study and know their customers will be the most successful ones in OTC drug retailing of the future (Meng, Layton, and Huang 2016). Today's demanding customers and the increasing amount of customer data available call for personalized marketing strategies that serve customer segments of the size of one (Google 2016). Therefore, standardized segmentation studies based on customer demographics will no longer help to cater individual customer needs (Atluri et al. 2016). In order to provide targeted health solutions, pharmacies and drugstores need to gain more insights into the type of customers that trust information online and offline. Despite its relevance, this area of research is widely underexplored (Agarwal et al. 2010).

Previous studies categorize products by how easy their claimed quality can be researched among customers. They differentiate between products with search, experience, and credence qualities (Nelson 1970). Depending on what category the products refer to, one can determine what factors customers of these products value most when shopping. OTC drugs are what experts refer to as credence goods. This means that the average consumer will never have sufficient expertise to evaluate whether the product quality claimed by the brand is accurate

or not (Beck et al. 2014). While existing studies deliver valuable insights into customers' preferences when purchasing credence goods, there is still a need to find out whether information related to price, product and service is equally important for the different types of today's customer segments purchasing OTC drugs. Furthermore, in today's digitalized and transparent world, one wonders whether some factors, such as price, have gained importance among specific segments. As a consequence, the author poses the following research question:

RQ2: What customer segments exist in today's retailing of OTC drugs and what do these different segments value most when shopping?

4 Opportunities and Threats of Technology-Enabled Health Services

Digital services benefit customers on a wide array that ranges from increased convenience and control, to potentially cheaper prices and more accurate treatments (e.g., Ozdemir 2007, Agarwal et al. 2010). Given this "glorification" of digitalized retailing of OTC drugs, the question arises whether there are also some downsides for the customer. Especially debates about the customers' privacy dilemma in the internet give rise to this question. With the help of digital technologies, companies may now collect customer data and personalize health services to the individual needs of their customers. Paradoxically, customers favor these customized products/services, but are still reluctant to share personal data (Awad and Krishnan 2006). Still, this concern is comprehensible, as personal health information is very sensitive and often requires higher levels of protection in order to avoid social discrediting (Beckerman et al. 2008; Malhotra, Kim, and Agarwal 2004). Furthermore, health information was found to be closely linked to customers' emotions and may therefore only be shared with those that one utterly trusts (Anderson and Argawal 2011). Apart from potential privacy concerns, there might be other factors that hinder customers of OTC drugs to use digital services. Unfortunately, literature on this topic is scarce. Only those pharmacies and drugstores that can identify the key challenges of digital health from a customer's point of view will be able to exploit opportunities to differentiate themselves from others (Roland Berger 2016). Abovementioned gaps in literature give rise to the third research question:

RQ3: What are the most prevalent opportunities and threats of technology-enabled services in today's OTC drug retailing?

5 Methodology and Findings

The author collected survey data of customers purchasing OTC drugs in Switzerland in spring 2017 with the help of an online service provider. In order to be able to replicate results, the author and her colleagues also collected survey data among customers purchasing OTC drugs in Switzerland in autumn 2014[6]. Within both questionnaires, participants were asked about their purchasing habits and preferences for OTC drugs. In sum, the author collected data from 900 individual customers in 2017 and from 722 individual customers in 2014. The quotas within these samples for age, gender and residential area represent the population distribution offered by the Swiss Federal Statistical Office (SFSO) in 2014 and 2017. This provides external validity of the results and allows a comparison between the two data sets. The author used the statistical software SPSS to analyze the data sets.

To answer the first research question, customers were asked to rate how much they trust specific online and offline health information sources when searching for and purchasing OTC drugs on a 7-point Likert scale. The most trustworthy information source is the doctor, followed by the pharmacist[7] and the pharmacy's personnel (see Figure C-1). While customers' trust in these sources did not change significantly within the last years, online information sources are becoming more important. In 2017, online information sources such as the manufacturer's website, the pharmacy's website and the pharmacy's newsletter are trustworthy information sources for more than one third of all customers. The results suggest that digital technologies are rapidly disrupting OTC drug retailing in Switzerland. Furthermore, results from the year 2017 show that customers Online-trust not only refers to the pharmacy but also to the manufacturer and to other customers. As the survey was conducted offline, on main railway stations, in 2014 and online in 2017, results concerning the differences between 2014 and 2017 might be biased to some extent and have to be interpreted carefully.
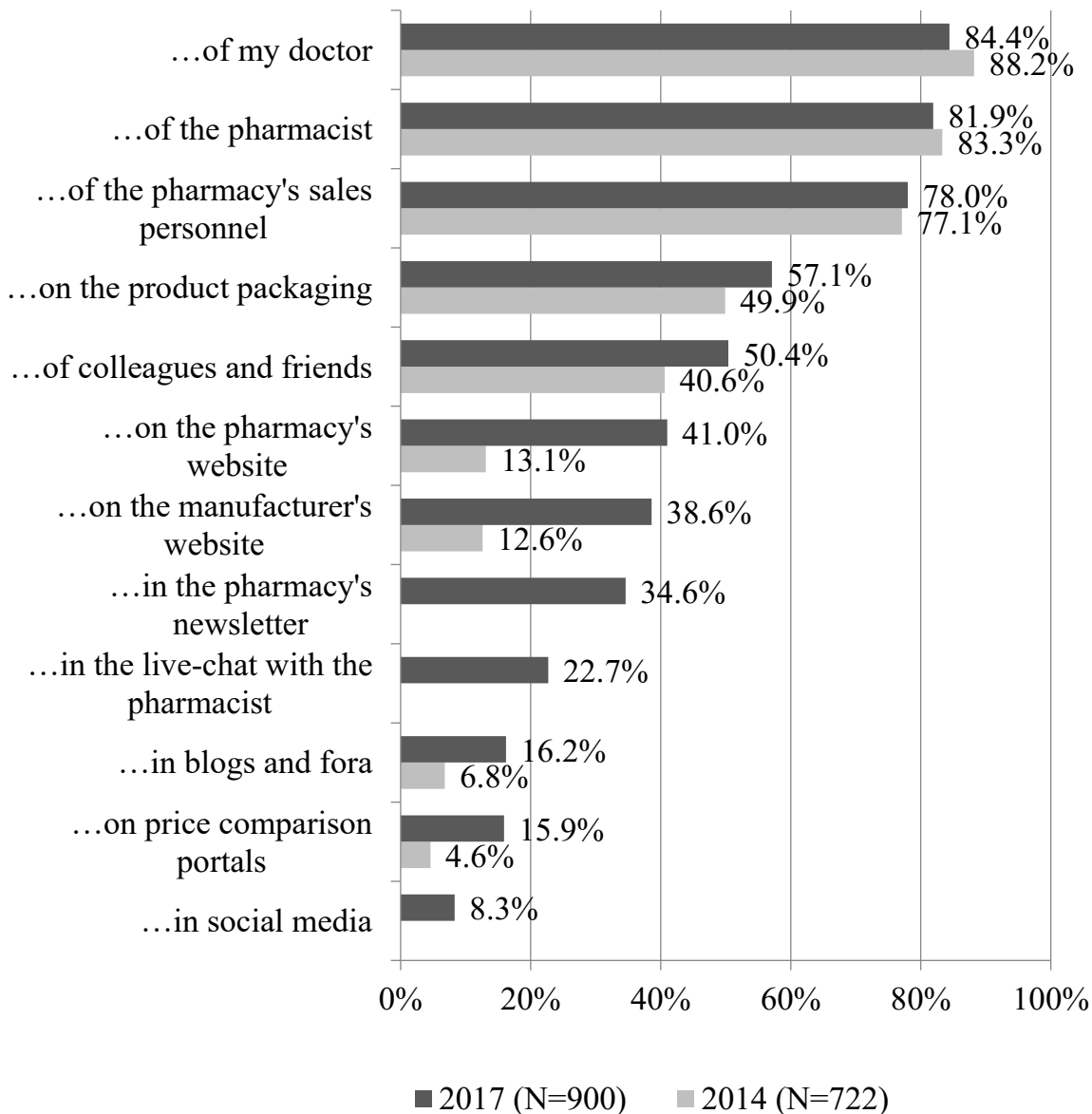
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[6] The two dataset used for this study were drawn from a longitudinal study conducted by the Institute of Retail Management at the University of St.Gallen (Rudolph and Weber 2014; Rudolph, Kleinlercher, and Nitsch 2017).

[7] For the sake of simplicity, the study will hereinafter refer to pharmacists and druggists as pharmacists and to pharmacies and drugstores as pharmacies.

Figure C-1
Customers' Trust in Information Sources (2014 and 2017)

When purchasing OTC drugs, I trust the information…

(share of customers with an agreement rate from 5-7 in percent on a scale from 1 = totally disagree to 7 = totally agree)

Information source	2017 (N=900)	2014 (N=722)
…of my doctor	84.4%	88.2%
…of the pharmacist	81.9%	83.3%
…of the pharmacy's sales personnel	78.0%	77.1%
…on the product packaging	57.1%	49.9%
…of colleagues and friends	50.4%	40.6%
…on the pharmacy's website	41.0%	13.1%
…on the manufacturer's website	38.6%	12.6%
…in the pharmacy's newsletter	34.6%	
…in the live-chat with the pharmacist	22.7%	
…in blogs and fora	16.2%	6.8%
…on price comparison portals	15.9%	4.6%
…in social media	8.3%	

■ 2017 (N=900)   ■ 2014 (N=722)

Since standardized segmentation studies based on customer demographics will no longer help to cater for individual customer needs, the author segmented customers purchasing OTC drugs according to their trust in online information sources (RQ2). First, customers were segmented depending on their level of trust (high vs. low) in online information given by the pharmacy (website, newsletter, live-chat). Then customers were segmented depending on their level of trust (high vs. low) in online information given by someone other than the pharmacy (manufacturer's website, price comparison portals, blogs and fora, social media), so-called "independent information sources". The grouping of customers along these two dimensions reveals four customer segments: (1) Sceptics, (2) Pharmacy Only Trusters, (3) Independent Only Trusters, and (4) Trusters (see Figure C-2).

Figure C-2
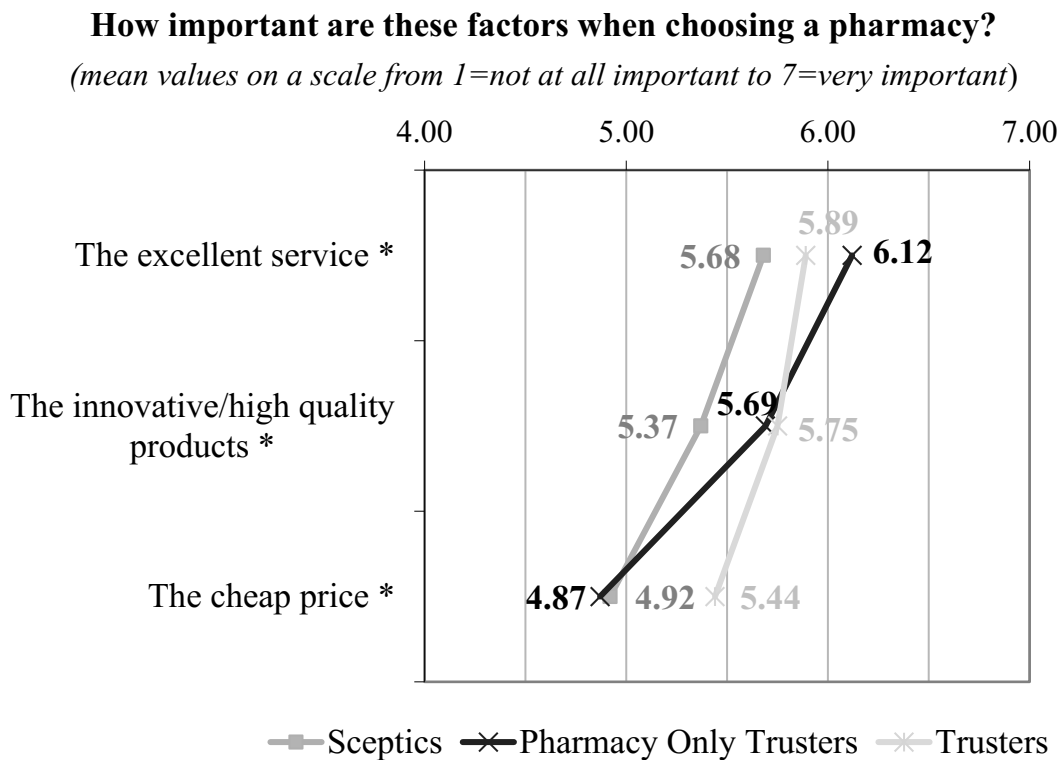Customer Segments Regarding Trust in Online Information (2017)

The segment Sceptics is the biggest of the four (60%). Sceptics do not trust any online information source. The average age of the Sceptics is the highest of the four segments. Almost two thirds of the Sceptics can name a specific pharmacy they usually go to. Sceptics visit a physical pharmacy on average once a month. The segment Pharmacy Only Trusters makes up one fifth of the customers investigated. These customers only trust the information that is send out by pharmacies online. 56% of Pharmacy Only Trusters are 45 years or older. More than two thirds of Pharmacy Only Trusters have a preferred pharmacy. The average customer in this segment visits the pharmacy every three weeks. Independent Only Trusters is the smallest segment[8]. Customers in this segment only trust independent information sources online. Independent Only Trusters is the youngest customer segment. Customers in this segment are less loyal than the others, only 30% of them have a preferred pharmacy. They cover 40% of their demand for OTC drugs abroad or online. 17.5% of the customers belong to the segment Trusters. These customers trust online information disseminated by pharmacies and other stakeholders. Trusters are on average younger than Sceptics and Pharmacy Only Trusters. They purchase pharmaceutical products every two weeks.

The relative importance of customers' weight on product, price and service when choosing a pharmacy to purchase OTC drugs differs significantly across the four segments. The pharmacy's service is the most important decision criterion for customers in all three segments (see Figure C-3). Trusters and Pharmacy Only Trusters are more demanding of excellent service and product quality than Sceptics. Trusters value the cheap price of a pharmacy's products the most. The excellent service weighs exceptionally strong for Pharmacy Only Trusters.

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[8] Given that this segment comprises only 16 customers, statements about Independent Only Truster have to be viewed as tendencies. Because of the small segment size, the author excluded the segment Independent Only Trusters from further analyses.
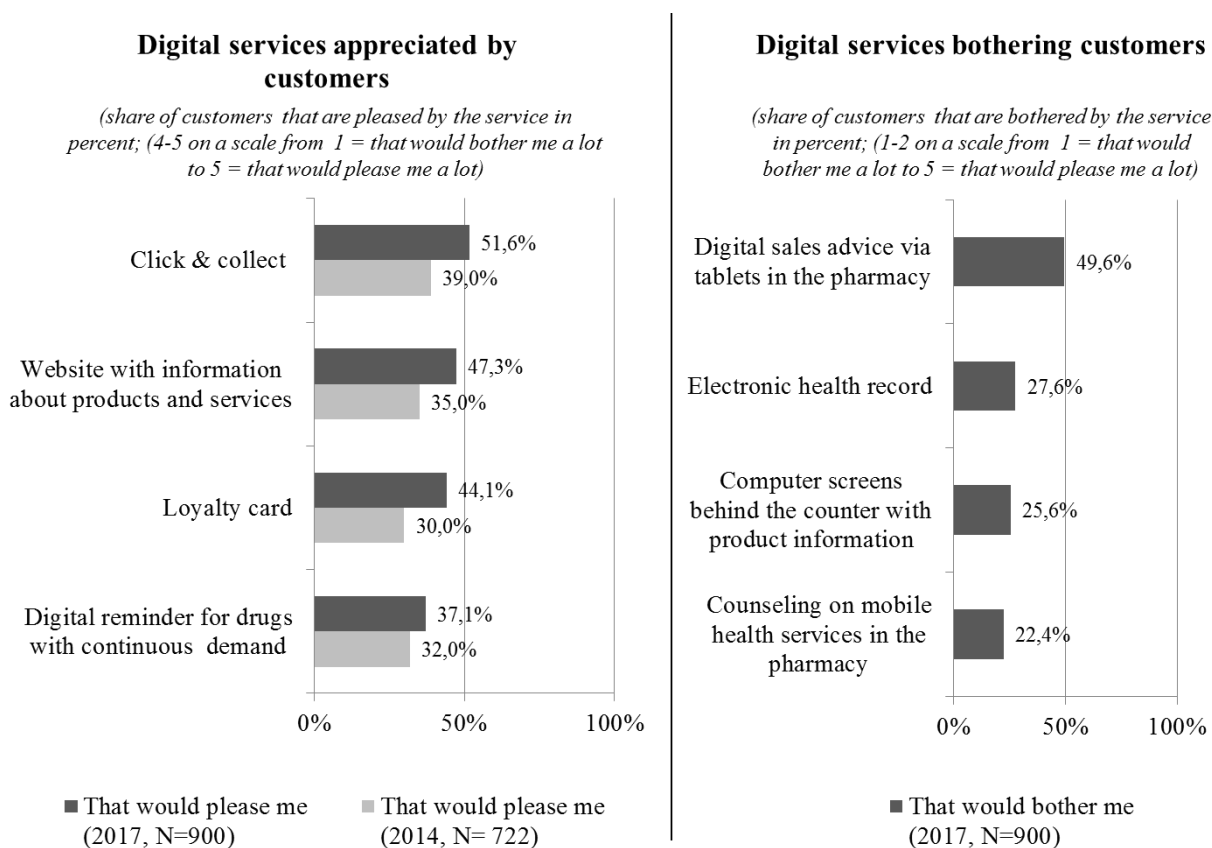
Figure C-3
Important Decision Criteria Across Customer Segments (2017)

How important are these factors when choosing a pharmacy?
(mean values on a scale from 1=not at all important to 7=very important)

* = significant at p < .05

By asking customers about their opinion on technology-enabled services on a scale from 1 (= that would bother me a lot) to 5 (= that would please me a lot), the study reveals the most prevalent opportunities and threats of the digital disruption in Swiss OTC drug retailing (RQ3). Services which are integrating online and offline channels (hereinafter "cross-channel services") please a large proportion of customers (see Figure C-4). Click & Collect, pharmacy websites with product/service information, and online and offline deployable loyalty cards are the most promising technology-enabled health services. The appreciation of these services has risen in the last three years. In contrast to that, services that reduce personal contact with the sales personnel and store customer data bother a relatively large proportion of customers. For instance, 50% of all customers indicate that digital sales advice in the pharmacy via tablets bothers them.

Figure C-4
Digital Services Appreciated by and Bothering Customers (2014 and 2017)

Digital services appreciated by customers

(share of customers that are pleased by the service in percent; (4-5 on a scale from 1 = that would bother me a lot to 5 = that would please me a lot)

Click & collect: 51,6% / 39,0%
Website with information about products and services: 47,3% / 35,0%
Loyalty card: 44,1% / 30,0%
Digital reminder for drugs with continuous demand: 37,1% / 32,0%

■ That would please me (2017, N=900)   ■ That would please me (2014, N= 722)

Digital services bothering customers

(share of customers that are bothered by the service in percent; (1-2 on a scale from 1 = that would bother me a lot to 5 = that would please me a lot)

Digital sales advice via tablets in the pharmacy: 49,6%
Electronic health record: 27,6%
Computer screens behind the counter with product information: 25,6%
Counseling on mobile health services in the pharmacy: 22,4%

■ That would bother me (2017, N=900)

6 Discussion

Today's digitalized world provides more and more players, such as manufacturers or other customers, with the opportunity to influence customers' purchase decision. Whether or not pharmacies will be able to keep their crucial role in the customer journey will depend on their ability to (1) identify and serve prevalent customer segments (Agarwal et al. 2010) and to (2) offer an increased customer experience by integrating channels (Roland Berger 2016).

