Sensing the Vocal Age

Managing Voice Touchpoints on Alexa

Creating strong customer experiences by actively managing touchpoints is an executive's top priority. The vocal age, manifested in the rise of AI-enabled voice assistants and platforms, offers new forms of touchpoints, so-called voice touchpoints. This paper conceptualizes voice touchpoints and develops managerial recommendations.

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Introduction

Creating a strong customer experience is on the top of executives' minds (Hebblethwaite, 2018) due to its expected multifaceted benefits, such as improved customer loyalty (Homburg/Jozić/Kuehnl 2017). A strong customer experience is thus a crucial advantage in highly competitive markets and industries (Gopalani/Shick 2011). However, creating a strong customer experience in our increasingly complex world characterized through social media (Whelan/Moon/Grant 2013) and omni-channel retailing (Kannan/Li 2017) is a challenging task. One approach to deal with this complexity is to break down the abstract concept of customer experience into manageable parts, so-called touchpoints (Lemon/Verhoef 2016). In their combination, these touchpoints constitute the customer journey and thus define customer experience.

Recent technological developments, namely the emergence of AI-enabled voice assistance (e.g. Google Home or Amazon Echo's "Alexa"), provide new touchpoints – voice touchpoints – that allow for new interaction and connection between consumers and brands. In contrast to radio, which is a one-way directional communication channel, voice touchpoints emphasize bidirectional interaction between consumers and technologies (Kumar/Dixit/Javali 2016). Technologies are no longer only responding in a passive, reactive way, but behave smarter (Rijsdijk/Hultink 2003, 2009) and lately even take a proactive stance by suggesting options and solutions (Hoffman/Novak 2017). As such, they offer unexplored opportunities and challenges to managers (Ng/Wakenshaw 2017) that strive to create strong, all-encompassing experiences.

This paper conceptualizes how voice touchpoints differ from other touchpoints, such as mobile or desktop. We argue that touchpoints are characterized to a different degree by senses (namely sight, smell, touch, taste and hearing) and that managers should take these senses into account when creating, designing and managing customer experiences in the vocal age.

AI-Empowered Voice Assistants and Platforms

AI-empowered voice assistants are software agents, which can be controlled by voice commands and are either integrated into smartphones or built into standalone speaker devices. The best-known systems are Amazon's Alexa, Google's Assistant, Apple's Siri, and Microsoft's Cortana. The software passively listens for its activation word, e.g. "Alexa" or "Hey Google" in order to then actively listen to what the user says. The voice input is then processed and interprets the spoken words into a command and reacts with a spoken, usually female and artificial voice response or concrete action (e.g. sets a timer). Voice assistants often operate through AI platforms and provide brands with virtual shelf space, new marketing possibilities, sales, data on consumer behavior, payment, product fulfillment and a trust halo (Dawar/Bendle 2018).

Although voice recognition has been around for quite some time, significant technological developments have only been made in the last years. For instance, in 1961 IBM already introduced the shoebox computer, which was able to recognize 16 spoken words. In 2010, Apple was first to launch a voice recognition app, Siri, which was then integrated into all iOS devices in 2011. Microsoft followed with the introduction of Cortana in 2013. The first hardware, a so-called smart speaker, was the Amazon Echo launched in 2014 with the software called Alexa.

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Table 1: Overview of voice assistants

Company	Devices	Assistant System	Release	Price (US)	Name of "app"	Market share of devices
Amazon	Echo (Dot, Plus etc.)	Alexa	July 2015	Echo Dot: $49.99 Echo: $99.99 Echo Plus: $149.99 Echo Spot: $129.99 Echo Show: $229.99	Skills	69%
Google	Google Home (Mini)	Google Assistant	Google Assistant: May 2016 Google Home: November 2016	Google Home Mini: $49 Google Home Plus: $129	Actions	25%
Apple	HomePod	Siri	Siri: October 2011 HomePod: February 2018	$349	n.a. – not open for external programmers	n.a.
Microsoft	n.a.	Cortana	April 2014	n.a.	n.a.	n.a.

Source: Own illustration.

Google followed with its Google Home Speaker and the corresponding software Google Assistant in 2016, which is now also available for Android smartphones. Early 2018, Apple also launched a smart speaker, the HomePod. As of January 2018, the market share split in the U.S. is as follows: Amazon 69%, Google: 25%, and Others: 6% (Kinsella 2018). The following table provides an overview of the main voice assistants.

