

University of Groningen

Omnichannel retailing

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Published in:
APA Handbook of consumer psychology

DOI:
[10.1037/0000262-029](https://doi.org/10.1037/0000262-029)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2022

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Verhoef, P., Ittersum, van, K., Kannan, PK., & Inman, J. (2022). Omnichannel retailing: A consumer perspective. In L. R. Kahle, T. M. Lowrey, & J. Huber (Eds.), *APA Handbook of consumer psychology* (pp. 649-672). American Psychological Association. <https://doi.org/10.1037/0000262-029>

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OMNICHANNEL RETAILING: A CONSUMER PERSPECTIVE

Peter C. Verhoef, Koert van Ittersum, P. K. Kannan, and Jeff Inman

Three decades ago, consumers had limited choices of how to search for and purchase products and services. The local brick-and-mortar store or branch was very dominant, and beyond that some consumers used home-shopping channels, such as catalogues, telephone, and home-shopping television. While home-shopping channels, and especially the catalog business, were significant back in the day, in general, a relatively small share of consumers actually used these channels. For example, Darian (1987) found that housewives, part-time female workers with preschool children, and households in the middle-income groups were most likely to use home-shopping channels. Furthermore, catalog business was typically prevalent in noncity areas, such as the Midwest United States.

While catalogs never vanished, and actually may be making a comeback (Zhang, 2020), with the advent of the internet in the early 1990s, the online channel has entered consumer lives. In the early days, some specific products, such as CDs, books, and software, could be purchased online, but only a small specific segment of consumers had started searching and purchasing online (e.g., Verhoef & Langerak, 2001). Since then, the online channel has become a dominant channel in many markets and consumers have adopted it widely. Consumers nowadays routinely search for and purchase goods and services online. A recent study of Herhausen

et al. (2019) showed that 80% of the North American market use a combination of online and offline channels, implying that only about 20% rely solely on offline stores.

As a result, Alphabet and Amazon have become among the most valuable firms in the world. Such development not only occurred in Western markets but in Asia as well, with online retail firms like Alibaba. The explosive growth of the online channel has dictated that multichannel retailing has become the norm rather than the exception from both a firm and customer perspective. Firms that fail to be successful handling multiple channels face grave difficulties. For example, recently one of the oldest travel agency firms, United Kingdom-based Thomas Cook, did not survive the fierce competition from digital players such as Booking.com, TripAdvisor, and Expedia. There will be more firms facing similar problems as digital firms develop aggressive growth strategies that severely affect existing businesses (e.g., Reinartz et al., 2019; Verhoef & Bijmolt, 2019; Verhoef et al., 2021). Consumer behavior is also changing drastically. The context of consumer behavior has moved from single channel to multichannel to omnichannel environments (e.g., Herhausen et al., 2019; Konuş et al., 2008). Omnichannel environments are characterized by a synergistic and complementary set of channels, aimed at optimizing the customer experience across channels

We thank Scott Neslin for providing very thoughtful comments on the first version of this chapter.

<https://doi.org/10.1037/0000262-029>

APA Handbook of Consumer Psychology, L. R. Kahle (Editor-in-Chief)

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and the performance over channels, as opposed to multichannel environments, which are characterized by a more independent set of channels.

In this chapter, we provide a psychological perspective on consumer behavior in an evolving digital environment. Prior work in this area has mainly considered a retailing or customer-management perspective but rarely has taken a consumer perspective with a focus on psychological aspects of this behavior. A recent exception is the study by Lee et al. (2018), which focuses on the shopping journey.

We start this chapter with a short discussion on some definitions and developments to make the reader familiar with specific terms in multichannel and omnichannel retailing. We then introduce a consumer-focused omnichannel model. Next, we address the drivers of channel choice decisions, multichannel and omnichannel segmentation studies, and the consequences of omnichannel behavior. We subsequently focus on the consumers' path to purchase and customer journey and extend the focus with an elaborate discussion on how new digital technologies are shaping the consumers' buying process. We conclude with a brief research agenda for consumer research in this emerging area.

MULTICHANNEL AND OMNICHANNEL RETAILING

Multichannel retailing started to attract attention in the early 2000s after the increasing popularity of online retailing. Not surprisingly, the main question being asked by traditional retail firms was whether they should add an online channel to complement their physical operations or whether online firms should add a retail presence. From a consumer perspective there were many studies on the drivers of online channel preferences and choice (e.g., Ha & Stoel, 2009; Verhoef & Langerak, 2001). The concept of a *multichannel customer* emerged as research investigated differences between multi- and single-channel customers, specifically focusing on purchase outcomes and customer profitability (Kushwaha & Shankar, 2013; Venkatesan et al., 2007; J. Xu et al., 2014).

The conceptual foundations for multichannel retailing are discussed in Neslin et al. (2006). This

foundation focuses on customer behavior, with a *channel* as “a customer contact point, or a medium through which the firm and the customer interact” (Neslin et al., 2006, p. 96). In their definition of a channel, Neslin et al. emphasized the two-way exchange between customers and the firm through a channel. Next, they defined *multichannel customer management* as “the design, deployment, coordination, and evaluation of channels to enhance customer value through effective customer acquisition, retention, and development” (p. 96). In this seminal multichannel paper, the authors proposed a customer-focused model including multiple phases in the buying process from search to purchase to after-sales in which customers can use multiple channels. Following this paper, multiple studies have considered how and why customers use these channels in the buying process, how they migrate between channels (e.g., Polo & Sese, 2016; Valentini et al., 2011; Verhoef et al., 2007), and what the effects are on purchase behavior outcomes, such as loyalty (e.g., Ansari et al., 2008). For in-depth discussions on the multichannel literature, we refer to Neslin and Shankar (2009), Verhoef (2012), and Liu et al. (2019).

To allow for a more synergistic approach, the omnichannel perspective has extended the scope of multichannel retailing by considering multiple touchpoints during the customer journey and also focusing more on experiential outcomes (e.g., Herhausen et al., 2015, 2019). Verhoef et al. (2015) defined *omnichannel 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” (p. 3). They extended multichannel retailing by focusing more on touchpoints, which may also include more one-way directed communication channels impacting the customer in multiple phases in the buying process. They also focused strongly on the customer experience, thereby emphasizing a more seamless experiences across channels and touchpoints in the customer journey (e.g., Baxendale et al., 2015; Homburg et al., 2015; Lemon & Verhoef, 2016). To achieve this, a more integrated way of managing channels is required. In multichannel retailing,

channels are frequently managed independently as single channels offered next to each other by a retailer. In contrast, omnichannel retailers manage them in an integrated way, thereby allowing consumers to use a combination of channels and/or a single channel to optimize their experience (Herhausen et al., 2019).

Approaching the customer journey from an omnichannel perspective has encouraged research into the role of specific digital technologies and mobile devices, such as artificial intelligence (AI), dynamic AI pricing tools, augmented and virtual reality (AR and VR), facial recognition tools, and mobile apps. Devices are thus different digital tools to connect with the firms during the buying process that vary on dimensions, such as portability, screen size, and risk. For example, de Haan et al. (2018) considered how moving from a mobile device to a more fixed device (i.e., personal computer) affects purchase behavior. Recently, researchers have also started to investigate how mobile apps affect purchase outcomes and firm value (e.g., Boyd et al., 2019; Gu & Kannan, 2019; van Heerde et al., 2019).

