

De-humanizing the customer experience: A conceptual framework

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Abstract

Technologies like smart services, artificial intelligence and cloud-based systems are reengineering current best practices, de-humanizing the customer experience and leading to new forms of interactions between human and machines. The topic is quite new in marketing and management. In particular, the effects of sales and marketing automation on customer experience are quite under investigated. This theoretical paper will develop a conceptual framework to find out variables moderating the relationship between automation (SMA) processes and customer experience (CX), as well as factors impacting positively and negatively on it. Important managerial implications derive from this study given the increasing number of companies who will approach the topic fast, by prompting to re-design daily operations and inherently change customer-firm interactions.

Keywords: marketing, sales, automation, machine learning, customer experience, digital.

1. Introduction

The fast pace of digitalization is driving innovation of novel forms of clients' and stakeholders' engagement involving increasingly smart machines. According to Salesforce (2016) -predictive intelligence, lead-to-cash process automation, and artificial intelligence- are expected to grow dramatically in the next 3 years. McKinsey forecasted that in 2020, about 85% of transactions will be managed by machines (Baumgartner et al., 2016): product recommendations, lead scoring, email response and even day-to-day administrative tasks will be effortlessly and autonomously integrated.

In this conceptual paper we refer to sales and marketing process automation (SMA) as the change that concerns the substitution of human with machine interaction across all the possible touch-points. We consider that such substitution can be total or partial, with automated processes integrated with the human component. We use of the term *de-humanization* is to stress the effects that the substitution of human with automated processes of the marketing and sales processes will have on the consumer experience. The performance of sales and marketing automation is quite under investigated and there is still the need to understand how intelligent systems impact on customers,

firms and their interactions (Yadav & Pavlou, 2014). Most important, it has not been clear until now which is the combination between automation and personalization (or between machine and human) which generates the higher customer experience and, as a consequence, higher return to companies.

2. Human and Machine interaction through sales and marketing automation processes (SMA)

Advances in autonomous technologies provide interesting prospects for integrating human-based interaction with machine-to-machine interaction or more customized and contextual forms of human-to-machine interactions (Gensler et al., 2013). Automation via intelligent systems is not just about crude automation, but it concerns the humanization of automation or the provision of human cues, which is shown to affect consumer trust (Moon, 2000), or even the integration of real human interaction. SMA, in particular, is moving toward building intelligent systems that can collaborate effectively with people, including creative ways to develop interactive and scalable systems for people to teach to robots (Stanford university report, 2016).

However, the integration of technology with human in delivering services has always been a delicate issue. For instance, while previous researches suggested that incorporating technology into front line services creates interpersonal barriers that limit satisfaction, further researches have shown that these effects can be mitigated when guests are given social space to interact with the technology (Giebelhausen et al., 2014; Giebelhausen, 2014). Also, if on the one side the best customer experience service through automation is delivered when customers cannot recognize if they are communicating with a machine or a human, on the other side roles that require lateral, creative thinking, empathy or societal sensitivity are the hardest to automate. We consider that SMA processes can set positive or negative expectations in the consumer which then determine a set of consequences at the level of attitudes, behavior and finally satisfaction. It is still too early to be either optimistic or pessimistic concerning the automation of sales and marketing processes and its effects on customer experience. There are provisos that we may initially take into account in order to identify the limitations and potentialities of technological advances.

3. A framework on the effects of SMA on CX

The scope of this conceptual paper is to identify specular elements related to SMA (sales and marketing process automation) which can have a positive or negative effects on CX (customer experience).

3.1 Customer experience (CX)

Customer experience is a multidimensional construct (De Keyser et al. 2015, Homburg et al., 2015) focusing on a customer's cognitive, emotional, behavioral, sensorial and social responses to a firm's offerings during the entire customer journey (Lemon & Verhoef, 2016).

Notwithstanding the importance of measuring the customer experience improvements

across complex and diverse touch points and channels (Ostrom et al., 2015), the customer experience concept is limited by a lack of conceptual clarity (Kranzbühler et al., 2017) and, unfortunately there is not yet agreement on robust measurement approaches to evaluate all aspects of customer experience across the customer journey.