These voice assistants have distinct characteristics (such as design, software etc.) but master similar functions such as controlling smart home devices, reading out the news/podcasts or playing music, to name a few. To this end, voice assistants connect to other brands that provide services or products to consumers. On Alexa, this is realized through so-called skills. Skills could be imagined as apps. Similar to mobile apps, these can be created externally and then connected to the Alexa eco-system. For instance, Deutsche Bahn has an Alexa skill that allows consumers to inquire about timetables, delays and connection (yet, so far it is not possible to purchase tickets through this voice touchpoint). Basically, every individual, brand, company, service provider etc. could develop an Alexa skill in order to create a voice touchpoint. As of December 2017, more than 25.000 skills have been developed for the Amazon Alexa technology – and the number is increasing constantly (Kinsella 2017). Other possibilities encompass to integrate voice assistants directly into existing products as planned by Daimler (Weintert 2017).

Alexa or other voice assistants thus provide an alternative to screen-based web browsing sessions and extend browsing to "hands-free browsing" while driving, cooking, doing sports, socializing or relaxing. Industry experts expect that this number will rise increasingly and that by 2020, 30% of browsing and searching will be done through voice (Pemberton Levy, 2016). Dawar and Bendle even "predict that AI assistants will win consumers' trust and loyalty better than any previous marketing technology" (2018, p. 82).

Management Summary

1. AI-enabled voice assistants such as Amazon Alexa and the Google Assistant offer new touchpoints – voice touchpoints – that allow for new interactions and connection between consumers and brands.
2. Voice touchpoints differ from offline, desktop, and mobile touchpoints as they mainly appeal to the auditory sense.
3. Voice touchpoints and respectively AI-enabled platforms challenge the role of brands in consumer-decision making, service encounters, and in the creation of a strong customer experience.
4. Managers should carefully create a strong customer experience by relying on sense mapping, "owning" the experience, and thinking in voice content.

Foto: Unternehmen

This implies a significant change in consumer-brand interactions: Whereas brands spent large amounts of (financial) resources on visual communications (such as product packaging, brand logos or physical shopping experiences) in order to create customer experiences, AI-empowered voice assistants change how consumers interact with brands and shop (Grewal/Roggeveen/Nordfält 2017). In other words: Billions of dollars have been spent to stand out on the physical shelf or in online stores. Now managers need to find solutions for the vocal age.



Use Case – Doing Sports with Alexa

In order to illustrate the working of voice touchpoints, we chose the example of doing gym exercises. Gym exercises are often done in a gym where an instructor shows a group of people how to do these exercises. In the digital age, consumers were provided with online formats that allowed following instructions on a screen while being in their living room. In the vocal age, doing gym exercises unfolds as follows:

Individual: *Alexa, I want to do some sports.*
Alexa: *The skill 5 minute gymondo workout can help you with this. Do you want to activate it?*
Individual: *Yes.*
Gymondo: *Hey, welcome to the 5 minute gymondo workout. I am Caro and today we will work out together. Before we start, first tell me which part of your body you want to train. Glutes, legs, abs or back?*
Individual: *Abs.*
Gymondo: *Your goal is a firm and flat belly. Do you still want to tell us what your fitness level is? Beginner, advanced or professional?*
Individual: *Professional.*
Gymondo: *Then I'm curious if I'm really dealing with a professional. 5, 4, 3, 2, 1, let's go. Let's start with the c-crunch. Lay on your back, put your feet up and bring your fingers to the temples, then you pull your belly in. ... [...] You performed very well. See you!*

Gymondo is an online fitness studio that offers training programs through video instructions that can then be done at home. In December 2017, gymondo.de launched a skill for Alexa that allows individuals to follow workout instructions on Alexa.

As this example of physical exercises illustrates, vocal touchpoints mainly work through voice and sound interactions. Other senses such as sight (in the case of video), or even smell (in a physical gym) are absent, not in the influence sphere of the brand or can be "mentally imagined" by consumers only to a limited extent. We argue that touchpoints are characterized to a different degree by senses (namely sight, smell, touch, taste, and hearing) and that managers should take into account these senses when creating, designing and managing customer experiences in the vocal age.