A CONSUMER-FOCUSED OMNICHANNEL ORIENTATION

We adopt a consumer perspective on omnichannel retailing. This implies that we focus on consumer choices and resulting behavior of consumers in their customer journey. Building on the process model of multichannel retailing, Neslin et al. (2006) and Lemon and Verhoef (2016) discussed a customer-experience model in which the customer journey starts with search and ends with after-purchase experiences, consumption, and disposal. The shift to the consumer-oriented omnichannel orientation focuses on ways consumers are affected by brand-owned, partner-owned, customer-owned, and social/external touchpoints.

Contrary to existing multichannel models, which adopt a rather classic and sequential model of consumer behavior, the proposed consumer-focused omnichannel orientation allows consumers to move through different stages in the journey but also to skip phases, such as search, or to move between

phases. Moreover, current models tend to ignore the role of touchpoints to stir up the purchase process by triggering consumer demand and uncovering consumer needs. Second, they ignore that within channels and touchpoints, consumers also have a kind of shopper journey (e.g., Lee et al., 2018). Third, these models ignore the role of technologies and mobile devices. Mobile devices, for example, have become extremely important in the customer journey, and consumers can switch between devices in their journey (e.g., de Haan et al., 2018). Moreover, mobile devices can be used within specifically offline channels to digitally search for alternatives, as well as for shopping support and promotion tools (e.g., Fong et al., 2015; Gensler et al., 2017; Rapp et al., 2015).

We present our consumer-focused omnichannel model in Figure 29.1. In our model, we posit that consumers move through multiple phases from need recognition to after-sales. As noted, prior models tend to emphasize the role of channels less in the need recognition phase and immediately start with the search phase (e.g., Lemon & Verhoef, 2016; Neslin et al., 2006). Further, we explicitly acknowledge that marketing activities through these touchpoints may alter consumer behavior. The first aspect we consider is triggering the recognition of unmet needs. Social media channels may be considered relevant in this regard. Firms can inform existing customers about offerings, trigger unmet needs with the promise of immediate social approval, and stimulate potential customers to move to the purchase phase, often skipping the search and shopping phases.

Next, consumers move to a search phase to resolve the need. In this search phase, most consumers can use digital, offline (i.e., store), and social touchpoints. Notably, consumers can switch between these touchpoints in their search behavior and/or use them simultaneously. A simultaneous use would be that within a store, consumers search for information and at the same time use their mobile device to find more information and compare offers (e.g., Rapp et al., 2015).

Importantly, we add an intervening phase where we focus on the shopping (or browsing) behavior within a touchpoint. Within touchpoints,

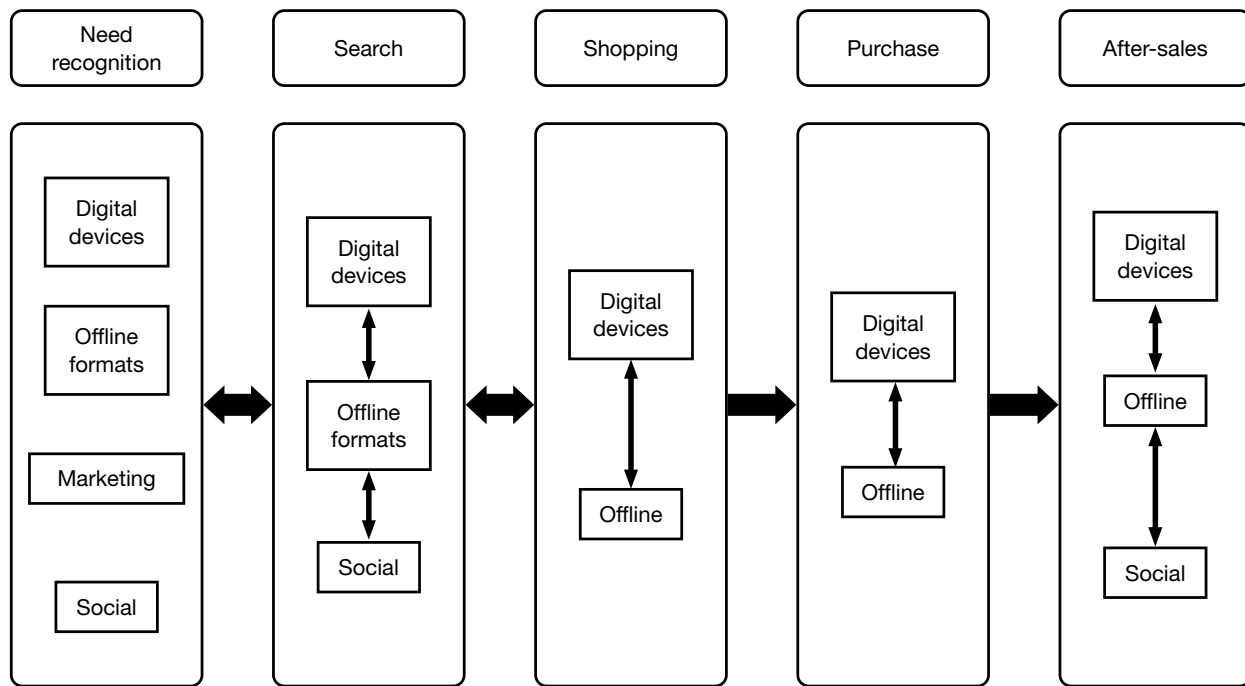


FIGURE 29.1. Consumer-focused omnichannel journey.

consumers also have their journey. One could argue whether this is indeed a next phase or a kind of in-depth treatment of the search phase. In this model, we consider it as a next phase, as consumers enter a specific channel and then start their shopping within a store either online or offline. The shopping phase distinguishes itself from the search and purchase phase in that the prepurchase search for product information has ended and consumers have narrowed their consideration set to a number of alternatives in the channel and move toward the actual purchase. Further, after entering the channel and before actually purchasing a product, the consumer may browse some more, look for promotional opportunities, receive reinforcement from reviews, watch an instruction video, and do some final price, service, shipping, and delivery-condition comparisons across multiple channels and stores, both online and offline, bringing the consumer back into the search phase. A special case in point is in both online and offline grocery shopping, where most of the channel experience depends on the shopping phase. The relevance of the shopping phase is corroborated by the growing literature on the role of digital shopping devices (i.e., mobile devices, smart shopping carts, shop bots) that guide

and inform consumers during the shopping phase within a channel and sometimes offer concrete advice or recommendations (e.g., van Ittersum et al., 2013).

Next, consumers move to the purchase phase where they use one or more channels for their transactions. Many early researchers assumed that consumers can use only one channel for purchase (Verhoef et al., 2007). However, nowadays consumers can, for example, buy online and pay and pick up in the store in so-called Click & Collect formats (Gielens & Gijsbrechts, 2018). Also, within a store one can use digital tools to make a purchase.

