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Opinion Paper

Setting the future of digital and social media marketing research: Perspectives and research propositions

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ABSTRACT

The use of the internet and social media have changed consumer behavior and the ways in which companies conduct their business. Social and digital marketing offers significant opportunities to organizations through lower costs, improved brand awareness and increased sales. However, significant challenges exist from negative electronic word-of-mouth as well as intrusive and irritating online brand presence. This article brings together the collective insight from several leading experts on issues relating to digital and social media marketing. The experts' perspectives offer a detailed narrative on key aspects of this important topic as well as perspectives on more specific issues including artificial intelligence, augmented reality marketing, digital content management, mobile marketing and advertising, B2B marketing, electronic word of mouth and ethical issues therein. This research offers a significant and timely contribution to both researchers and practitioners in the form of challenges and opportunities where we highlight the limitations within the current research, outline the research gaps and develop the questions and propositions that can help advance knowledge within the domain of digital and social marketing.

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1. Introduction

Internet, social media, mobile apps, and other digital communications technologies have become part of everyday life for billions of people around the world. According to recent statistics for January 2020, 4.54 billion people are active internet users, encompassing 59 % of the global population (Statista, 2020a). Social media usage has become an integral element to the lives of many people across the world. In 2019 2.95 billion people were active social media users worldwide. This is forecast to increase to almost 3.43 billion by 2023 (Statistica, 2020b). Digital and social media marketing allows companies to achieve their marketing objectives at relatively low cost (Ajina, 2019). Facebook pages have more than 50 million registered businesses and over 88 % of businesses use Twitter for their marketing purposes (Lister, 2017). Digital and social media technologies and applications have also been widely used for creating awareness of public services and political promotions (Grover et al., 2019; Hossain et al., 2018; Kapoor and Dwivedi, 2015; Shareef et al., 2016). People spend an increasing amount of time online searching for information, on products and services communicating with other consumers about their experiences and engaging with companies. Organisations have responded to this change in consumer behavior by making digital and social media an essential and integral component of their business marketing plans (Stephen, 2016).

Organisations can significantly benefit from making social media marketing an integral element of their overall business strategy (Abed et al., 2015a, Abed et al., 2015b, Abed et al., 2016; Dwivedi et al., 2015a; Felix et al., 2017; Kapoor et al., 2016; Plume et al., 2016; Rathore et al., 2016; Shareef et al., 2018; Shareef et al., 2019a; Shareef, Mukerji, Dwivedi, Rana, & Islam, 2019b; Shiau et al., 2017, 2018; Singh et al., 2017; Yang et al., 2017). Social media enables companies to connect with their customers, improve awareness of their brands, influence consumer's attitudes, receive feedback, help to improve current products and services and increase sales (Algharabat et al., 2018; Kapoor et al., 2018; Kaur et al., 2018, Lal et al., 2020). The decline of traditional communication channels and societal reliance on bricks-and-mortar operations, has necessitated that businesses seek best practices use of digital and social media marketing strategies to retain and increase market share (Naylor et al., 2012; Schultz & Peltier, 2013). Significant challenges exist for organisations developing their social media strategy and plans within a new reality of increased power in the hands of consumers and greater awareness of cultural and societal norms (Kietzmann et al., 2011). Nowadays, consumer complaints can be instantly communicated to millions of people (negative electronic word-of-mouth) all of which can have negative consequences for the business concerned (Ismagilova et al., 2017, 2020b; Javornik et al., 2020).

This study brings together the collective insights from several leading experts to discuss the significant opportunities, challenges and future research agenda relating to key aspects of digital and social media marketing. The insights listed in this paper cover a wide spectrum of digital and social media marketing topics, reflecting the views from each of the invited experts. The research offers significant and timely contribution to the literature offering key insight to researchers in the advancement of knowledge within this marketing domain. This topic is positioned as a timely addition to the literature as the digital and social media marketing industry matures and takes its position as an integral and critical component of an organisations marketing strategy.

The remaining sections of this article are organized as follows. Section 2 presents the overview of current debates and overall themes within the current literature. Section 3 presents multiple experts' perspectives on digital and social media marketing. Section 4 concludes the paper discussing limitations and directions for future research.

2. An analysis of recent literature

This section synthesizes the existing literature focusing on digital and social media marketing and discusses each theme listed in Table 1 from a review of the extant literature. Studies included in this section were identified using the Scopus database by using the following combination of keywords "Social media", "digital marketing" and "social media marketing". This approach is similar to the one used by existing review papers on a number of key topics (e.g. Dwivedi et al., 2017, Dwivedi et al., 2019a, Dwivedi et al., 2019b, Dwivedi et al., 2019c; Marriott et al., 2017; Shareef et al., 2015). Based on the classification provided by Kannan and Li (2017) the overall topics were divided into four themes: environment, company, outcomes, and marketing strategies.

2.1. Environment

The introduction and advancement of digital technologies has significantly influenced the environment in which companies operate. The studies in this theme focus on the changes of consumer behavior and customer interactions through online media and eWOM communications.

Consumer behavior has significantly changed due to technological innovation and ubiquitous adoption of hand-held devices, directly contributing to how we interact and use social commerce to make decisions and shop online. The increasing use of digital marketing and social media has positively influenced consumer attitudes toward online shopping with increasing market share for eCommerce centric organisations (Abou-Elgheit, 2018; Alam et al., 2019; Komodromos et al. 2018). The increasing number of shopping channels has also influenced consumer behavior (Hossain et al., 2019, 2020), creating a more diffused consumer shopping experience. Mobile channels have become the norm and are now embedded within consumers daily lives via the use of mobile tools, shopping apps, location-based services and mobile wallets - all impacting the consumer experience (Shukla and Nigam, 2018).

As in traditional marketing, it is important to identify the needs of users as well as their perceptions and attitudes to the various forms of messaging and communications. Kang (2018) proposed that organisations seek to identify the needs of members of online communities, create special offerings that accommodate those needs and effectively communicate with members to increase the satisfaction levels of online communities. The study by Bae and Zamrudi (2018) analyzed social fulfilment aspects of social media marketing, concluding that these

Table 1
Themes in digital and social media marketing research - adapted from Kannan et al., (2017).

Themes	Citations
Environment	Abou-Elgheit, 2018; Alam et al., 2019; Algharabat et al., 2018; Arora et al., 2019; Bae and Zamrudi, 2018; Gaber et al. 2019; Gironda and Korgaonkar, 2018; Islam et al., 2018; Ismagilova et al., 2020c ; Kang, 2018; Kim and Jang, 2019; Komodromos et al., 2018; Lin et al., 2018; Liu et al., 2018; Mandal, 2019; Mazzucchelli et al., 2018; Perez Curiel & Luque Ortiz, 2018; Seo & Park, 2018.
Marketing strategies	Ang et al., 2018; Chen & Lee, 2018; Hutchins and Rodriguez, 2018; Hwang et al., 2018; Kang & Park, 2018; Kusumasondjaja, 2018; Lee et al., 2018; Parsons & Lepkowska-White, 2018; Tafesse & Wien, 2018; Teo, 2019.
Company	Ballestar et al., 2019; Canovi & Pucciarelli, 2019; Gil-González et al., 2018; Iankova et al., 2019; Matikiti et al., 2018; Miklosik et al., 2019; Petit et al., 2019; Ritz et al., 2019; Roumieh et al., 2018; Tous et al., 2018; Vermeer et al., 2019.
Outcomes	Ahmed et al., 2019; Alansari et al., 2018; Aswani et al. (2018); Hanaysha, 2018; Ibrahim & Aljarah, 2018; Mishra, 2019; Morra et al., 2018; Shanahan et al., 2019; Smith, 2018; Stojanovic et al., 2018; Syrdal & Briggs, 2018; Tarnovskaya & Biedenbach, 2018; Veseli-Kurtishi, 2018;Wong et al., 2018.

characteristics were perceived to be useful in satisfying the motivations of consumers. The study assessed the motivations of belief, community participation and psychological factors, positing these as significant motivators of preceptive social media marketing and relevance for consumers. Consumer attitudes towards social media can in turn influence attitudes towards the brand. The research undertaken in Gaber et al. (2019) investigated consumer experiences using Instagram advertising, concluding that attitudes are influenced by consumer perception of content usefulness, entertainment, credibility and lack of irritation from the Instagram advertisement itself.

