

Understanding the Drivers of Online Atmospherics: A Conceptual Framework

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How to cite this article: Boney Bose, Divya James, Akhil M A (2024) Understanding the Drivers of Online Atmospherics: A Conceptual Framework. *Library Progress International*, 44(3), 19029-19038

ABSTRACT

The rapid growth of e-commerce and the increasing importance of online shopping experiences necessitate a better understanding of online atmospherics. This research paper presents a comprehensive study on the antecedents of online atmospherics, proposing a conceptual framework to analyze the factors that contribute to a positive online experience. The study divides online atmospherics factors into three main categories: Design Factors, Ambient Factors, and Virtual Agents. Design play a crucial role in shaping users' perceptions and influencing their purchasing decisions. Ambient Factors, create an immersive atmosphere that enhances the overall user experience. Virtual Agents, facilitate user interactions and provide personalized assistance. This research highlights the need for online retailers to holistically consider these factors to optimize their online presence, ultimately leading to improved customer satisfaction, increased user engagement, and higher sales. The proposed conceptual framework serves as a foundation for future empirical studies to further investigate the relationships between these factors and their impact on online atmospherics.

Keywords: Online Atmospherics, E-Commerce, Design Factors, Ambient Factors, Virtual Agents.

1. INTRODUCTION

The advent of the internet and the subsequent digital revolution has transformed the way people interact, communicate, and transact with businesses. The continuous advancement in technology has given rise to several forms of online commerce, such as digital commerce, e-commerce, social commerce, and m-commerce. These digital marketplaces have become integral to the global economy, as they provide a convenient and efficient way for consumers to purchase goods and services. The emergence of e-commerce, social commerce, and mobile commerce has had a major impact on the world economy. E-commerce sales are projected to grow by 10.4% in 2023, and by 2026, the market is expected to exceed \$8.1 trillion (Forbes, 2022). Additionally, social commerce revenue worldwide was valued at \$724 billion in 2022 and is predicted to surpass \$6 trillion by 2030 (Statista, 2022). This development emphasises the significance of understanding the factors, such as online atmospherics, that affect consumers' online shopping behaviour.

Online atmospherics refers to the design and presentation of a digital environment that influences consumer behavior (Dailey, 2004). It extends the concept of atmospherics, initially introduced by Kotler (1973) for physical retail spaces, to the digital realm, encompassing websites, mobile applications, and social media platforms (Eroglu, Machleit & Davis, 2001). Dimensions of online atmospherics include visual appeal, informativeness, ease of navigation, and social and interactive elements, which can affect consumer outcomes like

satisfaction, trust, and purchase intentions (Eroglu, Machleit & Davis, 2001; Kim & Lennon, 2013; Huang & Benyoucef, 2013; Manganari, Siomkos & Rigopoulou, 2012).

There is an urgent need to comprehend the antecedents of online atmospherics given the rapid expansion of digital commerce and the growing significance of online atmospherics in influencing consumer behaviour. Businesses can improve their digital commerce strategies and online presence by identifying the elements that make for a good online atmospheric experience. This conceptual research paper's objective is to develop a comprehensive framework for examining the antecedents of online atmospherics. By synthesizing existing research and identifying gaps in the literature, this study aims to advance the understanding of online atmospherics and provide valuable insights for businesses and researchers alike.

2. REVIEW OF LITERATURE

Both the retail and online industries have shown a keen interest in the topic of atmospherics and how they affect consumer behaviour. With a focus on online atmospherics, this literature analysis will trace the development of atmospheric definitions and dimensions.

Kotler (1974) introduced the concept of atmospherics in the *Journal of Retailing*, defining it as "the conscious designing of space to create certain buyer effects, specifically, the designing of buying environments to produce specific emotional effects in the buyer that enhance purchase probability" (p. 48). Kotler identified four sensory dimensions: sight, sound, scent, and touch; and further classified them into visual, aural, olfactory, and tactile dimensions (Kotler, 1974).

The concept of atmospherics was broadened by Donovan and Rossiter (1982) by include it as a component of store image. They emphasized the role of in-store variables, such as physical attributes, as antecedents of store atmosphere. Donovan et al. (1994) studied the impact of store-induced pleasure and arousal on spending behavior and time spent in-store, noting that dominance did not relate well to in-store behaviors.