Results from this study extend these statements in three ways. First, they reveal that customers who trust online information sources are more demanding when it comes to price-, service- and product-related issues. Therefore, pharmacies should identify their traditional and online-prone customers and adapt their channels to the preferences of their most valuable segment(s). Second, cross-channel services, such as Click & Collect, or online and offline deployable loyalty cards, are the most appreciated digital services among customers purchasing OTC drugs. Nevertheless, although technology-enabled services offered by the pharmacy (live-chat, website, newsletter) were proven to gain trust among customers, they shall not replace personal interactions but complement them. In this sense, companies such

as Galenica Santé plans to offer services such as Click & Collect in all of its pharmacies by the second half of the year 2017 (Alich 2017). Third, while mobile health applications are estimated to grow by 41% in market value until 2020 (Roland Berger 2016), this study reveals that several customers are still skeptical toward mobile health. One reason for this may be that customers do not trust the information given via mobile applications (Kumar et al. 2014). Companies developing health applications are well-advised to invest in the quality of their application and include detailed information about their privacy policy.

The pharmacy and drugstore market in Switzerland has been subject to predatory competition for several years. In July 2017 the Swiss online pharmacy Zur Rose, which achieves almost half of its sales with OTC drugs, had a successful initial public offering with a market capitalization of approximately 900 million Swiss Francs (as of August 2017). Furthermore, technology companies such as IBM, Google or Qualcomm Technologies are entering the health market and thus challenge traditional pharmacies. On top of that, cross-border shopping has become more popular over the last years. In 2017, almost 50% of Swiss customers go abroad from time to time to purchase OTC drugs (Rudolph et al. 2017). Traditional pharmacies and drugstores in Switzerland need to find ways to defend their shares against new market invaders. With detailed insights into the characteristics and preferences of the most prevalent customer segments purchasing OTC drugs and the most appreciated cross-channel services, this study shall help pharmacies and drugstores to embrace technology in order to differentiate themselves.

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D   PAPER 3: WEBSITES AS INFORMATION HUBS - HOW INFORMATIONAL CHANNEL INTEGRATION AND SHOPPING BENEFIT DENSITY INTERACT IN STEERING CUSTOMERS TO THE PHYSICAL STORE

Websites as Information Hubs –
How Informational Channel Integration and Shopping Benefit Density Interact in Steering Customers to the Physical Store

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Abstract

Multichannel retailers aim to steer customers to physical stores in order to increase cross-selling, benefit from higher margins, and offer multisensory experiences. The question of how retailers can steer customers to strategically important channels remains. We propose that retailers may induce customers to switch to physical stores by communicating information about channel integration on their websites and that this explicit communication is influenced by the implicit communication of shopping benefits of which customers and retailers may not be aware. Using a multilevel and multisource approach with field data on 1,479 customers and 104 firms, we find that informational online-to-physical channel integration on a retailer's website influences customers' online-to-physical store switching and that the density of concurrently communicated shopping benefits moderates this effect. Our results extend the literature on channel choice and provide implications for retailers regarding how to design websites as information hubs to steer customers to physical stores.

Conference Presentations

Presented at the Baker Retailing Center Conference in Philadelphia, USA.

1 Introduction

Research suggests that multichannel retailers should foster seamless channel behavior from the website to the physical store because customers' spending tends to increase if they use the physical channel (Ansari, Mela, and Neslin 2008). Macy's reports that on average, customers spend 20-25% more money than they had planned in physical stores (Halzack 2015). When exposed to products in a physical store, customers form new purchase motivations or remember forgotten ones and may increase their unplanned spending (Hui et al. 2013). In addition to increased cross-selling opportunities (Neslin and Shankar 2009; Gallino and Moreno 2014), physical stores also substantially contribute to a retailer's profits by providing higher margins than other channels. J.C. Penney, for example, states that its in-store sales are the most profitable sales across channels, and Rigby (2014) estimates a margin advantage of 2-8% for store-based compared to online retailers. Furthermore, enhanced customer experiences with the help of an inspiring store design (Robertson, Gatignon, and Cesareo 2018), increased trust through personal interaction (Benedicktus et al. 2010), and a higher convenience of shopping in-store (Pauwels and Neslin 2015) may help multichannel retailers to strengthen their brand image (Wang and Goldfarb 2017) and increase the costs of switching to competitors (Brynjolfsson, Hu, and Rahman 2013). Therefore, it is not surprising that pure online players, such as Amazon and Zalando, have opened up physical stores and that an increasing number of multichannel retailers aim to steer customers from their websites to their physical stores.

Despite the many advantages that a retailer's physical store offers, the online shop's ability to provide customers with a vast amount of information anytime and anywhere has turned retailer websites into a highly important information source within the customer journey (Flavián, Gurrea, and Orús 2016). A retailer's website may act as an information hub that attracts customers early in their search phase and displays information that may guide consumers through their shopping process (e.g., Pauwels et al. 2011). Approximately 70% of customers worldwide tend to search online before purchasing in physical stores (PricewaterhouseCoopers 2015), which makes so-called webrooming the most prevalent form of research shopping (Flavián et al. 2016). To prevent losing customers to competitors online, retailers integrate their online and physical channels (e.g., Cao and Li 2015; Emrich, Paul, and Rudolph 2015; Herhausen et al. 2015). Informational online-to-physical channel integration (hereinafter ICI), defined as providing access to and information about the physical store on the retailer's website (Bendoly et al. 2005), has been found to increase perceptions of website quality and enhance search and purchase intentions at a multichannel retailer (Herhausen et al. 2015). More generally, channel integration is central to establishing

a competitive advantage over pure online retailers and has been shown to increase sales growth over time (Cao and Li 2015).

To achieve and maintain a competitive advantage, retailers attempt to steer consumers towards their own strategically important channels. This process has become increasingly challenging because digital technologies enable unrestricted access to information disseminated by other customers, manufacturers, and independent providers that may influence customers' decision processes (Lemon and Verhoef 2016). Exerting too much control over customers' channel choice may lead to detrimental effects, such as customers' negative reaction or weaker purchase intentions (Herhausen, Schögel, and Schulten 2012; Trampe, Konus, and Verhoef 2014). As such, a debate has unfolded regarding whether and how retailers may steer today's empowered customers to strategically important channels (Lemon and Verhoef 2016).

To address this research gap, we propose that by integrating information between online and physical stores, a retailer's website may act as an information hub that steers customers to physical stores. To date, research on physical channel integration (providing integrated services, such as click & collect) and informational channel integration (one channel providing information about another) is scarce (Bendoly et al. 2005; Herhausen et al. 2015; Gallino and Moreno 2014). Given that physical channel integration is very costly for multichannel retailers and may not be sufficient to differentiate among retailers in the long run (Ofek, Katona, and Sarvary 2011), additional research on informational channel integration may help retailers to successfully steer customers to their physical stores. Focusing on the informational aspect of channel integration, we investigate how customers' channel choice is influenced by explicit communication about the physical store's resources on its website (i.e., ICI). Furthermore, we suggest that customers who are exposed to this explicit communication on the retailer's website may become more receptive to the implicit communication of shopping benefits associated with either the physical or the online channel (Verhoef, Neslin, and Vroomen 2007). The distinction between explicit and implicit communication refers to the notion that knowledge attainment is explicit for declarative, instructive, and actively processed knowledge and implicit for knowledge that is inferred from the context, which is often referred to as reading between the lines of information and practices (Griffith, Sawyer, and Neale 2003). As such, the context of shopping benefits communicated in conjunction with ICI may induce a (implicit) learning process regarding the relative advantages of physical stores versus online stores. Specifically, the density of informational shopping benefits may qualify (i.e., moderate) the impact of ICI on online-to-physical store switching (hereinafter OSS) such that it becomes either strengthened or weakened. Previous studies have found that subtle website cues, such as symbols in the website's background (Mandel and Johnson 2002) or similarities between the web design and

the physical store (Emrich and Verhoef 2015), influence customers' online purchase decisions. As these effects are very subtle, retailers may not necessarily be aware that these cues influence the effectiveness of ICI, thereby emphasizing the managerial importance of our research. We address two research questions for multichannel retailers:

1. *What is the effect of explicit informational online-to-physical channel integration (ICI) on customers' online-to-physical store switching (OSS)?*

2. *How does the implicit website information on shopping benefits moderate the effect of ICI on OSS? Specifically, when does implicit website communication about shopping benefits strengthen or weaken the effect of explicit ICI on OSS?*

Our study investigates the role of the website as an information hub in a field setting using behavioral customer and objective firm data across major retail categories in Germany, Austria, and Switzerland. Extending previous studies on drivers of webrooming (searching online and purchasing in the physical store; e.g., Flavián et al. 2016; Gensler, Neslin, and Verhoef 2017), our study explores whether and how a retailer's website, serving as an information hub, can steer customers to its physical stores. Appendix 1 summarizes relevant studies that investigate interdependencies and synergies between channels. Existing online-to-physical channel integration studies have focused predominantly on assortment or price integration (e.g., Avery et al. 2012) but do not analyze how websites, as information hubs, may direct customers to channels merely with the help of ICI and its interplay with other website information. We provide a readily observable measurement scale for companies to assess their degree of ICI and uncover new managerial knowledge about the moderating effects of the website context.

2 Conceptual Development

To explore the role of websites as information hubs, we consider retailers' explicit and implicit website communications and their joint effect on the likelihood of customers' online-to-physical store switching as the dependent variable.

Regarding a retailer's explicit communication, we use the degree of informational online-to-physical channel integration as the independent variable. The degree of ICI varies depending on how much information about the physical store is accessible through the website. Providing knowledge about the physical store should help a retailer to complement the online channel with specific capabilities of the physical channel (e.g., Herhausen et al. 2015). Examples include website information about physical store locations, in-store promotions, and in-store product availabilities.

A retailer's implicit communication of different shopping benefits on its website may further qualify the effect of ICI on OSS as a moderator. We define the density of informational shopping benefits as the frequency of a specific shopping benefit in relation to other shopping benefits in the website information surrounding channel integration. Subtle information cues that are communicated in the immediate surroundings of ICI may direct customers' attention toward specific aspects of the purchasing process that are associated with the physical channel and thus support the notion of OSS (e.g., Balasubramanian, Raghunathan, and Mahajan 2005). In line with this observation, Verhoef et al. (2007) state that retailers can strategically use comparative channel benefits to influence consumers' channel attitudes.

As summarized in our conceptual model (see Figure D-1), we first propose an effect of retailers' explicit communication of ICI that makes consumers deliberatively assess resources concerning the physical channel and thus increases the likelihood of OSS. Second, we propose that this activating effect on customers' channel choice is further qualified by a retailer's implicit communication of shopping benefits, associated with either the physical or the online channel, that either strengthen or weaken the effect of ICI on OSS. Although consumers may deliberately consider OSS based on ICI, a high density of shopping benefits in the immediate surroundings may automatically activate knowledge about stored channel advantages, in line with dual processing theory (e.g., Ophir, Nass, and Wagner 2009). Because this activation of implicit shopping benefits may be very subtle, we do not expect a direct effect (without ICI). However, the effects of ICI may still be highly sensitive to surrounding information on shopping benefits of which both retailers and customers may not be fully aware.

Figure D-1

Customer Steering With the Website as an Information Hub
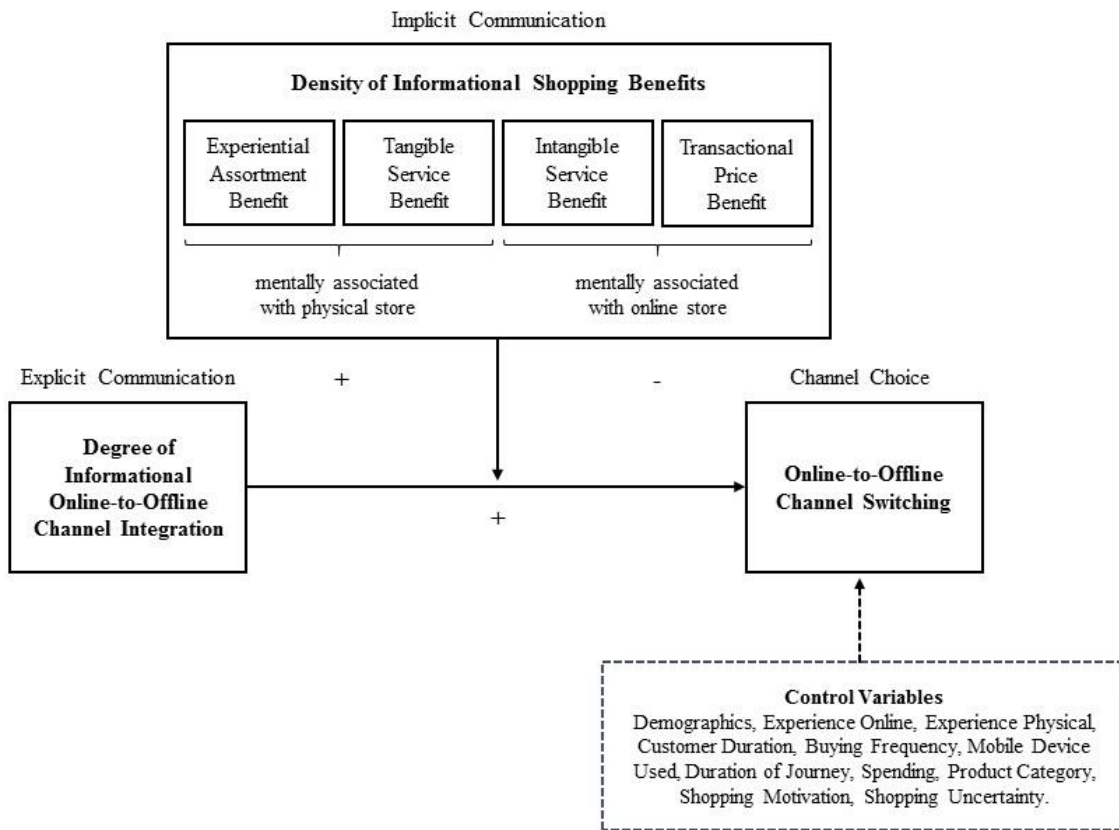
Based on previous research, we aggregate channel-related shopping benefits into four overall categories, encompassing experiential assortment benefits, tangible service benefits, intangible service benefits, and transactional price benefits (see Appendix 2 for a detailed description of the associations between shopping benefits and channels).

Experiential Assortment Benefits. According to Avery et al. (2012) and Verhoef et al. (2007), the physical channel is more strongly associated with experiential assortment benefits, such as opportunities to experience products, evaluate brands, and derive multisensory utilities. Although the online channel may contain more products at comparably low costs (also called a long tail), experiential benefits related to the assortment prevail for the physical channel because in the store, customers have more opportunities to explore brands and products. From the customer's perspective, physical channels can better represent assortments (e.g., Verhoef et al. 2007), and many retailers try to offer their most important assortments in both channels, which largely offsets differences in the product range (Avery et al. 2012).

Tangible Service Benefits. Tangible service benefits encompass all aspects of a curated and immediate shopping experience at a retailer where customers value personal interaction with sales personnel and instant gratification for their efforts (Alba et al. 1997). A physical store

provides a curated shopping experience through the opportunity to obtain face-to-face sales advice, to establish a relationship with the retailer, to negotiate prices and to receive after-sales services (Avery et al. 2012). In addition, immediate benefits – such as instantly obtaining the physical product and avoiding delivery – may be experienced more strongly in a physical store than in an online store (Wang, Krishnamurthi, and Malthouse 2018).

Intangible Service Benefits. Intangible service benefits summarize fluid and streamlined benefits that the online channel can better provide, given its flexible interfaces and optimized transaction procedures (Alba et al. 1997). The online channel provides fluid benefits via greater information accessibility, lower search costs, more flexible opportunities to compare products, and the option to browse and purchase products from any place anytime, anywhere (Verhoef et al. 2007). Streamlined benefits arise from the efficiency, ease, and speed of making a purchase online and from the online channel's ability to recognize a consumer (e.g., via log-in or cookies) and provide personal settings based on previous transaction histories that facilitate the purchase process (Avery et al. 2012).

Transactional Price Benefits. Whereas previous studies have indicated that a retailer's physical store may be in a better position to minimize monetary transaction costs (e.g., shipping charges) for the consumer (Avery et al. 2012), empirical results have shown that retailers more intensely compete on price online, that price levels are expected to be lower online and that retailers use attractive price promotions more extensively online than in store (Verhoef et al. 2007; Wolk and Ebling 2010).

Other Potential Benefits. Previous research has found channel-related differences in privacy benefits (e.g., Verhoef et al. 2007), which online stores frequently aim to provide. Those benefits are often communicated in conjunction with the online channel but cannot constitute a real advantage over physical stores, where high privacy levels are provided without any managerial intervention. Since we focus only on retail mix instruments, which are crucial to all multichannel retailers and must be dealt with on a regular basis (Zhang et al. 2010), we also do not consider social or fun-related shopping benefits.

3   Hypotheses

3.1   Explicit Multichannel Communication: The Effect of ICI on OSS

Previous research has supported the notion that firms benefit from channel integration. Cao and Li (2015) find that the integration of online and physical channels positively influences a firm's sales growth, and Emrich et al. (2015) identify several channel integration strategies that increase customers' patronage intentions. Verhoef et al. (2007) state that the level of

cross-channel synergy between the retailer's website and the physical store positively influences channel switching, and Herhausen et al. (2015) find that online-to-physical channel integration does not cannibalize sales in the physical store but rather increases purchase intentions in the physical store. However, providing information about the physical store online may also negatively affect customers' OSS. Offering too many product alternatives on a retailer's website may result in confusion, dissatisfaction and deter customers from making a purchase decision (Lee and Lee 2004). Apart from consumer confusion, ICI may also increase the cognitive complexity of a retailer's website and thus interrupt flow in online environments (Hoffmann and Novak 2009). Despite potential detrimental effects of channel integration on channel switching, we argue that providing information about the physical store increases the desire of today's empowered customers to visit the physical store and engage in a seamless multichannel experience without restricting their autonomy.

> *H1: The degree of ICI on a retailer's website is positively associated with customers' likelihood of OSS.*

3.2 Implicit Multichannel Communication: The Moderating Effect of Shopping Benefit Density

Channel choice depends on the benefits that customers wish to obtain from the purchase (Balasubramanian et al. 2005). Because customers prefer a channel based on the specific benefits that they anticipate obtaining by using this channel, their behavior may be influenced by subtle information cues that activate those specific benefit mindsets (Fiske and Taylor 2013). The more a specific shopping benefit is highlighted in relation to other shopping goals, the stronger the activation of the corresponding mindset for obtaining this benefit will be. Therefore, we will regard the communicated shopping benefit density surrounding the explicit communication about ICI as a moderating influence on the impact of ICI on OSS. Whereas explicit communication about channel integration is intended to prompt channel switching and therefore directly activate behavioral intentions (Bagozzi and Dholakia 1999), this implicit communication is more likely to trigger cognitions about shopping benefits that are only loosely connected with channel associations and become activated only if channel integration renders store switching salient (Fiske and Taylor 2013). Therefore, we will hypothesize how explicit communication about ICI may be qualified (i.e., moderated) by implicit communication about different types of shopping benefits when steering customers to the physical channel.

Experiential Assortment Benefits. Compared to the online channel, the physical store provides more opportunities to experience products based on sensory impressions, which

enable customers to better assess product utility, enhance their brand awareness, and increase their purchase confidence (Avery et al. 2012; Jahn et al. 2018). When customers process website information about the physical channel, cues about experiential assortment benefits may further strengthen their intention to use the physical channel because customers' mindsets become more strongly directed towards evaluating brands. For example, in fashion retailing, where brand experiences play an important role, online customers face a barrier to experiencing the product and are less confident about product attributes (Peck and Childers 2003). If the information cues activate mental concepts of brand experiences, the advantages of using a physical store with regard to touching, browsing, and feeling the assortments may implicitly support OSS intentions evoked by ICI. Additional evidence for the moderating impact of experiential assortment benefits results from empirical findings that customers perceive a retailer's physical store as the best channel for testing and purchasing popular brands, new products, and high-quality items (Verhoef et al. 2007).