The emerging trend of targeted personal advertising has led to an increase in privacy concerns from consumers. Gironda et al. (2018) found that invasiveness, privacy control, perceived usefulness and consumer innovativeness, directly influenced consumer behavior intention relating to privacy concerns. Companies should be sensitive to privacy and the concerns of consumers as they develop their advertising strategies and build long-term customer relationships (Mandal, 2019).

While many studies within the literature rely on consumers from developed countries, the research by Abou-Elgheit (2018) emphasized the importance of understanding changing consumer behavior from a wider context. The study conducted research on social media marketing within Egypt, highlighting the importance of cognition, emotion, experience and personality aspects that can influence the consumer decision making process and trust toward online vendors. The author argues that different demographic, cultural, geographic and behavioral consumer segments should be considered in companies social media marketing activities.

Consumer voices have become more powerful due to the advancement of social media and be heard by many people. Researchers have focused on consumer engagement, underlying characteristics, motivations and impact of eWOM communications, where factors such as: brand engagement (Algharabat et al., 2018), brand image (Seo and Park, 2018), self-brand image congruity (Islam et al., 2018) have influenced consumer behavior. Consumers personal characteristics and psychological drivers in the form of self-esteem, life satisfaction, narcissism and need to belong, seem to play an important role in consumers sharing intention on social media platforms (Kim and Jang 2019).

eWOM communication can have a significant effect on information adoption, consumer attitude, purchase intention, brand loyalty, and trust (Filieri & McLeay, 2014; Ismagilova et al., 2020a, Ismagilova et al., 2020c). The study by Mazzucchelli et al. (2018) collected and analyzed survey data from 277 millennials and found that peer recommendations significantly affect customer trust and brand loyalty intention. Liu et al. (2018) concluded that expressing subjectivity within online reviews can increase purchase intention among consumers. eWOM communications can yield significant benefits to organisations but also present challenges. Negative eWOM communications can lead to dire consequences for companies resulting in damaged reputation, negative consumer attitudes and resulting decrease in sales. Consumers generally respond positively to attempts by organisations to promptly reply to negative social media postings where the replies are addressed individually rather than generic postings, thereby preserving brand reputation and trust (Lappeman et al. 2018).

The social media literature suggests that online opinion leaders play important role in the promotion of products and services, highlighting the criticality of selecting the right influencers (Lin et al., 2018; Perez Curiel & Luque Ortiz, 2018). Opinion leaders can be experts, celebrities, micro-celebrities, micro-influencers, early adopters, market mavens and enthusiasts. The study by Lin et al. (2018) suggests that opinion leaders should be used to promote the hedonic and utilitarian value of products and services over different online forums. The research proposed five important steps in the process of utilizing influencers for promotion: 1) planning where the setting of objectives for the campaign is developed and the role of online opinion leaders is defined; 2) recognition where identifying influential and relevant online opinion leaders is defined; 3) alignment where the organisation matches online opinion leaders and online forums with the products or services promoted; 4) motivation where the organisation identifies the reward for online opinion leaders in a way that aligns with their social role; 5) coordination - which involves the negotiating, monitoring, and support for the opinion leaders).

2.2. Marketing strategies

Companies use numerous social media platforms for social media marketing, such as Facebook, Snapchat, Twitter etc. The choice of platforms depends on target consumers and marketing strategy. Chen and Lee (2018) investigated the use of Snapchat for social media marketing while targeting young consumers. The study findings highlighted that Snapchat is considered as the most intimate, casual, and dynamic platform providing users with information, socialization, and entertainment. The study identified that young consumers seem to have a positive attitude towards Snapchat engendering similar feelings toward purchase intention and brands advertised on the platform.

Tafesse and Wien (2018) analyzed various strategies employed by companies such as transformational - where the experience and identity of the focal brand exhibits desirable psychological characteristics; informational - presents factual product; service information in clear terms and interactional - where social media advertising cultivates ongoing interactions with customers and message strategies (Puto and Wells, 1984; Laskey et al., 1989; Tafesse and Wien, 2018). The research undertaken by Kusumasondjaja (2018) found that interactive brand posts were responded to more frequently than informative message content. Twitter was more effective for informative appeal. The findings highlighted that Facebook worked better for interactive entertainment posts and that Instagram was more suitable for interactive content combining informative-entertainment appeals. Interactive brand posts with mixed appeals received the most responses on Facebook and Instagram, while a self-oriented message with informative appeal obtained the least appeal (Kusumasondjaja 2018).

Content marketing plays an important role in the success of marketing communications. Aspects of the literature has argued that the use of emotions in the message significantly affects consumer behavior. The study by Hutchins et al. (2018) analyzed the marketing content of eleven B2B companies. It was found that using emotions in content marketing can lead to a competitive advantage and increased brand equity. Some studies looked at how companies should share their videos. Ang et al. (2018) conducted a scenario-based experiment with 462 participants and applied social impact theory to conclude that a livestreaming oriented strategy is more authentic in the eyes of consumers than pre-recorded videos by increasing consumers searching and subscription intention.

Social media message characteristics are important for advertisers. For example, Hwang et al. (2018) used motivation theory within a tourism context to conclude that completeness, relevance flexibility, timeliness of the argument, quality and trustworthiness of source credibility, have a positive impact on user satisfaction. This in turn can affect user intention where consumers are inclined to revisit the website and purchase the tourism product. Kang and Park (2018) found that message structure (interactivity, formality, and immediacy) significantly affects consumer behavior, such as attitude towards brand, corporate trust and purchase intention. Companies face many challenges when developing their strategies for social media marketing. The study by Parsons and Lepkowska-White (2018) proposed a framework to help managers to develop and apply social media as a marketing tool. The proposed framework includes four dimensions: messaging/projecting, monitoring, assessing, and responding. Lee et al. (2018) analyzed 106,316 Facebook messages across 782 companies and found that inclusion of humor and emotion can lead to greater consumer engagement.

2.3. Company

A number of different approaches have been adopted by

organisations in the use of digital and social media marketing where companies have exhibited varying attitudes to social media strategy. The study by Matikiti et al. (2018) examined factors that affect attitude of travel agencies and tour operators in South Africa. By using questionnaires collected from 150 agencies the study found that there are internal and external factors influencing attitude. Internal factors are managerial support and managers' level of education. External factors are pressure from competitors, perceived benefits and perceived ease of use. The study by Canovi and Pucciarelli (2019) investigated the attitude towards social media marketing in the context of small wine companies. The study found that while the majority of winery owners recognize the social, economic and emotional benefits of social media, they are far from exploiting its full potential.

The literature has identified variances in attitude to social media, depending on the size and type of the company. B2B companies tend to perceive social media as having a lower overall effectiveness as a marketing channel and categorize it as less important for relationship building than other communication models (Iankova et al., 2019). Motivations such as perceived economic benefit, sense of control, self-improvement, ease of use and perceived usefulness, tend to influence small businesses to use social media marketing (Ritz et al., 2019).

Organisations use various tools for analyzing and capturing data from social media and managing multi-channel communication. However, companies tend to lack sufficient knowledge on emerging technologies such as Artificial Intelligence (AI) with many organisations exhibiting low levels of adoption and utilization of Machine Learning (ML) analytical tools (Duan et al., 2019; Gil-González et al., 2018; Miklosik et al. 2019). These technologies could be used by companies for automated curation of brand-related social media images (Tous et al., 2018); to identify more effective sales promotional targets (Takahashi, 2019); to propose personalized incentives for users (Ballestar et al., 2019) and for identifying relevant eWOM communications (Vermeer et al., 2019).

2.4. Outcomes

The effects of digital and social media marketing can result in a number of positive and negative outcomes for organisations. Studies have found that social media marketing has a positive effect on customer retention (Hanaysha (2018) and also on purchase intention in the context of: hotels (Alansari et al., 2018), luxury fashion brands (Morra et al., 2018) and universities (Wong et al., 2018). Digital and social media marketing can have a positive effect on a company's brand. This can take the form of aspects such as: brand meaning (Tarnovskaya and Biedenbach, 2018), brand equity (Stojanovic et al., 2018; Mishra, 2019), brand loyalty (Shanahan et al., 2019) and brand sustainability (Ahmed et al., 2019). The research undertaken by Stojanovic et al. (2018) applied the schema theory and multidimensional approach to brand equity where the effect of social media communications on brand equity was studied using survey data of 249 international tourists. The results identified a positive effect of the intensity of social media use on brand awareness and intention to engage in eWOM communication. Studies have found that social media can have a significant influence on brand loyalty, sustainability and business effectiveness (Ibrahim & Aljarah 2018; Veseli-Kurtishi 2018).

