The Nature of Customer Experience and its Determinants in the Retail Context: Literature Review

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Abstract. The purpose of this study is to investigate the nature of customer experience (CX) in the context of retail, as well as its determinants in a psychological context. Based on a comprehensive literature review we identified 45 relevant articles. Major results are: First, we identified 41 factors operationalizing CX. Bearing the vast amount of conceptualizations in mind, it follows that today we observe significant diversity in how CX is operationalized. Second, we identified 27 determinants of CX. A customer's psychology always plays a role during consumers' interaction with companies. Hence, we classified the identified factors into two categories. First, *predominating* psychological CX determinants which can hardly be, or not at all, influenced by companies. Second, *interactive* CX psychological determinants which can only be measured during or after an interaction with a company; moreover, these determinants can, at least partly, be influenced by a company.

Keywords: customer experience, customer psychology, systematic literature review, retail environment

1 Introduction

The Internet has changed the retail landscape. E-Commerce and technologies such as augmented reality challenge the traditional business model of brick-and-mortar retailers by providing new online shopping experiences [1, 2]. Considering this trend, retailers have started to provide compelling customer experiences (CX) by seamlessly integrating online and physical channels [3–5]. To better manage this integration process, it is critical for retailers to develop an in-depth understanding of the customers' behavior to increase satisfaction and to optimize retail efforts [6].

In the early 1980s, Holbrook and Hirschman [7] introduced the perspective of customer behavior and were among the first to point out that buying decisions are not only based on logical thinking. It follows that CX, while not having that explicit label

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during that time, has been considered as an important phenomenon for decades. Recently, Lemon and Verhoef [4] defined CX as "a multidimensional construct focusing on a customer's cognitive, emotional, behavioral, sensorial, and social responses to a firm's offerings during the customer's entire purchase journey" (p. 71).

Examining how customers go through the buying process in retail, Puccinelli et al. [6] argue that psychological factors such as goals, information processing, affect, memory, or involvement significantly affect consumers' decisions. Unfortunately, our current understanding of these psychological factors is limited. Thus, they made an explicit call for further research in this area. It follows that more research on the psychological drivers of CX, the rise of omnichannel, and how touchpoints can be seamlessly integrated is needed [8, 9]. This would not only contribute to a better theoretical understanding of CX in the retail context, but would also provide an important foundation for retail managers in practice. Today, most management decisions are hardly evidence-based. This is an undesirable state, as it counteracts one major goal of academic research, namely to contribute to the development of the human society and economy.

Against this background, the purpose of the present study is to explore the nature of CX in the retail context, as well as its psychological determinants. The findings of this research can help retailers optimizing their sales and interaction channels while taking customer psychology into consideration. To this end, a systematic literature review was undertaken based on the following main research questions: How is retail CX operationalized and what are the psychological determinants of CX in a retail context?

2 Methodology of the Literature Review

Vom Brocke, Simons, Niehaves, Niehaves and Reimer [10] call for a thorough documentation of the literature review in the IS domain. Based on their framework, we will first consider the scope and conceptualization of this literature review. The scope of the present study focuses on research outcomes and methodologies. The conceptualization is characterized by a neutral summary of relevant studies. To further define the scope of this literature review, it is necessary to examine the different research streams of CX. According to Kranzbühler, Kleijnen, Morgan and Teerling [11], CX research has followed two different approaches: the organizational view and the consumer view. Studies in the organizational research stream focus on how to implement consumer-centric business processes within the company, for example through CX management. In contrast, research in the consumer research stream develops an understanding of how consumers perceive a firm's offered experience. The focus of this review is to identify and analyze previous studies that examine the nature of CX and its psychological determinants in the context of retail. Thus, this study focuses on the consumer perspective of CX, and not on organizational CX processes.

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2.1 Search Process

Based on vom Brocke et al. [10], the search process includes journal search, database search, as well as cross-reference evaluation. To identify relevant literature, the review process had two phases. Phase I included the search of journals, databases, and cross-references for articles related to CX in retail. Phase II identified which papers from Phase I include consumer psychology.

