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Marketing in a Digital World

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Abstract

Over the course of digitization, many innovative marketing technologies have emerged that – theoretically speaking – promise firms gains in efficiency and/or effectiveness. However, a central task for marketing is not to allow the use of these technologies to become an end in itself, but to preserve the guiding principle of marketing, namely customer orientation. This means that the new technologies only offer added value for firms if they also offer (perceived) added value for consumers. Using three specific application areas as examples (chatbots, voice assistants and data privacy management), we show how firms can combine innovative marketing technologies and consumer interests in a purposeful manner.

2.1 Introduction

Marketing is not a static concept. Rather, the basic idea of marketing is based on the assumption that a firm's environment is constantly changing and that marketing must adapt to environmental changes in its strategic and operational design elements (Eisenbeiss, 2020). For more than two decades now, it is the technological environment that has been changing – and not slowly and moderately, but quickly and radically, with ongoing digitization regularly delivering innovative technology-based solutions that firms can then use to interact with consumers. According to an annual market study by Chiefmartec, the global count of marketing technologies has increased from about 150 solutions in 2011 to about 8,000 solutions in 2020, corresponding to a growth of 5,200 percent in under ten years (Chiefmartec, 2020). The solutions offered cover a wide range of marketing application areas, such as advertising and promotion, sales management, customer relationship management, social media management, content design and data intelligence.

Technology providers and agencies promise that consumers can be addressed much more efficiently and effectively using these new marketing tools. This perspective, however, only attends to the technology side, which is all too frequently overemphasized. Marketing though is primarily about creating value for consumers. Thus, it is consumers rather than the technology itself that should be at the center of all corporate marketing decisions. Research has shown in many application areas that a technology, no matter how promising, often fails to achieve its goal as long as it is not aligned with the interests and needs of consumers (Malter & Rindfleisch, 2019). For example, in the context of retargeting, Bleier and Eisenbeiss (2015) illustrate that personalized online banners (which in theory should help consumers make purchasing decisions more easily) often elicit more negative than positive consumer responses. One of the reasons for this finding is the privacy concerns that consumers develop when they realize that their personal data is being processed. Another example is gamification (i.e., the use of game

elements in non-game contexts, such as marketing; see Eppmann et al., 2018), which is intended to elicit joy and hence greater interest among consumers in performing certain (often monotonous) tasks, such as participating in a market research survey. However, Downes-Le Guin and colleagues (2012) and Warnock and Gantz (2017) have shown that while gamified surveys increase enjoyment among survey participants, at the same time they also lead to higher dropout rates.

In this chapter, we suggest that marketing in a digital world is successful only when both perspectives (technology and the consumer) are taken into account. Modern marketing technologies only contribute to greater effectiveness and efficiency if consumers also recognize and value the benefits of these technological advancements. Analyzing previous research, this chapter shows how firms can combine innovative marketing technologies and consumer interests in a purposeful manner, using the examples of three application areas that will impact marketing in the future: (1) chatbots, (2) voice assistants, and (3) data privacy management.

2.2 Chatbots

The ways of interaction between individuals and machines have changed a lot over the last decades. Not only educational institutions use new technologies like chatbots more frequently, (see chapter 1 by Pijetlovic & Mueller-Christ, 2022); firms are increasingly using them as an AI tool of for interactions and communication with consumers (for a more advanced view on AI and machine learning in the context of accounting, see chapter 6 by Fieberg, Hesse, Loy & Metko, 2022). It has been predicted that the world market for chatbots will grow about 24 percent annually to a value of 1.3 billion USD by 2024 (American Market Association, 2020), reflective of the fact that the technology has evolved and improved very rapidly over recent years. Basically, a chatbot is a text- or voice-based artificial intelligence that responds to text or voice inputs from a human being. This method of responding is made possible by *natural language processing* (NLP), which is based on an intelligent algorithm: inputs are analyzed in terms of the words that are produced by a human being. The algorithm is capable of understanding the content, extracting the important parts and then answering properly (Adamopoulou & Moussiades, 2020a). The better the programming of the algorithm and the more (textual) information gained by prior conversations, the more accurately a chatbot can respond to specific topics. In a commercial setting, this capability is the basis for effective interaction between a software program representing the firm and consumers (Adamopoulou & Moussiades, 2020a).