Finally, the journey concludes with the after-sales phase, where service is provided to consumers if required when consumers are using the product and face problems with using the product. Multiple touchpoints can be used for this stage, and we observe an increasing use of digital tools, such as chatting and automated response forms, as well as social media. AI technology is becoming important here to determine support needs of individual customers. Note that traditional information on packages but also websites can be used in the after-sales phase. Furthermore, customers may be enticed to share their experiences in relevant social media

channels (and receive a discount from the firm or the approval of their peers), which in turn may trigger the recognition of unmet needs among potential customers. In all the considered phases, marketing plays a role, which we ignore in this process model, as it focuses on the shopping process and not how it is influenced.

OMNICHANNEL CONSUMER DECISIONS

During the customer journey, as depicted in Figure 29.1, consumers constantly choose which (combination of) channels to use. There has been ample attention in extant research on drivers of channel choices and specifically on the decision to use the online channel. Recently, we see an increasing attention on acceptance and usage of new digital technologies and mobile devices. Moreover, researchers have studied the use of channels and touchpoints across the distinct phases in the omnichannel journey. Therein, the focus has been mainly on the identification of specific consumer groups or segments, as well as understanding specific so-called research-shopping patterns (e.g., Gensler et al., 2017; Verhoef et al., 2007).

Channel Decisions

Based on prior research, we distinguish six factors that can be considered as determinants of channel choices: (a) channel attributes, (b) marketing efforts, (c) social influences, (d) contextual factors, (e) consumer characteristics, and (f) channel experiences.¹

Studies of online channel choice have addressed the effects of general channel attributes using theoretical models, such as the technology acceptance model and the theory of reasoned action. These studies focus on ease of use, usefulness, enjoyment, risk, and trust as drivers of consumers' channel adoption (e.g., Verhoef & Langerak, 2001; Vijayasathy, 2004). More recent studies have extended these factors and considered capabilities and functions of (online) channels, including security and privacy (e.g., Ha & Stoel, 2009), service quality (e.g., Kollmann et al., 2012), information

quality (e.g., Noble et al., 2005), the speed of purchase and response time (e.g., Verhoef et al., 2007), convenience (e.g., Kollmann et al., 2012), system accessibility (e.g., Lin & Lu, 2000), website design (e.g., Montoya-Weiss et al., 2003), and price (e.g., Teerling & Huizingh, 2005).

Marketing efforts may drive consumers to specific channels (Dholakia et al., 2005; Montaguti et al., 2016). Marketing efforts indeed have an effect on channel choices in such a way that digital efforts induce consumers to move to a digital channel, whereas standard offline methods tend to steer customers to offline channels. For example, Ansari et al. (2008) showed that marketing communication through email accelerates customer migration to online channels, while marketing communication through catalogs promotes customers' use of catalogs. There is also some evidence for what we call cross-channel effects. This implies that digital marketing efforts (i.e., banner ads) may drive customers to the store (e.g., Lobschat et al., 2017), while offline efforts may also have effects on online purchase behavior (e.g., Lesscher et al., 2020).

Customers' channel choices are also affected by their interaction with their social networks (Choi et al., 2010). Bilgicer et al. (2015) showed that a customer's network influences the adoption of a new online channel. This occurs because these customers live in a consumer's proximity, and consumers may imitate their behavior. Social media nowadays may also induce more social-influence effects. Research also suggests that social-influence effects on channel adoption decrease over time (Choi et al., 2010), which is also observed for other adoption decisions (Risselada et al., 2014).

Situational factors cover environmental conditions and temporal issues. Environmental conditions influencing channel choice refer to the environment in which consumers access a specific channel, "together with any complicating factors arising from the intervening technologies" (Nicholson et al., 2002, p. 134). They include weather, mobility, distance, crowdedness, and visible configurations of channels. For example, customers with limited time are more likely to purchase online

¹This section is partially based on an earlier overview written by one of the authors of this chapter: Liu et al. (2018, pp. 16–21).

(Konus et al., 2008; Melis et al., 2016). Studies also suggest that holidays and event proximity, such as date relative to payday, can affect customers' channel choices (e.g., Nicholson et al., 2002; van Nierop et al., 2011; R. J. H. Wang et al., 2015).

It is important to note that cross-cultural factors that affect both social networks and situational factors can have a significant impact on customers' omnichannel behavior. Nam and Kannan (2020) argued that the perceived switching costs are higher in high-uncertainty-avoidance cultures such as Japan, Western Europe, and Latin American countries and, therefore, customers in such cultures are less likely to switch to different channels (Pick & Eisend, 2016). Focusing on online channels, this reluctance implies that despite the lack of channel lock-in costs for online retailers as compared with offline retailers, the lock-in costs in high-uncertainty-avoidance cultures are higher than in low-uncertainty-avoidance cultures. Additionally, individualist and collectivist cultures influence multichannel shopping behaviors. Customers in collectivist cultures focus more on relationship building, interpersonal communication, and social exchanges, and thus social networks can play a more important role in influencing channel decisions than in individualist cultures. Similarly, in individualist cultures, customers start a relationship when a retailer provides a convenient service but are ready to leave the retailer's channel if it becomes less convenient. In collectivist cultures, however, depth of the social relationship with a retailer enhances word of mouth and customer loyalty (Pick & Eisend, 2016). Consequently, in collectivist cultures, customers are less likely to switch channels during the journey (Nam & Kannan, 2020).

Several psychographic characteristics are very relevant as antecedents of channel choices. Generally innovative consumers tend to explore and use new products and thus also new channels (e.g., Arts et al., 2015). Online self-efficacy, defined as "a consumer's self-assessment of his/her capabilities to shop online" (Vijayasarathy, 2004, p. 751), can improve consumers' preference for online shopping (O'Cass & Fenech, 2003). Bruner and Kumar (2005) showed that consumers who are more predisposed toward a visual model have a higher

tendency to adopt online channels, as they tend to process information by mental imagery and are more attracted by visual cues. Price sensitivity is a relevant psychographic variable. Price-sensitive consumers tend to choose online channels more often (Degeratu et al., 2000; Lynch & Ariely, 2000). Goal-oriented consumers are also more likely to use online channels, while experiential-oriented consumers are more likely to use physical stores (Pauwels & Neslin, 2015). Next to psychographics, there is ample evidence that sociodemographics are correlated with online channel use. Generally, there is a negative relationship between age and online channel choice (e.g., De Keyser et al., 2015; Narang & Shankar, 2019; van Nierop et al., 2011; Xue et al., 2011). Some studies report that male customers are more inclined to use new channels than female customers (Li et al., 2016; Narang & Shankar, 2019; Venkatesan et al., 2007). Education and income are also positively related to online channel use (e.g., Kumar & Venkatesan, 2005; van Nierop et al., 2011). Larger families tend to prefer online shopping (Ansari et al., 2008; Kushwaha & Shankar, 2013). Finally, store distance matters. Customers who live far away from the closest physical store are more likely to purchase through digital channels (Melis et al., 2016; Venkatesan et al., 2007; K. Wang & Goldfarb, 2017).