First, in Phase I we reviewed 66 high-ranked information systems, business informatics, and marketing journals (A+, A, B) from the VHB-JOURQUAL3 ranking published by the German Academic Association for Business Research (a list of the reviewed journals is available upon request from the authors).

The search query "customer experience*" was used to search within title and abstract. Second, the databases Web of Science and EBSCOhost were consulted. To make the search more specific, the following terms were used: "customer experience*" AND retail, as well as "customer experience*" AND “psych*”. After removing duplicates, this initial search yielded 142 articles from the journal search and 167 articles from the database search. To ensure quality and relevance, the search included only articles that were published in a peer-reviewed outlet. We only analyzed papers written in English.

Third, following an initial screening of the titles of all 309 articles, 222 were eliminated because they were not related to retail, or because CX was not the core of the investigation. Specifically, we excluded articles focusing on the company side of managing CX through technology (e.g. check-out systems), strategic management and business processes in the context of CX (e.g. supplier and quality management). In those cases, in which title and abstract were not enough to make the inclusion decision, the two authors of this paper reviewed the introduction, theoretical model and corresponding constructs, and the conclusion to identify information for the decision.

Fourth, after a thorough review of the remaining 87 papers, 23 relevant articles were added through cross-reference. The Top 400 ranked journals in the fields of Business, Computer Science, and Psychology (Scimago Institutions Rankings of 2018, sorted by Journal Rank Indicator) were included. A total of 27 articles did not meet this quality criterion and were eliminated.

Fifth, at this stage a total of 83 articles remained and were assessed for full-text eligibility. Within Phase II of this study, the articles were reviewed for psychological content. To do so, another keyword search within the papers was conducted (specifically, we analyzed the following sections: title, abstract, keywords, hypothesis, and research questions).

To develop a set of keywords the chapter headlines of important books in the psychology domain were reviewed. The books were selected by searching for (i) “consumer” AND “psychology”, (ii) “marketing” AND “psychology”, (iii) “ecommerce” AND “psychology” and (iv) “e-commerce” AND “psychology” in the book titles on Google Books as well as the EBSCOhost database (filtered by books). Books were included if they were written in English and the index page(s) were available either within Google Books or Amazon.com. A total of 20 books were identified. The keywords were drawn from the chapter and capital titles of the two

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most cited books in the study domain on Google Scholar, namely Foxall, Goldsmith and Brown [12] with 957 citations on Google Scholar, as well as Foxall [13] with 463 citations (July 11, 2019).

The following search terms were identified: Psychology/Psychological, Consumer Research, Personal, Cognition/Cognitive, Personality, Perception, Motivation, Choice/Choices, Learn/Learning, Attitude/Attitudes, Behavior/Behavioral, Behaviour/Behavioural, Lifestyle, Environment/Environmental, Society. The journal name, titles, abstracts, research propositions, research questions, hypotheses, and keywords of the 83 remaining articles were searched based on these terms. Through this process, 25 papers were eliminated and 58 remained in our basket.

Sixth, after an in-depth screening, 13 articles were discarded because they looked at the organizational side of CX or only dealt superficially with the consumers' psychology in CX. For example, a study by Krishna, Cian and Aydınoğlu [14] was eliminated because it focused purely on package design. This yielded a final set of 45 articles, which constitute the basis of our review (a list of the reviewed papers is available upon request from the authors). The 45 papers included ten conceptual papers, three literature reviews, ten scale developments, as well as 22 empirical studies.

3 Results

3.1 Methodologies and Research Designs

Our literature review identified 22 studies about psychological determinants of CX in brick-and-mortar, virtual reality, mobile, and online retail stores. Sixteen studies used a quantitative approach (14 studies used structured questionnaires; one experiment with survey; one content analysis with survey), five studies used a mixed-method approach (one Delphi study, survey, and experiment; one in-store survey and focus group; one study with semi-structured interviews, focus groups, and survey; one survey, interviews, and experiment; one semi-structured in-depth interviews and content analysis) and one used a qualitative approach (in-depth interviews). This dominance of survey is consistent with the results of a meta-analysis on IS research methodology as reported in Riedl and Rueckel [15].