Store environment was defined in three dimensions by Baker et al. (1994), atmosphere, social, and lighting. They emphasised the significance of environmental elements (visual, functional, and aesthetic), social factors (customer and sales personnel interactions), and ambient factors (temperature, lighting, music, and scent). Baker et al. (2002) reiterated the significance of these dimensions in store environments.

Shoppers' psychological reactions and facility-based environmental cues, or atmospherics, were the main topics of Berman and Evans' (1995) study. They categorized atmospherics into five dimensions: exterior of the store, general interior, layout and design variables, point-of-purchase and decoration variables, and human variables (employees, crowding, customer characteristics, and privacy). Turley and Milliman (2000) supported these findings in their study.

Researchers started examining atmospherics in online environments as e-commerce took off. According to Eroglu et al. (2001), virtual stores can be divided into high task-relevant environments (site descriptors that help customers achieve their buying goals) and low task-relevant environments (inconsequential site information). Dailey (2004) defined web atmospherics as the conscious designing of web environments to create positive effects in users, increasing favorable consumer responses such as revisiting and browsing.

Oh et al. (2008) identified two design factors that categorize web-based store atmosphere: storefront design (thematic and non-thematic types) and methods of information display (presenting merchandise and displaying information). A virtual shop component structure that includes virtual layout and design, virtual atmospherics, virtual theatrics, and virtual social presence was proposed by Vrechopoulos et al. (2004) and Manganari et al. (2009).

In the context of malls, Chebat et al. (2010) defined atmosphere as aesthetics and ambiance, with elements such as color, music, and crowding playing a crucial role in shoppers' perceptions and evaluations. They identified five dimensions of mall image: access, atmosphere, price/promotion, cross-category assortment, and within-category assortment, which predicted mall attitude, patronage, and word-of-mouth.

Floh and Madlberger (2013) examined the role of atmospheric cues in online impulse buying behavior. They classified atmospheric cues into three spheres: e-store content, e-store design, and e-store navigation. Wu et al. (2021) proposed three atmospheric categories in virtual contexts: pathfinding assistance, environment, and the manner of product presentation.

The evolution of atmospherics in retail and online environments has been examined in this literature review, with particular emphasis on online atmospherics. From the early emphasis on actual retail locations to the current investigation of virtual settings, the literature clearly demonstrates a trend. Understanding how atmospherics affect consumer behaviour and preferences is crucial given the continued expansion of e-commerce.

3. RESEARCH GAP

Although there is a growing body of literature on atmospherics, it is observed that the antecedents of online atmospherics are often scattered across different studies, making it challenging to develop a comprehensive understanding of the factors that contribute to effective online environments. Moreover, there is a disproportionate focus on retail store atmospherics, with fewer studies dedicated to investigating online atmospherics. As a result, the current understanding of the antecedents of online atmospherics remains fragmented and underdeveloped compared to its retail counterpart. Given this research gap, the primary research question this conceptual paper seeks to address is: "What are the antecedents of online atmospherics that contribute to the creation of a compelling online environment?" This research seeks to provide a thorough understanding of the elements influencing online atmospherics by combining the antecedents of online atmospherics from different studies and presenting them together in a unified framework. This will not only enhance the academic literature on online atmospherics but also offer valuable insights for businesses seeking to optimize their online presence and deliver an improved consumer experience in the digital space.

4. CONCEPTUAL RESEARCH MODEL & FINDINGS

This study aims to provide a comprehensive understanding of the antecedents of online atmospherics by categorizing them into three primary dimensions: Design Factors (Suitability of Use of Website), Ambient Factors (Sensory Aspects of Website), and Virtual Agents.

4.1. Design Factors

Design Factors focus on the aspects related to the website's usability and functionality, ensuring an optimal user experience.

4.1.1 Information Content

Information Content plays a critical role in the user experience and overall satisfaction with a website. High-quality information content not only provides relevant and valuable information but also fosters trust and credibility among users (Lee & Koubek, 2012). Various studies have identified the importance of Information Content in enhancing user satisfaction, engagement, and site loyalty (Richard & Chandra, 2005; Wu et al., 2021). A study by Parboteeah et al. (2009) revealed that users perceive websites with rich information content as more useful and enjoyable, ultimately leading to increased website visits and user satisfaction. Similarly, Eroglu et al. (2001) found that Information Content is a significant factor in creating a high task-relevant environment, which in turn influences online shopping behavior and goal attainment.