From a technical perspective, two types of chatbots exist. What are known as *open-domain* chatbots can respond to any topic the user wants to talk about (e.g., the weather), even if the answer will not contain any relevant information (i.e., is generic or makes no sense at all). In contrast, *closed-domain* chatbots operate only for specific topics or scenarios, such as customer services, and have only a limited repertoire of possible but well-fitting answers (Adamopoulou & Moussiades, 2020b). These are also called "rule-based" chatbots (Thorat & Jadhav, 2020). The interface design of chatbots is often very similar to the user interfaces of chat services such as WhatsApp or Facebook. In some cases, just speech bubbles appear within the chat, but more frequently, an avatar (i.e., a cartoon-style profile picture or the face of a real person) imbues the chatbot with some level of humanity.

Chatbots can offer several advantages for firms, including reduced costs through the automation of handling requests, increased time-efficiency through their 24/7 availability, faster response time than human employees, and consequently a potentially better user experience and service quality. Of course, consumers also benefit from these aspects when using chatbots (Adam et al., 2021). This two-way interaction via chat has been shown to positively influence consumer outcomes such as satisfaction, intention to repurchase, trust, and word of mouth (Mero, 2018).

Chatbots do not have only positive outcomes for consumers, however, and indeed may be a challenging proposition for firms. While consumers potentially can get solutions for their problems whenever needed, a large number of consumers also express concerns about or avoid interacting with a non-human "employee" (Gnewuch et al., 2017), as they sometimes perceive them as creepy or intrusive. Research has thus investigated parameters that might help reduce avoidance tendencies among consumers while interacting with chatbots. An important suggestion in this context is that consumers need to perceive a chatbot as a human-like being. This perception is called *anthropomorphism*, i.e., the attribution of human characteristics to a non-human being (Epley et al., 2007).

2.2.1 Humanness of Chatbots: A Two-Sided Coin

Interestingly, too much human-likeness can also backfire. In 1970, Masahiro Moto published his theory of the "uncanny valley," concerning the perception of industrial robots. The model explains the relationship between (positive and negative) familiarity with a non-human agent and the extent to which this agent is perceived as human-like. Overall, the theory states that the more human-like a non-human agent appears, the more familiar people perceive it to be (Gray & Wegner, 2012). However, if the agent seems to be "too" human-like, an overall positive familiarity becomes negative, traversing the so-called "uncanny valley." People then tend to exhibit a negative emotional response; agents are perceived as scary, creepy, strange or bizarre and people ultimately avoid any interaction (Blut et al., 2021). At the same time, the more human-like characteristics appear while seeing or interacting with a non-human agent, the more likely this agent will be perceived as a "real" entity (i.e., the non-human agent will be anthropomorphized), resulting in a positive emotional response towards the agent. The main purpose of this process of anthropomorphism from a consumer's perspective is to interact with one's environment effectively – reducing uncertainty, making sense of others' actions and better predicting their behavior (Epley et al., 2007). Human-likeness is thus important in producing benefits for consumer experience.

In sum, the supposition that "the more human-like, the better it is" does not hold up in every case, which means that the extent to which a chatbot is designed to be human-like must be considered carefully.

2.2.2 Social Perceptions of Chatbots

Social cues (such as avatars, emojis or language) should be the easiest and most efficient signals to increase the likelihood of anthropomorphism. These cues can also elicit social perceptions (Kim & Sundar, 2012), as they trigger what are called "human heuristics" (Sundar, 2008). These heuristics lead to an unconscious perception and evaluation of a chatbot, leading people to behave as they would in a social interaction with a human being. *Social response theory*, with its *computers-are-social-actors* (CASA) paradigm, provides a model to explain this phenomenon (Adam et al., 2021). This paradigm postulates that human–computer interactions are fundamentally social (i.e., applying social rules or norms) and driven by the evolutionary need for social orientation. This results in behavioral manners of consumers towards the chatbot (e.g., a specific way of responding, being polite, etc.) that can also be observed in social interactions between human beings. Perceiving a computer as a social actor happens both unconsciously and automatically (Nass et al., 1994; Nass & Moon, 2000) and can be triggered by social cues.