3.2 CX is a Multidimensional Construct

The next chapter provides the review results on how CX has been conceptualized in the scientific literature (i.e., nature of the construct). We found a total of 41 conceptualizations of CX (a list of the revealed factors is available upon request from the authors). Most studies include the customers' feelings when dealing with CX. Specifically, researchers highlight a hedonic [16] and affective [17–20] experience, an emotional experience [21], positive in-shop emotions [22, 23], feelings [24], and dominance, pleasure, and arousal [25, 26]. Enjoyment is the most researched emotion

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[25, 27–29], and Foroudi et al. [16] add the viewpoint of customers' recognition (e.g. a feeling of importance).

Moreover, researchers also refer to a cognitive and intellectual component of CX [17–19, 21, 24]. In this context, flow─an immersive state of mind that occurs while navigating a website [30]─is conceptualized as a cognitive element of CX [25, 31]. The flow-related dimensions of temporal disassociation, focused immersion, and perceived control have also been investigated [26, 28, 29].

The literature also acknowledges that the CX-construct can include the service CX [32–35], the product and sensorial CX [21, 22, 24, 34, 35], CX in the context of price or promotions [34], as well as a compelling or involving experience [26]. The literature further reflects on an aesthetic perspective [32, 33], the in-shop environment, the atmosphere, the product presentation [22, 34], and the retailer's reputation [34].

Several researchers also approach CX with a social or relational component such as the consumer's interaction with staff members [21, 22, 24, 31]. Further, considering online CX in clothing e-retail context, Pandey and Chawla [27] additionally identify a psychological CX dimension which is positively influenced by e-logistic ease, and e-convenience and negatively influenced by e-distrust, e-negative believes, and e-self inefficacy. They also find a functional dimension based on interactivity which is also identified by Roy et al. [28], informativeness, visual engagement, as well as navigation and search ease. An easy and comfortable use is also identified by Gentile et al. [21].

Researchers further argue that CX contains the customers' hedonic (e.g. fun, pleasure) and utilitarian (e.g. task-oriented) motivations [36, 37], outcome focus [35], relative advantage [28], return on investment or value for money [32–34], lifestyle [21], customer experience level and satisfaction [23, 38], situational involvement [31], piece of mind [35], entertainment [20, 25], as well as customers' level of curiosity [29]. Additionally, personalization and playfulness play a role when conceptualizing CX [28, 32, 33].

While some of the factors such as emotions seem to be of great significance regardless of the channel, others such as interactivity and enjoyment seem to be more important online than offline. Factors such as the product or the social experience are of particular relevance in the store. Based on our analyses, we conclude that many different approaches exist in the scientific literature to conceptualize, and hence operationalize, CX in various environments. This finding is important to understand the results concerning the psychological determinants of CX.

3.3 Psychological Determinants of CX

Despite the large body of literature examining CX, there is a need to further define the scope and psychological influences on CX [39]. The objective of the following analysis is a precise description of psychological determinants within retail CX. A total of 15 studies researched exogenous and endogenous determinants of CX (note that the terms "determinant" and "antecedent" are used interchangeably in this literature review).

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Several researchers like Grewal et al. [40] and Verhoef et al. [8] created conceptual frameworks to analyze the impact of exogenous and endogenous determinants of CX. The framework by Verhoef et al. [8], for example, includes the determinants social, service, retail atmospheric, assortment, price, and retail brand factors, as well as the past CX as antecedents. It further considers situational and customer-related factors like goals as moderators of CX.

To learn more about the psychological factors moderating or determining CX, we reviewed the literature and found 27 determinants of CX. Figure 1 shows a morphological box of CX determinants, including the examination counts. The concept of using a morphological box to visualize determinants was adapted from Hummel et al. [41]. The following two chapters summarize the results of our literature review.