4.1.2 Ease of Navigation

A user-friendly and effective online experience is largely dependent on the design's ease of navigation. When users can seamlessly navigate through a website, they are more likely to spend time on it and engage with the content (Nielsen, 2000). Research has shown that improved navigation increases user satisfaction, site loyalty, and the likelihood of revisiting the website (Flavián et al., 2006; Agarwal & Venkatesh, 2002). Palmer (2002) found that user perceptions and online behaviour are influenced by a website's navigability, which has a substantial impact on the site's overall quality. Similar to this, Chung et al. (2010) showed that user cognitive absorption and intention to shop online are positively influenced by well-designed website navigation. Additionally, a study by Huang in 2003 found that a user-friendly navigation system increases customer trust and loyalty.

4.1.3 Links

Links are an essential design factor that contributes to a website's overall usability and user experience. They help users navigate through the site and access relevant information effectively (Nielsen, 2000). Effective use of links has been shown to enhance user satisfaction, foster trust, and promote online engagement (Kim & Moon, 1998; Wang et al., 2003). Research has demonstrated the significance of well-designed, relevant, and descriptive links on websites (Rosen & Purinton, 2004). These elements not only facilitate ease of navigation but also contribute to a positive user experience. A study by Lin et al. (2011) revealed that websites with better linking structures experienced higher user satisfaction, trust, and intention to revisit. Moreover, Gommans et al. (2001)

found that effectively placed and well-organized links led to increased user engagement and improved conversion rates.

4.1.4 Website Layout

Website layout is a critical design factor that influences online atmospherics and user experience. A well-structured, visually appealing layout enhances usability, facilitates navigation, and improves overall satisfaction (Robins & Holmes, 2008; Cyr et al., 2006). Studies have shown that an aesthetically pleasing layout positively impacts user perceptions of trustworthiness, credibility, and professionalism (Karimov et al., 2011; Laja, 2012). Research by Lindgaard et al. (2006) indicated that users form an impression of a website's layout within 50 milliseconds, and these initial impressions significantly affect their subsequent behavior. In another study, Nielson and Tahir (2002) emphasized the importance of a well-designed layout for creating a favorable user experience and encouraging users to return to the site. Furthermore, Di Nardo et al. (2010) found that a visually appealing and user-friendly layout contributes to increased user engagement and satisfaction, ultimately leading to higher conversion rates.

4.2. Ambient Factors

Ambient Factors encompass the sensory elements of the website that contribute to its aesthetic appeal and overall atmosphere.

4.2.1 Colours

Colours, as an ambient factor, play a significant role in shaping online atmospherics and user experience. Research has demonstrated that the appropriate use of colours on a website can evoke emotional responses, influence user perceptions, and increase engagement (Labrecque & Milne, 2013; Madden et al., 2000). A study by Cyr et al. (2010) found that colour appeal significantly impacted website trustworthiness, satisfaction, and loyalty. In another study, Gorn et al. (2004) discovered that colour preferences directly influenced consumers' willingness to explore and engage with online content. Colour schemes and combinations can also impact the perceived usability and aesthetic appeal of a website (Moshagen & Thielsch, 2010). According to Pelet and Papadopoulou (2012), appropriate colour selection contributes to better readability, faster information processing, and improved decision-making.

4.2.2 Images

Images, as an ambient factor, contribute significantly to online atmospherics and user experience. High-quality visuals can enhance website aesthetics, influence user perceptions, and increase engagement (Kim & Lennon, 2013; Seock & Bailey, 2008). Research by Eroglu et al. (2003) found that visually appealing images on a website could positively affect user emotions, leading to higher consumer satisfaction and increased likelihood of purchase. Furthermore, relevant and engaging imagery can improve product understanding and facilitate decision-making (Park et al., 2005). Lin and Chen (2012) identified the importance of image type, size, and placement on a website, emphasizing that these factors contribute to the overall visual appeal and effectiveness of online atmospherics. High-quality images can also increase the perceived credibility and trustworthiness of a website (Robins & Holmes, 2008).

4.2.3 Music

Music, as an ambient factor in online atmospherics, can significantly impact user experience and emotions. It has the potential to create a unique atmosphere and reinforce brand identity (Knoferle et al., 2012; Minsky & Fahey, 2017). Research has shown that background music on a website can influence consumer behavior and emotional responses (Eroglu et al., 2005). Appropriate music selection can enhance user engagement, stimulate positive emotions, and even increase the time spent on a website (Park et al., 2014). However, the effectiveness of music in online atmospherics depends on several factors, such as music style, tempo, and volume (Huang & Yen, 2010). In some cases, music may also be perceived as a distraction, leading to negative user experiences (Yalch & Spangenberg, 2000).