A primary goal of chatbot designers is thus to elicit a social perception of the agent while interacting with it (Go & Sundar, 2019) through the manipulation of parameters such as the overall design representing the corporate identity, how the chatbot is integrated into the website,

and the use of various social cues. What consumers perceive while interacting with a chatbot are chiefly its appearance and the answers it gives. Feine and colleagues (2019) differentiate social cues into four categories: *verbal cues* (e.g., the content or style of responses), *visual cues* (e.g., the appearance of the chatbot, such as the avatar), *auditory cues* (e.g., the voice, which refers more to voice assistants) and *invisible cues* (e.g., response time). Figure 1 shows a typical structure of a chatbot.
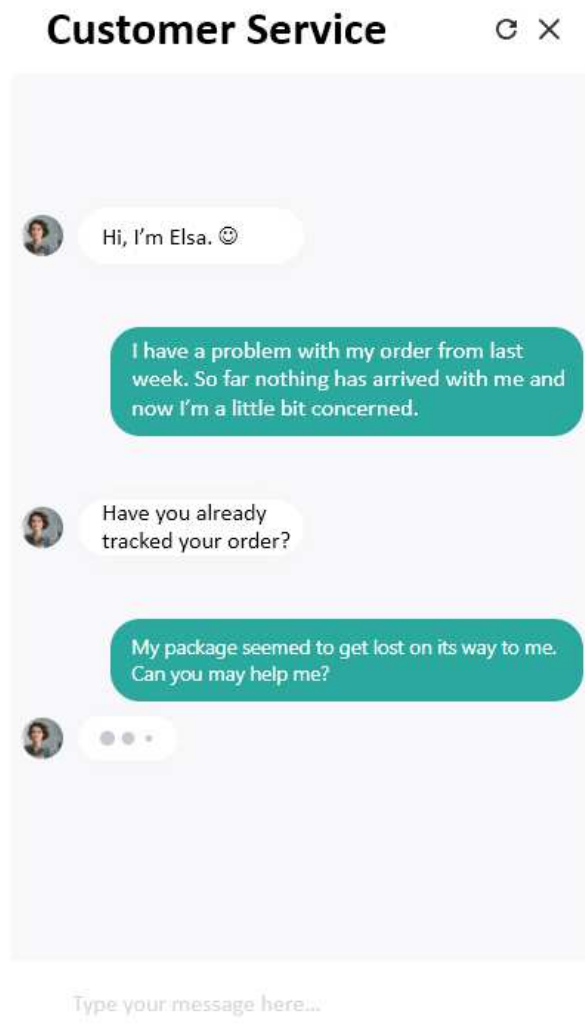

Fig. 2.1 Customer service chatbot Elsa (Bensemann, 2021)

At the bottom, consumers can type their message. While an avatar (next to the messages of the chatbot) is the visual cue, the style in which the chatbot is writing (e.g., speech bubble, modern language with emojis) represents verbal cues. The typing indicator (three dots inside the second speech bubble) belongs to invisible cues, because it is strongly connected to response time.

Most research so far has focused on visual cues. For example, giving chatbots a human name can elicit a social perception (Araujo, 2018; Koh & Sundar, 2010), which also occurs when using an avatar (Nowak & Rauh, 2005) or an animated typing indicator, but only for those consumers who have less experience with chatbots (Gnewuch et al., 2018). Recent research has shown that verbal cues such as language style (e.g., informal vs. formal) can also increase the likelihood that consumers anthropomorphize a chatbot (Adam et al., 2021; Go & Sundar, 2019; Araujo, 2018). Through anthropomorphism then and an increased social perception, chatbots

positively influence the intention to purchase in an e-commerce environment (Han, 2021), can increase conversion rates (Schanke et al., 2020), and lead to higher overall satisfaction (Chung et al., 2020; Yam et al., 2020).

Most of these effects do not occur directly, but are most likely mediated by other processes, a variety of which have been identified to gain a deeper understanding of how the perception of human-likeness of a chatbot and other agents is processed (Pelau et al., 2021). One of the underlying variables that can strengthen the perception of a social situation is *social presence*, that is, the subjective (cognitive as well as affective) perception that one is interacting with a human being and the possibility to assume cognition and emotion from the opposite. Social presence has been shown to positively affect consumers' trust (Toader et al., 2020; Qiu & Benbasat, 2009), perceived friendliness of the chatbot (Go & Sundar, 2019), and overall satisfaction (Verhagen et al., 2014). Managers should thus seek to create a perception of social presence using the above-mentioned social cues (Tsai et al., 2021).

The degree to which a chatbot is perceived as human-like is not only a result of the visual design of an agent, but also depends on consumers' predispositions (Waytz et al., 2014). For example, gender influences how chatbots will be anthropomorphized. Because men usually seem to be more interested in and experienced with technologies, women tend to anthropomorphize more often (De Graaf & Allouch, 2013). A possible explanation for this finding can be their stronger need to reduce uncertainty or to strengthen social connections (De Graaf & Allouch, 2013). Generally, as experience with the use of artificial agents increases, it is less likely that consumers perceive them as human beings (Blut et al., 2021). Thus, while middle-aged users do not exhibit a high tendency to anthropomorphize agents, children and elderly people are more inclined to attribute human characteristics to them (Kamide et al., 2013). Managers should thus consider the demographics of their target groups when implementing chatbot solutions.