We developed two categories from the literature: The Predominating Psychological CX Determinants (PPCXD) are highly related to the individual, and hence can hardly be, or not at all, altered by companies. These determinants are anchored very deeply in the customer's psychology and lifestyle. Further, they can be measured independently from the CX process. The determinants in the second category, we call them Interactive Psychological CX Determinants (IPCXD), develop during the customer-company interaction and hence can, at least partly, be influenced by the company. Having defined these two categories, we assigned the identified 27 determinants accordingly. The following two chapters present the identified PPCXD and IPCXD thematically structured into six categories.

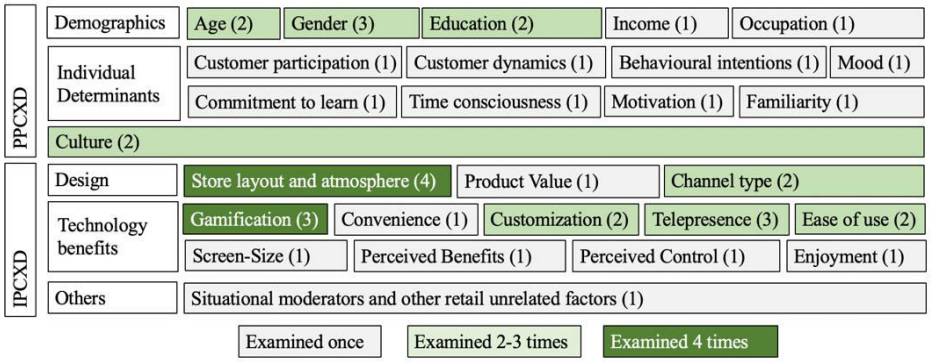

Figure 1. Morphological box of PPCXD and IPCXD influencing CX

3.3.1. Predominating Psychological CX Determinants

Individual determinants. Lucia-Palacios et al. [19] conducted 41 semi-structured, in-depth interviews on the determinants of affective and cognitive CX of mall visits. They conclude that personal determinants like motivations, moods, time consciousness and mall familiarity moderated the relationship between determinants like accessibility and physical design. Foroudi et al. [16] surveyed 330 participants to examine the CX (hedonic and recognitional) in smart retail and during smart retail

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technology adoption. As an independent variable, the researchers identified commitment to learning and behavioral intention (e.g. social influence, perceived value). Customer participation mediates the influence on CX, and customer dynamics (awareness, interest, desire, action) have a direct influence on the CX.

Sociodemographic. Developing a m-commerce mobile application customer experience model (MACE), McLean et al. [23] collected a total of 1024 questionnaires and found that gender moderated the relationship between (1) utilitarian factors of technology (ease of use, convenience, customization) and enjoyment, (2) utilitarian factors of technology and CX (level of satisfaction and positive emotions), and (3) enjoyment and CX. For example, females' CX seemed to be driven by utilitarian factors while males' CX was significantly influenced by the level of enjoyment. Foroudi et al. [18] explored the influence of the sociodemographic factor age, gender, education, and occupation on loyalty. While sociodemographic factors are found to influence loyalty, this relationship was moderated by the intellectual and affective CX. Deshwal [35] surveyed 346 in-store customers and found that gender, age, income, and education level at least partly determined CX quality (defined as peace of mind, moments-of-truth, outcome focus, and product experience).

Culture. Evanschitzky et al. [37] compare individualistic and collectivistic consumer cultures and find that shopping motivations and CX vary depending on cultural backgrounds. This is in line with a study by Shobeiri et al. [32] who report that culture moderates how Chinese and North Americans experience a retailer's website.