Conceptualizing Senses in Customer Experiences

Prior research has pointed to the relevant role of senses in customer experiences (Spence/Puccinelli/Grewal et al. 2014). Besides emotional, cognitive, social, spiritual and physical elements (De Keyser/Lemon/Keiningham et al. 2015), senses mark the direct interaction with brands and thus lie at the heart of customer experience. As Dewey (1934) writes: "It is through sense organs that living creatures participate directly in the world around them." The importance of senses has also been highlighted in human interaction: "The same words spoken in the same way

carry different weight when accompanied supportively holding the other person's hand or touching him on the shoulder" (McCarthy/Wright 2004, p. 81). These examples underline the importance of senses in interactions. In order to explore and conceptualize voice touchpoints, we analyze four touchpoints (namely offline, desktop, mobile and voice) regarding their sensorial characteristics. For this analysis, we break down senses into sight, smell, touch, taste, and hearing. The following table gives an overview of our conceptualization: Rows refers to touchpoints, columns to senses.

Offline Touchpoints

A classic example for an offline touchpoint would be a retail store, where packaged products are presented on shelf and service interaction unfolds (Kozinets/Sherry/DeBerry-Spence et al. 2002). At offline touchpoints, managers can draw on all the senses in order to create a strong customer experience. For instance, visual cues, such as packaging are a key differentiator in the fast moving consumer goods industry and help the consumer to navigate through the jungle of choice (Ampuero/Vila 2006; Underwood 2003). Scents are being used in order to increase time spent in-store (Knasko 1989) or the purchase intention (Spangenberg/Crowley/Henderson 1996), or stimulate the overall positive and enjoyable shopping experience (Bone/Ellen 1999; Gulas/Bloch 1995). A common example is for instance, the smell of freshly baked bread in front of a bakery. Tasting or giving out samples is also an often used tactic in order to stimulate sales (Lammers 1991). Further, the possibility to touch an object in the retail environment results in an increased feeling of ownership of the object (Peck/Shu 2009) with important implications for purchase intentions (Grohmann/Spangenberg/Sprott, 2007; Hultén 2012; Peck/Childers, 2006; Spence/Gallace, 2011) and willingness to pay (Martin 2013). Lastly, studies on auditory cues, especially music, have shown that background music can for example increase purchase intentions (Baker/Parasuraman/Grewal et al. 2002), sales (Mattila/Wirtz 2001), or reduce perceived waiting time (McDonnell 2007).

Overall, managers can draw on multiple senses in order to create a strong customer experience at offline touchpoints. In our gym example, the individual reacts to visual cues in the gym, senses the atmosphere through smelling and touching, and feels relaxed or motivated when listening to the background music.

Online Touchpoints

The rise of the internet offers new possibilities to brands to interact with consumers. Compared to offline touchpoints, the digital age comes with a power shift (Whelan/Moon/Grant 2013): Whereas managers have far more power in controlling the sensing experience within a retail store, digital platforms attribute more influence to consumers who co-create experiences (Prahalad/Ramaswamy 2004), influence other customers with their product reviews (Chevalier/Mayzlin 2006), or even create own content (Kaplan/Haenlein 2010). In the following, three kinds of online touchpoints will be further elaborated on: desktop, mobile, and voice touchpoints.

Table 2: Sensorial experience across different touchpoints

		Sight	Smell	Taste	Touch	Hearing
Offline Touchpoints		e.g., enhanced through packaging, retail store design (3D) and/or brand logo	e.g., scents in retail environments	e.g., tasting is used to trigger buying behavior	Touching creates a feeling of perceived ownership	e.g., music enhances browsing time
Online Touchpoints	**Desktop Touchpoints**	e.g., delivered through videos (2D)	No smell	No taste	Usage of touchpad or mouse for navigation on screen	e.g., jingles create brand recognition
	Mobile Touchpoints	e.g., delivered through videos, adapted to mobile (2D)	No smell	No taste	Touchscreen	e.g., jingles create brand recognition
	Voice Touchpoints	No visual (exception: Amazon Echo Show has a display)	No smell	No taste	No touch	Focus on voice

Source: Own illustration.

Desktop Touchpoints

By desktop touchpoints, the authors refer to all kinds of personal computers, including laptops. When using desktop touchpoints, consumers are bound by a 2D experience on the screen of their personal computer (compared to a 3D experience in the retail store) that hinders tasting, smelling, and touching experiences. Videos that transport visual and sound cues gain importance. Personal interaction between consumers and sales agent is reduced to a desktop interface or mediated through call-centers.