2.2.3 Potential negative consequences of chatbots

The implementation of a chatbot might also incur negative consequences. For example, Luo and colleagues (2019) found negative effects on the amount of purchases and contact time when consumers interact with a chatbot compared to a salesperson. While chatbots are comparably efficient, the study found that consumers perceived the chatbot to be less empathetic and knowledgeable, which ultimately led to a lower purchase rate. The reasons they identify are the awareness that one was interacting with a chatbot and limited prior experience with AI technologies. Ciechanowski and colleagues (2019) showed that a text-based chatbot with an animated avatar can lead to negative outcomes (e.g., affect or emotional arousal) and higher dissatisfaction. The former outcome likely occurred due to the "uncanny valley" effect, with the chatbot seeming to be "creepy and weird", while the latter decrease in satisfaction pertained to unmet expectations in chatbot performance. Crolic and colleagues (2021) investigated the effect on service satisfaction when angry (vs. neutral) customers interacted with an anthropomorphized (vs. non-anthropomorphized) chatbot. Overall, participants reported lower satisfaction with the service as well as lower purchase intention if they were angry and interacted with an anthropomorphized chatbot. These results overall show that specific context factors (such as the service situation) or the specific design (i.e., anthropomorphism) of a chatbot can lead to unwanted results.

In sum: chatbot usage must be carefully considered

Anthropomorphized chatbots have generally been shown to be beneficial for consumer–firm interactions. They can increase purchase intentions, perceived service quality and overall satisfaction, and offer the possibility to communicate with consumers in a time- and cost-saving manner. However, managers need to consider many aspects when creating, testing and

implementing a chatbot for service purposes, taking into account not only the appearance of these AI-based agents, but also the context and target demographics with which they are likely to be used.

2.3 Voice Assistants

Chatbots are not the only emergent mode of interaction between firms and their consumers. Moving beyond interactions via keyboard, mouse, or touch interface, a new type of interaction via voice has become increasingly popular through the proliferation of voice assistants. These are voice-controlled devices that are able to perform a wide variety of tasks with or for humans (Mari, 2019). Voice interaction starts with a voice request from the user's side. Voice assistants recognize the voice request using automatic speech recognition (ASR) and natural language understanding (NLU) and return a voice response using text-to-speech (TTS) (Polyakov et al., 2018). Voice assistants also learn from previous conversations to continuously improve speech recognition using AI and machine learning (ML) (Hoy, 2018; for machine learning in accounting see chapter 6 by Fieberg, Hesse, Loy & Metko, 2022).

From a business perspective, voice assistants represent a new communication platform and new touchpoint with consumers. They collect users' data to recognize preferences and create personal profiles. These features enable voice assistants to provide immediate and personalized information and suggestions based on customers' queries and their profiles (Hoy, 2018), helping firms to acquire more insights into customers' preferences and purchase intentions, and opening up opportunities for targeted advertising and personalized product recommendations (Paluch & Wittkop, 2020). From a consumer perspective, the primary advantage of voice assistants is that they provide a quick and easy way to communicate their needs. Assistants offer a hands-free and eyes-free way of interaction that is faster and more natural than typing and does not require any additional equipment such as a keyboard (McLean & Osei-Frimpong, 2019).

Voice assistants come in a variety of forms. Apple introduced one of the first voice assistants, Siri, in 2011 and integrated it into its smartphones. Voice assistants are now also found on tablets, computers, and wearables, as well as in car navigation systems and voice-controlled smart home systems (Petrock, 2020). For instance, Amazon Echo, the world's first smart speaker (i.e., a digital speaker with an integrated assistant that is controlled by voice command (Bizzaco et al., 2021)), was introduced by Amazon in November 2014, followed by Apple with its Home Pod, Google with Google Home, Alibaba with Tmall Genie and Xiaomi with Mi.