3.3.2. Interactive CX Psychological Determinants

Design of channel, interface, and product. Various studies consider the effect of different online store layouts on CX. Visinescu et al. [29], for example, find that 2D and 3D layouts affect CX. Krasonikolakis et al. [25] tested different 3D store layouts. They conclude that store layouts show an influence on shopping enjoyment and entertainment, but not on the CX (here defined as pleasure, arousal, dominance, flow). Martin et al. [17] compare the CX of frequent and infrequent online shoppers. In their survey with 550 participants, they find evidence that aesthetics influence the affective experiential state, but only for frequent shoppers. Lucia-Palacios et al. [19] define determinants of cognitive and affective CX in malls as accessibility, atmosphere, physical design, tenant mix, and crowding perception (these factors are combined as "store layout and atmosphere"). In their survey, Gentile et al. [21] find that it is important to balance utilitarian (or functional) and hedonic (or experiential) product value to successfully sustain CX. Hence, store layout and product value are determinants of CX.

Dacko [33] and Blázquez [36] argue that different channels like mobile augmented reality (MAR) shopping apps and online vs. offline channels can influence customer's CX. Each channel has its potential and features [33] and successful CX needs to

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seamlessly integrate different channels online and offline to best comply with the customer's shopping motivations [36]. Thus, the channel type can influence CX.

Technological benefits. McLean et al. [23] report that utilitarian factors (ease of use, convenience, customization) influence CX, however, the screen-size moderated the experience. Moreover, McLean et al. [23] find that m-commerce users report a negative CX if the completion of a task takes too long (timeliness/telepresence). Further, Martin et al. [17] compare determinants of CX (defined as a cognitive and affective experiential state) for frequent and infrequent shoppers. The researchers find that telepresence (defined as timeless immersion) has a moderate but inverse relationship with the cognitive experiential state for both groups. For both groups, perceived benefits seemed important for the affective experiential state, but to a higher degree for frequent shoppers. For infrequent shoppers, perceived control shows a positive effect. Perceived control was determined by the ease of use and customization. The level of enjoyment dictated customers' emotions and satisfaction. Krasonikolakis et al. [25] find that telepresence, defined as a customer's sensory experience and being present, moderated the relationship between different online store layouts and CX (shopping enjoyment, ease of navigation, and overall online CX).

Moreover, gamification has been found to influence CX. Poncin et al. [26] concluded that gamification through a playful interface in smart stores, create a compelling CX. Gamified challenge mechanics were able to induce arousal, but the data only partly support that the overall experience was more compelling. Also, Insley and Nunan [20] examine the link between gamification elements and customer engagement in retail CX. They conducted 19 in-depth interviews and concluded that gamification enhances customer engagement, and retailers can gamify their CX to use this effect. Yet, Martin et al. [17] did not find a positive relationship between challenge and a customer's cognitive state.

Retail unrelated factors. Lucia-Palacios et al. [19] define further situational moderators of CX as companionship and season of the year.

4 Discussion

Building on a systematic literature review and in-depth analysis, the purpose of this paper was to identify the psychological determinants of CX. Due to the scattered literature on CX, we first analyzed how CX is conceptualized and operationalized. We found 41 factors in the literature. Next, we identified the antecedents and moderators of CX. The literature review revealed 27 factors.

In their CX framework, Verhoef et al. [8] position the social experience, retail atmospheric, products, and assortments, for example, as determinants of CX. However, various researchers [22, 34] use those factors to operationalize CX. While the majority of researchers, for example Pandey and Chawla [27], used enjoyment to

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measure CX, other researchers used this factor as an antecedent [17]. It follows that there is little agreement on how to measure CX in retail and what drives it.

CX is always a customer's reaction to a customer-company interaction. CX is highly perceptive and based on the customer's psychology. However, the degree of this effect may vary. Thus, we propose to categorize CX determinants in two categories. The PPCXD, which can hardly be influenced by companies and can be measured independently from actual interaction. The literature review revealed PPCXD like sociodemographic factors (e.g. age, gender, education, income), but also culture, mood, time consciousness, and customer dynamics like awareness or commitment to learning. The second category of factors, the IPCXD, can only be measured based on actual interaction with a company. These factors can, at least partly, be influenced by companies. This category is based on customer perception, for example the perception of the channel (e.g. website or store layout), or product, as well as gamification features, and benefits from technology use (e.g. perceived telepresence or control). These findings are in line with Verhoef et al. [8] who argued that CX can only be partly controlled by the company.