4.2.4 Animation & Graphics

Animation and graphics, as ambient factors in online atmospherics, play a vital role in enhancing user experience and facilitating communication of the brand's message. High-quality visuals can capture users' attention, increase website memorability, and influence perceptions of a brand's image (Chen & Duh, 2007; Cyr et al., 2009). Research indicates that the appropriate use of animation and graphics on a website can improve user satisfaction, encourage longer browsing times, and increase the likelihood of purchases (Dailey, 2004; Kim & Lennon, 2008).

4.3. Virtual Agents

Virtual Agents play a crucial role in establishing trust and facilitating user interactions on the website.

4.3.1 Security of Transactions

Security of transactions is a crucial antecedent of online atmospherics under the category of virtual agents. Ensuring that customers feel safe while making transactions on a website is imperative for building trust and fostering customer loyalty (Liao et al., 2004; Kim et al., 2008). Research has demonstrated that customers are more likely to engage in online transactions when they perceive that their personal and financial information is secure (Flavián et al., 2006; Gefen et al., 2003). Implementing secure transaction systems, displaying security badges, and using encryption technologies are some of the ways to build trust and encourage online transactions (Kim & Benbasat, 2009; Mauldin & Arunachalam, 2002).

4.3.2 Contact Section

The contact section, an antecedent of online atmospherics under the category of virtual agents, is essential for facilitating communication between customers and businesses. A comprehensive contact section can significantly influence customers' trust, satisfaction, and the likelihood of making a purchase (Wang et al., 2007; Cyr et al., 2007). Research indicates that a well-designed contact section should include various contact methods, such as email, phone, and live chat, to cater to different customer preferences (Zeithaml et al., 2002; Park & Kim, 2003). Furthermore, clear and easily accessible contact information has been found to improve website credibility and increase customer trust (Lee & Kwon, 2011).

4.3.3 Search Option & FAQ

Search options and FAQs are vital components of online atmospherics under the category of virtual agents, as they can significantly influence user experience, customer satisfaction, and the overall success of e-commerce websites (Szymanski & Hise, 2000; Park et al., 2004). A robust search function can enhance website usability, save users' time, and increase the likelihood of a purchase (Lee & Kwon, 2011; Rose et al., 2012). By providing an effective search tool, businesses can cater to consumers' specific needs and preferences, ultimately leading to increased conversion rates (Jansen & Rieh, 2010). FAQs, on the other hand, serve as a resource for addressing common customer inquiries and concerns. Research has shown that a well-organized and comprehensive FAQ section can reduce customer uncertainty, improve trust, and contribute to a positive online shopping experience (Bart et al., 2005; Lin & Lu, 2010).

5. THEORETICAL CONTRIBUTIONS

The research paper on "A Study on the Antecedents of Online Atmospherics: A Conceptual Framework" offers significant theoretical contributions to the growing field of online marketing and website optimization. By identifying and classifying the antecedents of online atmospherics into three distinct categories: Design Factors, Ambient Factors, and Virtual Agents, this paper provides a comprehensive and structured approach to understanding the elements that contribute to the overall user experience on a website. This conceptual framework serves as a foundation for further investigation and analysis in the realm of online atmospherics. Firstly, by examining Design Factors such as Information Content, Ease of Navigation, Links, and Website Layout, this paper sheds light on the importance of structuring website content and interface in a user-friendly manner. This study reinforces the idea that a well-designed website can enhance users' experience and facilitate their decision-making process. The inclusion of these elements in the framework highlights the need for future research to focus on optimizing design factors to improve user engagement and satisfaction. Secondly, the Ambient Factors, which encompass sensory aspects of a website, including Colours, Image, Music, Animation, and Graphics, are essential in creating an immersive and aesthetically pleasing online environment. By identifying these factors as critical components of online atmospherics, the paper emphasizes the role of visual and auditory stimuli in shaping users' perceptions and experiences. This recognition serves as a stepping stone for further studies on the impact of sensory elements on user behavior and emotional responses. Lastly, the paper's focus on Virtual Agents, specifically Security of Transactions, Contact Section, Search Option, and FAQ, underscores the importance of trust and convenience in online environments. By including these factors in the conceptual framework, this study paves the way for future research to investigate the role of virtual agents in enhancing users' sense of security and confidence while navigating websites.