> *H2: A high density of website cues related to experiential assortment benefits strengthens the positive relationship between ICI and customers' likelihood of OSS.*

Tangible Service Benefits. The physical store offers multiple services during the purchase process that help customers receive curated advice and personal service delivery and provide them immediate access to physical consumption (Seiders et al. 2007). All these service benefits immediately result in tangible outcomes, such as immediate consumption access and immediate completion of product returns, and involve tangible face-to-face interactions that enhance the purchase process (Avery et al. 2012). Website cues that refer to tangible service benefits may activate expectations regarding those specific service aspects that the physical store can better provide and therefore implicitly strengthen the impact of ICI on OSS intentions. For example, if website cues elicit a desire for instant gratification, this impulse may place more weight on intentions to switch to the physical channel and thereby make informational channel integration more effective (Gao, Li, and Wyer 2016). Alternatively, consider a customer who struggles to make a decision and who is exposed to website cues about personal assistance. In such a situation, the impact of ICI on OSS will be additionally strengthened by the impulse for tangible interactions with a real service counterpart (Flavián et al. 2016).

> *H3: A high density of website cues related to tangible service benefits strengthens the positive relationship between ICI and customers' likelihood of OSS.*

Intangible Service Benefits. Compared to physical stores, online channels provide many opportunities to make shopping more flexible and to save time and effort (Verhoef et al. 2007). These fluid and streamlined processes are specific characteristics of online shops that are continually improved based on new technologies and access to individual customer profiles (Avery et al. 2012). When customers are exposed to these intangible service benefits, ICI may become less effective in steering customers to the physical store because the advantages of online shopping come more readily to mind and prevent customers from OSS. For example, from information cues related to their personal profiles, customers may be reminded that they can save time online because personalized shopping offers are automatically provided and shipping and credit card details are already stored. If those intangible service benefits are activated in customers' minds, the provision of information about other channels may less strongly increase OSS intentions.

H4: A high density of website cues related to intangible service benefits weakens the positive relationship between ICI and customers' likelihood of OSS.

Transactional Price Benefits. Even though additional monetary costs such as shipping costs may occur, consumers perceive prices to be lower online, and easy price comparisons and higher price transparency online strengthen the mental association between the online channel and transactional price benefits (Verhoef et al. 2007; Wolk and Ebling 2010). When searching for price deals, customers prefer the online channel to physical stores (Verhoef et al. 2007), and research has found that only showing consumers price-related cues encourages them to assume low prices even if concurrent information is available (Inman, McAlister, and Hoyer 1990). This finding suggests that if price cues are presented in the same context, ICI will become less effective in steering customers to physical stores. Empirical studies support this notion: if the online store highlights price information, its lock-in effect might be higher (Balasubramanian et al. 2005). Emrich and Verhoef (2015) find that information about price competitiveness weakens the effectiveness of design integration across channels (i.e., a homogenous design across online and physical channels). Therefore, cues about transactional price benefits may similarly weaken the effect of ICI on OSS.

H5: A high density of website cues related to transactional price benefits weakens the positive relationship between ICI and customers' likelihood of OSS.

4 Methodology

4.1 Data Collection

We test our hypotheses using multilevel and multisource data consisting of survey data collected in Austria, Germany, and Switzerland in 2016[9]. The quotas chosen for age and gender distributions correspond to the population of internet users in the three countries. Customers who could not recall a multichannel retailer for which they knew the online store and the offline store were filtered out at the beginning. The screening criteria, together with quota requirements and unfinished surveys, involved 3,575 cases for which we did not receive complete data. Our sample encompassed 3,105 multichannel customers. Participants were asked to reconstruct their last purchase at a multichannel retailer that sells its products both online and in physical stores. Participants indicated at which retailer they had made the purchase, what they had bought, how much time had passed since they bought the item(s), and which touchpoints they had visited during the purchasing process. Since our analysis requires that participants have processed the website information, we analyzed only participants who visited the retailer's website (1,912 participants), and due to the multilevel structure of our analysis, we considered only retailers that were mentioned by at least five customers. Our final sample consists of 1,479 customers from 104 multichannel retailers. We limited the time interval between the survey participation and the last purchase to a maximum of three months to avoid inaccurate statements concerning customers' usage of the channels. We assisted participants in the reconstruction of their last purchase by providing a list of touchpoints offered by the retailer, its competitors, and independent providers. In a two-step process, participants were first asked to select those touchpoints that they visited during their specific purchasing process. Retailer-owned touchpoints refer to the entity from which the purchase was made and included the retailer's online store, physical store, catalog, newsletter, online community, mobile application, call-center, radio/TV spots, and live chat on the company's website. Competitor-owned touchpoints included the physical store, online store, catalog, and newsletter of each respective competitor. Independent touchpoints encompassed search engines, manufacturer websites, social media, video portals, image portals, newspapers and printed media, communication with peers and friends, price comparison portals, product rating portals, blogs and forums. After having indicated all the visited touchpoints for their last purchase, participants were again confronted with the touchpoints they had selected and had to indicate the order in which they had visited them with the help of a drag-and-drop function (see Appendix 3).

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[9] The dataset used for this study was drawn from a longitudinal study conducted by the Institute of Retail Management at the University of St.Gallen (Rudolph et al. 2017).

We collected website data via manual coding. Within three months after the customer survey, a research assistant manually searched the websites of 104 retailers for ICI cues and for information on shopping benefits. To reduce coding error, we prepared a coding protocol, which specified the information to be extracted from each website. To ensure the reliability of the coding, a second research assistant independently coded all benefit dimensions on 30 randomly selected websites based on the coding protocol (inter-rater reliability > .97). To rule out the possibility that website content had been changed between the customer's and the coders' website visits, we tested content changes on every fourth website with the internet archive WayBack Machine (https://archive.org/web/), finding that no changes were made to any website within six months.

4.2   Measures

The *degree of informational online-to-physical channel integration (ICI)* may range from the complete separation of channels to their complete integration (Neslin et al. 2006). In line with other studies (e.g., Cao and Li 2015), we aggregated information about ICI into a continuous measure. In the website coding (see Table D-1), we observed ten different aspects of ICI that were discussed in previous research and confirmed in interviews with managers from two multichannel retailers. We created the measure for ICI by summing up the number of integration aspects on the relevant webpage for each retailer (0 = no ICI to 10 = complete ICI).

Table D-1

Degree of Informational Online-to-Physical Channel Integration

(measured on a ten-item scale based on the existence of 10 channel integration cues; 0=non-existent; 1=existent)

(1)	Route planner to the physical store(s)	Bendoly et al. 2005
(2)	Picture of the physical store(s)	Bendoly et al. 2005; Darke et al. 2016
(3)	Video of the physical store(s)	Bendoly et al. 2005; Darke et al. 2016
(4)	Availability of specific products in the physical store(s)	Cao and Li 2015; Herhausen et al. 2015
(5)	Information about the physical store manager(s)	Cao and Li 2015; Darke et al. 2016
(6)	Contact details for the physical store(s)	Bendoly et al. 2005
(7)	Opening hours of the physical store(s)	Bendoly et al. 2005
(8)	Information about products, which are only available in the physical store(s)	Bendoly et al. 2005; Cao and Li 2015
(9)	Information about price promotions available in the physical store(s)	Cao and Li 2015
(10)	Services offered in the physical store(s)	Cao and Li 2015; Herhausen et al. 2015

Online-to-physical store switching (OSS) is a dummy variable derived from the indicated touchpoint order in the survey (1= search on the retailer's website and purchase at the retailer's physical store; 0 = search and purchase on the retailer's website; no catalog purchases at the focal multichannel retailer were indicated).

Data for the four *shopping benefit densities* were collected with the manual website coding, which observed how strongly the information surrounding ICI contained keywords that refer to each of the shopping benefits. Similar to text analysis applications, the density of each shopping benefit featured on each website was calculated by dividing the number of keywords found for a specific benefit (one dimension) by the number of all benefit-related words surrounding ICI found on the retailer website's subpage. Appendix 4 provides a list of all the keywords used to characterize a specific benefit on the retailers' websites.

4.3 Validation Check of the Association Between Shopping Benefits and Channels

We empirically tested the assumptions in the literature about the associations between specific shopping benefits and either the physical channel or the online channel. Specifically, for all shopping benefit keywords on the 104 retailer websites, we coded whether the keyword is mentioned in conjunction with the physical channel (physical store association), with the online channel (online store association) or with no specific channel. All associations between shopping benefits and channels are in the proposed conceptualized direction (see Table D-2). That is, experiential benefits and tangible service benefits were more often mentioned together with the physical channel, whereas intangible service benefits and transactional price benefits were more often mentioned together with the online channel.

Table D-2
Share of Each Shopping Benefit's Association With the Online and Physical Store

	Experiential Assortment Benefit (%)	Tangible Service Benefit (%)	Intangible Service Benefit (%)	Transactional Price Benefit (%)
Physical Store Association	19.3	55.5	1.3	8.8
Online Store Association	4.1	6. 5	52.0	26.4
Total Channel Associations	23.5	61.9	53.3	35.2

We included several *control variables*, which may influence the effect of channel integration. We controlled for the effect of the product category on channel choice (Cao and

Li 2015), for several demographic and psychographic variables since certain customer characteristics may account for OSS tendencies (Falk, Schepers, and Hammerschmidt 2007), and for potential country effects. The measurement of all variables is detailed in Appendix 5, and descriptive statistics and correlations are presented in Appendix 6.

The correlation table in Appendix 6 reveals that ICI is highest for electronics and, surprisingly, lowest for apparel. The average spending of 225 Euros indicates that electronic purchases are rather expensive, making delivery insecure and susceptible to theft. Thus, ICI may be more important for customers of this category. In the apparel category, an average spending of 80 Euros indicates that these purchases are less expensive. Together with the common practice of free shipping and free returns in Germany, Austria, and Switzerland, this lower average purchase price may explain the low channel integration in this category. Additionally, OSS is also highest for electronics and lowest for apparel, indicating further differences across categories.

4.4 Analytical Strategy

Given that customers provide their binary channel choice (online vs. physical store for purchase) on multiple retailers and, thus, customers are nested in retailers, we conducted a Multilevel Logistic Regression Analysis, with the channel switching to the physical store as the dependent variable, the degree of ICI as the independent variable, the four densities of benefit dimensions on the websites as moderators, and our control variables. We used a Bernoulli distribution for OSS and full maximum likelihood via EM-Laplace 2 approximation. The mixed model is specified as follows:

$$\eta_{ij} = \gamma_{00} + \gamma ICI_j + \gamma Shopping\ Benefit\ Densities_j + \gamma ICI_j \times Shopping\ Benefit$$

$$Densities_j + \gamma Controls_{ij} + u_{0j}$$

where i = Level 1 (consisting of 1,479 customers), j = Level 2 (consisting of 104 multichannel retailers), Prob$(Channel\ Switching_{ij}=1|\beta_j) = \phi_{ij}$, $\log[\phi_{ij}/(1-\phi_{ij})] = \eta_{ij}$, and Level 1 variance = $1/[\phi_{ij}(1-\phi_{ij})]$.

5 Results

5.1 Control Variables

Table D-3 summarizes the results of our multilevel logistic regression analysis. Some control variables have a significant effect on OSS (Model 1). The positive effect of physical

experience on OSS ($\beta = .51$, p < .01) indicates that customers who are accustomed to making purchases in the physical store have a tendency to return to the channel with which they are most familiar. The effect of using a mobile device on OSS is negative ($\beta = -1.88$, p < .01), which indicates that customers who access the retailer's online store via a smartphone are less likely to purchase at the retailer's physical store. A possible explanation for this effect is that customers are most likely to use mobile devices in the early stages of their customer journey and are more likely to make an online purchase if switching from the mobile device to the laptop or desktop (De Haan et al. 2015). Furthermore, we find that, as the customer spends more time from search to purchase, the likelihood that he/she will visit the physical store after visiting the website increases ($\beta = .38$, p < .01). This finding is plausible, as customers who spend more time on their purchase are typically more involved in the purchase and wish to visit more channels to examine the product. The effect of hedonic shopping motivation on OSS is also positive ($\beta = .20$, p < .01), supporting our assumption that physical stores provide more opportunities to enhance shopping experiences.

5.2 Hypotheses Testing

Adding the main effects in Model 2 significantly improved the model fit ($\Delta = 20.72$, df = 5, p < .01). In support of H1, the significant positive relationship of the degree of ICI with OSS ($\beta = .42$, p < .01) indicates that ICI drives customers to the physical store. This finding identifies customer steering as a new positive effect of ICI for multichannel retailers in addition to higher trust, higher search and purchase intentions, and higher willingness to pay (e.g., Cao and Li 2015; Herhausen et al. 2015; Darke et al. 2016).

Adding the interaction effects in Model 3 significantly improved the model fit ($\Delta = 17.28$, df = 4, p < .01). In support of H2, we find that a high density of experiential assortment benefits on the surrounding webpage increases the relationship between ICI and OSS ($\beta = .32$, p < .01). Simple slopes indicate that the effect of ICI on OSS is significant only when the surrounding information has a high density of experiential assortment benefits density ($\beta = .64$, p < .01), but not if this density is low ($\beta = .00$, NS). Panel A in Figure D-2 graphically displays this relationship. Furthermore, in support of H3, we find that a high density of tangible service benefits increases the relationship between ICI and OSS ($\beta = .52$, p < .01). Simple slopes indicate that the effect of ICI on OSS is significant only when the surrounding information has a high density of tangible service benefits ($\beta = .84$, p < .01), but not if the density is low ($\beta = -.20$, NS; Panel B in Figure D-2).

According to H4, we expected the density of intangible service benefits to weaken the positive relationship between ICI and OSS. However, the results show no significant

interaction effect, thus not supporting H4 ($\beta = .17$, NS). One potential reason may be that the usefulness of the internet for searching and comparing products and prices has become so prevalent in customers' mindsets that mentioning these benefits no longer moderates the influence of ICI on OSS. Rejecting H5, we find that a high density of transactional price benefits does not significantly decrease the relationship between ICI and OSS ($\beta = .04$, NS). Unexpectedly, we find a negative main effect of transactional price benefits on OSS, independent from the level of ICI. This main effect suggests that price-related information counteracts retailers' goals to steer customers from their websites to their physical stores, both with and without channel integration.

In sum, our results indicate that retailers can amplify the positive effect of ICI on OSS by highlighting experiential assortment benefits and tangible service benefits. However, retailers do not offset the effects of ICI on OSS by highlighting intangible service benefits. Interestingly, price-related information cues on a retailer's website are strong enough to prevent OSS without any additional channel references, creating a channel lock-in.

5.3   Robustness Tests

One might argue that customers may not have actively noticed the ICI cues on the website. Therefore, we analyzed whether customers who visited websites with a high degree of ICI noticed that the retailer offers information about the physical store on its website. In the survey, we assessed whether customers indicated that the retailer website they visited provided such integration (i.e., "The retailer offered knowledge about and access to the physical store on its website," 7-point Likert scale from "do not agree" [1] to "fully agree" [7]). We aggregated the individual responses to the retailer level (ICC(2) =.67) and found a strong correlation between the degree of ICI obtained from the website data and the perceived variety of opportunities to purchase through the retailer's different channels, as indicated by the customer data ($r = .51$, $p < .01$). Thus, customers indeed noticed the ICI cues on the websites. Moreover, retailers may simultaneously provide different cues on their websites, and thus, these cues may have inter-related effects. Therefore, we explored all potential two-way interactions between the dimensions and all potential three-way interactions between ICI and all dimensions. None of these interactions were significantly related to OSS.

Table D-3

Results of the Multilevel Logit Regression Analysis Predicting OSS

	Model 1: Controls		Model 2: Main Effect		Model 3: Interaction Effects	
	β	SE	β	SE	B	SE
Intercept	-.73**	.36	-1.01***	.32	-.90***	.34
Level 1 Controls						
Spending	-.13*	.07	-.13*	.07	-.11*	.07
Gender (female)	.08	.14	.12	.15	.10	.15
Age	-.11	.08	-.12	.08	-.13	.08
Device (mobile)	-1.88***	.24	-1.92***	.25	-1.95***	.25
Duration of Journey	.38***	.05	.37***	.05	.38***	.05
Education	-.03	.07	-.02	.07	.00	.07
Household Size	-.03	.06	-.03	.06	-.03	.06
Income	-.09	.07	-.10	.07	-.11	.07
Urbanization	.29**	.12	.29**	.12	.29**	.12
Experience Online	-.07	.07	-.06	.07	-.06	.08
Experience Physical	.51***	.07	.52***	.07	.53***	.07
Customer Duration	.08	.06	.09	.07	.08	.07
Buying Frequency	-.06	.08	-.06	.08	-.05	.07
Hedonic Shopping Motivation	.20***	.05	.21***	.05	.22***	.06
Shopping Uncertainty	-.08	.06	-.08	.06	-.07	.06
Category Apparel	-.18	.29	.10	.31	.16	.30
Category Electronics	.33	.27	.36	.27	.24	.27
Category Entertainment	.38	.41	.36	.41	.26	.40
Category Grocery	-.05	.40	.20	.39	.29	.37
Category Cosmetics	-.42	.39	-.28	.39	-.49	.39
Level 2 Main Effects						
Country Dummy Switzerland	.10	.29	.19	.30	.36	.28
Country Dummy Austria	.42	.29	.52**	.25	.66***	.25
ICI (H1+)			.42***	.15	.32**	.14
Experiential Assortment Cues [ASS]			-.13	.11	-.11	.10
Tangible Service Cues [TAS]			-.23	.15	-.10	.11
Intangible Service Cues [ITS]			.05	.13	.06	.11
Transactional Price Cues [PRI]			-.31***	.12	-.23**	.10
Level 2 Interaction Effects						
ICI × ASS (H2+)					.32***	.09
ICI × TAS (H3+)					.52***	.13
ICI × ITS (H4-)					.17	.11
ICI × PRI (H5-)					.04	.09
-2 Log Likelihood	4,349.99		4,329.27		4,311.99	
Change in fit (df)			20.72*** (5)		17.28*** (4)	
N$_{Retailers}$	104		104		104	
N$_{Customers}$	1,479		1,479		1,479	

NOTE.—We used robust clustered standard errors and standardized all continuous variables. Category "other" is used as the base category in all analyses. Variance inflation factors for all predictors are below the critical value of 3.
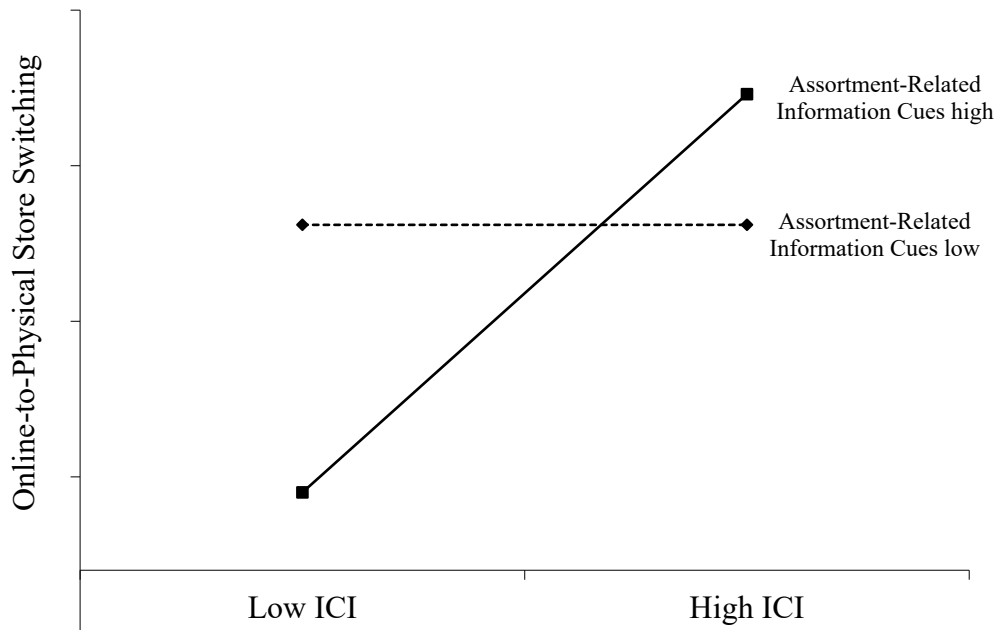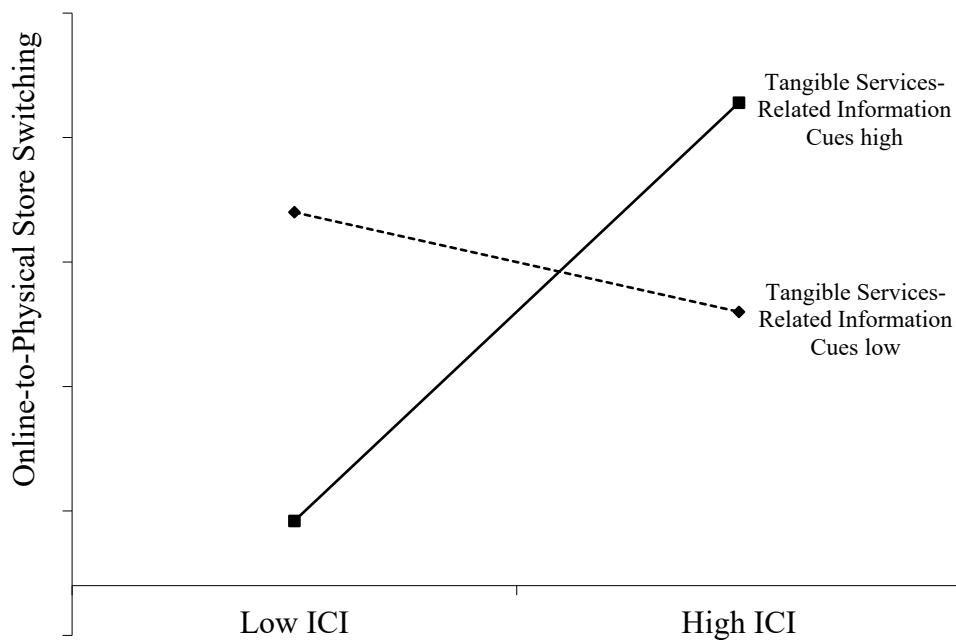Two-tailed tests:
*$p < .10$.
**$p < .05$.
***$p < .01$.