5 Conclusion and Outlook

With an increasing number of channels available to customers and the influence on factors like satisfaction and loyalty, CX has become increasingly important in the past decade. First, we revealed 41 factors that researchers used to operationalize CX as well as 27 psychological determinants of CX. The vast majority of factors suggest that there is no clear understanding of how CX is to be conceptualized and hence operationalized. Thus, there is a need for a clearer understanding of what an experience is and how to measure it. This finding is in line with calls for a robust measurement of CX, for example, by Lemon and Verhoef [4].

Second, CX is always an interaction between a company and its customers. It is clear that it is impossible for customers to just "switch off" individual internal processing when evaluating CX. Hence, customer psychology always plays a role during the company-customer interaction. Yet, there is a difference in how significant this influence is. Accordingly, we argue that there are two categories of psychological factors influencing CX, namely IPCXD (can hardly or not at all be influenced by a company) and IPCXD (even if not fully, can be better influenced by the company). In line with this finding, more research is needed to fully understand the relationships between those two categories and how these relationships can be used to optimize CX. Also, future research could additionally include psychological determinants of retail CX focusing on multi-channel behavior in the shopping context (e.g. personality). Since most of the studies used surveys to examine CX, we propose to widen the approach by using methods like facial and eye-tracking, or other physiological measurements including heart rate, skin conductance and other measures related to autonomic nervous system [42–47].

Although we believe that the findings of this paper are comprehensive, it is possible that there are more papers on psychological determinants of CX in the

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context of retail. Additionally, we note that we purposely only looked for papers with CX context. Papers focusing, for example, on brand experience were not considered. Also, we focused on retail context, hence, we eliminated papers from, for example, the finance and banking sector.

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References

1. Stobart, J., Howard, V.: The Routledge Companion to the History of Retailing. Routledge, New York, NY, US (2019).
2. Hilken, T., Heller, J., Chylinski, M., Keeling, D.I., Mahr, D., de Ruyter, K.: Making omnichannel an augmented reality: the current and future state of the art. J. Res. Interact. Mark. 12, 509–523 (2018).
3. Berry, L.L., Carbone, L.P., Haeckel, S.H.: Managing the Total Customer Experience. MIT Sloan Manag. Rev. 43, 85–89 (2002).
4. Lemon, K.N., Verhoef, P.C.: Understanding Customer Experience Throughout the Customer Journey. J. Mark. 80, 69–96 (2016).
5. von Briel, F.: The future of omnichannel retail: A four-stage Delphi study. Technol. Forecast. Soc. Chang. 132, 217–229 (2018).
6. Puccinelli, N.M., Goodstein, R.C., Grewal, D., Price, R., Raghubir, P., Stewart, D.: Customer Experience Management in Retailing: Understanding the Buying Process. J. Retail. 85, 15–30 (2009).
7. Holbrook, M.B., Hirschman, E.C.: The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun. J. Consum. Res. 9, 132–140 (1982).
8. Verhoef, P.C., Lemon, K.N., Parasuraman, A., Roggeveen, A., Tsiros, M., Schlesinger, L.A.: Customer Experience Creation: Determinants, Dynamics and Management Strategies. J. Retail. 85, 31–41 (2009).
9. MSI: 2018-2020 Research Priorities: Marketers' Strategic Imperatives, https://www.msi.org/articles/marketers-top-challenges-2018-2020-research-priorities/, last accessed 2019/04/23.
10. vom Brocke, J., Simons, A., Niehaves, B., Niehaves, B., Reimer, K.: Reconstructing the Giant: On the Importance of Rigour in Documenting the Literature Search Process. In: Proceedings of the European Conference on Information Systems (ECIS). pp. 2206–2217 (2009).
11. Kranzbühler, A.-M., Kleijnen, M.H.P., Morgan, R.E., Teerling, M.: The Multilevel Nature of Customer Experience Research: An Integrative Review and Research Agenda. Int. J. Manag. Rev. 20, 433–456 (2018).
12. Foxall, G., Goldsmith, R., Brown, S.: Consumer psychology for marketing. International Thomson Business Press, London, UK (1998).
13. Foxall, G.: Consumer Psychology in Behavioral Perspective. Beard Books, Washington, DC, US (1990).