Figure 1 Conceptual Model

In summary, this research paper makes a significant theoretical contribution to the understanding of online atmospherics by presenting a comprehensive and structured framework that encompasses Design Factors, Ambient Factors, and Virtual Agents. This framework serves as a foundation for further exploration in the field and encourages researchers to examine the interplay of these antecedents to optimize website design and user experience.

6. MANAGERIAL CONTRIBUTIONS

The conceptual framework developed in this research paper offers valuable insights for managers and website designers seeking to improve their website's overall user experience and effectiveness. By understanding the antecedents of online atmospherics, businesses can make informed decisions on how to optimize their websites to better meet user needs and preferences, ultimately leading to increased user satisfaction and engagement. The identification of Design Factors emphasizes the importance of user-friendly website design, which can directly impact user engagement and satisfaction. Managers should invest in developing clear and accessible website layouts, with easy navigation and relevant information content. This focus on design factors can lead to a more effective website, resulting in better user experiences and, ultimately, higher conversion rates. The inclusion of Ambient Factors highlights the role of sensory elements in shaping users' online experiences. Managers should pay attention to the visual and auditory aspects of their websites to create an aesthetically pleasing and immersive environment. By carefully selecting colors, images, music, animations, and graphics, businesses can stimulate positive emotions, enhance user engagement, and encourage users to explore the website further. Finally, the emphasis on Virtual Agents in the framework indicates the critical role trust and convenience play in online transactions. Managers should prioritize security measures and provide transparent and easily accessible contact information, search options, and FAQs. By doing so, businesses can foster trust and confidence in their users, ultimately leading to increased user retention and loyalty. In conclusion, the managerial contributions of this research paper are significant, as they offer practical guidance for businesses to improve their website's effectiveness by focusing on Design Factors, Ambient Factors, and Virtual Agents. By understanding and implementing the elements that contribute to positive online atmospherics, businesses can create a more engaging and satisfying user experience. This enhanced user experience can lead to increased user engagement, higher

conversion rates, and ultimately, greater success in the online marketplace. Furthermore, this conceptual framework can serve as a diagnostic tool for managers to evaluate their current website design and identify areas for improvement. By regularly assessing their website against these antecedents, businesses can ensure that they are meeting user expectations and maintaining a competitive edge in the digital landscape. Moreover, the insights derived from this study can be used by managers to inform training and development programs for website designers and developers. By incorporating these antecedents into the curriculum, businesses can cultivate a workforce that is well-equipped to create and maintain user-friendly, engaging, and secure websites. In essence, the managerial contributions of this research paper provide valuable guidance for businesses in optimizing their websites and fostering a positive online atmosphere. By implementing the antecedents identified in this conceptual framework, companies can enhance user experience, drive engagement, and ultimately achieve greater success in today's competitive digital marketplace.

7. FUTURE RESEARCH DIRECTIONS

The findings of this study provide a comprehensive understanding of the various antecedents of online atmospherics, including design factors, ambient factors, and virtual agents. By including a wide range of variables that affect the online buying experience, this study adds to the body of knowledge already available on online atmospherics. The results highlight how crucial it is to develop user-friendly, aesthetically pleasing, and secure online environments in order to generate pleasant consumer experiences and promote online shopping behaviour. Future studies should examine the relative significance of these antecedents in various businesses and look at potential cultural variations in how people perceive and react to online atmospherics. Additionally, future studies could examine the role of emerging technologies, such as virtual and augmented reality, in shaping online atmospherics and their influence on customer behavior. By continuing to explore the dynamic field of online atmospherics, researchers and practitioners alike can better understand the evolving landscape of e-commerce and optimize online shopping experiences for consumers.