Studies have considered consumer engagement as an outcome of social media marketing. The study by Syrdal and Briggs (2018) proposed that engagement should be considered as a psychological state of mind and should be considered separately from interactive behavior which includes liking and sharing content. While the majority of studies consider the effect of social media marketing and digital marketing on commercial companies, some studies focused outcomes relating to non-profit organisations. Smith (2018) examined the use of Facebook and Twitter in the context of non-profit organisations and the outcomes as well as impact on user engagement, concluding that users respond differently to social media activities across platforms.

There are negative outcomes and resulting consequences of digital and social media marketing that need to be considered by organisations. Aswani et al. (2018) highlight that digital marketing can have a negative effect if performed by unskilled service providers. The study highlights that if marketing is not developed and managed properly, it fails to provide benefits, destructs value, increases transaction costs, coordination costs, loss of non-contractible value and negative impact on long-term benefits.

3. Multiple perspectives from invited contributors

This section is organized by employing the approach set out in Dwivedi et al. (2015b; 2019c) and Kizgin et al. (2020) for presenting consolidating experts' contributions relating to the emerging area of digital and social media marketing to provide their input based on their research as well as practitioner expertise. Each perspective takes the form of an overview, challenges, limitations and research gap, along with related research propositions or questions. The contributions compiled in this section are in largely unedited form, expressed directly as they were written by the experts. Although, this approach creates an inherent unevenness in the logical flow, it captures the distinctive orientations of the experts and their recommendations related to various aspects of digital and social media marketing (Dwivedi et al., 2015b; 2019c). The list of contributions is provided in Table 2.

3.1. Contribution 1 - digital marketing & humanity: from individuals to societies and consuming to creating - Anjala S. Krishen

Several recent studies examine hypothesized links between humanness, or human-like physical or evolutionary characteristics and ascriptions of humanity and social perceptions (e.g. Wang et al., 2019).

Table 2
Invited contributions related to digital and social media marketing.

Contribution title	Author(s)
Digital marketing & humanity: From individuals to societies and consuming to creating	Anjala S. Krishen, University of Nevada Las Vegas, USA
Leveraging social media to understand consumer behavior	Gina A. Tran, Florida Gulf Coast University, USA
Understanding and cultivating engaged consumers in digital channels	Jamie Carlson, University of Newcastle, Australia
B2B Digital and social media marketing	Jari Salo, University of Helsinki, Finland
Future direction on developing metrics and scales for digital content marketing which aims to foster consumers' experience and customer journey	Mohammad Rahman, Shippensburg University, USA
Electronic Word of Mouth (eWOM)	Raffaele Filieri, Audencia Business School, France
Reflections on social media marketing research: present and future perspectives	Jenny Rowley, Manchester Metropolitan University, UK
Augmented reality marketing: Introducing a new paradigm	Philipp A. Rauschnabel, Universität der Bundeswehr München, Germany
Responsible artificial intelligence (AI) perspective on social media marketing	Yichuan Wang, University of Sheffield, UK
How AI would affect digital marketing? A practitioner view	Vikram Kumar and Ramakrishnan Raman, Symbiosis Institute of Business Management, India
Dyad mobile advertising framework for the Future Research Agenda: marketers' and consumers' Perspectives	Varsha Jain, MICA, India
Research on mobile marketing	Heikki Karjaluoto, University of Jyväskylä, Finland
Crossing to the dark side of social and digital marketing: Insights and research avenues	Hajer Kefi, PSB - Paris School of Business, France
Ethical issues in digital and social media marketing	Jenna Jacobson, Ryerson University, Canada

Humanness, or lack of dehumanization, is associated with the possession of sophisticated cognitive and agentic capacities and emotional and experiential responsiveness (Deska et al., 2018). Humanity and humanness, while intertwined, are not synonymous. Humanity is not simply defined as a collection of human beings; it is also characterized by the enactment of compassion, sympathy, generosity, kindness, and benevolence (c.f. Krishen and Berezan, 2019). In this age of digitization and analytics, societies are grappling with intersections – human-computer, human-machine, and human-human (race, religion, sexuality, gender, ethnicity, country-of-origin, etc.), among others. At each of these intersections lies another challenge for humanity, especially in relation to digital vulnerability. Research is needed to further understand how digital marketing relates to humanity. To grow this body of research, we offer three aspects of individuals as dimensions of their humanity: (1) individuals as seekers of capital, including informational, intellectual, social and cultural, (2) individuals existing and functioning with change, agency, and empowerment, and (3) individuals as progressively moving forward and creating capital. As conduits to these dimensions lies digitization and multiple intersections of communication.

3.1.1. *Conceptual framework and research proposition*

In Fig. 1, we propose a humanity framework. Various facets of individuals enacting humanity are depicted in clouds (certain ones are at the forefront); the lower level (such as information seekers) shows dimensions which are more tied to consumption while the upper level ones (such as knowledge creators) are more tied to creation.

3.1.1.1. Seeking capital: information, social, and cultural. Individuals spend much of their time consuming. This consumption can be tangible (e.g. physical objects) or intangible (e.g. relationships). Digital and social media marketing provide a mechanism by which to gather vast amounts of information, a phenomenon known as information overload (Hu and Krishen, 2019). To counter the overload, sophisticated hardware and software solutions enable adaptive choice sets and recommended products and services (Krishen, Raschke, and Kachroo, 2011). As seekers of social and cultural capital, consumers participate in multiple forms of social media; ideally, this could lead to a lived experience of mindfulness, happiness and belonging. Paradoxically, digital marketing simultaneously enables negative mental health issues (e.g. loneliness; Berezan, Krishen, Agarwal, and Kachroo, 2020 *forthcoming*) while facilitating solutions to them (e.g. social marketing campaigns encouraging mindful consumption; Bahl et al., 2016).

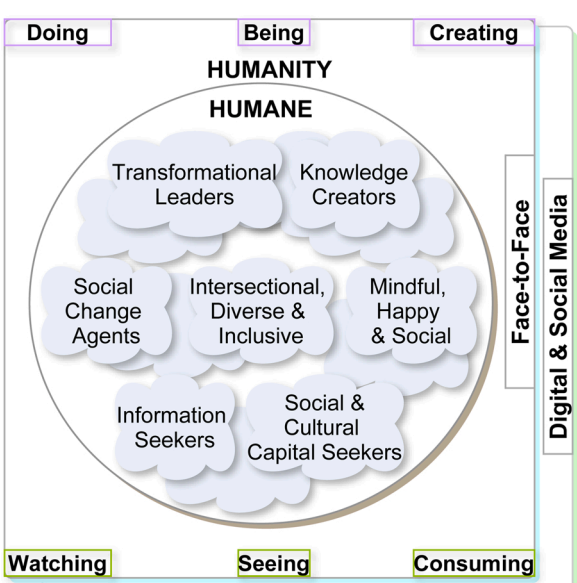

Fig. 1. Digital Marketing and Humanity Conceptual Model.

Proposition: In the process of seeking various types of capital through digital marketing platforms, consumers experience both positive (benefits or "gets") and negative (costs or "gives") effects.

3.1.1.2. Encountering change, agency, and empowerment. Cultural agency refers to an analytical lens for understanding individual actions and decisions as emergent from interactions between public and private experiences and ideas; for example, the purchase or desire for skin lightening creams stems from complex layers of individual agency and public hegemonic discourses (Wong & Krishen, 2019). The digital marketing ecosystem provides an environment within which individuals encounter change, agency, and empowerment. Digital marketing can enable consumers to access vast amounts of knowledge regarding diverse populations throughout the world: some who share similar ideas and others who live in completely different environments. This ability to understand and interact with multiple cultures and societies through online forums, support groups, information repositories, eWOM postings, and so on, has the potential to facilitate greater intersectionality, diversity, and inclusiveness throughout humanity. For example, through online representation via Twitter, fourth wave feminists can champion discussions and debates, mobilize social justice, and become change agents with organized political activities, and create allies, collaborations, and coalitions (Zimmerman, 2017). Alongside the ability to learn about other people and environments, individuals have access to information that can enable them to make data-driven decisions with potentially higher quality data (Zahay et al., 2014). Technologies also allow consumers to act as agents, empowered or unempowered, as they traverse the marketplace. For instance, fitness trackers enable social networks to share common health goals and track individual and group progress.