https://doi.org/10.30844/wi_2020_r5-hermes

14. Krishna, A., Cian, L., Aydınoğlu, N.Z.: Sensory Aspects of Package Design. J. Retail. 93, 43–54 (2017).
15. Riedl, R., Rueckel, D.: Historical Development of Research Methods in the Information Systems Discipline. In: Proceedings of the Americas Conference on Information Systems (AMCIS). pp. 1–14 (2011).
16. Foroudi, P., Gupta, S., Sivarajah, U., Broderick, A.: Investigating the effects of smart technology on customer dynamics and customer experience. Comput. Human Behav. 80, 271–282 (2018).
17. Martin, J., Mortimer, G., Andrews, L.: Re-examining online customer experience to include purchase frequency and perceived risk. J. Retail. Consum. Serv. 25, 81–95 (2015).
18. Foroudi, P., Jin, Z., Gupta, S., Melewar, T.C., Foroudi, M.M.: Influence of innovation capability and customer experience on reputation and loyalty. J. Bus. Res. 69, 4882–4889 (2016).
19. Lucia-Palacios, L., Pérez-López, R., Polo-Redondo, Y.: Cognitive, affective and behavioural responses in mall experience: A qualitative approach. Int. J. Retail Distrib. Manag. 44, 4–21 (2016).
20. Insley, V., Nunan, D.: Gamification and the online retail experience. Int. J. Retail Distrib. Manag. 42, 340–351 (2014).
21. Gentile, C., Spiller, N., Noci, G.: How to Sustain the Customer Experience: An Overview of Experience Components that Co-create Value With the Customer. Eur. Manag. J. 25, 395–410 (2007).
22. Terblanche, N.S.: Revisiting the supermarket in-store customer shopping experience. J. Retail. Consum. Serv. 40, 48–59 (2018).
23. McLean, G., Al-Nabhani, K., Wilson, A.: Developing a Mobile Applications Customer Experience Model (MACE)- Implications for Retailers. J. Bus. Res. 85, 325–336 (2018).
24. Srivastava, M., Kaul, D.: Exploring the link between customer experience-loyalty-consumer spend. J. Retail. Consum. Serv. 31, 277–286 (2016).
25. Krasonikolakis, I., Vrechopoulos, A., Pouloudi, A., Dimitriadis, S.: Store layout effects on consumer behavior in 3D online stores. Eur. J. Mark. 52, 1223–1256 (2018).
26. Poncin, I., Garnier, M., Ben Mimoun, M.S., Leclercq, T.: Smart technologies and shopping experience: Are gamification interfaces effective? The case of the Smartstore. Technol. Forecast. Soc. Chang. 124, 320–331 (2017).
27. Pandey, S., Chawla, D.: Online customer experience (OCE) in clothing e-retail. Int. J. Retail Distrib. Manag. 46, 323–346 (2018).
28. Roy, S.K., Balaji, M.S., Sadeque, S., Nguyen, B., Melewar, T.C.: Constituents and consequences of smart customer experience in retailing. Technol. Forecast. Soc. Chang. 124, 257–270 (2017).
29. Visinescu, L.L., Sidorova, A., Jones, M.C., Prybutok, V.R.: The influence of website dimensionality on customer experiences, perceptions and behavioral intentions: An exploration of 2D vs. 3D web design. Inf. Manag. 52, 1–17 (2015).
30. Novak, T.P., Hoffman, D.L., Yung, Y.-F.: Measuring the Customer Experience in Online Environments: A Structural Modeling Approach. Mark. Sci. 19, 22–42 (2000).
31. Piyathasanan, B., Mathies, C., Wetzels, M., Patterson, P.G., de Ruyter, K.: A Hierarchical Model of Virtual Experience and Its Influences on the Perceived Value and Loyalty of Customers. Int. J. Electron. Commer. 19, 126–158 (2015).
32. Shobeiri, S., Mazaheri, E., Laroche, M.: Creating the right customer experience online: The influence of culture. J. Mark. Commun. 24, 270–290 (2018).
33. Dacko, S.G.: Enabling smart retail settings via mobile augmented reality shopping apps. Technol. Forecast. Soc. Chang. 124, 243–256 (2017).
34. Lin, Z., Bennett, D.: Examining retail customer experience and the moderation effect