The areas of application for voice assistants are also diverse. According to Paluch and Wittkop (2020), they can be divided into four main categories. The first category is *voice entertainment*, with applications such as music streaming services, podcasts, audiobooks, and radio and news programs, as well as games, quizzes and fitness applications. The second category, *voice assistance*, encompasses applications to connect to and manage other smart devices in order to, say, control the lights, regulate the heating, or turn the coffee machine off and on. The third category is *voice search*, which includes information retrieval using spoken voice commands rather than typing, for example, when searching for products, news, weather, or recipes. The fourth category, *voice commerce*, includes all activities that involve shopping with voice assistants. Here, voice assistants act as intermediaries connecting firms and customers via voice apps. For Amazon voice assistants, these voice apps are called "skills," whereas for Google voice assistants they are called "actions." Firms need to create these apps and consumers need to install them on their specific voice speakers. Then, for example, consumers can ask their Alexa to order a pizza or book an Uber. In January 2019, already 100,000 skills for Alexa and 4,253 actions for Google Home existed (Kinsella, 2019).

Two key aspects of voice assistants might exert a strong influence on consumers' decision-making. First, voice assistants alter the way in which consumers search for and choose products (McLean & Osei-Frimpong, 2019). Based on the voice assistant's understanding of a consumer's request, it might offer a limited set of suggestions presented one after another, starting with the top search result in the underlying database. Voice assistants thus act as a filter and limit the amount of information given, generally reducing the number of suggested options based on context and existing user preferences. On the positive side, this filtering prevents information overload for the consumer and makes the purchase process more convenient and efficient. On the negative side, it can threaten one's sense of decision authority and self-determination by restricting a consumer's choices (Dellaert et al., 2020). The options suggested by voice assistants also might not guarantee the best option and can exclude more desirable options. Second, voice assistants limit consumers to the auditory sense and requires consumers to choose from options without seeing them. Recalling all given information presented by a voice assistant could be difficult for consumers, especially in cases where they confront several options. This difficulty can enhance one's feeling of losing control over the received information, which reduces the customer's confidence in the product and results in an unpleasant experience (Pagani et al., 2019). Furthermore, many consumers prefer to see and/or touch a product before buying it, as this increases confidence in their decisions about the quality or value of a product (Peck & Childers, 2003). This lack of visual and tactile sensations might stop customers from using voice assistants to purchase products.

These two aspects portend new challenges for firms. First, they need to ensure that they maintain their customers in the transition to voice commerce. The algorithm behind voice assistants that ranks and suggests products/brands is not openly accessible; sometimes voice assistants might, for instance, recommend a private label over a national brand, which might result in the loss of brand visibility for the national brand. Moreover, specific data (e.g., how the algorithm works and what it includes) are only available to the manufacturer of the smart speakers such as Amazon with Alexa. Consequently, the hardware and software provider become a gatekeeper, with some brands not being chosen by a particular voice assistant (Mari, 2019). Firms need to be aware of this potential negative effect on their "presentation" to consumers.

Second, firms need to fundamentally rethink the design of content provided to consumers. Instead of classic visual representations, only audio-based content is needed. The design of audio-based advertising messages can increase costs without guaranteeing acceptance of the message (Lenz-Kesekamp & Weber, 2018). Due to the limited capacity of memory in the auditory sense, consumers might simply forget the content they have heard, particularly if several options are presented to them. These restrictions make advertising more difficult, potentially increasing advertising costs (Mari, 2019).

Another more general challenge for firms is to find new solutions that enhance data protection. As voice assistants can constantly listen to conversations and collect information, many users are concerned about data privacy and security. Because such data are vulnerable to theft by hackers or being published in the event of data leaks (Hoy, 2018), developing a strategy for such situations is crucial for firms.

Despite the increasing popularity of voice assistants, firms are still reluctant to heavily invest in this point of contact with consumers. However, if firms want to rely on voice assistants in the future, they should make them customer-centric first and foremost. The (relatively sparse) literature to date already provides several starting points for this in two key decision areas:

I.   Factors influencing the usage of voice assistants

II.   Design factors for the interaction between voice assistants and consumers

2.3.1 Factors Influencing the Usage of Voice Assistants

The *technology acceptance model* provides a valuable lens for understanding users' adoption and use of new technology (Davis, 1989). Based on this model, hedonic elements such as perceived enjoyment (Pitardi & Marriott, 2021) as well as functional elements such as perceived usefulness and perceived ease of use are main antecedents influencing users' attitude toward using voice assistants for both transactional activities (e.g., purchasing) and non-transactional activities (e.g., searching information) (Moriuchi, 2019). A favorable attitude toward using voice assistants positively influences consumers' loyalty (i.e., behavioral intention) toward firms integrating voice assistants into their marketing strategies (Moriuchi, 2019).