The final factor influencing channel decisions is channel experience. There is ample evidence that consumers tend to use the same channel over time (e.g., Gensler et al., 2012). This is also referred to as state-dependence, and from a psychological perspective this can also be viewed as behavior based on habits (Verplanken & Aarts, 1999), which Cambro-Fierro et al. (2020) referred to as channel habits. A consumer accustomed to a physical supermarket is more likely to continue to shop there if nothing dramatically changes. Interestingly, store closures due to the COVID-19 crisis are forcing consumers to move massively toward shopping online. Whether and which consumers revert back to their pre-COVID-19 shopping patterns are intriguing research questions. We finally acknowledge that the effect and relevance of each of the first five factors will in part be determined by the channel knowledge and experience the customer

has. Finally, it is worth noting that channel knowledge and experience are dynamic and evolve over the journey and over time.

Multi- and Omnichannel Segments

Within marketing segmentation, it is of crucial importance to understand markets and to classify consumers in groups that can be targeted differently.² In the multichannel literature there has been ample attention to segmentation, based on the multichannel behavior of customers. Konoş et al. (2008) suggested the existence of multiple multichannel segments, where there are two multichannel-oriented segments and a store segment focusing on a single channel. One of these multichannel segments can be considered as a true multichannel segment, preferring multiple channels for search and purchase of products. The other segment has a multichannel orientation but in general does not have a strong preference for multiple channels.

De Keyser et al. (2015) replicated the study of Konoş et al. (2008) and extended it by also including the phone channel and adding the after-sales phase. They identified two multichannel segments that encompass 45% of a firm's customers and three single-channel focused segments (web, store, and phone). These segments mainly vary on loyalty and revenue. The call-center and the store-focus segment are the most loyal, while the multichannel segments have the highest revenue. In a recent study, Herhausen et al. (2019) segmented customers based on the customer journey, thereby including a wide range of touchpoints and also including mobile devices. They identified five distinct segments, analyzing data collected in 2013 and 2016 that strongly differ in the use of the number and type of touchpoints. The first segment consists of heavy-touchpoint users who use, on average, seven touchpoints. Replicating the findings of Konoş et al. (2008) and Montaguti et al. (2020), the second segment consists of consumers who largely eschew online purchasing and prefer to use the store as their major touchpoint or channel. In contrast, a third segment is strongly web focused, searching and purchasing on the web only. Herhausen

et al. identified a fourth segment of consumers with lengthy journeys who shop around online and also buy online. Finally, they found a fifth segment of web-rooming consumers who search online and buy offline. Interestingly, Herhausen et al. analyzed data at two points in time, before and after mobile device usage became prevalent. Their findings showed that mobile devices are mainly added to the journey in specific segments (i.e., the heavy-touchpoint user segment).

Research Shopping

Verhoef et al. (2007) were one of the first to discuss research shopping. In their study, research shopping implied that a consumer uses one channel for searching and the other channel for purchase. By defining research shopping this way, they clearly separate the information-gathering phase from the purchase phase. Information gathering is done in a separate channel than where the purchase occurs. The main form of research shopping they identified was from online search to offline purchase. Recently, retail practice distinguishes two forms of research shopping behavior: showrooming and web-rooming. *Showrooming* implies that a consumer searches in-store and purchases online (e.g., Gensler et al., 2017; Rapp et al., 2015). *Web-rooming* implies that a consumer does the opposite, searching online and purchasing offline. Verhoef et al. identified attribute differences, channel lock-in, and cross-channel synergies as three mechanisms that explain research shopping behavior. Some channels, such as the internet, may have an attribute advantage in terms of search (i.e., easy to search) but a disadvantage in terms of purchase (i.e., higher risk), thus leading to internet search and in-store purchase. The lack of lock-in implies that a channel does not have the stickiness to keep customers within the customer journey through both search and purchase. Rapp et al. (2015) and Fassnacht et al. (2019) showed that salespersons within a store are important to create such stickiness within the store channel.

The cross-channel synergy mechanism implies that consumers experience a synergy for using a

²This part is to some extent based on a recent overview on customer experience by one of the coauthors: Verhoef (2020).

different channel search and purchase because using different channels for search and purchase allows them to get more value. These synergies go beyond attribute differences, as the attribute differences focus on the fact that one channel is better for search (i.e., more convenience), while the other channel is better for purchase (i.e., lower risk). By using two channels for search and purchase, synergies are achieved above these differences by achieving more value through actively benefiting from these differences. For example, consumers are able to negotiate better prices in the store if they search online, or from a psychological point of view they might experience smart-shopper feelings (Schindler, 1998). Moreover, customers might also enjoy shopping across channels during the buying process. Konus et al. (2008) showed that consumers in the enthusiastic multichannel segment indeed have a higher shopping enjoyment. Flavián et al. (2019) showed that web-rooming consumers experience stronger smart-shopper feelings than showrooming consumers and thus also achieve stronger purchase satisfaction. In a related study, Flavián et al. (2020) showed that web-roomers additionally have greater perceptions of time/effort savings and of making the right purchase. Furthermore, web-rooming leads to higher personal attribution than showrooming, meaning that consumers feel responsible and in control of their purchase outcomes.

Showrooming has also gained strong attention in the recent omnichannel literature. Gensler et al. (2017) studied determinants of showrooming behavior. Not surprisingly, showrooming is more likely when there is a substantially lower price online than offline or if consumers expect higher price dispersion online than offline, which implies more opportunities to find lower prices. Furthermore, expected positive quality gains of buying online also lead to more showrooming. However, the authors also showed that in-store service factors are important. A long waiting time within the store drives consumers to shop online. Gensler et al. found limited evidence for the importance of specific psychographic characteristics, such as shopping mavenism. Interestingly, Schneider and Zielke (2020) recently identified four showrooming segments that differ in retailer loyalty, usage of

in-store information, devices used, and place and time of the online purchase. They further showed that loyal versus competitive showroomers differ in psychographic variables, such as price consciousness, desire for social contact, and guilt during showrooming.

One important issue is how retailers can cope with the often-considered destructive behavior of showrooming (Daunt & Harris, 2017). Rapp et al. (2015) and Fassnacht et al. (2019) studied how store sales employees should psychologically deal with this type of behavior, as customers purchasing elsewhere can be seen as a rejection of their service. Mehra et al. (2018) argued that stores can limit showrooming using price matching guarantees or by having an exclusive brands or offerings that are not sold at competing stores. Given the presumed negative consequences for retailer profits of both showrooming and web-rooming, we expect that more studies will focus on how to circumvent these types of behavior.

It would be interesting to observe and investigate whether web-rooming will remain prevalent in the coming years or whether it will vanish as, for example, online retail becomes more dominant and many aspects of offline stores can be found online as well.

Consequences of Multichannel Shopping

Many researchers have found that consumers are shifting from single- to multichannel retailers (e.g., Kumar & Venkatesan, 2005). This is of extreme importance for single-channel firms, especially online-only firms, and explains why so many of them are also establishing an offline presence. Amazon and Whole Foods are major examples, as well as Apple, Google, and Microsoft, with their offline stores. Understanding what multichannel consumers want is of course also critical for retailers who already offer both an online and offline channel. Customers may switch buying behavior across these channels, and firms may also create cross-channels synergies across these channels (e.g., Emrich et al., 2015). In a cross-sectional analysis, Kumar and Venkatesan (2005) reported that multichannel customers are more profitable.