Figure D-2
Amplifiers of Informational Online-to-Physical Channel Integration

Panel A: Assortment-Related Information Cues

Panel B: Information Cues Related to Tangible Services

6 Discussion

Our article extends previous findings on the beneficial effects of channel integration by providing an observable measurement scale to assess retailers' level of informational channel

integration and showing that a higher degree of ICI on the website induces more OSS. Consumers' channel choice is influenced not only by retailers' explicit communication but also by very subtly communicated information cues that may occur without retailers' and consumers' awareness. The empirical design enabled us to detect those subtle influences, particularly if consumers are not aware of these effects, because we based our analysis not on self-reported perceptions of this subtle information but rather on observed information levels and densities on websites. Therefore, our findings also provide insights into the heated debate about whether retailers can still influence customer journeys in the multi-optional omnichannel world and how self-determined today's empowered consumers really are (e.g., Neslin and Shankar 2009).

Building on previous articles examining the influence of website cues on customer behavior (e.g., Emrich and Verhoef 2015) and based on a framework of associated channel benefits, our study analyzed the moderating impact of web cues. Our results show that information about experiential assortment benefits on the retailer's website induces a corresponding benefit-mindset of customers that points them to the advantages of a physical channel with respect to brand awareness, brand experience, and purchase confidence and highlights the risks associated with purchasing the wrong product. In such a situation, information about the physical channel resources raises more attention and is more likely to lead to OSS. Similarly, we find that information about tangible service benefits strengthens the relationship between ICI and OSS because the potential disadvantages of online shopping (e.g., lower service levels in terms of support) may become more salient.

Transactional price benefits induce a strong focus on immediate rewards that can be gained by buying online. The negative direct effect found in our study suggests that customers consider price benefits online to be so strong (e.g., Gensler et al. 2017) that OSS is reduced. In that sense, price cues may be a way to create more online channel lock-in (Verhoef et al. 2007), thereby reducing webrooming. Our article did not provide evidence that stressing intangible service benefits, such as fluid and streamlined online processes, reduces the effect of ICI. Consumers tend to focus more strongly on the less subtle and more concrete retail mix elements, such as assortment and price, which may inform retailers' use of these retail mix instruments, depending on their goals.

From a managerial perspective, we highlight opportunities that arise from the design of websites as information hubs to create cross-channel synergies for firms and customers. If a retailer wants to steer customers to a physical store, websites containing ICI should include information related to experiential assortment and tangible services because such information reinforces the benefits of a physical store visit. Importantly, the benefits do not have to refer explicitly to a specific channel. Merely mentioning a benefit draws attention to a specific

channel that is more strongly associated with this specific benefit in the consumer's mind. The high prevalence of shopping benefit information without any channel reference in our data (for assortment: 76.5%, for price: 64.8%) suggests that many retailers are not aware of these effects even though they have a strong impact on the effectiveness of channel integration. In our analysis, websites with ICI aspects contain a lot of transactional price information, which directly counteracts the desired OSS. Combining the explicit communication of channel integration with the implicit communication of shopping benefits on their website, retailers might attract new floating customers or competitive research shoppers online, steer them to their physical stores and increase their loyalty and cross-buying propensity as they enter the physical store (Verhoef and Donkers 2005). Importantly, these communication instruments can be implemented at very low costs and therefore should complement the costlier physical aspects of channel integration on which most retailers already focus.

One managerial limitation of our study is that it did not focus on switching to competitors, as we investigated channel switching effects for the same retailer rather than competitive webrooming effects in which customers switch to competitors. However, previous research has conclusively shown that customers are more likely stick to the multichannel retailer once the retailer integrates its channels (Herhausen et al. 2015). Therefore, at the very least, indirect effects of informational channel integration on long-term loyalty are likely to occur. Our study did not focus on the reverse switching behavior – from physical stores to online shops – because our goal was to investigate the role of the website as an information hub (used by the majority of consumers in their search phase). As an additional limitation, our shopping benefit density measure focused on the content of websites (keywords) but not on other factors that may influence the processing of benefits, such as color and the formatting of keywords or associated images (Mandel and Johnson 2002; Jiang and Fan 2018). Finally, our results do not provide insights into the OSS effect on firm performance. Future research may study the long-term financial effects associated with informational channel integration. However, since implementation costs are low, informational channel integration is most likely to benefit retailers.

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Appendix D

APPENDIX 1: Overview of Multichannel Search, Purchase, and Online-to-Physical Integration Studies

Author	Year	Methodology	Multichannel Focus	Independent Variables	Outcome	Outcome Data	Moderators	Integration Type	Multisource Data
Bendoly et al.	2005	Logistic regression analyses	Online-to-physical and physical-to-online	Product availability failure	Switching to another firm's channel (+)	Both	Perceived informational and physical channel integration	Informational; Physical	NO
Ansari et al.	2008	Type II Tobit specification, probit framework	Channel migration between Web and catalog	Internet usage; Internet purchase; Marketing communication; E-mail marketing	Long-term purchase incidence (-) Subsequent purchase volume (-) Purchase volume (+) Catalog channel selection (-)	Behavioral	Marketing communication	n.a.	NO
Pauwels et al.	2011	Latent class analysis, vector autoregressive model	Online-to-physical	Informational website introduction	Customers visiting store (+) Money spent in store (+/0) Shopping trips to store (-/0)	Behavioral	Online experience; Product type; Customer characteristics	Informational (indirect)	NO
				Online price promotion	Revenue in store (+) Customers visiting store (+) Money spent per product in store (-)				
				Online non-price promotion	Revenue in store (+)				
Avery et al.	2012	Regression analyses	Online-to-physical	Assortment integration; Price integration	Short term: catalog sales (-) online sales (+) Long term: catalog sales (+) online sales (+)	Behavioral		Assortment Price	NO
Oh et al.	2012	Structural equation modeling	Both (not specified)	IT enabled channel integration; Human enabled channel integration	Firm competences (+) Firm performance (+)	Perceived	Environmental dynamism	Assortment; Informational; Physical; Price	NO

Author	Year	Method	Channel	Integration concept	Effects	Type	Mediators/Drivers	Shopping benefits	Overview
Konus et al.	2014	Conditional mixed process model	Eliminating catalog from telephone and internet	Catalog channel elimination	Purchase incidence (-) Telephone purchase (-) Order size per purchase (+)	Behavioral	Channel preference; Firm preference; Firm marketing efforts	n.a.	NO
Cao and Li	2015	Grounded theory, panel data regression analyses	Both (not specified)	Front- and back-end integration activities; Organizational structure	Sales growth (+)	Behavioral	Online experience; Physical store experience	Assortment; Informational; Physical; Price	YES
Emrich et al.	2015	Structural equation modeling	Both (not specified)	Assortment integration	Shopping benefits (+) Patronage intentions (+)	Intended/Perceived	Assortment relations	Assortment	NO
Herhausen et al.	2015	Regression analyses	Online-to-physical	Online-to-physical channel integration	Overall retailer outcomes (+) Internet store outcomes (+) Physical store outcomes (0) Channel choice (+/-)	Intended	Online shopping experience	Informational and physical (mixed)	NO
Pauwels and Neslin	2015	Multivariate baseline analysis	Adding physical to online and catalog	Physical store introduction	Purchase frequency catalog (-) Purchase frequency internet (0) Overall purchase frequency (+) Order size internet/catalog (0) Return frequency catalog (-) Exchange frequency catalog (-) Overall frequency of returns and exchanges (+)	Behavioral		n.a.	NO
This study	2018	Multilevel logistic regression analysis	Online-to-physical	Degree of informational online-to-physical channel integration	Online-to-physical store switching (+)	Behavioral	Density of informational shopping benefits	Informational	YES

NOTE. —(+) = positive effect, (-) = negative effect, (0) = no significant effect.

APPENDIX 2: Associations Between Shopping Benefits and Channels

	Experiential Assortment Benefits	Tangible Service Benefits		Intangible Service Benefits		Transactional Price Benefits
		Curated Benefits	Immediate Benefits	Fluid Benefits	Streamlined Benefits	
Avery et al. (2012)	- To be confident in purchasing the right product (OFF) - To have access to broad assortments (ON/OFF) - To experience product utility (OFF) - To experience the product/brand on a multisensory basis (OFF) - To have an enhanced brand/retailer awareness (OFF)	- To establish a relationship with the retailer (OFF) - To have access to face-to-face support (OFF)	- To minimize non-monetary transaction costs (e.g., wait time) (OFF)	- To shop whenever, wherever, and from anywhere (ON) - To have easy search and comparison opportunities (ON)	- To recognize a retailer for a particular purchase through browsing the web (ON) - To be recognized by retailers during transactions based on customer profiles (ON)	- To minimize monetary transaction costs (OFF)
Verhoef et al. (2007)	- To have popular brands, new products, high-quality products, and large assortments available (OFF) - To avoid purchasing risk (OFF)	- To get sales advice (OFF) - To negotiate on price (OFF) - To get after sales service (OFF)	- To quickly purchase products (OFF) - To quickly obtain products (OFF)	- To easily collect information (ON) - To easily compare products and prices (ON)	- To reduce transaction effort (Search/Purchase) : (N/A)	- To have low prices, more price competition, and attractive price promotions available (ON)
Channel Association	Physical Store	Physical Store		Online Store		Online Store

NOTE.—(OFF) = benefit associated with the physical channel, (ON) = benefit associated with the online channel.

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APPENDIX 3

Example of the Survey Question on the Order of Touchpoints Visited

Please think back to the **individual steps of your purchasing process**. In **which order** did you use visit the **touchpoints chosen**? Please drag and drop the touchpoints in the order you visited them. Please start on top of the page with the touchpoint you visited first.

Notice: You can drag the touchpoints with your mouse from the left column and drop them at the right position in the right column.

H&M's Online Store

H&M's Physical Store

H&M's Newsletter

Search Engine

Back   Next

Please think back to the **individual steps of your purchasing process**. In **which order** did you use visit the **touchpoints chosen**? Please drag and drop the touchpoints in the order you visited them. Please start on top of the page with the touchpoint you visited first.

Notice: You can drag the touchpoints with your mouse from the left column and drop them at the right position in the right column.

H&M's Newsletter

Search Engine

H&M's Online Store

H&M's Physical Store

Back   Next

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APPENDIX 4

Shopping Benefit Keywords on Retailers' Websites

	Experiential Assortment Benefits	Tangible Service Benefits	Intangible Service Benefits	Transactional Price Benefits
Key-words	Abundance of products Assortment Brand Branded product Category (in reference to product) Collection (in reference to product) Item New product Own Brand Product Product category Product feature Product offer Product quality Product release Product selection To examine To test To touch To try (out) Top-brands Top-categories Type (in reference to product)	"We are here for you" "We respond to you/cater for your needs" "We take care of that for you" Advice Carefree Consultant Conversation Direct(ly) Guidebook Immediate(ly) Personal(ly) Advisor Presentation Salesperson Shop assistant Support To advice To arrange To collect To explain To negotiate To pick sth. up On-site/On site To present To support Uncomplicated	"A few clicks" "Around the clock" "At a glance" "Fast/easy/simple to compare" "In a few steps" "Look up information" "Simply add to cart" "Whenever it suits you" 24/7 24h 365 days Always Anytime Anywhere Authorized Buyer protection Certified Comparison list Customer profile Log-In Mastercard Secure Code Payment methods Payment opportunities Payment options Payment procedure Paypal transfer Protected Proved Reliable Safety Save Shopping cart Secure Security Tested Trusted Trustworthy Verified by Visa	"Get 25% off" "Get a EUR5 voucher" Bargain Best price Bulk discount Cheap Coupon Discount Discount campaign Discounted Inexpensive Low in price Permanent price Price Price recommendation Reduction Sale Savings card Shopping discount Special offer To save (in reference to money)

NOTE.—Keywords translated from German.

APPENDIX 5

Measurement and Operationalization

Degree of Informational Online-to-Physical Channel Integration (ICI)

The number of integration cues was summed up for each retailer (0 = no ICI to 10 = complete ICI). The ten-item measure scale was based on the existence of the following ten online-to-physical channel integration cues on the subpage of the retailer's website:

- Route planner to the physical store(s) (Bendoly et al. 2005; Oh et al. 2012)
- Picture of the physical store(s) (Bendoly et al. 2005; Darke et al. 2016)
- Video of the physical store(s) (Bendoly et al. 2005; Darke et al. 2016)
- Availability of specific products in the physical store(s) (Cao and Li 2015; Herhausen et al. 2015; Oh et al. 2012)
- Information about the physical store manager(s) (Cao and Li 2015; Darke et al. 2016)
- Contact details for the physical store(s) (Bendoly et al. 2005; Otto and Chung 2000; Pentina and Hasty 2009)
- Opening hours of the physical store(s) (Bendoly et al. 2005; Pentina and Hasty 2009)
- Information about products, which are only available in the physical store(s) (Bendoly et al. 2005; Cao and Li 2015; Oh et al. 2012)
- Information about price promotions available in the physical store(s) (Cao and Li 2015; Otto and Chung 2000; Pentina and Hasty 2009)
- Services offered in the physical store(s) (Cao and Li 2015; Herhausen et al. 2015)

Density of Informational Shopping Benefits

The density of each shopping benefit featured on each website was calculated by dividing the number of keywords found for a specific benefit (one dimension) by the number of all benefit-related words surrounding ICI found on the retailer website's subpage:

- Experiential Assortment Cues (e.g., product feature, product quality, assortment, brand, etc.)
- Tangible Service Cues (e.g., advice, directly, on-site, support, carefree, etc.)
- Intangible Service Cues (e.g., a few clicks, 24h, always, payment opportunities, anytime, etc.)
- Transactional Price Cues (e.g., sale, coupon, discount, to save, special offer, etc.)

Spending
Spending for [Product X] measured in Euro/Swiss Francs

Gender
0 = male, 1 = female

Age
1 = below 14 years, 2 = 15 to 18 years, 3 = 19 to 24 years, 4 = 25 to 34 years, 5 = 35 to 44 years, 6 = 45 to 54 years, 7 = 55 to 64 years, 8 = above 65 years

Device
0 = stationary, 1 = mobile

Duration of Journey
How much time has passed between your first idea to buy [Product X] and your actual purchase? (1 = a few moments, 2 = less than an hour, 3 = 1 to 2 hours, 4 = 3 to 4 hours, 5 = 5 to 8 hours, 6 = 9 to 12 hours, 7 = a day, 8 = 2 to 3 days, 9 = 4 to 6 days, 10 = a week, 11 = 2 weeks, 12 = weeks, 13 = a month, 14 = 2 to 3 months, 15 = 4 to 6 months, 15 = 7 to 12 months, 16 = more than one year)

Education
1 = basic education, 2 = secondary school, 3 = high school degree, 4 = university degree

Household Size
Number of people in household

Income
Monthly income (1 = below 1000€, 2 = 1000€ to 2000€, 3 = 2001€ to 3000€, 4 =3001€ to 4000€, 5 = more than 4000€)

Urbanization
0 = rural area, 1 = urban area

Experience Online
How experienced are you in buying [Product X] in online stores? (1 = not experienced at all to 7 = very experienced)

Experience Physical
How experienced are you in buying [Product X] in physical stores? (1 = not experienced at all to 7 = very experienced)

Customer Duration
Since when are you a customer of [Retailer X]? (1 = very new customer to 7 = already customer for a long time)

Buying Frequency
How frequently do you buy [Product X]? (1 = not frequently at all to 7 = very frequently)

Hedonic Shopping Motivation
On this shopping occasion, my primary goal was to… (1 = totally disagree to 7 = totally agree)
… have fun
… relieve boredom
… get things done
… be task focused

Shopping Uncertainty
Thinking back to the time when you started seeking information and shopping for [Product X], how sure were you about…? (1 = very unsure to 7 = very sure)
… the retailer to shop from
… the model to choose
… the brand to choose
… the features that were available
… the performance of the different brands and models
… the most important considerations to be used in making the purchase choice