There are three primary motives driving consumers to use voice assistants. The first motive is related to *utilitarian benefits* that emerge when consumers see voice assistants as a useful and convenient way to accomplish tasks (McLean et al., 2021). The second motive relates to *symbolic benefits* that reflect an individual's sense of self or social identity. The use of a voice assistant gives consumers the feeling that they can improve their social status. Third, consumers derive *social benefits* through treating voice assistants as a social entity and feel a human-like relationship when interacting with them (McLean & Osei-Frimpong, 2019; McLean et al., 2021).

In addition to these general usage motives, the underlying perception of a voice assistant also influences consumers' usage intention/behavior (Schweitzer et al., 2019). Voice assistants can be perceived by consumers in one of three forms: servant, partner or master. The role of a servant is characterized by such traits as kindness, loyalty, friendliness, helpfulness and reliability, and is seen as one that can help consumers to conduct daily tasks. A partner is perky, humorous, intelligent, factual and serious, and one who deftly organizes situations. A master is perceived as ignorant, inflexible, annoying, obstinate, and erratic. Increased future usage of a voice assistant is most likely when consumers perceive the assistant as a servant, imparting a feeling of control, mastery and superiority that inspires continued usage. In contrast, consumers who perceive voice assistants as masters see themselves as servants who must follow the voice assistant's rules, resulting in reduced usage intentions (Schweitzer et al., 2019).

2.3.2 Design Factors for the Interaction between Voice Assistants and Consumers

Compared to other digital channels such as websites, interaction with voice assistants can become relatively complex for consumers, which can lead to different patterns of usage. When shopping, for example, consumers perceive recommended products on websites more positively than with voice assistants. This is because they regard voice assistants as pseudo-human agents detached from the firm, while they view websites as a tool or interface used by the firm (Whang & Im, 2020). Recommendations in auditory form (as opposed to visually) also increase difficulty in information processing, resulting in consumers being less able to differentiate among options. Consequently, an auditory form leads to a higher likelihood of accepting recommended options, but also a higher probability of deferring choice altogether compared to options presented visually (Munz & Morwitz, 2019). Finally, voice presentation changes the level of cognitive effort exerted by individuals, resulting in reduced personal engagement and brand trust (Pagani et al., 2019).

Because of this potential increased complexity in the interaction between voice assistants and consumers, it is recommended that marketers build a voice assistant system that (1) understands the user's mental model in a voice interaction context, (2) recognizes and expresses emotions, (3) determines users' short-term and long-term goals for voice interaction, (4) provides advice that matches consumers' goals, (5) leads the dialogue in the desired direction by requesting information that is missing ("pull" dialog) or providing information that the user needs ("push" dialog), and (6) predicts the user's future goals (Dellaert et al., 2020).

The type of marketing messages conveyed via voice assistant is another important design factor to consider. Consumers are more likely to accept marketing messages on voice assistants if (1) they include information about the availability and location of a product/service, (2) they provide information about sales or discounts, (3) they offer products/services that the consumer has specifically inquired about, (4) they explain how beneficial the product is for the consumer, (5) they can be skipped and repeated if desired, (6) they can provide detailed information if asked (Smith, 2018), and (7) they include personalized and relevant content that matches consumers' preferences (Rhee & Choi, 2020; Jones, 2018).

Voice assistants: A field with vast research potential

Due to the novelty of these technical devices, research into voice assistants and their effects is still in its infancy. While much is known about how consumers make decisions in traditional web environments, far less is known about whether and how search behavior and product choices change in voice environments. In addition, no study has compared consumers' choice behavior regarding products with different involvement levels or different categories to investigate which circumstances favor or inhibit the use of voice assistants. Nor has a study examined how the interaction between consumers and voice assistants changes over time. A longitudinal study could bring interesting insights into how interactions change and affects customer behavior. Furthermore, no study has examined the effectiveness of voice assistants when integrated with other platforms such as PCs or mobile devices. Voice assistants cannot be seen as a single channel in isolation; they might have a stronger effect on consumer behavior when they are combined with other online or offline channels.