REFERENCES

- Agarwal, R., & Venkatesh, V. (2002). Assessing a firm's web presence: A heuristic evaluation procedure for the measurement of usability. *Information Systems Research*, 13(2), 168-186.
- Baker, J., Grewal, D., & Parasuraman, A. (1994). The influence of store environment on quality inferences and store image. *Journal of the Academy of Marketing Science*, 22(4), 328-339.
- Baker, J., Parasuraman, A., Grewal, D., & Voss, G. B. (2002). The influence of multiple store environment cues on perceived merchandise value and patronage intentions. *Journal of Marketing*, 66(2), 120-141.
- Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study. *Journal of Marketing*, 69(4), 133-152.
- Berman, B., & Evans, J. R. (1995). *Retail management: A strategic approach*. Prentice Hall.
- Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital marketing*. Pearson.
- Chebat, J. C., Sirgy, M. J., & St-James, V. (2010). Upscale image transfer from malls to stores: A self-image congruence explanation. *Journal of Business Research*, 63(12), 1288-1296.
- Chen, Q., & Duh, H. B. L. (2007). Web atmospheric cues and users' perception. In *International Conference on Human-Computer Interaction* (pp. 640-649). Springer, Berlin, Heidelberg.
- Chung, H., Rainer, R. K., & Lewis, B. R. (2010). The impact of information technology infrastructure flexibility on strategic alignment and applications implementation. *Communications of the Association for Information Systems*, 27(1), 1-22.
- Cyr, D., Head, M., & Ivanov, A. (2006). Design aesthetics leading to m-loyalty in mobile commerce. *Information & Management*, 43(8), 950-963.
- Cyr, D., Head, M., & Ivanov, A. (2009). Perceived interactivity leading to e-loyalty: Development of a model for cognitive-affective user responses. *International Journal of Human-Computer Studies*, 67(10), 850-869.
- Cyr, D., Head, M., & Larios, H. (2010). Colour appeal in website design within and across cultures: A multi-method evaluation. *International Journal of Human-Computer Studies*, 68(1-2), 1-21.
- Dailey, L. (2004). Navigational web atmospherics: Explaining the influence of restrictive navigation cues. *Journal of Business Research*, 57(7), 795-803.
- Dholakia, R. R., & Dholakia, N. (2021). Mobile commerce: A new frontier in business. In *Mobile Commerce* (pp.

3-16). Springer.

Di Nardo, M., Di Nardo, P., & Gaudioso, E. (2010). The role of aesthetics in Web design for usable and enjoyable e-commerce. *Electronic Commerce Research*, 10(4), 439-465.

Donovan, R. J., & Rossiter, J. R. (1982). Store atmosphere: An environmental psychology approach. *Journal of Retailing*, 58(1), 34-57.

Donovan, R. J., Rossiter, J. R., Marcoolyn, G., & Nesdale, A. (1994). Store atmosphere and purchasing behavior. *Journal of Retailing*, 70(3), 283-294.

Eroglu, S. A., Machleit, K. A., & Chebat, J. C. (2005). The interaction of retail density and music tempo: Effects on shopper responses. *Psychology & Marketing*, 22(7), 577-589.

Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research*, 54(2), 177-184.

Eroglu, S. A., Machleit, K. A., & Davis, L. M. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology & Marketing*, 20(2), 139-150.

Flavián, C., Guinalíu, M., & Gurrea, R. (2006). The role played by perceived usability, satisfaction and consumer trust on website loyalty. *Information & Management*, 43(1), 1-14.

Floh, A., & Madlberger, M. (2013). The role of atmospheric cues in online impulse-buying behavior. *Electronic Commerce Research and Applications*, 12(6), 425-439.

Forbes. (2022). E-commerce sales are expected to grow 10.4% in 2023. <https://www.forbes.com/>

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51-90.

Gommans, M., Krishnan, K. S., & Scheffold, K. B. (2001). From brand loyalty to e-loyalty: A conceptual framework. *Journal of Economic and Social Research*, 3(1), 43-58.

Gorn, G. J., Chattopadhyay, A., Sengupta, J., & Tripathi, S. (2004). Waiting for the web: How screen color affects time perception. *Journal of Marketing Research*, 41(2), 215-225.

Hajli, M. N. (2015). Social commerce constructs and consumer's intention to buy. *International Journal of Information Management*, 35(2), 183-191.

Huang, L. (2003). See how they read: An eye-tracking study of Chinese users' reading behavior on web pages. *ACM SIGCHI Bulletin*, 35(1), 26-30.

Huang, L. Y., & Yen, D. C. (2010). Factors influencing user behavior in online games: A commitment-trust theory perspective. *Computers in Human Behavior*, 26(6), 1667-1673.

Huang, Z., & Benyoucef, M. (2013). From e-commerce to social commerce: A close look at design features. *Electronic Commerce Research and Applications*, 12(4), 246-259.