Category
apparel, cosmetics, entertainment, electronics, grocery, other

APPENDIX 6: Descriptive Statistics and Correlations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
LEVEL 2																												
1. ICI																												
2. Experiential Assortment Cues	-.13																											
3. Tangible Service Cues	-.19	-.24																										
4. Intangible Service Cues	.23	-.21	-.23																									
5. Transactional Price Cues	.21	-.26	-.24	-.09																								
6. Country Switzerland	-.06	.06	-.12	.09	-.07																							
7. Country Austria	.07	.01	.17	-.07	.08	-.42																						
LEVEL 1																												
8. OSS	.20	-.04	-.02	.12	-.08	-.06	.11																					
9. Spending (log)	.17	.00	-.01	-.05	.04	.11	.01	.03																				
10. Gender (female)	-.27	.09	-.01	-.12	-.02	.01	-.01	-.07	-.10																			
11. Age	.08	-.04	.07	-.02	.00	-.02	-.06	-.07	.10	-.11																		
12. Device (mobile)	-.06	.05	-.03	-.02	-.01	.04	.04	-.21	-.01	.13	-.16																	
13. Duration of Journey	.16	.00	-.01	.06	.02	-.06	.04	.21	.17	-.06	-.12	-.04																
14. Education	-.01	.07	-.04	-.07	.02	.01	.05	-.01	-.04	-.06	-.09	-.02	.05															
15. Household Size	-.06	.04	-.08	.01	.01	.03	.00	-.02	.00	.10	-.34	.11	.03	.00														
16. Income	-.02	.05	-.10	-.08	.03	.30	-.08	-.08	.16	-.09	.05	.03	-.04	.21	.27													
17. Urbanization	.03	.03	.03	.00	.00	-.17	.07	.10	-.02	-.05	-.01	-.05	.05	.12	-.20	-.09												
18. Experience Online	-.04	.04	-.01	.02	.00	-.17	.01	-.11	-.01	.02	-.07	.09	-.12	.04	.00	.06	.05											
19. Experience Physical	-.02	-.02	.02	-.04	.00	.04	.04	.21	-.04	.03	-.02	-.01	-.01	-.01	.01	-.03	.09	-.18										
20. Customer Duration	-.07	.03	-.03	-.05	-.07	.04	-.03	.01	.04	.11	.10	.04	-.14	-.03	-.01	.08	.01	.13	.19									
21. Buying Frequency (log)	-.10	-.05	.07	-.09	-.05	.06	-.04	-.04	-.04	.12	.01	.06	-.14	.00	.06	.12	.05	.06	.18	.33								
22. Hedonic Shopping Motivation	-.11	.09	-.03	-.05	-.06	-.04	-.04	.08	-.04	.10	-.19	.03	.01	-.12	.11	-.08	-.04	-.06	.09	.00	.02							
23. Shopping Uncertainty	-.06	.02	.04	-.06	.05	.04	-.04	-.09	-.01	.05	.12	.02	-.23	-.11	-.08	-.03	.01	.10	.08	.24	.14	-.07						
24. Category Apparel	-.47	.23	-.19	-.18	-.16	-.16	-.02	-.10	-.10	.28	-.12	.08	-.10	.06	.08	-.03	.02	.07	-.05	.04	-.02	.19	-.08					
25. Category Electronics	.43	-.09	-.03	.22	.12	.00	.07	.15	.24	-.37	.08	-.08	.17	-.01	-.06	-.02	.05	-.01	-.07	-.13	-.22	-.13	-.10	-.46				
26. Category Entertainment	.00	-.12	-.02	.19	-.01	.20	-.03	-.03	-.21	.00	-.06	-.01	-.06	.02	.02	.02	-.04	-.04	-.02	.04	.03	.01	.12	-.24	-.24			
27. Category Grocery	-.12	-.13	.33	-.25	-.11	.12	-.06	-.04	.00	.03	.08	.00	-.11	-.06	-.08	.03	-.02	-.08	.15	.04	.28	-.08	.13	-.23	-.23	-.12		
28. Category Cosmetics	.05	.04	.04	-.03	.14	-.11	.06	-.04	-.12	.16	-.02	.03	-.05	-.01	.03	-.02	.01	.03	.05	.06	.06	.05	.10	-.17	-.17	-.09	-.09	
Mean	3.63	.23	.16	.25	.15	.28	.31	.41	4.26	.51	42.29	.12	6.41	2.74	2.36	3.26	.56	4.91	4.78	5.85	1.69	3.18	5.42	.31	.32	.11	.11	.06
SD	1.74	.25	.24	.21	.21	.45	.46	.49	1.12	.50	15.98	.33	4.31	.99	1.23	1.14	.50	1.78	1.62	1.50	1.58	2.10	1.19	.46	.47	.31	.31	.24

NOTE.—For Level 2, $|r| \geq .20$ is significant at $p < .05$ and $|r| \geq .26$ is significant at $p < .01$. For Level 1, $|r| \geq .06$ is significant at $p < .05$ and $|r| \geq .07$ is significant at $p < .01$. Significance is based on two-tailed tests. The measurement is explained in the Appendix 5.

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E PAPER 4: POSITIONING HIGH- AND LOW-STATUS BRANDS IN SOCIAL MEDIA: THE POTENTIAL OF COMMUNICATION STYLE

Positioning High- and Low-Status Brands in Social Media: The Potential of Communication Style

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Abstract

Brand managers often struggle with how to position their brands in social media. Luxury brands, whose exclusive image seems to collide with the personal communication norms of social media, are particularly challenged to appeal to a wide audience without jeopardizing their image. This paper proposes that the way in which brands communicate, or their communication style, is an important but neglected parameter that can be used to shape brand positioning in social media. We use five studies to investigate the communication style of luxury and non-luxury brands. First, we analyze 49,402 tweets from 102 brands to reveal that luxury brands use a more distant communication style, even in a socially close channel such as social media. Second, the results of two laboratory experiments with manipulated communication styles confirm that consumers attribute different brand status levels to different communication styles and that these status inferences depend on consumers' luxury brand aspirations. Finally, we examine the downstream consequences of using a socially close and a distant communication style for high- and low-status brands on customers' like intentions on social media. We contribute to the literature on brand linguistics, social media marketing, and luxury brand aspiration and advise marketing managers to rethink whether their brand's communication style best suits the intended brand image.

1 Introduction

Social media have disrupted marketing communication by enabling brands to publicly communicate with their customers in a very personal, intimate and human way and to build close consumer-brand relationships (Labrecque 2014). However, for some brands, this social closeness to customers may be less beneficial than for other brands in terms of brand popularity, and such closeness may even be harmful in terms of brand positioning. High status, luxury brands aim to maintain a certain distance from their customers in order to maintain an exclusive image and create a strong desire for their brand (Dion and Arnould 2011). Ward and Dahl (2014) show that condescending behavior among sales personnel in a retail store may actually increase consumers' regard for and willingness to pay for a luxury brand, and Wang, Chow, and Luk (2013) demonstrate that in selling luxury brands, arrogant salespeople may positively influence purchase intentions. Do high-status brands also create this type of distance in social media and address their customers differently than do lower-status brands? And if yes, how exactly can brands preserve a certain degree of social distance from their customers on social media? Our research addresses these questions by exploring how the communication style, i.e., the way in which brands from different status levels communicate in social media, may convey different levels of social distance from customers.

While the content and valence of a brand message focus on what the brand communicates, style focuses on how the brand communicates its message (Ludwig et al. 2013). Several linguistic devices may help to define a communication style (Tannen 2000). In written communication, typical linguistic devices are punctuation, function words (pronouns, fillers, articles, etc.) and a few content words (e.g., the word "feel" might indicate an emotional communication style) (Chung and Pennebaker 2007). For instance, consider the following fictitious tweets:

Brand A: Today, Brand A is proud to announce that its new scarves are out!

Brand B: Today, we are proud to tell you that our new scarves are out!

Even though both brands convey the same content and emotions, they differ from each other in the way the content is communicated—i.e., in their style. Brand A seems more formal and socially distant, while Brand B seems more informal and socially close. As early as the 1990s, researchers were beginning to examine the power of communication styles in human interactions. For instance, Pentland (1999) argues that the way a message is delivered provides valuable insights into the communicator's personality and her/his relationship to the audience. Similarly, Riessman (2005) highlights the importance of analyzing a message not only on its thematic level, i.e., its content, but also on its structural level, i.e., its style. Spurred by the importance of communication styles in human interactions, marketers have begun to

examine the potential of communication styles for brand management. Consequently, brand linguistics, "the study of language effects in brand-related settings", has evolved as a new research stream (Carnevale, Luna, and Lerman 2017). By investigating brands' communication styles in social media and other marketing contexts, these studies have demonstrated that the way in which brands communicate may influence customers' brand trust (Gretry et al. 2017; Keeling, McGoldrick, and Beatty 2010; Kelleher 2009), brand attitude (Sela, Wheeler, and Sarial-Abi 2012; Steinmann, Mau, and Schramm-Klein 2015), and purchase intention (Barcelos, Dantas, and Sénécal 2018; ; Kronrod et al. 2012; Packard, Moore, and McFerran 2018).

Our work builds on existing research on brand linguistics and contributes to research and practice in four important ways. First, even though the abovementioned studies contribute substantially to our understanding of communication styles in marketing-related contexts, they do not examine how brand characteristics influence the effect of brand communication styles on customers' brand perceptions and behavioral intentions. Specifically, it is unclear how brands from different status levels may use communication styles to position their brands in social media. Examining this relationship is important because brands from different status levels rely on communication to convey a specific brand image and thus shape the consumer-brand relationship (Kapferer and Bastien 2009). Therefore, a brand's communication style is an important but neglected parameter of brand positioning in social media. Second, our research is the first to apply stylometry, a statistical method used to gain insights into a communicator solely based on his/her communication style (Holmes 1998), to marketing research. By examining brand communication styles in social media on an exploratory level and attributing different styles to different brand status levels, we will show how stylometry may contribute not only to linguistics and forensics but also to marketing. Third, we apply the concept of psychological distance (Trope, Liberman, and Wakslak 2007) to brand communication in social media and thus contribute to research examining social distance as an important dimension with which to classify communication styles (Stephan et al. 2010). Because we actively manipulate different degrees of social distance between a brand and a consumer with the help of personal pronouns, we also extend research on the use of personal pronouns in brand linguistics (Kachersky and Carnevale 2015; Sela et al. 2012). Finally, we shed light on the psychological mechanism to explain how customers associate brand status with different communication styles by examining customers' luxury brand aspirations (Sreejesh, Abhigyan, and Subhadip 2016). We build on research examining brand aspiration as a brand characteristic (Wang et al. 2013; Ward and Dahl 2014). In doing so, we are the first to examine brand aspiration as a customer characteristic and to show that brand

communication styles are more fruitful in inducing different perceptions of brand status levels among customers with high levels of luxury brand aspiration.

The rest of this paper is organized as follows. First, we review existing research on communication styles, social distance, brand aspiration, and luxury branding to derive hypotheses regarding the communication styles used on social media by brands from different status levels. Second, we analyze 49,402 tweets (i.e., posts on the social network Twitter) from 102 brands to explore which linguistic devices offer insights into a brand's status level and how communication styles on social media vary across different brand status levels. Third, we actively manipulate two different communication styles to test whether the way brands share a message on social media influences customers' perceptions of brand status. Fourth, we examine different degrees of luxury brand aspiration among customers to shed light on the psychological process underlying customers' associations between communication styles and brand status levels. Fifth, we offer insights into the downstream consequences of social media communication styles by analyzing the effect of different communication styles and brand status levels on customers' intention to like different brand tweets. Finally, we discuss this study's theoretical contributions, managerial implications, and limitations, as well as issues for further research.

2 Conceptual Development

2.1 More than Words: The Potential of Communication Styles

The way we communicate with others, known as our communication style, reveals two important insights. First, it tells others a lot about who we are. Second, it sheds light on how we relate, or would like to relate, to the people with whom we communicate (Tannen 2000; Tausczik and Pennebaker 2010). Several linguistic devices have been identified as indicating a specific communication style. Originally, researchers used word lengths to identify communication styles (e.g., Mendenhall 1887). Later works began to examine other linguistic dimensions, such as sentence length (Yule 1939), the usage of word pairs (Morton 1978), punctuation, and most importantly the usage of function words (Brennan, Afroz, Greenstadt 2012; Burrows 1987; Merriam and Matthews 1994; Mikros 2012). Whereas the "what" of a message can be analyzed with the help of content words (nouns, regular verbs, adjectives, etc.), the "how" relies to a large extent on function words (conjunctions, pronouns, auxiliary words, etc.; Chung and Pennebaker 2007). Even if function words amount only to 0.5% of all the words in the English language, they make up approximately 55% of our language in terms

of actual use and are important indicators of a communicator's personality and his/her relationships to the audience (Tauszcik and Pennebaker 2010).

Whereas the majority of the previous literature has investigated the communication styles of humans and within human relationships (e.g., Norton 1978; Tannen 2005), a growing body of research is examining the importance of communication styles in marketing-related settings. Given that brands can attribute qualities such as willpower or emotiveness to products and may thus humanize a firm and its products (Fournier 1998), research on brand communication styles has become an area of particular interest in academia and practice (Carnevale et al. 2017). Table E-1 summarizes studies that focus on how the communication styles of consumers and brands may shape the consumer-brand relationship. Specifically, these studies demonstrate that the way in which brands communicate influences customers' brand trust (Gretry et al. 2017; Keeling et al. 2010; Kelleher 2009), brand attitude (Sela et al. 2012; Steinmann et al. 2015), and purchase intention (Barcelos et al. 2018; Packard et al. 2018; Kronrod et al. 2012). These linguistic studies in marketing typically study one specific dimension of style, such as personal vs. impersonal (Schamari and Schaefers 2015), formal vs. informal (Gretry et al. 2017), and human vs. corporate voice (Barcelos et al. 2018). Some studies measure communication styles with the help of multi-item scales (e.g., Kelleher 2009; Van Noort and Willemsen 2005). The majority of studies actively manipulate different communication styles in online experiments using specific linguistic devices such as imperatives (Kronrod et al. 2012), personal pronouns (Packard et al. 2018; Sela et al. 2012), emoticons (Gretry et al. 2017), and first naming (Barcelos et al. 2018). While all of these studies contribute substantially to our understanding of how communication styles shape the relationship between consumers and brands, they fail to examine what a brand's communication style tells us about the brand itself and how consumers' reactions to specific brand communication styles differ depending on the characteristics of the communicating brand. Our study contributes to brand linguistics by examining how a brand's communication style relates to its brand status. Specifically, we address what a brand's communication style reveals about the brand's status and how brands from different status level may use communication styles to convey different levels of social distance in the consumer-brand relationship and thus position their brand differently in social media. .

Table E-1: Overview of Studies Examining Communication Styles in Marketing

Authors	Independent	Outcome	Mediator	Moderator	Context	Analysis	Communi-cator	Operationalization of Communication Style
Williams and Spiro 1985	Task- self-, and interaction-oriented communication style	Sales variance			Salesperson-consumer interaction	Regression analysis	Salesperson	Three multi-item scales
Van Noort & Willemsen 2005	Proactive vs. reactive webcare	Band evaluation	Conversational human voice	User- vs. firm-generated content	Social media	Regression analysis	Brand Customer	11 item scale
Van Dolen et al. 2007	Perceived control, enjoyment, speed in chat, reliability, ease of use, group involvement, group similarity, group receptivity	Chat session satisfaction		Task vs. social communication style	Retailer website	Regression analysis	Company advisor	Task: repeat, clarify, and evaluate; goal-oriented and purposeful; address customers by numbers. Social: personal and social; making jokes; show understanding; use emoticons; address customers by names.
Keeling et al. 2010	Task- versus social-communication style	Trust			Retailer website	Structural equation modeling	Avatar	Avatar to (not) move towards customer. Extra content to convey mutuality, approval, and friendliness.
Kelleher 2009	Conversational human voice	Satisfaction, commitment, trust, control mutuality		Relational commitment of brand	Company blog	Regression analysis	Blogger	11 item scale
Kronrod et al. 2012	Assertive vs. nonassertive communication	Compliance intention	Positive mood	Hedonic vs. utilitarian product	Brand ad	Structural equation modeling	Brand	(no) imperative used
Sela et al. 2012	"You and [the brand]" vs. "we" Close vs. distant relationship	Brand attitude		Customers vs. noncustomers	Brand ad	Regression analysis	Brand	"we" versus "You and the brand"
Kronrod and Danziger 2013	Figurative vs. nonfigurative communication	Customer attitude		Hedonic vs. utilitarian goal, user- vs. firm-generated content	Product reviews Brand ad	Regression analysis	Brand Customer	Figurative: "blows you mind", "bigger than in a palace", "like on a king's reception". Literal: "very spacious", "excellent", "very professional".
Ludwig et al. 2013	Positive affective content	Conversion rate		Linguistic style match	Product reviews	Text and regression analyses	Customer	Personal and impersonal pronouns, articles, conjunctions, prepositions, auxiliary verbs, high-frequency adverbs, negation, quantifiers

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Authors	Independent	Outcome	Mediator	Moderator	Context	Analysis	Communi-cator	Operationalization of Communication Style
Hamilton et al. 2014	Usage of dispreferred markers	Credibility, likability, willingness to pay, product personality		Skepticism toward communicator	Product review	Regression analysis	Customer	"God bless it…"; bless its heart";. "I don't want to be difficult, but"; I still think it's great, but"; "don't get me wrong"; "I have got to be honest"; "I don't want to be mean, but".
Beukeboom et al. 2015	Conversational human voice	Brand attitude, brand equity, net promoter score, purchase intentions			Social media	Regression analysis	Brand	11 item scale
Schamari and Schaefers 2015	Personal vs. impersonal communication style	Engagement intentions	Surprise Conversational human voice	User- vs. firm-generated content	Social media	Regression analysis	Brand Customer	Personal: picture of Anna working for brand and personalized greeting. Impersonal: impersonal greeting and brand logo as picture.
Steinmann et al. 2015	Personal vs. impersonal communication style	Brand attitude, recommenda-tion, purchase, community satisfaction			Social media	Regression analysis	Brand	(not) addressed by first name, geduzt versus gesiezt
Gretry et al. 2017	Informal vs. formal communication style	Brand trust	Appropriat eness of style	Brand familiarity	Social media	Regression analysis	Brand	Informal: Emoticons, first naming, contraction, first and second person pronouns, sound mimicking, active voice, verb omission, present tense, discourse markers, lexical bundles
Barcelos et al. 2018	Human vs. corporate voice	Purchase intention	Hedonic value of experience, perceived risk	Hedonic vs. utilitarian consumer goal Valence Involvement	Social media	Regression analysis	Brand	Human voice: Using employees' photo as profile picture, informal language, express emotions, address consumers by first names, refers to brand in the first person
Packard et al. 2018	"We" versus "I" versus no pronouns	Satisfaction, purchase intention, purchase	Perceived firm agent empathy and agency		Customer service	Regression analysis	Firm agent	"we, our, us" versus "I, my, mine" versus no personal pronouns used
This study	Close vs. distant communication style	Brand status perception, intention to like	Brand status	Consumers' luxury brand aspiration	Social media	Stylometry, regression analysis	Brand	Geduzt versus gesiezt 1st and 2nd person pronouns

To gain insights into what a brand's communication style reveals about its status, we build on stylometric research. Each individual has a unique communication style, which is like a fingerprint in writing (Brennan et al. 2012). Stylometry uses statistical methods to assess the fingerprints of texts and thus gain insights into authors (Holmes 1998); it determines the most probable author of a text solely based on the communication style used in the text and regardless of its content (Tweedie, Singh, and Holmes 1996). Augustus de Morgan, who postulated that the authorship of the Pauline letters could be determined with the help of the average word length in text passages, was the first to apply the concept of stylometry (Morgan 1882). Although his hypothesis could not be validated, he laid the foundation for a number of studies examining differences between Shakespeare's and Marlowe's communication styles based on statistical text analyses (e.g., Mendenhall 1887; Merriam and Matthews 1994). In the 1960s, researchers applied stylometric analyses to determine the probability of authorship for 12 of the 18 Federalist Papers that were claimed by both Alexander Hamilton and James Madison. Mosteller and Wallace (1964) compared the frequency of function words such as articles, conjunctions, and prepositions in these papers with the frequency of those words in text samples from Hamilton and Madison. Because their statistical evidence for Madison being the most probable author was in agreement with prevailing beliefs, stylometry quickly gained credibility and acceptance in linguistics. Despite its significant contribution to literary and forensic linguistics, stylometry has not yet been applied to marketing-related contexts. As brands often use communication to position themselves in the market and convey a specific image to their customers (Kapferer and Bastien 2009), a stylometric analysis of brand messages in social media may be a powerful tool to gain insights into a brand's status.