https://doi.org/10.30844/wi_2020_r5-hermes

of loyalty programmes. Int. J. Retail Distrib. Manag. 42, 929–947 (2014).
35. Deshwal, P.: Customer experience quality and demographic variables (age, gender, education level, and family income) in retail stores. Int. J. Retail Distrib. Manag. 44, 940–955 (2016).
36. Blázquez, M.: Fashion Shopping in Multichannel Retail: The Role of Technology in Enhancing the Customer Experience. Int. J. Electron. Commer. 18, 97–116 (2014).
37. Evanschitzky, H., Emrich, O., Sangtani, V., Ackfeldt, A.-L., Reynolds, K.E., Arnold, M.J.: Hedonic shopping motivations in collectivistic and individualistic consumer cultures. Int. J. Res. Mark. 31, 335–338 (2014).
38. Boyer, K.K., Hult, G.T.M.: Customer behavioral intentions for online purchases: An examination of fulfillment method and customer experience level. J. Oper. Manag. 24, 124–147 (2006).
39. Jain, R., Aagja, J., Bagdare, S.: Customer experience – a review and research agenda. J. Serv. Theory Pract. 27, 642–662 (2017).
40. Grewal, D., Levy, M., Kumar, V.: Customer Experience Management in Retailing: An Organizing Framework. J. Retail. 85, 1–14 (2009).
41. Hummel, D., Schacht, S., Maedche, A.: Determinants of multi-channel behavior: Exploring avenues for future research in the service industry. In: Proceedings of the International Conference on Information Systems (ICIS). pp. 1–12 (2016).
42. Riedl, R., Léger, P.-M.: Fundamentals of NeuroIS – Information Systems and the Brain. Springer Verlag, Berlin, Germany, et al. (2016).
43. Dimoka, A., Banker, R.D., Benbasat, I., Davis, F.D., Dennis, A.R., Gefen, D., Gupta, A., Ischebeck, A., Henning, P.H., Pavlou, P.A., Müller-Putz, G., Riedl, R., vom Brocke, J., Weber, B.: On the use of Neurophysiological Tools in IS Research: Developing a Research Agenda for NeuroIS. MIS Quarterley. 36, 679–702 (2012).
44. Riedl, R., Banker, R.D., Benbasat, I., Davis, F.D., Dennis, A.R., Dimoka, A., Gefen, D., Gupta, A., Ischebeck, A., Kenning, P., Müller-Putz, G., Pavlou, P.A., Straub, D.W., vom Brocke, J., Weber, B.: On the Foundations of NeuroIS: Reflections on the Gmunden Retreat 2009. Commun. Assoc. Inf. Syst. 27, 243–264 (2010).
45. Riedl, R.: Zum Erkenntnispotenzial der kognitiven Neurowissenschaften für die Wirtschaftsinformatik: Überlegungen anhand exemplarischer Anwendungen. NeuroPsychoEconomics. 4, 32–44 (2009).
46. vom Brocke, J., Hevner, A., Léger, P.-M., Walla, P., Riedl, R.: Advancing a NeuroIS Research Agenda with Four Areas of Societal Contributions. Eur. J. Inf. Syst. forthcoming, (2020).
47. Riedl, R., Fischer, T., Léger, P.-M., Davis, F.D.: A Decade of NeuroIS Research: Progress, Challenges, and Future Directions. Data Base Adv. Inf. Syst. in press.

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