2.4 Data Privacy Management

Both chatbots and voice assistants are examples of marketing technologies that only work if they draw on (personal) consumer data. In general, collecting consumer data and creating consumer insights is at the heart of many contemporary marketing activities (Bleier et al., 2020). Through processing consumers' data, marketers can increase the effectiveness of digital marketing while at the same time creating value at the individual consumer level regarding price (e.g., individual discounts), product (e.g., personalized recommendations), and promotion (e.g., geotargeting) (Erevelles et al., 2016). Given the importance of consumer data for marketing, Martin and Murphy (2017) have identified a shift in privacy research. While early scholarship concentrated more on whether consumers are willing to reveal personal data (e.g., Acquisti & Grossklags, 2005), recent studies have focused more on how consumers react to unavoidable data disclosure (e.g., "cookie walls" as a necessity to enter or use a website; Nouwens et al., 2020) and tailored marketing activities. The increasing focus on consumers' reactions towards data collection practices is directly connected to the construct of data privacy (Martin & Murphy, 2017). When examining how consumers react to certain disclosure situations, it is indispensable also to study consumers' perception of data privacy and the consequences of this perception (e.g., privacy concerns; see Goldfarb & Tucker, 2012).

Martin and colleagues (2020) point out that other parties besides consumers are important in the context of data privacy. That is why they present consumers, regulators, and firms as "germane key players" in data privacy and highlight the triangulated, dependent relationship among them. Regulations (through such laws as the General Data Protection Regulation or the California Consumer Privacy Act) are implemented and monitored by governments; they set the context of data handling and regulate what data collection practices are allowed and what requirements firms have to meet when they want to collect consumer data (Martin et al., 2020). From a consumer perspective, data privacy and the privacy trade-off cuts both ways. While consumers can perceive services built on personal data (e.g., personalized recommendations) as beneficial and useful (Bleier & Eisenbeiss, 2015; Kokolakis, 2017), data collection practices

can also lead to consumer discomfort (Aguirre et al., 2015), increased perceived data vulnerability (Martin et al., 2017), increased privacy concerns (Goldfarb & Tucker, 2012; Eisenbeiss & Bleier, 2015; Xu et al., 2012), and cause protective behavior (e.g., falsified identification.; Malhotra et al., 2004). The third key players involved are firms. Several studies suggest that firms can use data privacy/privacy protection as a proactive strategy to gain a competitive edge over their competitors (Casadesus-Masanell & Hervas-Drane, 2015; Gerlach et al., 2019; Martin & Murphy, 2017). In practice, more and more corporations are emphasizing the protection of consumer privacy. Apple, for example, describes privacy as a "fundamental human right" and one of its "core values" (Apple 2021). This theme is woven into several of the company's advertising campaigns titled "Privacy. That's iPhone," demonstrating that corporations increasingly view privacy protection as a core component of their strategic positioning. And by including data privacy in their corporate strategy, firms can reduce the negative effects of data collection practices (e.g., privacy concerns; Wirtz et al., 2007) opening up more personal data to be collected for management decision-making (e.g., customer relationship management; Malthouse et al., 2013).

The dependency of the three perspectives – regulation, consumer, firm – underlines that managing consumers' data/privacy is a complex topic for firms. If firms want to take advantage of innovative marketing technologies that build on personal data and avoid negative outcomes, they must increasingly address the issue of data privacy management in the future. In the following, we highlight several starting points and findings from scientific literature that have been shown to be helpful for effective privacy management:

I.   Transparency

II.   Privacy control and data sovereignty

III.   Privacy customization

IV.   Data handling

2.4.1   Transparency

Legislation such as those described above aims to protect consumers' informational self-determination by requiring firms to be transparent about their data collection practices. Transparency entails that firms act comprehensibly and fairly to obtain consent for information collection and further information processing from consumers (Ghosh, 2018; Martin et al., 2020). But transparency should go beyond meeting legal requirements, as various advantages are associated with it. Firms can reduce privacy concerns through transparent data management (Malhotra et al., 2004; Oulasvirta et al., 2014; Xu et al., 2008). Consumers reward transparency, for example, by sharing more personal information when websites use privacy policies (Hui et al., 2007), and report a higher likelihood to purchase if privacy policies are easily accessible and likewise comprehensible (Tsai et al., 2011).

Likewise, non-transparent procedures by firms can result in disadvantages. For instance, the perceived vulnerability of consumers can increase when data for personalized advertising is collected in a non-transparent manner (Aguirre et al., 2015). However, understandability and fairness of transparency features are a necessity for their success (Martin & Murphy, 2017). Fairness refers to the perceived benefits consumers receive for sharing their data and must outweigh the perceived disadvantages. This trade-off should be in balance so that it is perceived as fair by consumers (Li et al., 2010). Finally, transparency measures must be understandable for consumers. Privacy policies that are incomprehensible for consumers, for example, are judged as unfair and reduce trust in the firm (Vail et al., 2008). Together, these measures should enable consumers to better understand the consequences of their data disclosure and build trust

(Martin & Murphy, 2017). Transparency should therefore only be one part of an overarching privacy strategy that takes other elements into account.