To better understand how brands from different status levels may use communication styles to convey different levels of social distance, we draw on research on psychological distance. As with human relations, consumer-brand relationships vary in the level of distance between the consumer and the brand (Sela et al. 2012). Together with temporal and spatial distance, social distance is the most important dimension to shape psychological distance between two entities (Trope et al. 2007). According to construal level theory, events, people, or brands that one encounters far in the future, at a distant location and that relate to people less like oneself are considered as more abstract and psychologically distant than others (Stephan et al. 2010). The self is the smallest entity of social distance. Groups to which one belongs – so-called in-groups – as well as friends, family and people who are similar to oneself represent low levels of social distance, while groups to which one does not belong – so-called out-groups – as well as strangers or people who are very dissimilar to oneself represent high levels of social distance (Trope et al. 2007). As an important subcategory of function words – and thus characteristic of someone's communication style – personal pronouns have been found to be a powerful linguistic device to communicate different levels

of social distance. For instance, Bar-Anan, Liberman and Trope (2006) find that using the words *ours, ourselves, us*, and *we* convey low levels of social distance to an audience, while the words *them, they, theirs,* and *themselves* convey higher levels of social distance. Fitzsimons and Aaron (2004) found that partners who referred to themselves by the first person plural pronoun *we* consider their own and others' relationships as closer compared with partners who refer to themselves with *you and I*. Similarly, people who reference others when writing by using the second person plural pronoun *we* are generally known to be more collective and socially integrated (Stone and Pennebaker 2002). Sela et al. (2012) find that a brand's use of the word *we* when it addresses a consumer implies more closeness than the use of *you and [the brand]*. Finally, Barcelos et al. (2018) find evidence that a winery's brand communication that uses the words *we are open* instead of *the winery is open* increases the level of humanness in the brand's communication.

In the course of this subchapter, we have explained that (1) stylometric analyses of brand communication styles deserve more attention in marketing and that (2) brands from different status levels may use different communication styles to convey varying levels of social distance. However, there is one important question that has not yet been fully answered: Why do brands from different status levels want to communicate different levels of social distance in social media? This paper proposes that high-status brands use communication styles that convey a certain distance in order to create brand aspiration and a strong desire for their brand among customers via social media. The next chapter will build on existing research on brand aspiration and luxury branding to shed light on the relationship between brand communication styles and brand status levels.

2.2   Communication Styles and Brand Status in Social Media

Customers have an innate need for belongingness and thus strive, throughout their lives, to affiliate with social groups (Ward and Dahl 2014). Social groups can be classified into membership groups (in-groups that an individual already belongs to), aspirational groups (out-groups which an individual desires to belong) and dissociative groups (out-groups to which an individual avoids belonging) (Escalas and Bettman 2003; Ward and Dahl 2014; White and Dahl 2006). Aspirational groups are valued and respected by society. Therefore, individuals often go to great lengths to belong to aspirational groups that convey a desirable social status (Berger and Ward 2010). Owning or simply associating themselves with aspirational brands can help individuals to gain acceptance among aspirational groups (Veblen 1899). To create a strong desire for their brand and thus be considered aspirational, marketing managers aim to position their brands as representative of an aspirational out-group

that appeals to customers who typically do not belong to such an elite group (Ward and Dahl 2014).

High-status, luxury brands are a common example of aspirational brands. Luxury brands may help customers to associate themselves with a small group of selected people who are known for their elite qualities (Fionda and Moore 2009). Studies show that the personality of luxury brands differs substantially from that one of non-luxury brands (e.g., Sung et al. 2015). Luxury brands are commonly described as having characteristics such as exclusivity, high prices, fine craftsmanship, limited quantities, and a prestigious image. On the other hand, non-luxury brands are typically described as having characteristics such as mass-produced, low priced, low individuality, value-for-the-money, available in many fashion stores, and a rather casual image (Hagtvedt and Patrick 2009; Jin and Cedrola 2017). Exclusivity, singularity, and distinction are vital characteristics with which luxury brands legitimize their high status and price premium (Dion and Arnould 2011). Customers cherish this exclusivity because it can help them to establish inequality and benefit from an advantage in interpersonal comparisons (Barone and Roy 2010). Therefore, luxury brands typically present themselves as indicators of an aspirational out-group that appeals to the average customer who does not belong to this elite but aspires to do so (Dimofte, Goodstein, and Brumbaugh 2014).

To signify such an aspirational out-group and thus strengthen their exclusive, distinctive and elite image, luxury brands aim to keep a certain social distance from their customers (Dion and Arnould 2011). For instance, luxury boutiques typically close their front doors and keep them guarded by well-dressed doormen, which gives the impression that these shops are not open to everybody (Dion and Arnould 2011). Social media enable customers to easily associate themselves with any brand and engage in personal and intimate communication with it, even if they could never afford to buy its products in real life. This disruption brought about by digitalization makes it difficult for luxury brands to preserve their not-for-everybody image in social media. How can brands create social distance when customers can easily associate themselves with any brand and when there is no possibility of engaging aloof sales personnel and doormen who treat customers condescendingly? As elaborated in the previous chapter, several studies have shown that a brand's language has the power to shape consumer behavior (e.g., Barcelos et al. 2018; Gretry et al. 2017; Sela et al. 2012). Brands may use communication styles to convey aspects of a brand's image and thus influence consumers' brand perceptions and the consumer-brand relationship (Kapferer and Bastien 2009). We expect that the communication style used by brands in social media varies depending on the degree of social distance that brands intend to convey. Luxury brands may use communication styles to create a certain distance in social media, keep their aspirational level high, and validate their high status. Specifically, we hypothesize that to preserve their vital not-for-everybody image, luxury brands employ a more distant social media communication style

than do non-luxury brands. We build on research outlined above, which argues that the frequency of personal pronouns used in language influences the level of social distance conveyed to the audience (e.g., Bar-Anan et al. 2006), and we hypothesize that high-status brands use fewer personal pronouns in their social media communication than do low-status brands in order to preserve a certain distance from their customers in this intimate and personal channel.

> *H1: In social media, high-status brands use a more socially distant communication style as measured by a higher frequency of personal pronouns used compared with low-status brands.*

2.3 Communication Styles and Brand Positioning in Social Media

In the previous chapter, we hypothesized that brands from different status levels use different communication styles in social media to convey varying degrees of social distance. In this chapter, we aim to elaborate whether customers actually notice these differences in communication styles and attribute different styles to different brand status levels. If yes, tailoring a brand's communication style to its brand status level and thus its intended brand image could help to strengthen brand positioning in social media. In the following, we will draw on research on relational schemata to elaborate how customers infer a more luxurious brand status from a socially distant communication style.

People build cognitive structures, or relational schemata, based on their experiences with interaction partners. Depending on these schemata, peoples' expectations about a significant other's behavior and the behavior of the self in social encounters vary (Berscheid 1994). Similarly to humans, humanized, or so-called anthropomorphized, brands can take on different roles that characterize different relational schemata in the consumer-brand relationship (Aggrawal and McGill 2007). For instance, brands can play the role of a partner that works together with a consumers and coproduces value with the consumer, or they can play the role of a servant who works for the consumer to create value for the consumer (Kim and Kramer 2015). The relational schemata and relationship expectations that consumers hold of brands may vary depending on factors such as product category (Sela et al. 2012) or differences in brand personalities (Fournier 1998). Because a brand's status gives insights into its personality, we expect consumers' relationship expectations to vary depending on the brand's status level. Close relationships are characterized as friendly, intimate, informal, and comforting (Fournier 1998) and follow a different set of behavioral norms than do distant relationships (Aaker et al. 2004). Given that high-status brands position themselves as aspirational brands that are not suitable for everybody (Dion and Arnould 2011; Kapferer and

Bastien 2009; Sung et al. 2015), we hypothesize that customers expect luxury brands to maintain a certain degree of social distance from them in social media.

Based on insights drawn from linguistics concerning fingerprints in writing (e.g., Merriam and Matthews 1994), we hypothesize that people use communication styles to recognize and classify brands in social media. Therefore, communication style may serve as a powerful brand-positioning tool in social media that has not yet received sufficient attention is research and practice. As shown in Table E-1, communication styles have been found to shape customers' brand attitude, brand trust, and purchase intentions. However, no study has yet examined how a brand's communication style may shape brand perceptions among customers. We build on research examining personal pronouns in brand communication (Barcelos et al. 2018; Sela et al. 2012) to hypothesize that communication styles featuring many versus no personal pronouns convey a specific brand status level in social media. Specifically, we expect consumers to more strongly associate a distant social media communication style with luxury than with non-luxury brands.

H2: In social media, consumers infer a higher brand status from a socially distant communication style than from a socially close communication style.

2.4   The Moderating Influence of Customers' Brand Aspirations

Another contribution of this paper is focused on identifying why differences in communication styles may influence consumers' brand status perceptions. One potential psychological mechanism that may clarify this relationship is customers' luxury brand aspirations. Brand aspiration has been treated as a brand characteristic in prior research (Wang et al. 2013; Ward and Dahl 2014). That body of research has helped us to identify high-status brands as aspirational brands and to develop hypotheses about the communication styles of aspirational and non-aspirational brands. To better understand the psychological aspects of brand status perceptions based on communication styles, we aim to investigate the tendency toward luxury brand aspiration as an individual difference among consumers. Specifically, our research aims to examine how different levels of social distance in the consumer brand-relationship, as manipulated by brand communication styles, affect the brand status perceptions of high- and low- luxury aspirers.

In social psychology, aspirations capture psychological goals that humans strive for and wish to accomplish in the course of their lives (Kasser and Ryan 1993). Aspiration can be extrinsic, focusing on needs related to wealth, image, popularity and the like, or intrinsic, focusing on needs related to self-esteem, personal growth, community feeling and the like

(Kasser and Ryan 1993). Truong, McColl, and Kitchen (2010) examine how much importance customers attribute to extrinsic and intrinsic aspirations and find that the importance of these aspirations correlates with customers' preferences for luxury brands. Sreejesh et al. (2016) build on these insights to develop a scale that measures how important luxury brands are for individual consumers in achieving their aspirations. Consumers who are high in luxury brand aspiration (i.e., high aspirers) believe that luxury brands can significantly help them to enhance their success and achieve their goals, while consumers with low luxury brand aspirations (i.e., low aspirers) do not attribute those qualities to luxury brands (Sreejesh et al. 2016). High aspirers are typically in search of distinctive and unusual features that allow them to set themselves apart and affirm their self-concept. They strive for exclusivity – a characteristic that helps them be part of a small group of selected people (Fionda and Moore 2009). Thus, high aspirers do not want luxury brands to appeal to the masses. Therefore, we expect that high aspirers, as experienced luxury advocates, quite easily identify and value the distinctiveness and exclusivity of a distant communication style in social media and attribute it more strongly to a luxurious brand status compared with tweets that use a socially close communication style. In contrast, low aspirers are expected to not infer significantly different brand status levels from socially close and socially distant tweets. Because low aspirers do not value luxury brands as a way to achieve their goals, we expect them to infer a relatively low brand status from both close and distant tweets.

> *H3: Luxury brand aspiration amplifies the effect of communication style on perceived brand status, such that (a) for high aspirers, a socially distant communication style will elicit a higher brand status than a socially close communication style, and (b) for low aspirers, there will be no significant differences in status perceptions between close and distant communication styles.*

2.5 The Impact of Communication Styles on Customers' Like Intention in Social Media

Elucidating how communication styles may serve as a brand-positioning tool in social media raises the question of what downstream consequences brands from different status levels can expect from using a socially close or distant communication style. Therefore, we will examine how socially close and distant brand communication, as applied by high- and low-status brands within their brand tweets, influences customers' intentions to like the respective tweet.

To successfully accomplish communication between two or more parties, conversation participants need to adhere to a set of inherent rules that summarize the expected way in which

they will communicate with one another, so-called communication norms (Kronrod and Danziger 2013). Communication norms are context-specific. For instance, exaggerating might be a taboo in formal documents but appropriate in some rhetorical speeches. The communication norms of social media follow the communication norms of user-generated content and have a very emotional (Berger 2014), interactive (de Vries et al. 2012) and informal (Kaplan and Haenlein 2010.) character. Although social media communication can reach millions of customers, it may still be very personal and intimate (Barcelos et al. 2018; Kietzmann et al. 2011). In accordance with the common communication norms of social media, researchers found that brands using a more personal and human-like communication style in social media may increase customers' brand attitudes and purchase intention (Colliander and Dahlen, 2011), trust, satisfaction and commitment (Kelleher 2009), and engagement intentions (Schamari and Schaefers, 2015). Based on these benefits of socially close brand communication in social media, we hypothesize the following:

H4: In social media, a socially close communication style induces higher intentions to like the brand's message compared with a socially distant communication style.

Engaging in personal communication with a cordial tone of voice may not be equally beneficial to all brands in social media. High-status luxury brands may prefer a more distant communication style to preserve their exclusive image, maintain a high aspirational level and legitimize their elite status (Dion and Arnould 2011). A more distant communication may incite customers to engage in social comparison, where they compare themselves with the aspirational out-group the luxury brand represents. In using this type of communication, marketers' intention is for customers to experience inconsistencies and thus try to revive the link between the actual self and the aspirational group that is being communicated (McGhee and Teevan 1967). Indeed, individuals rejected by social groups may go to great lengths to restore their social standing and gain acceptance in aspirational groups (Williams, Cheung, and Choi 2000). The urge to be part of aspirational groups may even lead customers to purchase initially undesired products for the sole purpose of connecting with the group and its representatives (Mead et al. 2011). Ward and Dahl (2014) show that condescending behavior among sales personnel in a luxury retail store may increase consumers' regard for and willingness to pay for a luxury brand. Similarly, Wang et al. (2013) demonstrate that in selling luxury brands, arrogant salespeople may positively influence customers' purchase intentions. In line with this research, we hypothesize that a socially distant communication style employed in social media by a luxury brand is a subtle form of condescending behavior that incites rather than restrains customers to associate themselves with the brand in social media and thus be part of an aspirational group that is respected by society (Berger and Ward

2010). Non-luxury, low-status brands, which are easily attainable for a wide audience, are not associated with these elite qualities and aspirational groups (Ward and Dahl 2014). Therefore, we hypothesize the following:

> *H5: Brand status moderates the effect of a brand's communication style on customers' intention to like the brand's message in social media in such a way that high-status brands benefit less from a socially close communication style and more from a socially distant communication style than low-status brands do.*

Three studies test the hypotheses outlined above. Study 1 uses a more explorative, stylometric approach to uncover the differences between high- and low-status brand communication styles in practice. Study 2 and Study 3 actively manipulate socially close and distant communication styles with the help of personal pronouns to test each style's effect on consumers' brand status perceptions, shed light on the proposed psychological mechanisms of luxury brand aspiration, and assess the downstream consequences of using socially close and distant communication styles for high- and low-status brands.

3 Methodology

3.1 Study 1a

In the first study, we aim to explore whether the communication style of high- and low-status brands differs in social media and whether personal pronouns can be used as a linguistic device to manipulate different degrees of social distance (see H1). We chose the fashion industry as a context for all of our studies due to the prevalence of strong consumer brands in this industry for both high and low brand status levels. We identified 200 fashion brands that were active on the social media website Twitter. To gain insights into the perceived status of these focal fashion brands, we conducted a pretest with 228 students (57.7% male, median age 24). Each student classified a subsample of 20 brands as luxury, non-luxury, or in-between. We presented customers with definitions of luxury, non-luxury (i.e., casual) and in-between (i.e., premium) brands, which we determined with the help of existing research on brand status levels (Hagtvedt and Patrick 2009; Jin and Cedrola 2017). Fifty-eight students were filtered out because they answered I don't know to every question in the survey. From the data of the remaining 170 students and their classifications of the 200 brands, we excluded all brands that (1) received less than 10 status classifications, (2) whose agreement rates among participants were less than 40% and thus reached a proportional reduction in loss (PRL) reliability of less than .71 (Nunnaly 1978; Rust and Coil 1994), or (3) whose most

prevalent status classification did not receive at least 20% more votes than the second-most prevalent status classification. This procedure resulted in a final sample of 102 brands that were attributed to one of the three status classifications (ICC(1, 170) = .996). Thirty-seven brands were classified as luxury, 30 as non-luxury and 35 as in-between. The 35 brands that were classified as in-between luxury and non-luxury were also excluded from our analyses in Study 1a, resulting in a final set of 67 focal brands.

Data collection and analysis. We used the R package "twitteR" to collect up to 1,000 of the most recent tweets per brand for each of the 37 luxury and 30 non-luxury brands identified in the pretest. To ensure the comparability of tweets among brands, we excluded tweets that were written by brands as a reply to specific consumer requests. With this procedure, we collected a total of 33,402 individual tweets posted between June 2009 and June 2018. The number of tweets per brand ranged from 22 to 996 tweets. Using the R package "stylo", we conducted a stylometric Zeta analysis (Burrows 2007) to identify luxury and non-luxury brands' characteristic vocabulary, so-called marker words, on Twitter. More specifically, we used Craig's Zeta formula (Craig and Kinney 2009) that simultaneously calculates sets of marker words and anti-marker words between two texts by splitting them into equally sized sections and comparing the frequency of appearance of specific words in each section. Theoretically, Zeta ranges from -1 (for a word present in every text section written by luxury brands and absent in every section of non-luxury brands to 1 (for a word present in every text section of non-luxury brands and absent from every text section on luxury brands). Therefore, the higher the Zeta value, the more often the word is used by non-luxury brands and the less often it is used by luxury brands. Because the applied measure is symmetrical, the marker words for non-luxury brands are identical to the anti-marker words for luxury brands and vice versa.

Results. The results reveal that luxury and non-luxury brands show distinctive preferences in the words they use (see Table E-2). In support of H1, we find that non-luxury brands use the personal pronouns *you(r)*, *we*, and *our* substantially more often than do luxury brands. On the other hand, luxury brands tend to use prepositions such as *from* or *by* more often, which may indicate that they use direct brand names rather than personal pronouns when referring to their own brand. Our results from Study 1a suggest that non-luxury brands use more personal pronouns to convey a socially close communication style in social media, while luxury brands avoid personal pronouns to convey a more distant communication style. Furthermore, Study 1a shows that stylometry is a powerful method to gain insights into fashion brands and their status levels based on the brands' communication styles in social media.

Preferred Words for Luxury and Non-luxury Brand Communication and Their Zeta Values
(Study 1a)

Preferred words low-status brands	Zeta value	Preferred words high-status brands	Zeta value
you	0.48	collection	-0.37
your	0.42	by	-0.36
we	0.41	show	-0.35
our	0.33	discover	-0.23
this	0.33	at	-0.23
get	0.33	from	-0.22
it	0.30	fall	-0.20
here	0.22	wearing	-0.18
shop	0.22	of	-0.16
all	0.21	Paris	-0.15

3.2 Study 1b

Study 1b has three purposes. The first purpose is to validate the results of Study 1a. Study 1a is exploratory because using the R package "stylo" enabled us to obtain insights into the communication styles of high- and low-status brands on the basis of all words these brands use in their Twitter communication. Study 1b is more confirmatory, as it analyzes communication styles of brands from different status levels solely based on the frequency of the personal pronouns used. Specifically, Study 1b examines how a brand's status level influences the number of personal pronouns used in its Twitter communication. In accordance with H1, we expect lower-status brands to use significantly more personal pronouns and thus apply a more close communication style compared with high-status brands. Second, Study 1b aims to test whether communication styles also vary among luxury brands, non-luxury brands, and brands with a hybrid status, or so-called premium brands. In the 21st century, premium brands have gained in popularity among lower- and middle-class customers who seek a sense of luxury and prestige at affordable prices (Truong et al. 2009). Study 1b intends to assess whether the communication style applied by premium brands is also a hybrid of a socially close and a socially distant communication style or if it is more similar to one of those two styles than it is to the other. The third purpose of Study 1b is to develop initial insights into the downstream consequences of using socially close and socially distant communication styles in social media. To achieve this objective, Study 1b examines how the interaction of brand status and the personal pronouns used influences the number of brand likes on Twitter.