Jansen, B. J., & Rieh, S. Y. (2010). The seventeen theoretical constructs of information searching and information retrieval. *Journal of the American Society for Information Science and Technology*, 61(8), 1517-1534.

Karimov, F. P., Brengman, M., & Van Hove, L. (2011). The effect of website design dimensions on initial trust: A synthesis of the empirical literature. *Journal of Electronic Commerce Research*, 12(4), 272-301.

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. *Decision Support Systems*, 44(2), 544-564.

Kim, D., & Benbasat, I. (2009). Trust-assuring arguments in B2C e-commerce: Impact of content, source, and price on trust. *Journal of Management Information Systems*, 26(3), 175-206.

Kim, H. S., & Lennon, S. J. (2013). Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention: Based on the stimulus-organism-response model. *Journal of Research in Interactive Marketing*, 7(1), 33-56.

Kim, J., & Moon, J. Y. (1998). Designing towards emotional usability in customer interfaces: Trustworthiness of cyber-banking system interfaces. *Interacting with Computers*, 10(1), 1-29.

Kim, M. J., & Lennon, S. J. (2008). The effects of visual and verbal information on attitudes and purchase intentions in internet shopping. *Psychology & Marketing*, 25(2), 146-178.

Kim, M., & Lennon, S. J. (2013). Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention: Based on the stimulus-organism-response model. *Journal of Research in Interactive Marketing*, 7(1), 33-56.

Knoferle, K. M., Spangenberg, E. R., Herrmann, A., & Landwehr, J. R. (2012). It is all in the mix: The interactive effect of music tempo and mode on in-store sales. *Marketing Letters*, 23(1), 325-337.

- Kotler, P. (1973). Atmospherics as a marketing tool. *Journal of Retailing*, 49(4), 48-64.
- Labrecque, L. I., & Milne, G. R. (2013). To be or not to be different: Exploration of norms and benefits of color differentiation in the marketplace. *Marketing Letters*, 24(2), 165-176
- Laja, P. (2012). The effect of visual appearance on conversions. *ConversionXL*. Retrieved from <https://cxl.com/blog/the-effect-of-visual-appearance-on-conversions/>
- Laudon, K. C., & Traver, C. G. (2021). *E-commerce 2021: Business, technology, and society*. Pearson.
- Lee, S., & Koubek, R. J. (2012). The effects of usability and web design attributes on user preference for e-commerce web sites. *Computers in Industry*, 63(4), 380-389.
- Lee, S., & Kwon, O. (2011). The effects of website atmospherics on e-trust in an e-tailing environment. *International Journal of Retail & Distribution Management*, 39(8), 610-627.
- Liao, Z., & Cheung, M. T. (2002). Internet-based e-shopping and consumer attitudes: An empirical study. *Information & Management*, 38(5), 299-306.
- Lin, H. F., & Lu, H. P. (2010). The influence of corporate image, relationship marketing, and trust on purchase intention: The moderating effects of word-of-mouth. *Tourism Review*, 65(3), 16-34.
- Lin, I. Y., & Chen, Y. C. (2012). The influence of website environment on brand personality. *Internet Research*, 22(4), 369-392.
- Lin, J. C. C., Liang, H. Y., & Wu, M. C. (2011). The effects of electronic commerce environments on online shoppers: Linking the antecedents and consequences. *African Journal of Business Management*, 5(10), 3854-3864.
- Lindgaard, G., Fernandes, G., Dudek, C., & Brown, J. (2006). Attention web designers: You have 50 milliseconds to make a good first impression! *Behaviour & Information Technology*, 25(2), 115-126.
- Madden, T. J., Hewett, K., & Roth, M. S. (2000). Managing images in different cultures: A cross-national study of color meanings and preferences. *Journal of International Marketing*, 8(4), 90-107.
- Manganari, E. E., Siomkos, G. J., & Rigopoulou, I. D. (2012). Virtual-store layout effects on consumer behavior: Applying an environmental psychology approach in the online travel services domain. *Journal of Enterprise Information Management*, 25(6), 531-546.
- Manganari, E. E., Siomkos, G. J., Rigopoulou, I. D., & Vrechopoulos, A. P. (2009). Virtual store layout effects on consumer behavior: Applying an environmental psychology approach in the online travel industry. *European Journal of Marketing*, 43(5/6), 623-639.
- Mauldin, E., & Arunachalam, V. (2002). An experimental examination of alternative forms of web assurance for business-to-consumer e-commerce. *Journal of Information Systems*, 16(1), 33-54.
- Minsky, L., & Fahey, S. (2017). The role of website design in establishing an online retail brand. *Journal of Brand Management*, 24(4), 319-334.
- Moshagen, M., & Thielsch, M. T. (2010). Facets of visual aesthetics. *International Journal of Human-Computer Studies*, 68(10), 689-709.
- Nielsen, J. (2000). *Designing web usability: The practice of simplicity*. Indianapolis, IN: New Riders Publishing.
- Nielson, J., & Tahir, M. (2002). *Homepage usability: 50 websites deconstructed*. Indianapolis, IN: New Riders Publishing.
- Oh, H., Fiore, A. M., & Jeoung, M. (2008). Measuring experience economy concepts: Tourism applications. *Journal of Travel Research*, 46(2), 119-132.
- Palmer, J. W. (2002). Web site usability, design, and performance metrics. *Information Systems Research*, 13(2), 151-167.
- Parboteeah, D. V., Valacich, J. S., & Wells, J. D. (2009). The influence of website characteristics on a consumer's urge to buy impulsively. *Information Systems Research*, 20(1), 60-78.
- Park, C. H., Kim, Y. G., & Fesenmaier, D. R. (2004). Identifying the dimensions of the experience construct. *Journal of Travel & Tourism Marketing*, 17(4), 3-18.
- Park, D. H., Lee, J., & Han, I. (2005). The effect of on-line consumer reviews on consumer purchasing intention: The moderating role of involvement. *International Journal of Electronic Commerce*, 11(4), 125-148.
- Park, J., Lennon, S. J., & Stoel, L. (2014). On-line product presentation: Effects on mood, perceived risk, and purchase intention. *Psychology & Marketing*, 22(9), 695-719.
- Park, Y. A., & Kim, J. K. (2003). Identifying key factors affecting consumer purchase behavior in an online shopping context. *International Journal of Retail & Distribution Management*, 31(1), 16-29.