The question is why this occurs. There could be self-selection; multichannel customers are already more loyal, and therefore they express multichannel behavior, as they like shopping using the retailers' multiple offered channels. Marketing could also play a role, as marketing instruments might drive customers to become multichannel and more loyal (Valentini et al., 2011). However, the use of multiple channels could also induce more loyalty and spending because consumers enjoy more convenience and experience greater service levels and the channels serve their specific needs better over time. If the latter occurs, there is a true multichannel effect. Kumar et al. (2019) summarized the available studies on this topic. In their own empirical study, accounting for self-selection effects, they showed that multichannel customers purchase more frequently, have higher spending levels, and also are profitable, though the study used relatively old data from when digital competition was not yet so severe.

A key question, therefore, is whether the relationship is causal—does multichannel behavior increase customer revenues and profits? Valentini et al. (2011) found that marketing can induce multichannel behavior, but in their experimental study they also showed that, when accounting for self-selection, multichannel customers are indeed more profitable. Thus, they concluded that driving consumers to become multichannel can be profitable for retailers offering multiple channels. The consistent conclusion from prior research is that multichannel customers tend to be more profitable. An important question that remains is whether multichannel behavior also leads to more consumer well-being.

UNDERSTANDING CONSUMERS' PATH TO PURCHASE

Understanding how customers respond to marketing stimuli in the different channels they use and how these stimuli impact their use of multiple channels is key to developing effective and efficient marketing investments across channels. We first focus on cross-channel effects and then discuss the important role of attribution.

Understanding Cross-Channel Effects

Cross-channel effects occur when consumers in their path to purchase are influenced by multiple touchpoints affecting their behavior in other channels or touchpoints. Hence, it is important to distinguish between firm-initiated touchpoints and customer-initiated touchpoints (e.g., de Haan et al., 2018). Customers exhibit significant heterogeneity in their behaviors with regard to how they are impacted by various stimuli they encounter on their customer journey, and at the aggregate level these effects determine the carryover and spillover across channels and devices (de Haan et al., 2018; Li & Kannan, 2014). A carryover effect occurs within the same touchpoint when consumers visit the touchpoint or channel (i.e., website) multiple times and finally purchase through that channel. A spillover effect occurs when consumers start with using a channel and then move to other channels and finally make a purchase from the last used channel (e.g., start with search engine, next click on display ad leading to final purchase). Early work focusing on measuring synergies across media and channels has used aggregate data (e.g., Naik & Raman, 2003), while individual user-level and aggregate data have been used to determine cross-channel impacts and customers' channel migration (e.g., Ansari & Mela, 2003; Ansari et al., 2008), focusing on offline and online channels.

Some of the touchpoints in the customer journey are customer-initiated, where customers seek out information through search engines, review sites, or direct visits to websites, while others are firm-initiated, such as display ads and emails. The distribution of such touchpoints in the different stages of the customer stage can provide insights into the baseline propensities for purchase for each customer (Kannan et al., 2016). Of course, these baseline propensities are enhanced or attenuated depending on the types of marketing stimuli customers encounter. For example, Kireyev et al. (2016) showed that customers exposed to display advertisements online show positive spillover effects in the search channel, while Joo et al. (2016) established the positive spillover linkage between offline advertising and online search behavior. Various stimuli can have very different impacts across

different stages of the customer journey, thereby affecting the nature of carryover and spillover.

Colicev et al. (2019) showed that user-generated content has a greater impact on consumers at the awareness and postpurchase (satisfaction) stages, while firm-generated content is more effective at the consideration and purchase intent stage. Even within each type of content, their features could also have different impacts on consumers' search and purchase behaviors. This highlights the importance of incorporating the characteristics of the touchpoints in understanding cross-channel effects, including firm- versus customer-initiated touchpoints, duration of display ad exposure, duration of search session, the website where the display ad was shown, and the characteristics of the emails (see, e.g., Zantedeschi et al., 2016).

The Challenge of Assessing Touchpoint Contribution to Consumer Choices

An understanding of how customers react to and get impacted by the various features and stimuli at each touchpoint in the customer journey is necessary for understanding the different ways in which these touchpoints contribute to the outcomes desired by the marketer for each customer journey. For example, some touchpoints could be very effective in starting a fruitful customer journey and some very effective in ending the journey with a purchase event. The so-called attribution problem is to determine the roles and the specific contributions of each feature of each touchpoint (both firm- and customer-initiated; e.g., Li & Kannan, 2014) to the outcome of interest—that is, allocating the credit due to each of the touchpoints for outcome event—be it purchase, customer satisfaction, or customer retention. Such an attribution of credit could be useful to understand the real costs of obtaining the outcome and thereby allocate appropriate budget to each marketing touchpoint. Researchers (e.g., Abhishek et al., 2012; Li & Kannan, 2014; L. Xu et al., 2014) have used different methodologies to allocate credit, looking for associations between touchpoint usage and purchase. Recent research (Berman, 2018; Danaher & van Heerde, 2018) examined the more sophisticated issues in attribution such

as gaming behavior of players in the advertisement supply chain and budget allocation for marketing mix. We also observed the use of experiments in which touchpoints are manipulated to infer stronger causal effects (e.g., Lesscher et al., 2020). In comparison with more associational studies, the true effects of typically a limited number of touchpoints can be inferred. Studies building on existing data and the associations between touchpoints and purchase have to infer the effects from the data using sophisticated methodologies but can do so for a larger set of touchpoints.

Cultural and situational factors in omnichannel consumer behavior make this difficult problem of attribution even more difficult. Whereas extant research has viewed this mainly as a decompositional problem—splitting the credit for an outcome into many pieces across marketing devices—a newer approach further divides the outcome into many stages (e.g., creating awareness, increasing the probability of consideration, increasing purchase intent, increasing satisfaction) and tries to assign credit for instruments at each stage. This approach acknowledges that customers use both multichannels and multiple devices in their customer journey. Mapping each stage of the customer journey to a device and understanding the role of devices (e.g., de Haan et al., 2018; K. Xu et al., 2017) in the customer journey could lead to more useful insights for attribution.

Technological advancements continue to push the boundaries of the channels in such a way that they become increasingly seamless. For example, new retail store formats are emerging that allow the use of mobile apps within retail stores for searching for products, scanning products for prices, scanning for purchases, and self-checkouts with auto payments through the apps. Similarly, online and mobile environments are being melded together, for example, with event tickets (e.g., Basu et al., 2020). Newer technologies like VR and AR can complement a web-based interaction as well as mobile-app-based or wearable-device-based interactions. In such cases, omnichannel behavior will be more of a norm than an exception. This will necessitate examining the issues of spillovers and attribution in a new light. This will be a ripe area for future research.