Proposition: Digital marketing platforms provide forums though which consumers can work across boundaries in a plethora of ways, including: 1) as empowered agents seeking to collaborate, 2) as data-driven decision makers enabling transparency, and 3) as social change humanitarians spreading knowledge through their voices.

3.1.1.3. Moving forward and creating capital. As a facilitator of intellectual capital, digital and social media marketing allows consumers to circulate new knowledge through complex gatekeeping processes that track both its quality as well as its popularity. Creativity is not limited to written knowledge and spans products and services that can be self-created (do-it-yourself), a process that can lead to greater well-being and mindful consumption (Brunneder and Dholakia, 2018). Through transformational leadership, individuals as part of teams can convert cognitive diversity to team creativity (Wang et al., 2016). These creative processes and systems exist in face-to-face environments but also in digital and social media ones, which often provide additional tools and mechanisms (Iacobucci et al., 2019).

Proposition: Digital marketing platforms have the potential to unlock multiple forms of creativity and knowledge alongside the sophistication to carefully link them together.

As shown in Fig. 1, digital and social media marketing provides a backdrop to humanity and humane individuals, one that can serve as both a positive and negative force. The challenges to humanity in the digital environment (e.g. information overload) can be overcome with tools and mechanisms that build credible knowledge and facilitate data-driven decisions.

3.2. *Contribution 2 - leveraging social media to understand consumer behavior - Gina A. Tran*

Daily, the average individual spends 2 h and 23 min on social networking sites; this time is spent reading the news, researching

products and staying in touch with friends (Global Web Index Social Flagship Report, 2019). Given the prevalence of social media within consumers' lives, it is clear that organizations must effectively use social media marketing to reach potential markets. However, social media marketing presents unique challenges for both practitioners and researchers, as the lack of validated scales, constant changes in social media platforms (including emerging platforms) and use of social network analysis, is needed to understand how information shared on social media influences consumers.

3.2.1. Lack of validated scales

One of the challenges of researching social media marketing is the lack of appropriate constructs (Cooper, Stavros, & Dobele, 2019) and validated scales (Tran et al., 2019) to test the potential models of how social media usage impacts consumption behaviors. While existing scales may be adapted for the context of social media, this approach is not always successful (Tran et al., 2019). The scales currently available do not fully capture and measure the complexity of social media. For example, no scale currently exists to measure the level of perceived connectedness via social media between an individual to others, as well as perceived connectedness via social media between an individual to a brand. It would be interesting to explore these relationships and the link between perceived connectedness and behavioral outcomes, such as brand awareness, electronic word-of-mouth intentions and purchase intentions. One recommendation for future research is the development of scales germane to social media and the capabilities of social media.

3.2.2. Changes in social media

With social media platforms in perpetual beta mode, which is the consistent release of new functions, change is a constant in social media platforms. This makes it challenging to research social media marketing and the metrics associated with social media. While some social media metrics may remain consistent, such as number of followers, likes and shares, other metrics emerge that may be useful. For example, social media influencers, also known as influencers, are individuals with the ability to influence others by promoting and recommending brands and market offerings on social media. The influencer marketing industry is expected to be $15 billion by 2022 (Schomer, 2019) and metrics such as customer influence effect, stickiness index and customer influence value (Kumar & Mirchandani, 2012) have emerged as key factors in evaluating possible influencers to share information about the brand, increase brand awareness and promote electronic word-of-mouth conversations about the brand. Another concern is the problem of decreasing organic reach, which is the number of people who have viewed the content at no cost to the marketer (Tuten & Solomon, 2018). Between 2013 and 2018, the expected organic reach of a brand's Facebook post dropped from 12 % to 5 % (Tips for Increasing Organic Reach, 2019). With the improving algorithms and surge in number of posts, brands must work harder to gain attention and boost organic reach, which is proving to be more problematic. Beyond the continual changes in existing social media platforms, another concern is the development of new social media platforms.

New social media platforms are introduced and begin to grow in popularity and gain new followers, representing both opportunities and challenges for social media marketing. With the different social media platforms, there may be varying capabilities for brands to interact with individuals, which means social media marketing managers must learn to adapt to effectively use the platform to reach consumers. Furthermore, perhaps new marketing strategies for the new social media platforms must be created to gain customer leads and enhance consumer engagement. For academics researching social media marketing, the novel social media platforms also present opportunities for additional research, including potentially comparing the different platforms, exploring how and why individuals may use the various social media for distinct purposes and developing or modifying metrics for measuring return on investment.

3.2.3. Social network analysis

Social network analysis involves studying networks of people, where each individual is a node. The social structure of connections and ties between nodes are investigated and characterized in social network analysis (Wasserman & Faust, 1995). Social network analysis has been researched in relation to electronic word-of-mouth (Sohn, 2009), identifying influencers (Zhang & Li, 2014) and investigating how individuals influence others, the relationship between influence and tie strength and the flow of information through social media (Gandomi & Haider, 2015). However, there are still gaps in the social network analysis of social media usage literature.

One possible avenue for research may be to explore how consumers' motivations for sharing information via social media impact others' perceptions of the message, which is particularly interesting given the phenomenal growth of the influencer industry. An extension of this research is to examine if and how influencers' use of paid advertisements, sponsorships and partnerships affects followers in the social network. Experimental or quasi-experimental designs may be employed to determine if nodes pay attention to the paid advertisements on social media, and how this may interact with the nodes' reactions, shares and comments on the influencers' non-organic posts. Beyond influencers, it would be fruitful to research the potential negative effects of what happens when a node views the same message on social media multiple times. Is there a point where there is a negative effect of exposure to the same information shared by too many nodes? Perhaps the information about the number of shares, comments and reactions on social media may dilute the impact of the relevant information (Nisbett et al., 1981). The potential findings of such research may have both theoretical and managerial implications for understanding consumers.

Often, both academics and practitioners focus on understanding how positive electronic word-of-mouth messages travel through nodes in social networks. However, there is also value in examining negative electronic word-of-mouth in social networks, as recommended by Pfeffer, Zorbach, and Carley (2014). These researchers defined the term online firestorm as the "phenomenon involving waves of negative indignation on social media platforms," which has affected brands, organizations, politicians and celebrities following the release of less than desirable information (Pfeffer et al., 2014, p. 125). Future research may explore how the technical capabilities of specific social networking sites, an individual's social identity, altruistic tendencies and commitment towards the organization impacts the individual's propensity to share negative word-of-mouth messages. In addition, it would be interesting to use social network analysis to investigate how in-group and out-group members are likely to transmit negative word-of-mouth information, as well as the potential influence of negative messages on these nodes (Balaji et al., 2016).

It would be intriguing to compare how negative versus positive electronic word-of-mouth travels through a social network online. The velocity of information flow, volume of information shared, network clusters and cross-posts on different social media may be analyzed and compared for negative and positive electronic word-of-mouth. To conduct this research, a social networking platform that allows all viewers to see the nodes, ties and frequency of reactions and comments may be used. A quasi-experimental design approach may be used to select the nodes; an event or noteworthy news article would be shared to these nodes. Data on the number of times the node viewed, shared and commented on the event and the impact of these numbers may be explored to better understand how viral marketing works. It would be interesting to potentially measure the speed of the information flow, which may be possible with the advanced technical designs of the social media platform. Based on the research limitations and gaps outlined above, the two propositions are formulated hereafter to help guide future research on this topic.

3.2.4. Research propositions

When individuals make judgments, the dilution effect occurs when

people fail to use diagnostic information in the presence of non-diagnostic information (Nisbett et al., 1981). For social media marketing, the dilution effect may occur when consumers view the number of reactions and comments about a message, which serve as the non-diagnostic details. The message is the diagnostic information. However, if the number of reactions and comments on the social media platform is too high, perhaps that may serve to dilute the effect of the diagnostic message details and serve to negatively impact the individual's judgment of the information. The following is proposed.

Proposition: On social media platforms, a) the number of reactions and comments positively impacts the individual's perception of the message to a peak point; b) beyond the peak point, the number of reactions and comments negatively impacts the individual's perception of the message.