However, consumers creatively combine online touchpoints with senses. For instance, they engage in showrooming (Kokho Sit/Hoang/Inversini 2018). This means getting information and counseling in a physical store and then purchasing the product through the website at a cheaper price. Or brands offer try-at-home options to deliver a strong customer experience that relies on different senses. For instance, online retailers send clothing to consumer homes allowing for touching and smelling. In our gym example, gymondo.de does not only offer instructions in written form on their webpage and in their app but animate consumers through engaging videos, regular newsletter or recipes for a healthy nutrition.

Mobile Touchpoints

Regarding the sensorial consumer experience, mobile touchpoints are similar to desktop touchpoints. Key differences lie in the size of the screen and the touching experience of the consumers. At mobile touchpoints, consumers do not touch products directly, however they interact with the technological device in new ways. By dragging and dropping or by clicking directly on the screen, they purchase services and products. For instance, prior research has shown that touch sensitive interfaces create a focus on experiences and not on instrumental process (Hildebrand/Levav 2017).

Voice Touchpoints

Compared to the other touchpoints, voice touchpoints are less sensorially rich as they mainly rely on voice interaction between consumers and technology. For instance, the gymondo Alexa skill provides no pictures or videos on how to exert the physical exercises. Consumers are asked to draw on their prior experience while following the instructions. For instance, they need to activate prior knowledge of how to perform a c-crunch. Further, voice only allows for a limited amount of information due to complexity: When browsing on Amazon for new products through Alexa, the consumer is only offered two to three items for each product category. Comparisons across products are made difficult as consumers lack reviews, visual comparisons, and written product descriptions.

However, voice touchpoints might be combined with other touchpoints. On Alexa for instance, more specific information is sent to the consumer via the Alexa app. This means that consumers can scroll down in their Alexa app and access more products in the same product category with pictures and short product descriptions. Further, recent technological advancements complement voice touchpoints with a small screen that is able to show pictures or videos while voice browsing (e.g. the Amazon Echo Show).

Overall, touchpoints are characterized through different senses. While certain touchpoints are able to evoke a more sensorial experience, other touchpoints such as voice touchpoints are more restricted. Based on this insight, we will develop managerial recommendations.

Lessons Learned

1. Analyze how "sensorial" the interaction between a service or product and consumers is by mapping the interaction of your brand with the consumer. Identify the evoked senses, evaluate the importance of the sensorial experience and design a strong customer experience.
2. Instead of using the default voice assistant voice for your brand, create your own, specific voice for Alexa, Google Assistant etc. in order to differentiate your brand from competitors (similar to jingles or sound branding) and to "own" the experience.
3. Think in voice content for a strong customer experience, since voice search behavior and current advancements in natural language processing are significantly different from search behavior on computers or mobile devices.

Managerial Recommendations

Voice touchpoints present new opportunities to marketers and managers. Based on our above analysis, we offer three managerial recommendations for creating, designing, and managing customer experience on Alexa (or other voice-enabled digital assistants).

Recommendation 1: Design the Customer Experience Through Sense Mapping

We recommend a sense mapping exercise for creating voice touchpoints. This sense mapping exercise allows analyzing how "sensorial" the interaction between a service or product and consumers should be designed for an optimal customer experience. Sense mapping can be done in three steps. First, map the interaction of your brand with the consumer and identify the evoked senses. For instance, when offering a weather forecast service to consumers the following senses might be evoked: sight (through displaying the temperature by a number and adding a pictorial visualization of clouds and sun), hearing (telling the temperature and weather forecast to consumer through video or voice channels), and touch (in case the consumers directly taps onto the screen). Second, evaluate how important sensorial experience for this product or service is to consumers. For instance, consumers might not need a visual component when inquiring about the weather. However, a visual component might be quite relevant when following a cooking recipe or organizing the personal calendar. Third, compare your sensorial assessments from the first two steps: Which senses are essential to your product or service experience and how can you translate them into voice interaction? Linking different touchpoints (for instance a mobile app with a voice touchpoint) or technological advancements (such as the Amazon Echo Shows with an integrated screen) might facilitate this task. Further, it might be possible to appeal to other senses (such as touch or sight) through other touchpoints.

Recommendation 2: "Own" the Experience

With the rise of AI-enabled platforms and voice assistance, the question arises about the position of branded products on such AI-enabled platforms. AI-enabled platforms are expected to analyze and predict consumer behavior and desires better than consumer themselves putting branded products in a weaker position (Dawar/Bendle 2018).