However, despite all these technological changes, offline instruments may still affect both online and offline purchasing behavior. For example, Mark et al. (2019) found that catalogs still have an effect on purchase behavior for multichannel retailers, while Konuş et al. (2014) showed that the elimination of the catalog channel reduces sales but improves profitability. Still, more attention is required to the interplay between online and offline touchpoints on purchase behavior.

NEW DIGITAL TECHNOLOGIES AND CONSUMER OMNICHANNEL EXPERIENCE

The omnichannel approach is generally considered to focus on linking online and in-store shopping experiences. Moreover, there are growing technological opportunities to connect the online with the offline and to offer customers a unique experience. AI can automate and customize the retail experience and be used for market research. Beacons are small, wireless transmitters that use low-energy Bluetooth technology to send signals to other smart devices nearby. Beacons allow location- and time-sensitive in-store marketing activities and self-service checkout systems within a physical store to facilitate the speed and convenience of checking out (Argyros, 2017; Baird, 2017). AR and VR allow for virtually trying on products like clothes and makeup and immersing customers into the product usage experience (Holzwarth et al., 2006; Inman & Nikolova, 2017; van Ittersum et al., 2013). However, we argue that the development of new digital technologies, mobile devices, and apps on these devices allows for more than merely linking the online with the offline. It allows for a full integration and expansion of both channels. Based on a search in the popular media, we created Table 29.1, with the most prominent new digital technologies and mobile devices (without claiming to be exhaustive; see also Shankar et al., 2011). Next, we discuss some of these via a structured discussion of the five stages of the customer journey. We focus on how the technology and mobile devices influence the shopping experience, potential pitfalls, and directions for future research.

The following discussion describes the potential of these new technologies on consumer behavior. In many cases, whether this potential is realized will depend on consumer adoption of the technology. Inman and Nikolova (2017) introduced a framework describing the factors that drive the success of shopper-facing retail technology. They applied equity theory in arguing that consumers assess the value of the technology to them compared with what the retailer receives. In a study of six different retailing technologies, they found that retail technologies that provide value without (a) requiring a big investment in time or money by the shopper or (b) treading on their privacy were valued the most highly by consumers. In the next sections, we discuss how technology can help with the stages of the consumer purchase journey.

Need Recognition

New digital technological advances and devices enable marketers to approach customers with ideas and suggestions that increase the salience of specific unmet needs or wants consumers may have. For example, smart beacons allow retailers to identify when customers are in the neighborhood or, for example, where they are inside the store. Customers may not recognize they have a need to visit the store or move toward a specific part of the store. However, a message from the store may trigger an unmet need or want that next entices customers to follow through. For example, Hui et al. (2013) presented evidence that targeted mobile promotions aimed at increasing in-store path length can increase unplanned spending. They showed that a coupon requiring consumers to travel farther from their planned path through the store increases exposure to in-store cues (e.g., signs, physical displays), thereby increasing the likelihood of in-store need recognition compared with a coupon for a category near the planned path.

New digital technological advances also offer the ability to track the consumers and the environmental circumstances and identify whether a specific need is growing. An example is the ability to keep track of a consumers' stock of products in a refrigerator. With this knowledge, specific replacement orders can be made automatically. Or, building on a recent study

TABLE 29.1

New Technologies and Consumer Omnichannel Process

		Potential relevance of technology in different phases						
		Need recognition	Search	Shopping	Purchase	After- sales	Need for active customer	Privacy concerns
Technological developments								
Artificial intelligence (AI)	Automation and customizing/personalization of retail experience (automated stores)	√	√	√	√	√		√
Voice activation AI (Alexa, Siri)	Searching, ordering, service complaints, medical help, service chatbots	√	√	√	√	√	√	√
Augmented reality	Virtually trying clothes, makeup, or new furniture		√	√			√	
Virtual reality (VR)	In-store VR experience of a product (e.g., Audi)	√	√	√			√	
New devices								
Mobile devices	Mobile devices may carry apps that allow for mobile-armed sales staff, mobile-enhanced product reviews, mobile-responsive websites, discount on demand, and automated stores		√	√	√	√	√	√
Mobile wallets	Easy and quick payment				√			√
Smart beacons	Used near or inside store to interact with customers while shopping (e.g., personal discounts) and also great to test effectiveness		√	√				√
Facial recognition tools	Used to track where customers gravitate within a store and determine customer demographics			√	√			√
Cloud services	Used for inventory tracking, stock availability, shipping details, and orders, reducing costs and offering real-time information			√	√	√		√
QR codes	Used inside store to offer more product information to customers (e.g., harvest dates, sourcing information)	√	√	√	√	√	√	

		Potential relevance of technology in different phases						
		Need recognition	Search	Shopping	Purchase	After- sales	Need for active customer	Privacy concerns
New devices								
Robots	Used to support and service customers throughout the entire or parts of the shopping trip		√	√	√		√	√
Smart shopping carts	Shopping carts that offer real-time information on products customers consider to purchase (and on potential alternatives)			√	√		√	√
Autonomous shopping carts	Shopping carts that follow customers around the store (instead of having to be pushed), keeping the customers hands-free			√	√			
Imaging software	Produces 3D model of a customer's face, analyzes it, and selects glasses that best suit the person's face shape, gender, and age (reducing search process)		√	√			√	√
Digital pricing	Used for digital prices and nutritional information, reducing energy costs and allowing for dynamic pricing			√	√			√
Telemedicine	Health-related services and information via electronic information and communication technologies	√	√	√			√	√

by Sheehan and van Ittersum (2018) that demonstrated that the price sensitivity of shoppers varies depending on the total spending amount, retailers can offer price promotions depending on how much money a shopper already spent. The growing penetration of digital pricing tools (i.e., tools and tags that allow for presenting digital prices in the store), combined with AI technologies, allows for refined dynamic pricing schemes that benefit from identifying consumer needs as a function of shopping trip characteristics. Another example would be that when a retailer can track that consumers buy pancake mix or put it in their shopping basket, the retailer can then offer deals on syrup and lead them to attractive other deals.

While intriguing, these approaches may be subject to consumer backlash over privacy and implicit discrimination concerns. For example, Ali et al. (2019) found that Facebook ads for employment and housing were significantly skewed along gender and racial lines despite inclusive targeting parameters set by the advertisers. We discuss challenges associated with privacy in a separate section later on.

Search

New digital technological advances and devices increase accessibility to a vast amount of information during the customer journey. Multiple studies have considered the adoption of mobile devices

for shopping purposes. For example, Hubert et al. (2017) found that usefulness and ease of use mediate the effects of perceived risk and perceived benefits on mobile shopping intentions. Mobile devices have particular characteristics that differentiate them from fixed devices. These characteristics of mobile devices, including location specificity, portability, screen size, and wireless features, make them ideal for search purposes. Consumers, for example, use their mobile device to find online reviews and determine the lowest price offering in the market. Retailers may also provide in-store QR codes that consumers may scan to acquire additional product information, such where products are produced, from where the raw materials are sourced, and so forth. In many ways, the marketplace has become more transparent. One could argue that this may result in information overload. However, new technologies such as AI enable firms to customize the information in real time and offer complex information in a more accessible and understandable manner.