The immediacy of social media makes it easier for people to act on their altruistic impulse and use it to spread messages and propagate goodness (Tuten & Solomon, 2018). On the other hand, individuals may also decide to use social media for the purpose of altruistic punishment, which is bringing attention to a person or organization whose behavior is socially unacceptable (Rost et al., 2016). The altruistic punishment available through the use of negative messages on social media allows enforcement of the group's social norms. To enforce the social norms on the offending person or organization, the negative word-of-mouth information is spread more quickly through a social network, when compared to positive word-of-mouth information. Thus, the following is postulated.

Proposition: In social networks, negative word-of-mouth information flows faster than positive word-of-mouth information.

3.2.5. Conclusion

With more consumers turning to social media use daily for activities such as reading the news, researching products and enjoying entertainment (GlobalWebIndex Social Flagship Report, 2019), organizations must strategically use social media marketing to appeal to their target audiences. However, challenges in using social media to reach consumers include lack of appropriate scales to measure and investigate constructs of interest, the constant changes in current and emerging social media platforms and the application of social network analysis to research the flow of electronic word-of-mouth messages and the influence on consumers' attitude and behaviors of such information. We encourage researchers to conduct further research in these areas to better understand the phenomena of social media marketing to benefit both academics and practitioners.

3.3. Contribution 3 - understanding and cultivating engaged consumers in digital channels - Jamie Carlson

Over the past 20 years, marketing and IS academics and practitioners have observed the "digital transformation of marketing" where Digital and Social Media Technologies (D&SMT) have become firmly embedded into billions of people's daily lives. D&SMT (e.g. e-commerce, online brand communities, digital advertising tactics, live chat services, mobile services) have since revolutionized the engineering of compelling customer experiences offering new ways to reach, inform, sell to, learn about, and provide service to customers that have an overarching social dimension (Lamberton and Stephen, 2016).

The dynamic, interactive exchanges enabled by D&SMT have led to consumers playing a far greater role in how they shape their own individual *and* communal-based experiences with brands (Carlson et al., 2018). This has strategic consequences on how customers engage with brands beyond transactions alone, a concept labelled as 'customer engagement behaviors' (CEBs) which is vital for contributing greater value for the organisation (van Doorn et al., 2010v). For instance, customers can create (destroy) value for an organisation through purchase related behaviors as well as through influencing others, generating knowledge exchanges and co-creation/developing behaviors with brands (c.f. Jaakkola and Alexander 2014; Kumar et al., 2010).

As the proliferation of new technologies (e.g. artificial intelligence, robotic solutions, wearable technologies, augmented and virtual reality) continue to emerge, greater research focus is now needed to understand how brands can leverage these multitude of technologies to cultivate CEBs. Despite the excitement that such new technological capabilities afford managers in the construction of customer experiences, this often leads to confusion about when and how to deploy what information technology to maximize value creation opportunities during stages of the customer journey (Gartner Research 2019). In parallel, there have been calls for business and technology research to widen its boundaries and be more relevant to business practices that improves the lives of people in our societies, such as alignment to the U.N.'s Sustainability Development Goals (Dwivedi et al., 2019c; RRPM, 2019). Through greater understanding of consumer expectations and preferences for engaging with brands through technology, organisations can then develop truly differentiated customer experiences that cultivate CEBs and greater value and well-being for them. As such, it is therefore necessary for consumer research to continue to examine and understand the mechanisms by which D&SMT can further unlock CEBs and improve consumer well-being.

Against this backdrop, this section outlines key challenges and opportunities around cultivating CEBs and consumer well-being in the D&SMT context and present a research agenda to stimulate further research enquiry.

3.3.1. Challenges and opportunities for research

The first challenge relates to customer experience (CX) design. Research emanating across IS and marketing literatures do indicate that CX-design of D&SMT plays a fundamental role in encouraging favorable customer behaviors towards brands (Carlson et al., 2018; Kamboj et al., 2018). Nevertheless, consumers expect a seamless, integrated and holistic customer experience, regardless of the channel. Offering multi- or omnichannel consumption experiences, whereby interactions with a variety of digital channels and with real people (either phone or in-person) complement rather than compete with each other, enhances the overall customer experience (Bolton et al., 2018). However, despite channel integration efforts by organisations, recent market reports show that 54 % of UK customers are disappointed with their most recent experiences (Temkin Group, 2017). As such, the design and measurement of CX initiatives involving D&SMT and their integration will become paramount in order to unlock the full extent of CEBs and well-being to maximize mutual value fulfilment for the customer and the firm.

The second challenge concerns personalization. D&SMT provides significant opportunities for highly personalized communications. Here, brands can offer content and customized product recommendations resulting in greater customer satisfaction and CEB outcomes. Despite this, several challenges surface for consideration. First, given the growing availability of personalization options through D&SMT, customer brand evaluations are expected to increase. This has important implications for CX management as when customers develop habits to using specific technologies, their initial customer delight is expected to transfer to their realm of expectation (c.f. Rust and Oliver, 2000). A second challenge is managing the personalization/privacy paradox. Numerous corporate data breaches have led to government legislation for increased privacy e.g. The European Union General Data Protection Regulation (GDPR), tighter data security and the consumer right to erase their information which has the degree of difficulty for marketers to build meaningful and authentic relationships with consumers through personalized experiences. Furthermore, when brands leverage collected customer data to provide relevant, personalized content, it might heighten some customers' sense that the brand has some manipulative intent, which could spur privacy concerns (Aguirre et al., 2016). This has negative consequences for cultivating CEBs and their well-being where consumers are less likely to participate, for example, in sharing their motivations, preferences and desires with brands. Despite these

challenges, the opportunity therein lies in understanding how to overcome these issues so that consumers are willing to disclose this information for personalization to more readily occur so that satisfied and loyal customers can be achieved.

The third challenge is associated with segmentation. With the increasing rate of media fragmentation and channel multiplicity, segmenting the marketplace has become vital. However, as D&SMT adoption intensifies in the marketplace, careful consideration is needed as to the development of technology-specific user segmentation. While many customers will use familiar technology (e.g. websites, mobile apps), technologies that are new or more peripheral to the market offering (e.g. interactive virtual assistance, social media to register complaints, self-serve technologies) will likely see varying adoption levels across customer segments, including in terms of demographics, psychographics, or brand- or marketing-related preferences. This will become a critical issue looking forward as by 2050, demographic trends indicate that society will contain growing numbers of aged population and consumers with disabilities, changing family roles and structures, and global migration (Fisk et al., 2018). As such, the opportunity arises for customer experiences through D&SMT to be designed for inclusion to account for the myriad of ways in which different segments of consumers can access and engage with brands.

The fourth challenge relates to innovation and collaboration. The use of D&SMT has enabled customers new opportunities for interacting and collaborating with brands in the innovation process (e.g. Carlson et al., 2018; Kamboj et al., 2018). For instance, the increasing sophistication of online brand communities on social media have enabled opportunities for customers to become active collaborators that generate new ideas within these communities (e.g. My Starbucks Idea). Here, advancements in social media monitoring, text and image analysis techniques that "listen" to, and capture, customer-generated content enable ideation, sharing, product development and brand experience improvements (Humphreys and Wang 2017; Villarroel Ordenes et al., 2018). As such, this requires organisations to prepare for and invest in their own adaptive capability to capture, manage and exploit these opportunities from customers to gain a deeper understanding of customers' available resources and those they are willing to invest in particular brand-related interactions. This understanding can, in turn, be translated into customization tools to optimally cater for specific customer needs, wants or preferences (e.g. Lego Ideas customer co-creation platform).

3.3.2. *Agenda for research and practice, and research propositions*

The following paragraphs advance a set of research questions relating to the challenges and opportunities outlined above.