2.4.2 Privacy Control and Data Sovereignty

Transparency is interlinked with privacy control. It enables consumers to have the necessary information about the use of their personal information and is deemed a prerequisite for consumers to gain control over their privacy (Morey et al., 2015). Privacy control involves consumers believing that they can exercise choice over their data and give explicit consent to share it (Iyengar, 2010; Tucker, 2014). Privacy control thus has a profound impact on all consumer decisions related to personal data (Mothersbaugh et al., 2012; Tucker, 2014). When consumers perceive that they have control over their privacy, privacy concerns are reduced (Xu et al., 2012) and consumers have stronger feelings of empowerment (Martin et al., 2017). Moreover, privacy control can reduce consumer reactance towards marketing efforts (Taylor, 1979), increase consumers' willingness to share personal data via control mechanisms such as opting into or opting out of data sharing agreements (Martin et al., 2017), and increase the effectiveness of personalized advertising (Tucker, 2014). Consumers can decide for themselves when, how, and for what purposes they want to disclose their personal data. Ultimately, it may result in consumers exercising data sovereignty.

2.4.3 Privacy Customization

Privacy customization is linked to the construct of control as it concerns the idea of giving consumers complete control over their data by letting them choose what to disclose. Following the privacy-customization approach (Eisenbeiss & Wiegand, 2019), consumers can configure which data they share for certain marketing purposes and which they do not. Although privacy customization may result in fewer data points being released by consumers, several positive effects also result from this approach (Eisenbeiss & Wiegand, 2019). In particular, consumers who are willing to share their data have a higher degree of self-disclosure (e.g., Facebook users customizing their privacy settings are more likely to have a high self-disclosure; Lankton et al., 2017), mostly because of various psychological benefits that are elicited through customization, such as an increased feeling of exercised control and empowerment (Van Dyke et al., 2007). Letting consumers customize their privacy settings may also lead to a higher feeling of psychological ownership (Franke et al., 2010), an increased sense of control (Eisenbeiss & Wiegand, 2019), and decreased privacy concerns (Zhang & Sundar, 2019). Overall, the positive effects of customization can outweigh the negative effects, as shown in the context of display banner advertising by Eisenbeiss and Wiegand (2019). Likewise, Bornschein et al., (2020) showed that privacy customization options (in a cookie notification context) can increase consumers' purchase intention. Lastly, Zhou and Piramuthu (2015, p. 29) concluded that privacy customization can increase firms' profits, and therefore it is a "win-win situation for both business and consumers."

2.4.4 Data Handling

Fueled by the rapid development of technology, consumers' general privacy concerns are rising (Statista, 2019). More precisely, studies have shown that data collection by firms can be a driver of consumers' privacy concerns (e.g., Lwin et al., 2007; Bleier et al., 2020; Martin et al., 2020). In order to mitigate those concerns, firms can offer additional services. Wiezorrek and Dulle (2021) however showed that there is no suitable "trading good" for highly sensitive data. In light of these findings, it becomes even more important for firms to reflect on exactly what data

improves their ability to offer their services. Hence, firms should answer the following questions (based on the suggestion by Stewart, 2017) before collecting consumer data:

1) What consumer data is actually required to enable us to offer our services?

2) How sensitive is the data we asked for in our consumers' perception?

3) How can we ensure safety for the data we collect?

4) Who has access to the data?

The first studies in this still-young field of research have argued that focusing on data handling should be part of the strategic focus of firms (Martin et al., 2020). Possible starting points to strategically approaching data handling can be data minimization (Ogonji et al., 2020), privacy as a default setting (Noain-Sánchez, 2016), privacy-by-design (e.g., through privacy-friendly interface design; Emanuel & Koohborfardhaghighi, 2020) and giving consumers more configurative power through privacy customization (Eisenbeiss & Wiegand, 2019).

2.5 Conclusion

This chapter has introduced two new ways of interaction with consumers that technology and digitization have enabled and has shed light on the very important issue of privacy management that accompanies new technologies based on data. The chapter has highlighted that consumers and their needs must always be at the forefront of firms' considerations, as it is consumer perceptions that will "make or break" a new technology and be decisive in its success.

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