One can, for instance, think of advanced visualization tools that may offer customized visualizations of complex information that would otherwise be ignored by consumers. For example, it could be interesting to study whether and how the offering of customized visualizations of nutrition information (kcal, protein, fat, saturated fat, carbohydrate, sugar, and sodium [a component of salt] in the food) simplifies the search process for consumers interested in purchasing healthier groceries. Research suggests that front-of-package labels—which provide a simplified visualization of nutrition information—may contribute to healthier shopping baskets. Similarly, Nikolova and Inman (2015) showed that the introduction of simplified nutritional information by a retailer leads to healthier choices. Smart shopping carts mounted with a scanner and a digital screen can offer real-time information on products consumers consider purchasing. The visualization may be customized and presented in real time while shopping. Consumers showing an interest in buying a less salty product can be informed by the amount of salt in the product that they intend to purchase and about other less salty products available in the store. This information can potentially be more

easily provided when consumers are shopping for food products online, but this rarely happens.

Interestingly, our understanding of the acceptance and effects of real-time feedback on the shopping experience, purchase behavior, and consumer knowledge levels remains limited. Moreover, one could argue that with the growing availability of these kinds of technologies and devices, the autonomous search for information before or during shopping trips becomes obsolete and this search of information is integrated in the purchase phase. Consumer dependence on the provider of the information increases, which may influence the acceptance of the information. Consumers may also resist the threat to their autonomy in the purchase process; they may exhibit reactance. In psychology *reactance* is generally considered as a kind of unpleasant motivational arousal that emerges when people experience a threat to or loss of their free behaviors (Brehm & Brehm, 1981). Research does suggest that certain consumers exhibit reactance, for example toward marketing loyalty programs (Wendlandt & Schrader, 2007). More research on consumer reactance in the context of omnichannels is called for. Also, how does the provision of product information by retailers affect the general knowledge level of consumers? It would be interesting to research whether and how knowledge level develops among shoppers who receive this kind of real-time feedback on a regular basis versus consumers who more autonomously have to search for information on the products they prefer to purchase.

Shopping

As noted in our section on the process model, we distinguish between the search and shopping phase. We also note that the distinction between search and shopping is not always clear, and consumers may move in a kind of fluent way from searching to shopping. The distinction in a shopping phase is especially relevant as new digital technological advances and devices may offer opportunities to guide the shopping process in real time. Consumer surveys indicate that 72% of shoppers would welcome radio-frequency identification tags on products to help them better track their in-store spending (<https://www.infosys.com>).

com), and 85% of leading retailers rate self-service customer-facing technologies, such as smart shopping carts, as one of the three top opportunities for increasing consumer satisfaction and revenue (Rosenblum, 2007). In addition to enabling shoppers to track their in-store spending (Nelson, 2008), smart shopping carts may help improve customer satisfaction by offering customized and timely promotions, recommending complementary products, sharing nutritional information and recipes, and even allowing customers to skip the checkout lane (e.g., Hui et al., 2013; Osborne, 2012; Quaid, 2005).

Retailers can use mobile devices and apps to inform shoppers about desirable deals and engage shoppers at any point in their shopping trip depending on, for example, their in-store location or the contents of their shopping baskets (Clifford & Hardy, 2013; Hui et al., 2013). More specifically, retailers can use such technologies to offer shoppers promotions at any moment before they reach the actual point of purchase, where promotional material has been traditionally displayed. This raises new questions, such as whether separating the moment shoppers encounter a promotion from when they encounter the promoted product on the shelf influences a consumer's response to promotions. For instance, consider a grocery shopper who is going to purchase frozen pizza. Would encountering a price promotion for a specific premium brand of frozen pizza before arriving to the product on the shelf (i.e., separate promotion) produce a different response than encountering that same promotion with the product on the shelf (i.e., joint promotion)? Sheehan and van Ittersum (2021) demonstrated in three studies that isolated promotions—promotions shoppers encounter while shopping independently from the point-of-purchase for the promoted product—for premium brands are more effective than traditional shelf promotions in persuading consumers to purchase the promoted brand, as these promotions alter how consumers evaluate and justify purchasing the promoted brands. Specifically, isolated promotions lead consumers to focus relatively less on the price of the promoted brand compared with its quality. This reduced focus on price assuages the negative effect

of guilt associated with purchasing a more expensive, premium brand.

Building on the examples from the previous sections, next to offering information about the products consumers intend to purchase, a smart shopping cart may offer customized alternatives based on the product that a consumer intends to purchase and show their location in the store. If a consumer wants healthier choices, a smart cart may offer one or more healthier alternatives. Similarly, the retailer can draw from the consumer's past purchase history and use predictive AI tools to generate suggested purchases based on projected household inventory levels. Little is known about whether this kind of real-time feedback and recommendation is effective in the short or in the long term. Furthermore, the acceptance of these kinds of recommendations may also vary among consumers. More generally, the acceptance of algorithms that offer guidance and recommendations deserves scientific attention. Besides concerns about their privacy, consumers may feel a sense of loss of autonomy.

Purchase

New digital technological advances and devices may offer opportunities to impact the purchase process. However, that impact can also be negative if, as discussed earlier, the additional use of a mobile device might increase the risk and effort associated with the purchase (de Haan et al., 2018; Fritz et al., 2017). Similar to K. Xu et al. (2017), de Haan et al. (2018) and Fritz et al. (2017) showed that consumers are more likely to purchase on desktop computers when they first searched on a mobile device where they could also see the product. The likelihood of purchasing on desktop computers increases with the risk associated with the purchase (i.e., higher priced products, less experience). Thus, we believe that the risk of buying on a mobile device induces consumers to mainly use a mobile device for searching information and less for purchasing.

Retailers and other service providers aim to overcome this risk issue with the use of mobile store apps next to the use of mobile websites. Mobile store apps create a more secure environment, and consumers may consider it as less risky. Moreover, mobile apps create a more personalized

environment and can create a stronger lock-in. Indeed, Liu et al. (2018) supported the notion that apps are less risky than mobile websites. They showed that when consumers move from a mobile website to an app, their purchase frequency increases and that this specifically occurs in riskier purchase situations (i.e., for higher priced products). Multiple studies have also looked at the impact of app adoption on purchase frequency and loyalty. The main conclusion was that app adopters indeed tend to buy more frequently and buy more (e.g., van Heerde et al., 2019; R. J. H. Wang et al., 2015, 2018). However, these effects might differ between consumers. For example, van Heerde et al. (2019) found that apps generate more incremental sales among distant customers compared with near customers and more incremental sales among offline-only customers compared with online customers. Gu and Kannan (2019) showed that not all firms reap the benefits of the app.

New technologies and devices can improve the purchase process, specifically the payment and pickup process. Smart shopping carts, mobile wallets, and automated stores minimize or even eliminate the payment process. While these technologies and devices may improve the shopping experience, for example by reducing the pain of paying experienced, they may also increase the risk of running up debts among low-income consumers. Research has demonstrated that shoppers spend up to 100% more when using their credit card to pay instead of cash (Prelec & Simester, 2001), due to a reduction in the experience of pain of paying. That is, by using seamless payment system, a decoupling of the product acquired or the consumption experience associated with the product and the payment for that product occurs (Prelec & Loewenstein, 1998). Seamless payment systems and devices are prone to similar effects, putting low-income households at a potential risk.