Data collection and analysis. As in Study 1a, we used the R package "twitteR" to collect tweets from brands from different status levels. However, this time, we not only sampled tweets from the 30 casual, and 37 luxury brands but also from the 35 premium brands that we identified in the pretest in Study 1a. To enable comparisons between Study 1a and Study 1b,

we sampled the tweets using "twitteR" for both studies at the same time. With this procedure, in June 2018, we collected a total of 49,402 individual tweets posted by luxury, premium, and casual brands for Study 1b. To test whether the communication styles of luxury, premium, and casual brands differ in their usage of personal pronouns, we submitted the sum of tweets posted by each brand to a dictionary-based content analysis tool called Linguistic Inquiry and Word Count (LIWC; Pennebaker, Booth, and Francis 2007). LIWC counts the words in a given text that match one or more of 80 predefined categories (see Tauszcik and Pennebaker 2010 for a description of all categories and the words in each category). For each brand, Study 1b examines all tweets across the category "personal pronouns," which encompasses 70 first, second, and third person pronouns in all variations. This procedure yields the percentage of all words used by a brand in its Twitter communication that are personal pronouns. Furthermore, we used "twitteR" to collect the number of likes for each casual, premium, and luxury brand in our sample that posted tweets. Finally, we also collected the Twitter age for each of these brands in years by using "twitteR". We used R to conduct a linear regression analysis that examines how a brand's status level influences the number of personal pronouns it uses on Twitter. Given that we had five brands with zero brand likes on Twitter in our sample, we conducted a generalized linear regression analysis using the Gamma distribution to examine the interaction effects of brand status and the number of personal pronouns used per brand on the number of brand likes. The continuous variable that captured the number of personal pronouns used per brand was scaled and mean-centered, and the interaction between the number of personal pronouns used per brand and the brand status level was computed as the product of these two terms.

Results: In support of H1, we find that a brand's status has a significant influence on the frequency of personal pronouns used in the brand's social media communication ($F(2, 99) = 35.39$, $p < .001$). Specifically, we find that casual brands use significantly more personal pronouns per 100 words than do premium brands ($M_{casual} = 6.75$ vs. $M_{premium} = 5.10$, $t(99) = 2.97$, $p = .004$) and luxury brands ($M_{casual} = 6.75$ vs. $M_{luxury} = 2.25$, $t(99) = 8.21$, $p < .001$). Premium brands use significantly more personal pronouns in their Twitter communication than do luxury brands ($M_{premium} = 5.10$ vs. $M_{luxury} = 2.25$, $t(99) =$, $p < .001$). In a next step, we analyzed how the interaction between a brand's status and the frequency of personal pronouns in its Twitter communication (all tweets) influences the number of brand likes. Because the amount of brand likes correlates with the time a brand has been operating on Twitter, we included the brand's Twitter age as a control variable into our model. The results of the generalized linear regression analysis revealed a significant interaction of brand status by frequency of personal pronouns, which influenced the number of brand likes on Twitter ($\chi^2(2)=5.04$, $p = .0805$). We employed a spotlight analysis one standard deviation above and below the mean of the number of personal pronouns used by brands. As depicted in Figure E-

1, casual brands that use more personal pronouns (i.e., a close communication style) in their Twitter communication have significantly more likes than casual brands that use fewer personal pronouns (i.e., a distant communication style; $M_{distant}$ = 1152.45 vs. M_{close} = 3472.24, z = -2.25, p = .024). Similarly, premium brands that use more personal pronouns on Twitter have more likes than do premium brands that use fewer personal pronouns ($M_{distant}$ = 1320.51 vs. M_{close} =5636.23, z = -2.65, p = .008). In contrast, there is no significant effect of communication style on brand likes for luxury brands ($M_{distant}$ = 1409.91 vs. M_{close} =772.44, z = .88, p = .38). In sum, the results show that the relationship between the communication style of premium brands and customers' reactions in terms of brand likes is very similar to the relationship between the communication style of casual brands and customers' reactions to it. Therefore, we decided to examine only luxury and non-luxury brands in the following three studies. Furthermore, our results provide the first partial support for H5 by showing that a socially close communication style, featuring a high number of personal pronouns, induces more brand likes for lower status brands than does a socially distant communication style. However, for luxury brands, the degree of social distance conveyed by the communication style does not significantly influence the number of brand likes.

Figure E-1
Spotlight Analysis of Communication Style by Brand Status Level on the
Number of Brand Likes (Study 1b)
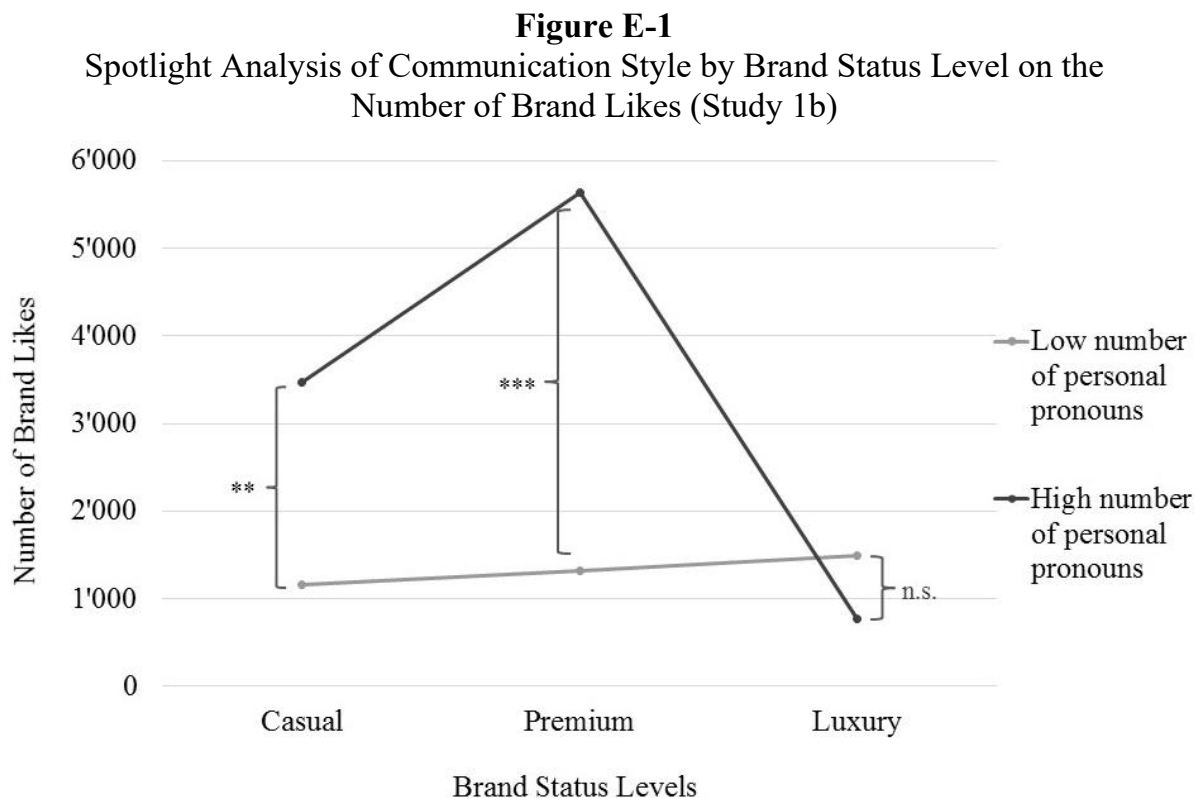
3.3 Study 2a

While Studies 1a and 1b provide valuable insights into the relationships between communication styles and brand status levels in practice, they fail to examine why brands from different status levels employ different communication styles and why some status-style combinations are associated with more brand likes than others are. The Results from Study 1a und 1b rely on correlational data. Therefore, we may only draw assumptions about the underlying causal relationships between communication styles, brand status levels, and the number of likes from the results of Study 1a and 1b. Furthermore, Study 1a and 1b examine real-life brands on Twitter what may have caused confounding effects of preexisting perceptions about the brands among customers (e.g., variations in the country of origin of the brand or the foundation year of the company behind the brand may have influenced customers' intention to like a brand on Twitter). To address these shortcomings of Study 1a and 1b and to better understand the casual relationships between communication styles, brand status levels, and customers' reaction to the brand in social media, we conducted three online experiments where we actively manipulate communication styles.

First, one needs to study consumers' expectations and reactions to luxury and non-luxury brand communication in social media. Therefore, Study 2a tests whether consumers are able to infer brand status levels from differences in communication styles in social media (see H2). Based on our review of prior literature and the results of Studies 1a and 1b, we expect that a socially distant communication style will result in higher status classifications than will a socially close communication style. This would make tailoring the communication style used in social media a very promising branding tool for brands from different status levels. We used a counterbalanced within-subject design (Westfall et al. 2014) to test the proposed inference of brand status from a brand's communication style. Based on prior research and insights from Study 1, we manipulated socially distant and close communication styles with the help of personal pronouns.

Stimuli. To manipulate communication style, we prepared socially close and socially distant versions of 12 sample tweets (for a total of 24 tweets) with the help of a fictitious Twitter widget. We used the personal pronouns *you* and *we* several times in the socially close style condition and replaced them with *from [brandname], by [brandname], the*, and infinitives in the socially distant style condition (see Figure E-2 for an example). The 12 sample tweets were sampled from the real-life Twitter pages of fashion brands and featured a variety of content ranging from collections, to individual products to styling advice. Any identifying brand information was removed from the tweets to avoid the confounding effects of preexisting perceptions about the brand (Sela et al. 2012). Contents also varied in their degree and valence of emotionality to account for potential biases in status classifications

(Onishi and Manchanda 2012). As exemplified in Figure E-2, manipulating communication style with the help of personal pronouns has the advantage of creating variance in social distance while not altering the content of the tweets.

Figure E-2
Example of Stimuli With Close and Distant Communication Styles (Study 2a)
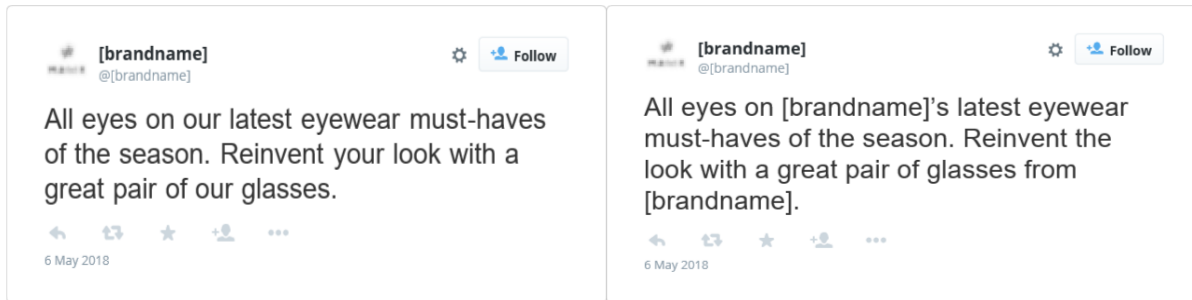
Procedure. At the start of the online experiment, each participant was randomly assigned to receive either the socially distant (high frequency of personal pronouns) or the socially close (no personal pronouns) version of each of the 12 tweets. Importantly, content was counter-balanced between the two versions of each tweet, such that any systematic effects of content on our dependent variable were controlled for (Westfall et al. 2014). Thus, the tweets only varied in their degree of social distance, which was manipulated with the help of personal pronouns. For each one of the 12 different tweets, we asked participants to indicate the perceived status of the fictitious fashion brand that posted that tweet (on a single-item scale from 1=not at all luxurious to 7=very luxurious). Furthermore, to gain insights into the degree of social distance, we asked participants to rate the communication style used in each tweet (on a single-item scale from 1=personal to 7=impersonal). Given that personal pronouns are a common linguistic device used to manipulate social distance (e.g., Bar-Anan et al. 2006; Sela et al. 2012), we chose the dimension *personal/impersonal* from existing scales about close and distant communication styles (Barcelos et al. 2018; Kumar and Benbasat 2002) as the most suitable item for the manipulation check in this study.

Data Collection and analysis: Participants in this online survey were recruited via the online platform Amazon Mechanical Turk in spring 2018. In exchange for completing the online survey, participants received a remuneration of 1USD. A total of 360 participants completed the survey. Thirty-nine participants did not pass the Instructional Manipulation Check (hereinafter IMC; Oppenheimer, Meyvis, and Davidenko 2009) and were excluded from our sample. To rule out potential demand effects, we asked participants to indicate what they thought was the underlying hypothesis that this research intended to test (Meyvis and Osselaer 2017). We excluded five participants, whose guess about the underlying hypotheses

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was close to our actual hypothesis. This left us with 316 (participants) x 12 (tweets) = 3,792 responses to tweets in our dataset. From a conceptual perspective, both our participants and our tweets were sampled from a larger population across which we wish to generalize our results. Clearly, our two samples do not exhaust the universe of potential tweets and participants that we might have used. When faced with data obtained from such a design, researchers typically conduct a by-participant analysis in which they analyze two means for each participant — i.e., one for socially close and one for socially distant tweets — and test whether the mean-difference per participant is significantly different from zero. The problem with this type of analysis is that it treats only participants as random and thus allows generalizations of results to other participant samples in the population but not to other samples of tweets. Studies show that research that fails to treat stimuli (i.e., tweets) as random in such a dataset gives rise to inflated Type I error rates that exceed the nominal alpha level by at least an order of magnitude (e.g., Judd et al. 2012). To rule out potential shortcomings of that type, we used a mixed model approach that treats both participants and stimuli (i.e., tweets) as random factors. The communication style (operationalized by the use of personal pronouns) entered the model as a fixed effect term, while the intercepts and slopes of the communication style across participants and across tweets were entered as random effects terms.

Results. The manipulation check revealed that tweets that used a socially distant communication style, i.e., no personal pronouns, were – to a significant degree –rated as being more impersonal than tweets with a socially close communication style, i.e., many personal pronouns ($\chi^2(1)=12.23$, p < .001). In support of H2, the analysis revealed a significant main effect of communication style on status inference ($\chi^2(1)=3.96$, p = .047) such that tweets with a more distant communication style were generally associated with a more luxurious brand status than were tweets with a closer communication style. This result indicates that customers recognize differences in communication styles and attribute them to different brand status levels. Hence, communication styles may serve as a powerful brand-positioning tool in social media.

3.4 Study 2b

The purpose of Study 2b was twofold. First, we intended to replicate the results of Study 2a and thus show that customers infer a more luxurious brand status from tweets with a socially distant communication style and vice versa (see H2). In line with Study 2a, we rely on personal pronouns in Study 2b to manipulate socially close and distant communication styles. Second, we aimed to investigate the process through which socially close and distant

communication styles may influence brand status perceptions among customers. To this end, we examined whether different levels of luxury brand aspiration among consumers influence status inferences based on different communication styles (see H3).

Stimuli: Again, we prepared socially close and socially distant versions of 12 sample tweets (for a total of 24 tweets) with the help of a fictitious Twitter widget. We opted to conduct this study in German because doing so allowed us to manipulate socially close and socially distant communication styles with the help of two different versions of the 2nd person singular pronoun *you* in the German language. The first version of the German translation of you – *Du* – is used when talking to friends or family and is rather familiar and informal in nature (Looi et al. 2005). We used the *Du*-version to manipulate a socially close communication style in Study 2b. The second, more formal *Sie* is used when talking to people one does not know very well (Looi et al. 2005). We used the *Sie*-version to manipulate a socially distant communication style (see Figure E-3 for an example). These socially close and socially distant ways of addressing people in the German language have already been used by Steinmann et al. (2015) to manipulate differences in communication styles in social media. As in Study 2a, we sampled the 12 tweets from the real-life Twitter pages of fashion brands. The tweets did not include any identifying brand information, featured a variety of different content, and varied in their degree of emotionality.

Figure E-3
Example of Stimuli With Close and Distant Communication Styles (Study 2b)


Procedure. At the start of the online experiment, each participant was randomly assigned to receive either the socially distant (*Sie*) or the socially close (*Du*) version of each of the 12 tweets. As in Study 2a, the content was counter-balanced between the two versions of each tweet (Westfall et al. 2014), and thus the tweets only varied in their degree of social distance. We asked participants to indicate the perceived status of the fictitious fashion brand that posted that tweet (on a scale from 1=not at all luxurious to 7=very luxurious), for each of the 12 different tweets. In addition, we asked participants to indicate their aspiration for luxury

brands on a 14-item, 7-point scale (Sreejesh et al. 2016) to examine the psychological mechanism that may explain brand status inferences based on communication style.

Data Collection and analysis. Participants in this online survey were recruited on a social media platform used by students of the University of St.Gallen in spring 2018. In exchange for completing our survey, participants were entered into a lottery that gave them the chance to win a university-branded hoodie. In total, 183 German-speaking students completed our survey. Thirteen participants did not pass the IMC (Oppenheimer et al. 2009) and were excluded from our sample. A total of 167 (participants) x 12 (tweets) = 2,004 responses to tweets in our dataset. As in Study 2a, we used a mixed model approach that treats both participants and stimuli (i.e., tweets) as random factors. We used R to analyze our linear mixed effects model. The communication style (*Du* vs. *Sie*), the degree of luxury brand aspiration, and the interaction between communication style and luxury brand aspiration entered the model as fixed effect terms, while the intercepts and slopes of the communication style across participants and across tweets were entered as random effects terms. The continuous moderating variable luxury brand aspiration was mean-centered, and the interaction between communication style and luxury brand aspiration was computed as the product of these two terms.

Results. In support of H2, the analysis revealed a significant main effect of communication style on brand status inference ($\chi^2(1)=4.67$, p = .031) such that tweets with a more distant communication style (no personal pronouns) were generally associated with a more luxurious brand status than tweets with a closer communication style (many personal pronouns). Importantly, the results also revealed a significant interaction between communication style by degree of luxury brand aspiration, which influenced brand status inference ($\chi^2(1)=10.61$, p = .001). We employed a spotlight analysis 1 standard deviation above and below the mean of luxury aspiration to shed light on the moderating role of luxury brand aspiration. As expected, the simple effects depicted in Figure E-4 reveal that participants who were high in luxury brand aspiration perceived a distant communication style as significantly more luxurious than a close communication style ($M_{distant}$ = 3.80 vs. M_{close} = 3.35, $t(101)$ = 3.87, p < .001). In contrast, there was no significant effect of communication style on perceived brand status for participants who were low in luxury brand aspiration ($M_{distant}$ = 3.31 vs. M_{close} = 3.39, $t(101)$ = .73, p = .47). These results support H3, which states that using a more distant communication style on social media may increase the perceived luxuriousness of the brand because it encourages consumers' aspirations.