3.3.2.1. Customer experience (CX) design. Since consumers now live in a world in which most aspects of their lives can potentially intersect with digital, physical and social realms, it enables them to interact with brands seamlessly from almost any device. As a consequence, a discussion is occurring across industry and academia on how marketers can appropriately integrate and measure online and offline CX efforts (i.e., an omnichannel approach) (Lemon and Verhoef, 2016; McColl-Kennedy et al., 2019). While various CE measurement frameworks exist for a single channel within the literature, what is missing is a measurement framework that shows how customers evaluate CX performance within an omnichannel environment in consideration of relevant cues and encounters across all channels (Ostrom et al., 2015; Lemon and Verhoef, 2016). In this regard, the influence of simultaneously using many channels focused on a customer's cognitive process of quality assessment and the attributes associated with a positive omnichannel experience, remains unclear (Ostrom et al., 2015). To address these issues, researchers need to clarify 1) what CX design attributes across different D&SMT channels are most conducive toward cultivating CEBs and customer well-being? How does this differ across industries, contexts and cultures? 2) How can organisations integrate and deliver superior cross-channel experiences that contribute to the formation of favorable CEBs and customer well-being? 3) How can brands leverage new CX via emerging technologies (e.g. augmented and virtual reality, voice activated assistants, wearable technologies) to cultivate CEB and well-being outcomes? These questions need to be addressed by further research, so the following proposition is offered:

Proposition: It is necessary to theorize a CX framework for D&SMT and its impact on CEB and well-being, therefore an integrated conceptual framework is needed to provide a systematic understanding of CX design in a D&SMT-driven omnichannel context.

3.3.2.2. Personalization. With the advancement of technologies that support managing customer data across channels, brands are well positioned to analyze customer behaviors and provide personalized offerings that maximize customer satisfaction. However, to overcome the personalization / privacy paradox and customer trust issues with brands, researchers need to consider the following issues that arise. For instance, based on the social exchange theoretical premise that the firm's delivery of valuable, consistent content to (prospective) buyers, will see these rewarding the firm in exchange with their future loyalty (Blau 1964); what strategies can motivate consumers to participate in CEBs, such as provide their preference information across various D&SMT? Are customers motivated differently on different touchpoints? What role does digital literacy regarding privacy play? What strategies are most effective for dealing with consumer privacy concerns that prevent CEB outcomes in digital channels? e.g. Are younger generations really less concerned about privacy, and will that last as they age? What customer traits may influence/block sharing behavior with brands on D&SMT? As such, more research is needed to better understand the combination of factors that affect (and prevent) the enhancement of personalization opportunities for consumers to better satisfy their needs. Considering the importance of customer attitudes towards privacy and its implications for greater personalization in D&SMT's, the following proposition is advanced:

Proposition: There is a necessity to fully understand the facilitators, barriers and individual customer characteristics that will affect the success of personalization to better cultivate CEB and well-being

3.3.2.3. Segmentation. While pure technology driven service delivery may yield efficiency gains for brands, managers may wish to retain a level of human service contact, particularly for those customers exhibiting a preference for these over technology-driven interactions (e.g. vulnerable consumers such as the elderly, low digital literacy skills, sensory deterioration issues) (Fisk et al., 2018). Within this context, rapidly evolving technological and societal developments require brands to constantly consider their customer segments to reflect different channel preference structures for digital interactions to maintain their relevance, accuracy and maximize inclusion. As such, further research opportunities include: which combination of variables are most effective in segmenting customers in D&SMT channels? What role does technology preference play in this mix? What CX design elements need to be tailored to meet different customer D&SMT needs, which may differ across product offerings, industry sectors or over time? What are the technology preferences for vulnerable customers that enable them to better participate in CEB's with brands? Therefore, the following proposition is offered:

Proposition: In a growing heterogenous marketplace, there is a necessity to fully understand the configuration of segmentation bases in the context of D&SMT for cultivating CEBs and well-being.

3.3.2.4. Innovation and collaboration. As previously discussed, the multitude of D&SMT provides significant potentialities for cultivating CEBs for the purpose of innovation capture.

While success factors affecting the use of D&SMT for capturing innovation opportunities have been studied from the customer (e.g.

Carlson et al., 2018; Nambisan and Baron 2009) and firm perspectives (e.g. Muninger et al., 2019; Zhang et al., 2019), more needs to be known on identifying the critical success factors affecting the current use of emerging technologies. In light of these opportunities for developing innovation generating capabilities, the following research opportunities emerges from both the customer and firm perspectives: How can brands leverage new technologies (e.g. AI, augmented and virtual reality, voice activated assistants, wearable technologies) with current technologies to cultivate innovation behaviors from individuals, and the broader community of consumers? What D&SMT strategies, activities or initiatives enhance how customers participate in innovation related behaviors (e.g. share new ideas, co-production)? What motivates customers to invest their own resources (i.e. time, skill, knowledge) for participating in CEBs related to innovation with brands through D&SMT? What is the interplay between customer traits (e.g. innovativeness, brand involvement, technology readiness) and attributes of technological platforms in this process? What firm capabilities are required to capture, manage and exploit these innovation opportunities from customers to gain a deeper understanding of them? On this basis, the following proposition is advanced:

Proposition: There are a set of critical factors at the individual and organizational level that will positively affect D&SMT's success for cultivating innovation related CEBs and well-being.

3.3.3. Concluding statement

IS and Marketing scholars have an essential role to play in shaping the agenda of how D&SMT can cultivate CEBs in the future and generate greater value for the profit *and* non-profit organisation. However, to contribute meaningfully, it must be noted that greater interdisciplinary awareness between IS and marketing scholarship is required to unveil novel insights to achieve CEB objectives. It is anticipated that the research agenda will be useful for scholars to stimulate new insights that inform and guide how practitioners may harness technology to deliver greater benefits for the customer, their well-being, and ultimately stronger customer-brand relationships. To date, there has been growing research activity in the literature related to CEB, and many important and noteworthy contributions to knowledge have been made. To advance the knowledge base further forward, particularly given the fast-moving nature of digital settings, research that attempts to broaden our understandings of CEB, and examines new and evolving technologies that enhance the customer experience that impacts society as a whole will be most valuable.

3.4. Contribution 4 - B2B Digital and social media marketing - Jari Salo

3.4.1. Theoretical advances

Computers and artificial intelligence have been used for decades to help digitalize business processes in and within companies in the buyer-seller relationships as well as to attract and keep customers. Martínez-López and Casillas (2013) provide complete review of industrial marketing deployment of artificial intelligence e.g. in segmenting and pricing from 1970s to 2013. Continuing from that Syam and Sharma (2018) provide a detailed overview impacts of machine learning (ML) and artificial intelligence (AI) on personal sales and sales management. They also detail an overview of worthy research areas that are still relevant. In addition, ML and IoT has been focused from a more systemic perspective i.e. business model innovation (Leminen et al., 2019), where authors found four different types of architypes of business models that are utilized by different B2B companies. Also IoT and ML studies are reviewed in detail by Leminen et al. (2019). Since, the publication of Leminen et al. (2019), Suppatvech, Godsell and Day (2019) provide a literature review on how IoT is linked to industrial services. They provide four architype models with add on, sharing, usage-based and solution oriented where degree and intensity of IoT usage varies. At a more fine grained level, Liu (2019) utilizes big data analysis and ML methods to show that negative user-generated content – customer sentiment has negative impact on stock performance. The ever increasing popularity of big data research and big data skills have spilled over to an industrial context. Sun, Hall and Cegielski (2019) build an integrated view to explain the decision to adopt big data. They show that relative advantage and technology competence are key factors when planning the adoption. B2B companies face challenges in digital marketing technology investment decisions (Sena and Ozdemir, 2019) as well as on deciding how and what skills to develop (Sousa and Rocha 2019). Data, big or small, is analyzed in multiple ways by B2B companies. Different types of analytics are used (big data, web and social media among others) to identify possibilities to increase marketing performance (Järvinen and Karjaluoto, 2015), automate marketing activities (Järvinen and Taiminen 2016) and better social media marketing (SMM) (Sivarajah et al. 2019). Besides big data, IoT and ML also virtual and augmented reality trials have been popular in the industrial field as well which have also resulted in some research. Laurell et al. (2019) study barriers to adopt virtual reality which are - lack of sufficient technological performance and limited amount of applications.