Choosing a voice that fits your brand might be one way to "own" the voice experience. Similar to jingles or sound branding, consumers are able to differentiate between brands merely based on vocal cues (Steiner 2014). Just think of the iconic Telekom sound branding or other brand jingles. In our example of gymondo, the skill developers relied on a female, slightly naughty voice. Other skills, however, work with the Alexa voice. In the Deutsche Bahn skill, the Alexa voice guides you through the different options of the Deutsche Bahn skill. However, this is a missed opportunity to create a strong vocal cue that consumer then associate with the Deutsche Bahn brand.

Recommendation 3: Think in Voice Content for a Strong Customer Experience

While consumers learned over the last years how to use key words in order to find relevant information, interaction at voice touchpoints is far more complex as it resembles human interaction more. Instead of the consumer typing in words that the search algorithm processes, voice recognition has to deal with myriad consumer ways of framing a sentence. Content for digital voice assistants needs to be adapted to the sensorial experience of voice. For instance, products on Amazon for voice touchpoints should not be described in the same way as products for desktop or mobile touchpoints. Similar to the emergence of Search Engine Optimization (SEO), we expect a need for Voice Search Engine Optimization (VSEO). Understanding how search engines identify and analyze vocal content will be of utmost importance for managers when managing and designing voice touchpoints.

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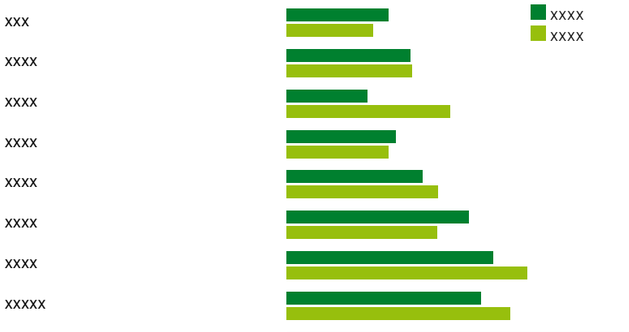
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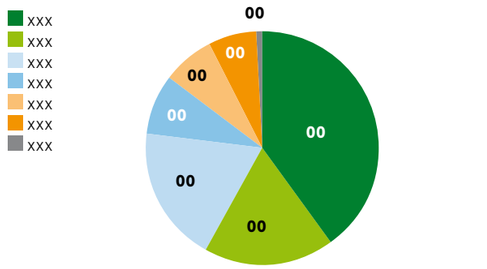
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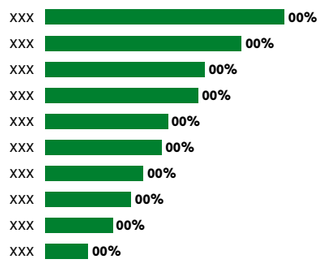
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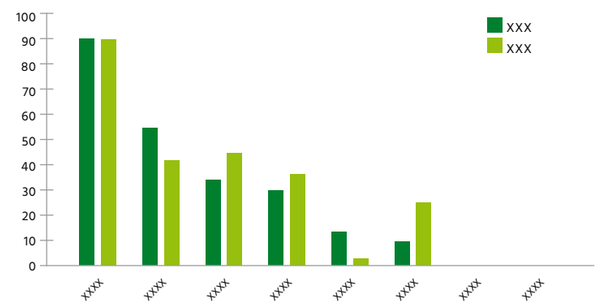
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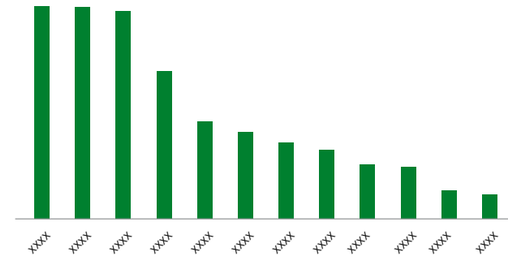
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Abb. 1: / Fig. 1: xxxxx xxxxxx xxxxxxxx



Quelle: xxxxxx xxxxxxxx.

Abb. 1: / Fig. 1: xxxxx xxxxxx xxxxxxxx



Quelle: xxxxxx xxxxxxxx.

Tabelle 1: xxxxxxxxx

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