Figure E-4

Spotlight Analysis of Communication Style by Degree of Luxury Aspiration on Brand Status Perceptions (Study 2b)
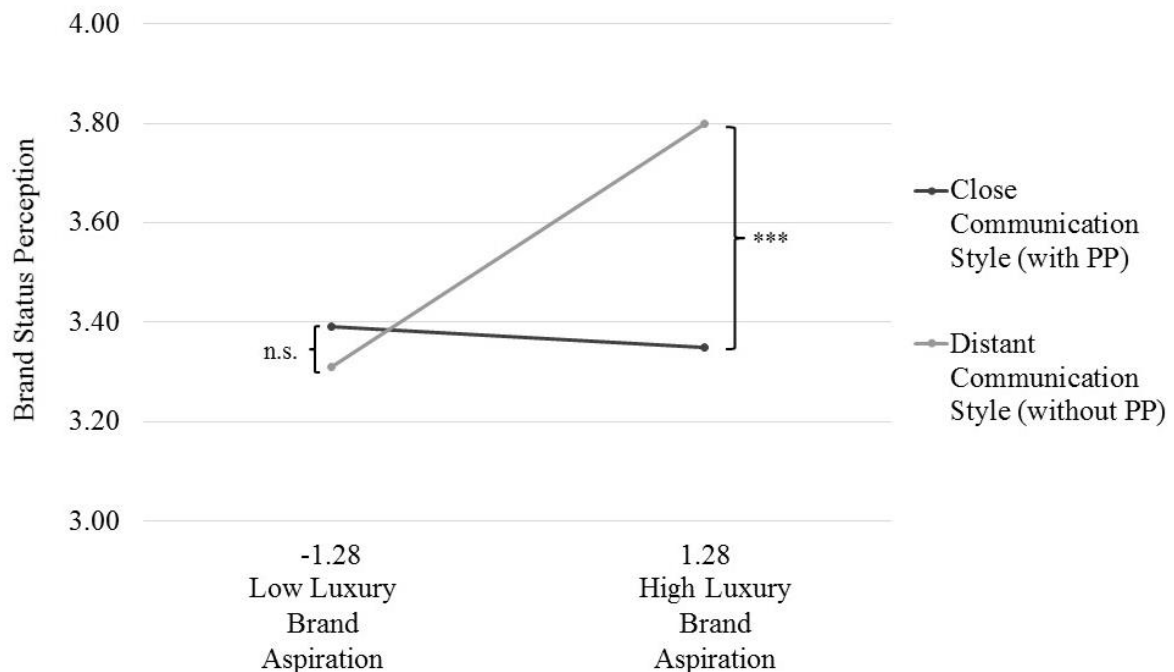
3.5 Study 3

This study examines the downstream consequences of using a socially close and a socially distant communication style for high- and low-status brands in social media. According to H4, we expect a tweet with a socially close communication style to induce higher like intentions among customers on social media than a tweet with a socially distant communication style. However, a brand's status level may moderate the effect of brand communication style on like intentions in such a way that condescending behavior as manipulated by a socially distant communication style may be beneficial for luxury brands in social media (see H5). Study 1b yielded initial insights into the interaction effects of brand status and communication style on brand likes. Study 3 provides much higher internal validity than Study 1b and extends the findings of Study 1b in two important ways. First, it actively manipulates brand status levels and communication styles in order to rule out other factors that might have influenced the number of likes. Second, it analyses customers' like intentions not at the brand level but at the tweet level, which makes it much easier to attribute specific style-status interactions to behavioral consequences.

Stimuli and procedure. Study 3 used a 2 (socially close versus socially distant communication style) x 2 (high vs. low brand status) between-subjects design to test H4 and H5. At the start of the experiment, participants were randomly assigned to one of four

experimental conditions. To rule out potential confounding effects (Sela et al. 2012), we used a fictitious fashion brand, which we named Acadu, for this survey. We introduced Acadu to survey participants with a few sentences at the very beginning of the survey. In the high (low) brand status condition, we presented Acadu as a high (low)-status brand by using common expressions associated with luxury (non-luxury) brands, which we derived from existing research (Hagtvedt and Patrick 2009; Hamilton, Vohs, and McGill 2014; Janssen, Vanhamme, and Leblanc 2017; Jin and Cedrola 2017; Wang and Griskevicius 2014). A screenshot with the high- and low-status manipulations used in the survey is provided in the Appendix. We used the same communication style manipulation as in Study 2a for Study 3. Hence, we prepared socially close and socially distant versions of 12 sample tweets by using the personal pronouns *you* and *we* several times in the socially close style condition and replacing them with *from [brandname], by [brandname], the,* and infinitives in the socially distant style condition. In each of the four groups, we showed participants 12 different tweets and asked them to indicate their intention to like the tweet on Twitter (on a single item scale from 1=very low to 7=very high). As in Study 2a and Study 2b, content was counter-balanced between the two versions of each tweet, such that any systematic effects of content on our dependent variable, intention to like the tweet, was controlled for (Westfall et al. 2014). Furthermore, we asked participants to rate the communication style used in each tweet with the measure already applied in Study 2a (on a single-item scale from 1=personal to 7=impersonal). After having examined customers' like intention and style perception for each of the 12 tweets, we asked them to indicate their status perception of the fashion brand Acadu on a two item scale ("Acadu is a symbol of prestige" and "Acadu is a symbol of luxury") ranging from 1=strongly disagree to 7=strongly agree (Miller and Mills 2012). Finally, we asked participants to indicate their brand name familiarity with Acadu on a 7-point scale for the three items *unfamiliar/familiar*, *did not recognize/recognized*, and *had not heard of/had heard of* (Simonin and Ruth 1998).

Data Collection and analysis: We recruited participants for this online survey on Amazon Mechanical Turk in spring 2018. Participants received a remuneration of 1USD in exchange for completing the online survey. A total of 342 participants completed the survey. Twenty-seven participants did not pass the IMC (Oppenheimer et al. 2009) and were excluded from our sample. This left us with 315 (participants) x 12 (tweets) = 3,780 responses to tweets in our dataset. As in Study 2a and Study 2b, we used a mixed model approach in Study 3 and analyzed the model using R.

Results. The manipulation check reveals that tweets with socially distant manipulated communication styles were significantly perceived as more impersonal than were tweets with socially close communication styles ($\chi 2(1)=30.67$, p < .0001). Furthermore, the brand's status level was rated as significantly higher when we manipulated a high-status brand and vice

versa (F(1, 311) = 1134.10, p < .001). To test H4 and H5, we calculated several mixed effect models with random intercepts and/or random slopes and applied Akaike's Information Criterion (AIC) and the Bayesian Information Criterion (BIC) to assess the goodness of fit of the different models. Because we did not find significant differences in goodness of fit between the different models, we selected the most parsimonious model (BIC = 11,729), with random intercepts and fixed slopes, for all analyses in Study 3. In support of H4, the analysis revealed a significant main effect of communication style on intention to like ($\chi^2(1)$=3.51, p = .061), such that tweets with a more close communication style showed higher like intentions among customers than did tweets with a more distant communication style. Importantly, the results also revealed a significant interaction of communication style by degree of brand status, which influenced customers' intention to like a tweet ($\chi^2(1)$=3.32, p = .068). Specifically, the simple effects depicted in Figure E-5 reveal that for low-status brands, tweets with a more socially close communication style show higher like intentions than do tweets with a more distant communication style ($M_{distant}$ = 3.08 vs. M_{close} = 3.20, z = 2.61, p = .009). Unexpectedly, but in line with insights from Study 1b, customers' intention to like a tweet did not vary among socially close and socially distant communication styles for high-status brands ($M_{distant}$ = 2.79 vs. M_{close} = 2.79, z = .02, p = .98). In partial support of H5, the results imply that low-status brands have to use a socially close communication style in social media to obtain many likes for their tweets, whereas customers seem to accept both socially close and distant communication styles for high-status brands. One might argue that participants might have associated the fictitious brand Acadu with other real-life brands they share personal experiences with and that these associations might have affected their answers. Therefore, we conducted a robustness test by examining whether customers' familiarity with the brand name Acadu might have influenced our results. We mean-centered the three-item construct brand name familiarity and included it as a control variable in our main ($\chi^2(1)$=3.51, p = .061) and interaction effect models ($\chi^2(1)$=3.32, p = .069) and found no significant differences.

Figure E-5

Spotlight Analysis of Communication Style by Brand Status Level on Intention to Like the Brand Message (Study 3)
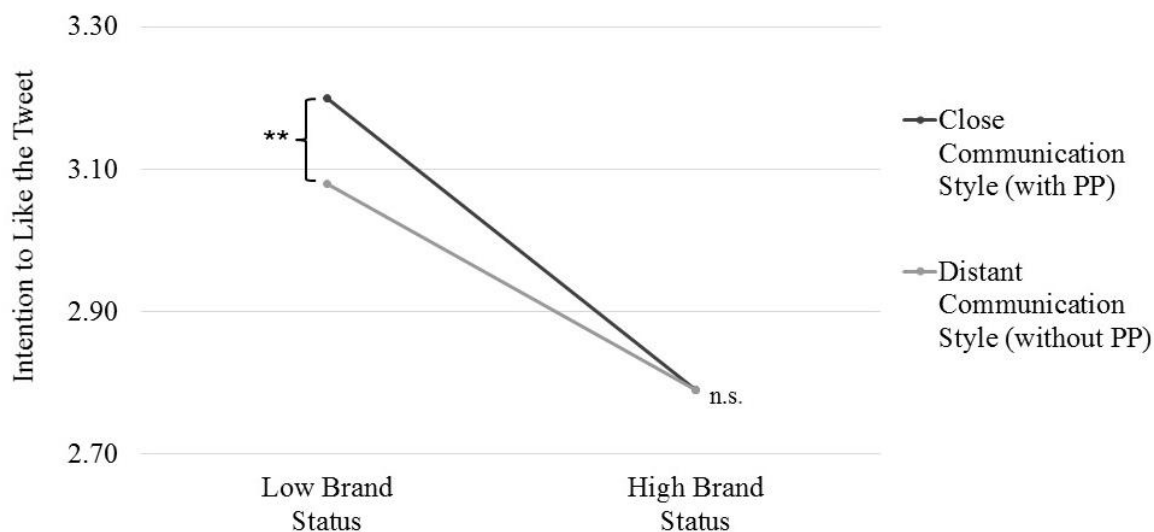
4   General Discussion

The results of our studies suggest that brands differ not only in what they communicate via social media, i.e., the communication content, but also in how they communicate, i.e., the communication style. We find that the communication styles employed by luxury and non-luxury brands in social media differ in the degrees of social distance they convey to the customer and that variations in social distance can be manipulated very subtly with the help of personal pronouns. Furthermore, we find that consumers associate a socially close communication style – as measured by the usage of many personal pronouns – more strongly with lower-status brands and a socially distant communication style – as measured by the usage of no personal pronouns – more strongly with luxury brands. This finding indicates that communication style may be an important tool for brand positioning that deserves more attention in research and practice. Furthermore, we find evidence that consumers' level of luxury brand aspiration may serve as a psychological mechanism that helps to explain why customers infer a more luxurious brand status from a more distant communication style. In other words, a socially distant communication style may encourage consumers to aspire to a brand. Finally, we demonstrate how socially close and socially distant communication styles may yield different downstream consequences for luxury and non-luxury brands.

4.1 Theoretical Implications

This article yields several theoretical implications. First, we contribute to the literature on brand linguistics. While existing research on the effects of brand communication styles on consumer behavior (e.g., Barcelos et al. 2018; Gretry et al. 2017; Kronrod et al. 2012) contributes substantially to our understanding of brand linguistics (Carnevale et al. 2017), it fails to analyze how brand characteristics influence the effect of brand communication styles on consumer behavior. Specifically, it is unclear how brands from different status levels may use communication style to position their brands in social media. Examining this relationship is important because brand communication is a powerful means of conveying a specific brand image and shaping the consumer-brand relationship (Kapferer and Bastien 2009). Our results show that customers attribute a more distant communication style to a more luxurious brand status and vice versa, indicating that a brand's communication style is an important but highly underexplored parameter with which to influence brand positioning in social media. Second, our research is the first to apply stylometry, which is a statistical method of authorship determination based on communication styles, to a marketing-related context (Holmes 1998). We examine brand communication styles in social media on an exploratory level and attribute different styles to different brand status levels. Therefore, we show that stylometry is a powerful method of determining the authorship of texts and that it deserves more attention outside its traditional domains of linguistics and forensics. Third, we apply the concept of psychological distance (Trope et al. 2007) to brand communication in social media and thus contribute to research examining social distance as an important dimension with which to classify communication styles (Stephan et al. 2010). Because we actively manipulate different degrees of social distance between a brand and a consumer with the help of personal pronouns in both the German and English languages, we also extend research on the use of personal pronouns in brand linguistics (Kachersky and Carnevale 2015; Sela et al. 2012). Our research demonstrates that even very subtle changes in the use of personal pronouns can significantly alter brand communication styles in social media and ultimately influence consumers' brand perceptions and behavioral intentions. Fourth, we advance research on social media marketing and brand management by showing that socially distant brand communication via social media does not necessarily hurt brands. Based on the results of Study 1b and Study 3, we cannot corroborate the claim that condescending behavior benefits luxury brands (Wang et al. 2013; Ward and Dahl 2014) in the context of social media communication styles. However, our results are still valuable as they show that using a socially distant communication style in a very personal and close channel such as social media does not harm high-status brands. Thus, we critically reflect on the widely held belief that social media communication has to adhere to the norms of informal, emotional, and interactive communication (Berger 2014; Kaplan and Haenlein 2010; de Vries et al. 2012). Finally, we provide fresh insights into the

psychological process behind the effect of brand communication styles on brand status perceptions by comparing customers who believe that high-status brands can significantly help them to communicate their identity, signal achievement, boost self-esteem, and impart social status with customers who do not believe that high-status brands have these powers. We introduce luxury brand aspiration (Sreejesh et al. 2016) as a new concept to better understand why certain customers value socially distant brand communication in social media more than other customers do. Luxury brand aspiration helps us to understand consumers who desire to have wealth and status but do not necessarily have the economic means to purchase luxury goods (Truong et al. 2009). We propose that a communication style that conveys a not-for-everybody image may help high aspirers to construct their self-concept and feel a sense of belonging to a small group of selected people in a medium where billions of customers can associate themselves with any brand. Our paper is the first to examine the demand side of brand aspiration, i.e., the importance that customers place on luxury brands in achieving their life goals. Therefore, we extend existing research examining aspiration as a brand characteristic, or put differently, we examine aspiration from the supply side (Wang et al. 2013; Ward and Dahl 2014).

4.2   Practical Implications

With more than three billion users expected for 2021 (Statista 2018), social media have become an important marketing channel to create brand awareness and form close consumer-brands relationships. Many customers have their first encounter with a brand via social media (Naylor, Lamberton, and West 2015). Therefore, social media are an important channel in the customer journey to acquire new customers, position a brand and differentiate it from others, and transform new customers into brand ambassadors who help to spread brand awareness and improve brand attitude within their network (Hutter et al. 2013; Malhouse et al. 2013). Unfortunately, brand managers often struggle with how to position their brands on social media (Barcelos et al. 2018). In particular, high-status, luxury brands whose exclusive image seems to collide with the human-like and personal communication norms of social media (Dion and Arnould 2011) face the challenge of appealing to a wide audience on social media without jeopardizing their image.

By creating awareness for the importance of communication style, our research helps marketers to assess the factors that shape consumer-brand relationships in social media. We show that a brand's linguistic identity may influence how consumers identify, experience, integrate, and connect with brands (Carnevale et al. 2017). Brand managers are well advised to rethink whether their brand's social media communication style suits the image they intend

to convey. Our studies show that even subtle differences in language that marketers might not be aware of, such as personal pronouns, may have the power to influence consumers' perception of the brand and their intentions to like the brand or its messages on social media. Therefore, communication styles may serve as a powerful brand-positioning tool for luxury and non-luxury brand managers. Non-luxury brands, in particular, need to be aware of the negative consequences of socially distant communication in social media. For luxury brands, a more distant communication style may not necessarily be harmful, even in a socially close and informal channel such as social media. Our results show that high-status brands may use either a socially close or distant communication style on social media. However, based on research on integrated marketing communications (e.g., Keller 2008), we strongly advise luxury brand managers to stick to a consistent style throughout their social media messages. Therefore, high-status brands need to reflect on which style suits their image better. For instance, the luxury brand Burberry might be better off using a socially close communication style, which better suits the brand's redefined image. On the other hand, the luxury brand Versace might benefit more from a distant communication style that helps to preserve its aura of exclusivity. In social media, brand communication, and thus brand positioning, can be implemented and monitored much more easily than in other channels simply by changing a few little words in brand posts. We strongly advise brand managers to harness this potential and devote more attention to their social media communication styles. To help marketers test whether the brand communication style used in a specific tweet suits the image they intend to convey, we have developed an online application (https://tboettger.shinyapps.io/style_gen/). With the help of a machine learning technique, the application analyzes the communication style of any text entered based on the frequency of personal pronouns, other linguistic devices, and their interactions used in the text. The analysis yields probabilities for the text being written in a high-status, luxury and low-status, or casual communication style.

Furthermore, our results show that customers may respond differently to the same brand communication depending on their level of brand aspiration and on the status level they attribute to a brand. We find that in particular, high aspirers to luxury brands can be attracted and maintained with the help of socially distant brand communication. Marketers are challenged to study their current and potential customers and adapt their communication styles accordingly. Finally, our results imply that communication styles can help brands to better assess the competitive landscape in social media and differentiate themselves from competitors. In a medium where customers can easily associate themselves with any brand, exclusivity is difficult to preserve. Therefore, luxury brand managers should be on the lookout for new ways to communicate a distinct brand image. The booming luxury market further challenges luxury brands to preserve their aura of exclusivity, as prestigious brands at affordable prices are gaining popularity among middle- and lower-class consumers (Truong

et al. 2009). Originally, researchers believed that a communicator's style develops unconsciously and cannot be manipulated by communicators (Holmes 1998). However, Brennan et al. (2012) found empirical evidence that individuals can actively hide their communication style or imitate the style of others and thus effectively mislead their audiences. Some casual brands already seem to mirror luxury brands quite well and gradually crawl their way up to the luxury fashion Olympus. For instance, Zara owns a retail store on the Champs Elysées in Paris, which is surrounded by luxury stores such as Cartier, Guerlain, and Louis Vuitton; the company takes inspiration for its product designs from items on the runway that will be sold off-the-rack in no time thanks to its fast fashion leadership. Our results imply that communication style can help lower-status brands to attain a more luxurious brand image, which may in turn threaten luxury brands' unique position.

4.3   Directions for Future Research

This article has some limitations that open up promising avenues for future research. The first limitation of our research is that it did not examine the attitudinal and behavioral consequences of brand communication styles outside of social media. While some studies show that liking a brand or a brand post in social media may positively influence brand evaluations (Beukeboom, Kerkhof, and de Vries 2015; Naylor et al. 2015) , others find that customers' fondness for a brand is the same regardless of whether they like the brand in social media or not (John et al. 2017). Our studies featured 12 different tweets, which were shown to customers at one point in time, to manipulate differences in communication styles and examine their effects on like intentions in social media. Since variations in communication styles are very subtle, it might take more brand messages over a longer period of time to significantly alter customer's brand attitude and purchase intentions. Future studies may conduct a longitudinal study in social media to examine the influence of communication styles on brand attitude and purchase intentions. Second, more research is needed to shed light onto the psychological process underlying the relationships between communication style, brand status, and consumer behavior. For instance, it would be interesting to actively manipulate consumers' need for luxury brand aspiration. Third, this study tests how consumers react to communication styles of unfamiliar, fictional high- and low-status brands. Gretry et al. (2017) find that an informal communication style is more beneficial to familiar brands, whereas a formal style benefits unfamiliar brands. It would be interesting to examine how the interaction effects of a brand's communication styles and status level change as soon as customers get to know a brand better. Finally, similar studies could be conducted in other social media, such as Facebook or LinkedIn, and in other contexts than the fashion industry to increase the generalizability of our results.

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Appendix E

Luxury and Non-Luxury Brand Manipulation Used in Study 3

Luxury Condition

Please read the following background information carefully.

Introducing the luxury fashion brand Acadu to the US market

Acadu is a European **luxury** fashion brand that was founded in 2015. Acadu sells **high-end** clothes for women and men. In Europe, Acadu is known for its **prestigious image** and very **fine craftsmanship**. Acadu's products have a **high price** and are **limited editions** that are available **exclusively in a few** boutiques in Europe. In line with its global expansion strategy, Acadu opened its first U.S. store in New York on March 31, 2018.

In order to help the luxury brand Acadu with its expansion to the US market, we were asked to provide feedback on its current social media communication. On the following pages, we will therefore ask for your opinion on 12 recent Tweets from Acadu.

☐ I have read and carefully considered this page.

Continue

Non-Luxury Condition

Please read the following background information carefully.

Introducing the value for money brand Acadu to the US market

Acadu is a European **value for money** fashion brand that was founded in 2015. Acadu sells **low-end** clothes for women and men. In Europe, Acadu is known for its **fashion for everyone** image and its **casual clothes**. Acadu's products are sold at **affordable prices,** are **mass-produced** and **available in many** fashion stores in Europe. In line with its global expansion strategy, Acadu opened its first U.S. store in New York on March 31, 2018.

In order to help the value for money brand Acadu with its expansion to the US market, we were asked to provide feedback on its current social media communication. On the following pages, we will therefore ask for your opinion on 12 recent Tweets from Acadu.

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