SMM in the context of business markets has witnessed a steady increase in the number of publications as the review of literature indicates (Salo, 2017). Since the publication of Salo (2017) and other related systematic literature reviews on sales (Ancillai et al. 2019) and advertising (Cortez et al., 2019), several scholars have approached industrial SMM. Subsequent to the publication of the aforementioned reviews on SMM, traditional areas of B2B marketing such as advertising, marketing communications, strategic management, sales and NPD have been of interest to those who utilize social media lenses in their research. Within advertising, two recent publications are discussed. First, with help of a hierarchy-of-effects theory Juntunen, Ismagilova, and Oikarinen (2019) study the use of Twitter by world's leading B2B companies. They identify from an advertising perspective that companies use Twitter for creating awareness, knowledge and trust, interest and liking amongst their followers by both strategic and tactical means. Interestingly, purchase, preference and conviction are much less advertised. Twitter feed scraping is gaining popularity among B2B marketers as a similar study was conducted by McShane, Pancer and Poole (2019) while focusing on a fluency perspective. From a marketing communications point of view, Magno and Cassia (2019) survey 160 companies and find that thought leadership (similar to influencer marketing within a business to consumer context) via SMM, has a positive influence on brand performance and customer performance. Additionally, they highlight that specific thought leadership capabilities could emerge that support social media capabilities. Similarly to Magno and Cassia (2019), Foltean, Trif and Tuleu (2019) are interested in these capabilities and survey 149 companies. It was shown that social media technology improves the CRM capabilities of a B2B company. Besides capabilities, acquiring new customers i.e. sales is pertinent function in the B2B marketing field as indicated by the two reviews. Iankova et al. (2019) identify that SMM is used in all stages of the customer engagement cycle for acquiring new customers. From the new product development point of view, Cheng and Krumwiede (2018) studied supply chains. By surveying 367 Taiwanese companies they found that market and technological-knowledge processing capabilities strengthens the positive effect of using social media in the new product development process with the involved supplier.

3.4.2. Limitations of research and practice

Some limitations of research and practice can be identified from the existing research. First, one can see that previous studies still to some extent, rely on comparison with B2C and B2B which is rather unorthodox method and provides limited information for industrial marketing scholars. Second, several studies still rely on relatively small sample sizes (about 75 companies) in surveys as well as a relatively small amount of key-account interviews (e.g. seven experts) conducted. Third, even though web scraping and utilizing e.g. netnography in qualitative research is gaining popularity, these need to be linked with objective measures. A Limited amount of research in general, exists that utilizes

objective measures, which can correspond to a lack of real-world relevance. Fourth, it seems that sales and advertising are still pertinent areas of focus while the scholars could also deepen our understanding in other areas of industrial marketing (e.g. buyer-seller relationships).

3.4.3. Agenda for future research

Based on the meta-analysis of the existing systematic literature reviews and research, one can highlight some future research areas. First, B2B research will see in the future B2B companies using more of their resources to content marketing that is geared toward lead generation e.g. via A/B tested email campaigns. Second, many B2B companies are still lacking skills in SEM especially SEO which links to customer insights creation with 360-degree video as well as immersive (AR-VR) content or any interactive content for that matter. Third, in the realm of website design predictions are that customers are increasingly focused on page speed download times among other factors which leads to website experience optimization unless 5 G will be adopted at faster rates. Fourth, B2B companies have increasingly adopted different types of website and social media analytics tools which desperately needs research especially on effectiveness of current data dashboard and visualizations, are we focusing on the right issues? As is the case with consumer markets, B2B market companies will increasingly use predictive or behavioral marketing tactics leading to an increased use of learning e.g. with bacterial algorithms. Fifth, some industries such as finance and food are likely to be interested in applying digital technologies such as blockchain, cloud computing, thin clients, remote monitoring and sensors that alter not only the buyer-seller relationship, but also customer behavior. All these technologies can be used in different B2B categories (Salo, 2017). Considering the above discussion and help guidance for future research, the following two propositions are offered.

3.4.4. Research propositions

It can be synthesized, with some hesitation from the previous B2B digital and social media marketing review, and proposed as a core of future research that digital technologies in broad (including AI, platforms, IoT, Machine learning, big data, different digital analytic and visualization tools) are changing in ever increasing pace B2B digital and social media marketing. This poses a challenge to theory testing and building as different types of digital technologies influence marketing sub-domains (Reid and Plank 2000) and empirical contexts (industries) in different ways. Besides, these challenges to theoretical advancements are also an ethical dilemma as part of the general opinion, with some parts of the research community having woken up to the dark side of the ever-increasing volume of data and opaque predictive algorithms.

Proposition: Digital technologies are increasingly changing digital and social media marketing in the context of B2B.

In order to extend the previously mentioned core research focus where theoretical advances are sought for in B2B Digital and social media marketing one has also adapt novel research methodologies. Both case studies and surveys have been traditionally popular method of gaining new insights in the field of B2B marketing and business studies at large. Still, relatively little of the digital research methods, that offer, in many situations objective data are fully utilized. Digital analytics tools (Järvinen 2016), neuroscience (Bear et al. 2020), motion, voice and other sensors (e.g. Nguyen 1997; Heikenfeld 2016), netnography (Kozinets 2010), data scraping and mining (Munzert et al. 2014) provide novel data and data triangulation possibilities (Patton 1987). Hence, it is proposed that in future we embrace the plurality of research methods, be it used for mixed or single method research.

Proposition: Digital research methods with objective data are to be widely employed in understanding digital and social media marketing in the context of B2B.

3.5. Contribution 5 - future direction on developing metrics and scales for digital content marketing which aims to foster consumers' experience and customer journey - Mohammad Rahman

Recent growth in digital content marketing (DCM) due to how consumers search for information, is intensifying the competition within industries. This has led to an intensive focus on scholarships in the areas of marketing metrics, social media, email strategy, consumer experience, consumer engagement, online advertising, search engine optimization (SEO) and overall DCM. Additionally, traditional concepts of advertising, focusing campaigns on Procter & Gamble's "Moments of Truth" concept, disrupted by the search engine giants such as Google (Moran et al., 2014). According to Google (2019), 88 % of shopper interaction occurs before they interact with a particular brand and 94 % of B2B buyers are performing online research before they engage with that particular enterprise. This scenario creates fierce competition in the DCM area where enterprises from large to small end up vying for ranking on top of Google's organic search results (Howells-Barby, 2019). Thus, we can state that DCM is a really big deal for enterprises and current industry practice, which is constantly changing to suit Google's rank brain algorithm (Moz, 2019) to increase organic traffic to the site. Hence, enhancing DCM strategies to implement increased customer knowledge by listening to the customer and gathering data rather than shouting to the customer, becomes apparent in the realm of DCM. It is also about optimizing customer experiences by reducing barriers for the customer to obtain information and interaction (engagement) with the brand. DCM is about knowing your customers' insight and thinking from the customer's journey regarding why they are on Google to search for an answer for a particular problem/question and providing those answers/solutions. This is where content, user experience and engagement design comes first.

We all know what is happening. Digital media spending is up and traditional media spending is down. Media viewership is a direct relationship with age – the younger the media the younger the audience. In the meantime, Google now processes over 40,000 search queries every second (Statista, 2019). The world's largest search engine is handling an unconceivable number of searches on an hourly basis. Rather difficult statistics to grasp, but, "If like most people, you read at a rate of about three words per second, between the time you started reading this article and finish this sentence there will have been 11.3 million Google searches worldwide" (Rooney, 2017). Although searches on desktop have been gradually falling, it is on mobile devices where Google's continued growth has come from. The search has moved from text to voice where DCM needs to design for the moments (in your car, on the go) and content must be constructed to answer questions vs simply targeting keywords. As more and more people become connected, wherever they are in the world, this figure is likely to continue to rise. Thus, DCM strategy is reaching a wide range of customers, conducting specific placement targeting and increasing engagement with customers. DCM needs to reach prospective customers searching for specific services or products and develop real-time results thus indicating its importance as a relationship marketing tool.

DCM has the ability to grab consumers' shorter attention spans in the environment of multi-screen and multitasking where consumers are exposed to a higher quantity of media in a lower quality of time. In a background of growing digital competition amongst enterprises to earn consumer engagement and trust (Hollebeek & Macky, 2019), DCM is the pathway to nurture credibility, control, and visibility in the continued divergence of media consumption. However, regardless of some scholarly research (Aswani et al., 2018; Carlson et al., 2018; Järvinen & Taiminen, 2016) in the area of DCM and social media marketing metrics providing practitioners with the tools to measures the return on investment (Kakkar, 2017), relevant research is still lacking.

To optimize digital strategy and implement DCM effectiveness, practitioners require an adaptive mindset, a willingness to engage in continuous learning, and the ability to visualize and implement unique,

value-creating DCM within a broader marketing background. Thus, digital and social media marketing analytics is of growing importance, facilitated by creating brilliant, meaningful brand owned experiences for customers to interact with and engage. The solution falls apart without compelling, relevant, content that connects to each customer's needs and preferences to develop a personalized experience. It requires an equal combination of strategy, creativity, and technology to find the quality of customer insights, thereby contributing to consumer and firm-based brand equity development.