- Pelet, J. É., & Papadopoulou, P. (2012). The effect of colors of e-commerce websites on consumer mood, memorization and buying intention. *European Journal of Information Systems*, 21(4), 438-467.
- Richard, M. O., & Chandra, R. (2005). A model of consumer web navigational behavior: Conceptual development and application. *Journal of Business Research*, 58(8), 1019-1029.
- Robins, D., & Holmes, J. (2008). Aesthetics and credibility in web site design. *Information Processing & Management*, 44(1), 386-399.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online customer experience in e-retailing: An empirical model of antecedents and outcomes. *Journal of Retailing*, 88(2), 308-322.
- Rosen, D. E., & Purinton, E. (2004). Website design: Viewing the web as a cognitive landscape. *Journal of Business Research*, 57(7), 787-794.
- Seock, Y. K., & Bailey, L. R. (2008). The impact of retail website dimensions on online apparel shopping behaviour: A study of young adult consumers. *International Journal of Consumer Studies*, 32(6), 619-627.
- Statista. (2022). Worldwide revenue of social commerce is valued at 724 billion U.S. dollars in 2022. <https://www.statista.com/>
- Szymanski, D. M., & Hise, R. T. (2000). e-Satisfaction: An initial examination. *Journal of Retailing*, 76(3), 309-322.
- Turley, L. W., & Milliman, R. E. (2000). Atmospheric effects on shopping behavior: A review of the experimental evidence.
- Wang, Y. D., & Emurian, H. H. (2005). An overview of online trust: Concepts, elements, and implications. *Computers in Human Behavior*, 21(1), 105-125.
- Wang, Y. D., Emurian, H. H., & Wei, C. P. (2003). Effects of hyperlink preference and text structure on searching and browsing performance on the World Wide Web. *International Journal of Human-Computer Interaction*, 15(3), 389-411.
- Wu, J., Chen, Y., & Chung, Y. S. (2010). Trust factors influencing virtual community members: A study of transaction communities. *Journal of Business Research*, 63(9-10), 1025-1032.
- Yalch, R., & Spangenberg, E. (2000). The effects of music in a retail setting on real and perceived shopping times. *Journal of Business Research*, 49(2), 139-147.
- Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30(4), 362-375.
- Zhang, P., & Von Dran, G. M. (2000). Satisfiers and dissatisfiers: A two-factor model for website design and evaluation. *Journal of the American Society for Information Science*, 51(14), 1253-1268.