While we argued that new digital technological advances and devices allow for an integration of the off- and online world, there may also be a growing decoupling of specific phases and experiences in the customer journey. For example, by decoupling the purchase and payment process from the actual acquisition of the purchased goods and service,

a temporal distance arises that may influence the outcomes of the purchase and payment process. For example, Milkman et al. (2010) studied whether decisions made for tomorrow or 2 days in the future differ from decisions made for several days in the future. They report that as the delay between order completion and delivery increases, grocery customers spend less, order a higher percentage of “should” items (e.g., vegetables), and order a lower percentage of “want” items (e.g., ice cream), controlling for customer fixed effects. Thus, while sales in stores may increase such impulse purchases, a move to more than 2-day delivery to homes may result in fewer impulse purchases.

After-Sales

Research on the path to purchase mainly focuses on the single outcome of the path to purchase: transaction or purchase (e.g., Kannan et al., 2016). McKinsey consultants suggested the existence of a loyalty loop, where the purchase journey should result in repeat purchases (Edelman & Singer, 2015). For example, van Ittersum et al. (2013) demonstrated how real-time spending feedback while shopping for groceries using smart shopping carts reduces the spending uncertainty of budget shoppers, improves their shopping experience, and increases their repatronage intentions. This meshes well with the interest on long-term purchase outcomes and metrics (i.e., customer lifetime value), which has been advocated in the customer relationship management literature (Kumar & Reinartz, 2016). Within multichannel research, there has been attention for these loyalty effects as discussed earlier in the section of consequences of multichannel behavior. However, studies on customer journey and the path to purchase mainly focus on how touchpoints affect the purchase. Herhausen et al. (2019) is one of the few studies considering loyalty as an outcome variable. They studied the impact of product satisfaction, journey satisfaction, and customer inspiration on customer loyalty for their identified customer segments and identified differences between customers segments. For example, for the segment exposed to many touchpoints, both customer journey satisfaction and customer inspiration are related to customer loyalty, while

product satisfaction is not related. However, for two online-oriented segments, product satisfaction is most strongly related to customer loyalty. Beyond that, studies on app adoption have considered purchase frequency as an outcome variable. However, there is still a lack of studies considering the long-term consequences of touchpoints and other marketing instruments. Firms like Amazon are using new marketing tactics, such as their loyalty program Prime and AI with their use of Alexa, to create more loyalty (Verhoef, 2020).

As mentioned earlier, it would also be valuable to understand the impact of customers who share their experiences with other potential customers using social media channels. First, it may be an effective way to trigger the relevant unmet need among potential customers. Second, potential customers may be more open to experienced input from actual customers than receiving the same information from the firm. The so-called message source effect on the persuasion of potential customers is an important topic that has received considerable attention in consumer behavior and related fields such as marketing communications (Wilson & Sherrell, 1993). Finally, the firm may benefit from social influences, whereby the mere fact that a peer of the potential customers posts their experience may be sufficient for the potential customer to respond (Dahl, 2013).

Privacy Considerations

The use of many specifically data-driven technologies raises issues surrounding consumer privacy and data security. There is some evidence that consumers make a cost-benefit trade-off when deciding on whether to share data with firms. However, one should be aware that many of these decisions are executed unconsciously and that there is a so-called privacy paradox (Beke et al., 2018). Consumers are aware of privacy issues, but they still decide to share data and adopt data-based services. From a consumer psychology perspective, regulatory focus theory can potentially be used to explain why consumers may want to share data (Higgins, 1997). Prevention-focused consumers are potentially less

likely to share data, while promotion-focused consumers tend to focus on the immediate benefits of data sharing. In an international study, Schumacher et al. (2020) linked regular focus theory to national culture variables and showed that data sharing is less present in cultures with a higher long-term orientation, as they might have a stronger prevention focus. Omnichannel retailers also should be aware that using personal data during the customer journey has adverse effects, as it may create customer reactance and disloyalty (van Doorn & Hoekstra, 2013). Much more can be discussed about privacy, but given the focus of this chapter on multi- and omnichannel retail, we refer the interested reader to overview studies (e.g., Beke et al., 2018).

CONCLUSION AND RESEARCH GAPS

We have reviewed the growing research on omnichannel retailing with a focus on the consumer perspective. In this final section, we outline several important gaps in the literature in the hope that researchers will endeavor to fill these gaps. We frame them as research questions and briefly sketch out the domain and context for each one.

Consumer Acceptance of AI and Bots

What role will AI play in helping consumers make better decisions and take on the burden of day-to-day repurchase decisions? Current research suggests that today's consumers are somewhat leery of AI technology (e.g., Longoni et al., 2020), but just as Gen Z consumers are digitally native, so may the next generation be "AI native." Research is needed on consumers' specific concerns and how to address them. Moreover, does the attractiveness of AI differ within customers over time, that is, when Gen Z grows up, will they be less receptive to AI? Or will they be permanently attracted to AI?³

Consumer Adoption of Retail Technology

Similar to the aforementioned, how can retailers overcome consumer objections to some of the new retail technologies? Are some technologies, such as

³We thank Scott Neslin for this suggestion.

proximity marketing, inherently doomed to fail due to privacy concerns and the creepiness factor (e.g., Beke et al., 2018; Inman & Nikolova, 2017)?

Showrooming and Web-Rooming

Are showrooming and web-rooming always a bad thing for customer satisfaction and retailer profitability? Perhaps not. This may be the greatest benefit of omnichannel retailing. We posit that the easier retailers make it to switch seamlessly between in-store and online, the more likely the shopper may be to purchase from the retailer's site. Additional research is needed for testing these kind of assumptions and in general on this important and growing phenomenon.

Unplanned Purchase Behavior

What are the consequences of online shopping for consumers' unplanned purchase behavior? Such purchases are less likely online since consumers are not incidentally exposed to as many product categories compared with a physical store (Inman et al., 2009). If consumers then have to place multiple online orders due to less efficient trips, the added shipping incurred will either decrease firm surplus or consumer surplus, depending upon who bears this cost.

Omnichannel Versus Multichannel

Is omnichannel more effective than multichannel? In this chapter, we have highlighted many of the benefits of omnichannel retailing. However, making the consumer experience seamless across online and offline channels with multiple touchpoints in an integrated way comes at a cost. Is it worth the investment, or is a multichannel approach sufficient? A sufficient number of retailers have transitioned from multichannel to omnichannel to conduct an empirical investigation into the net effect and address this critical question.

Loyalty Loop

How does omnichannel affect consumers who are in the loyalty loop? Many of the steps discussed in this chapter are bypassed once the consumer has identified a satisfactory product and has begun to

engage in routinized decision making (e.g., Howard & Sheth, 1969). It is unclear if or how omnichannel influences such consumers. If omnichannel is only effective for big ticket product categories such as durables and on consumers who engage in active search, its value may be mitigated.

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