In our framework we assume that the way the automation process is perceived affect the customer expectations and thus the whole buying process (attitude-adoption-satisfaction).

3.2 Positive aspects of sales and marketing automation

On the positive side, an automated process may benefit from the following considerations, which may also be thought as expectations related to the customer experience:

- It induces a *perception that the purchase process is simplified*, or that a sort of advantage in terms of time saving is associated with the use of the process, especially when human service tends to be time consuming (this in turn means that if this expectation is not fulfilled, the valence turns out negative as well as the customer experience). Lovelock and Young (1979) suggested that to reduce delivery time, some people prefer to perform the service themselves. In self- service literature the time spent to learn how to use a technology is associated with risk and thus with low Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) (Kansal, 2016). With respect to Internet banking it has been shown that perceived speed of delivery of the self-service option will have a positive effect on perceived service quality (Shamdasani, Mukherjee & Malhotra, 2008).
- *Risk* is the perceived probability that a loss or a danger may occur by using a technology (Shamdasani, et al., 2008). With automated systems there may be less risk associated with the performance, when a risk of variation of performance is relatively important for the customer (e.g., financial market, legal services, insurance, calculus), and where human failure is perceived more likely than machine failure. This is mainly due to the superior cognitive capability of calculation of the machine with respect to the human. In the technology field risks has been associated with reliability of a self-service technology that may positively impact the perceived service quality.
- *Confidentiality*. Personal data must be kept private and not used for other purposes (Van Riel et al., 2001; Zhu et al., 2002). SMA may respond to a need for privacy, nevertheless privacy is seen most often as a negative point for technology because of potential data leakage. In truth, preventing human interaction may in certain circumstances be beneficial, for example when personal data are concerned, or the fact of revealing such as for example in pharmacies, may cause embarrassment.
- *Enjoyment*. Languard et al. (1981) investigated this antecedent and found that some people enjoy playing with machines and thus may prefer self-service options that allow them to do so. A study by Davis et al. (1992) on the use of computer technology also found that customers value the fun involved in using such products. Subsequently, Dabholkar (1996) discovered respondents to be more likely to use a technology based self-service option if it looked like something that would be enjoyable. Thus, in line with these findings, it is expected that enjoyment would

contribute positively towards expected service quality for such options (Shamdasani, et al., 2008).

- SMA may create higher possibility for *customization* and more efficiently serve the customer, for example through intelligence systems that advice on the basis of what other customers purchased in association with a certain product (Van Riel et al., 2001).

3.3 Negative aspects of sales and marketing automation

By contrast, from the negative side, there are at least the following issues that shall be considered, and that may reduce the perceived value of an automated sales and marketing process:

- *Tailored response*. It reduces the relational value of human interaction, which in certain situations may have a peculiar valence, for example when the consumer is troubled and does not know what to choose, or when it needs an urgent solution to a problem, or in peculiar contexts like healthcare where robots have been criticized as being inferior to human caring and contact (ref). The human interaction with a salesperson may be a way of releasing anxiety and may give value beyond the simple purchase.

- *Need for human interaction* is defined as the importance of human interaction to the customer in service encounters (Dabholkar, Bagozzi, 2002: 188). It is a relevant factor for technology- based self-service. It reduces the pleasure of human interaction, as interacting with people is pleasant by itself and adds value to the customer experience, by creating the perception of being treated singularly and therefore of personalization.

- *Security concerns*. SMA may raise privacy issues, to the extent that the consumer is unsure of where his data will be stored and by whom they will be treated. Retail studies, for instance, have shown that privacy becomes a touchy issue when it comes to the adoption of a new technology in the store, and also that word of mouth becomes an important driver of adoption (Inman & Nikolova, 2017).

- SMA usually requires more *effort* from the consumer that has to co-create his customer experience, and at least initially a certain cognitive effort in order to learn to interact with the user interface (Cassidy, 2015).

- SMA may also reduce the *perceived control* of the customer over the present situation (Brocato et al., 2012), which of course connects to risk perception.

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3.4 Moderating factors

We consider the factors that will contribute to establish a positive or negative valence to the absence of human touch. We have grouped them into three categories: the *context*, the *personal* sphere (user level), and the characteristics of the *object* (automated technology) with which the user interacts.

As for *context* we have considered first of all the *industry*. SMA is being applied in very heterogeneous contexts, such as hospitality, banking, biological and medical

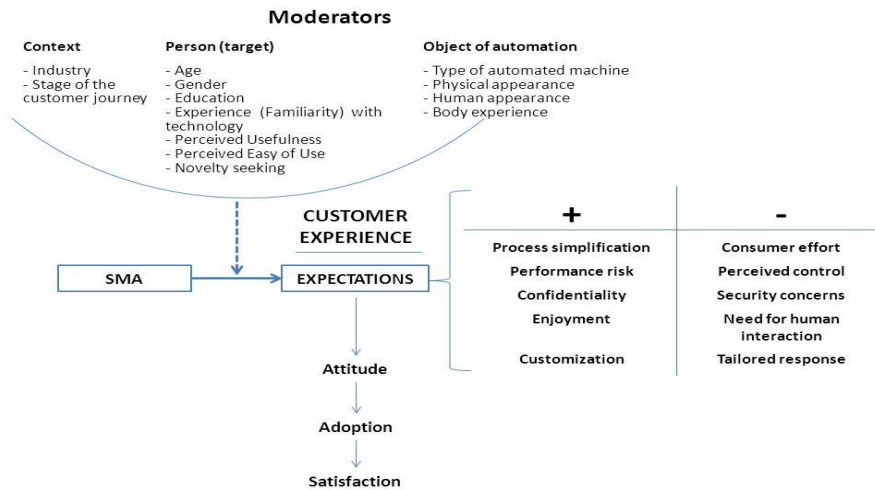
fields, automotive, physical assistance for elder care, but also agriculture, food processing, fulfilment centers, factories, education, public safety, security, and many others. We assume that considering high sensitive industries, like for instance healthcare or banking, could have different implications for the customer with respect to low sensitive ones (Broadbent et.al., 2009).

The second contextual element we considered is the *stage in the customer journey*. As stated by Lemon and Verhoef (2016), analysing the customer experience implies to understand the stages of the customer journeys, the nuances of the individual, social, and environmental and market context and frictions among touch points.

With respect to *personal* factors, following the technology adoption model (TAM) (Davis, Bagozzi and Warshaw 1989), the actual use of a new technology depends of several factors which intervene between the awareness and the real use. We draw from this model the *Perceived Usefulness (PU)* and *Perceived Ease of Use (PEOU)* as factors conditioning the acceptance of the absence of human factor in the customer experience. More specifically, Perceived usefulness (PU) is defined as the degree by which people believe that a technology improves their performance, while Perceived Ease of Use (PEOU) denotes the degree of effort that people imagine to put in to using a technology (Davis, 1989).

We will then consider consumer age (as technology adoption varies across generations see Chung et al., 2010; Niehaves & Plattfaut, 2014), gender and experience with technology (familiarity), education level (Broadbent et al., 2009).

As for the *object* of interaction, we include medium through which the sales process is carried out (e.g., chatsbot, robots, etc.), its physical and human appearance (Kim and Lee, 2012; Robins et al., 2006) and involvement of a bodily experience. Figure 1 provides a summary of the interpretative framework of the study.



Despite the media rumours in favour of sales & marketing automation academic literature tends to identify the boundaries of such positive effects, if not pointing out possible negative consequences (e.g., Nikolova and Inman, 2017). We thus consider both views identifying the reason in favour and against the adoption, which may in a positive or negative way affect consumer experience.

The methodology of the study will apply in depth interviews with industry experts and, depending on the availability of industry data other possible methodologies may be used, such as surveys or experiments.

This study will have important managerial implication. According to McKinsey study (2017) many firms are still uncertain of the business case or return on investment. Adoption patterns show a rowing gap between digitalized early adopters, such as tech, telecom and financial services, and others. So, companies would need to understand better where to address their resources. Important implication from AI at organizational level also refers to new forms of collaboration between HR, marketing, sales, operations and IT.

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