It is important to gain control over the entire content life cycle by rank and prioritizing content, develop a content outline and begin information architecture to deliver personalized experiences to customers. Creating personalized content which matters to your customers requires content development teams of front-end developers who are able to build solutions for not only your websites, but mobile apps, social apps, marketing automation integrations, email marketing, interactive infographics, iBooks, eBooks, digital direct mail pieces, and so on. Today, marketers are facing a content crisis: they cannot produce content fast enough because of disjointed systems, inability to collaborate, duplication of work and the sheer volume of needed content.

A marketer cannot solve content crisis simply by working harder: they need a plan, a process, and the right technology. DCM is the hot new thing that is as old as marketing itself. It is about compelling, relevant and timely storytelling that resonates with your prospects. Content is not just "what" but also "how" to disperse through paid, owned and earned media.

Given DCM's relatively short history, little is known regarding its optimal design and implementation. The following sample research questions may assist scholars to develop research topics which will have some practical implication for the marketers. They are:

- Does DCM affect e-mail open rate, generating leads and loyalty and how to measure those relationships with theoretical underpinnings?
- Does DCM affect online reputation, building positive search results via Expertise, Authority, and Trustworthiness?
- Does DCM affect the value and perception of the brand, leading to engagement and creating loyalty?
- How does DCM that is relevant, personalized and speaking to specific goals, needs, pains and desires of customers build trust and engagement?
- What emotions do consumers have along the customer's journey/mapping when searching for answers to a problem/question? What are the highs? The lows?
- How do consumers frame and evaluate their digital content experiences? What do they expect from DCM marketers?
- How to distribute relevant, valuable content that is personalized to specific goals, needs, pains, and desires.
- How important is it for DCM marketers to "Think Human" and relate to three important questions: 1) Know your audience, 2) Know their journey; and 3) Know what matters in developing digital content.
- How does the customer's journey and the importance of the advocacy stage towards building trust for your brand in the social media marketing process lead to engagement?
- How does paid, owned and earned digital media can gain visibility, control and credibility in this digital content marketing environment?
- Google has approached SEO in 2019 by focusing on three big areas, a) The shift from answers to journeys, b) The shift from queries to providing a query less way to obtain information, and c) The shift from text to voice and a more visual option of finding information. What strategies can we offer to develop metrics and scales for the DCM managers to implement?

In conclusion, digital content marketing, today, is very important for marketers, and academics alike. At the same time, digital marketing is an innovative way to reach potential customers worldwide. Hence, increasing importance in building trust and engaging customers with relevant, specific and useful content of more volume which resonates with your business and target markets is essential in digital storytelling.

3.5.1. *Research propositions*

In this section, two propositions are developed to encapsulate the theoretical and practical arguments outlined in the previous section. Their development draws on further elaboration of the concept of Digital Content Marketing (DCM) and how customer experience and customer journey comes into play when it comes to delivering on relevant, specific and targeted DCM from the brand.

For instance, Hollebeek and Macky (2019) suggest that consumer engagement in the DCM context includes elements of multi-tier interaction between the brand and its consumers. These intra-interaction consequences such as consumers' cognitive, emotional, and behavioral engagement with the brand thus trigger extra-interaction consequences of brand trust and attitude thus developing brand equity through the DCM strategy.

Lamberton and Stephen's (2016) comprehensive examination of the literature suggests that a DCM offers several benefits to customers including exploratory and positive behaviors that directly benefit the brand (cf. Appel et al. 2019; Dabbous & Barakat, 2020; Leeflang et al. 2014). Drawing upon and synthesizing the aforementioned works in marketing and information systems literature examining customers' interactions with brand-related stimuli (Digital Content in the paid, owned or earned media) on a digital platform. Customer experience with Digital Content refers to a customer's perception of their interactive and integrative participation with a brand's content in any digital media (Judy & Bather, 2019).

3.5.1.1. Customer experience states and DCM. In the emerging digital marketing literature, scholars in a variety of consumption contexts contend and empirically demonstrate that consumer experience exerts a direct influence on a customer's evaluation of a brand. For example, Järvinen and Taiminen (2016) find support for consumer experience with digital content from the brand has the potential to influence future digital consumption intention in multiple digital media outlets.

Because the psychological states of consumer experiences influence a variety of behaviors including those beyond purchasing, the nature of these relationships in the branded digital content context may be transferable to consumer engagement behaviors of sharing intentions (Carlson et al., 2019). Specifically, future studies can argue conceptually, as to suggest that consumptions experience states relate to the experiences and associated value judgments involving cognitive, emotional and behavioral responses evoked by brand-related stimuli (e.g., Carlson et al. 2018; Vivek et al., 2014). Customers reciprocate when they derive benefits from the experiences relating to their consumer experience states; such that they develop sharing intentions (Carlson et al. 2019; Yasin et al. 2020). Thus, our first proposition is as follows:

Proposition: Digital consumption experience related to branded content positively relate to digital content sharing intentions.

3.5.1.2. Conditional impact of DCM on the customer journey. According to the earlier argument concerning the likely impact of digital content sharing intentions of digital customers with positive consumptions experience, customers possibly demonstrate the same levels of sharing intentions (de Vries and Carlson, 2014). A customer's journey towards finding solutions to their questions by evaluating digital content consistency in terms of authority, trust and reputation (Ray, 2019), plays a critical role in our theorizing and should affect customers' participation with the brand's future digital content evaluations (i.e. digital consumption experience). Drawing from these combined insights, we argue that under conditions of branded digital contents that speak to customers with authority, trust and reputation should then be viewed as helping the consumer in their journey by enabling specific, relevant and

timely access to information. This being the case, we propose:

Proposition: Positive customer journey in the digital content consumptions impact on future content consumptions with the same brand.

3.6. Contribution 6 - Electronic Word of Mouth (eWOM) - Raffaele Filieri

eWOM has received huge attention from scholars in tourism, information systems and marketing in the last decade. eWOM refers to any positive or negative statement made by potential, actual or former consumers about a product or company, which is made available to a multitude of people and institutions via the Internet (Hennig-Thurau, Gwinner,Walsh, & Gremler, 2004, p. 39). Scholars have investigated the impact of online reviews on sales (e.g. Chevalier and Mayzlin, 2006), brand awareness and attitudes (e.g. Lee et al., 2008), purchase intention (e.g. Filieri, 2015) and various other important outcomes. A specific manifestation of eWOM is online consumer reviews (OCRs). OCRs can be defined as any positive, negative or neutral feedback on a product, service, brand, or person supposedly made by someone who claim to have purchase the product or experienced the service and that is shared online to be available to read by several other potential buyers.

3.6.1. Fake reviews and trust in eWOM

Many business reports in the last years document that an increasing number of consumers rely on online reviews and ratings to make purchase decisions. Online reviews have become a primary information source in consumer information search and their extraordinary success is due to their reliability and usefulness. Initially, eWOM was perceived as a reliable form of information about a brand and its products, particularly compared to marketing information sources. However, mass media all over the world in the last number of years, has reported several scandals within the online reviews industry. This has been a factor within the tourism sector, revealing the practice of some managers posting promotional reviews about their business and offering discounts or freebies to consumers in exchange for glowing reviews (Filieri, 2016). For instance, an executive at Accor Group hotels in the Asia-Pacific region was caught posting several positive reviews for its hotels acting as a customer and Australian property developer Meriton, has been ordered to pay $3 m for manipulating TripAdvisor reviews about its serviced apartments (The Guardian, 2018). TripAdvisor, Amazon, Yelp have often made the news for not being able to prevent fake or promotional reviews to be posted and appear on their website. The surge of fake reviews has stressed the importance of the reliability of OCRs (Filieri, 2016).

Research on eWOM has paid huge attention to the concept of source credibility and on the influence that credible communicators have on consumer behavior such as purchase intention (e.g. Hovland et al., 1953). However, research on trust in eWOM is in its infancy. From a theoretical perspective, source credibility theory (Hovland et al., 1953) is one of the most popular theories that are used to understand what makes a communicator an influential source of communication. The source credibility model established by Hovland et al. (1953) analyze the factors that can affect the receiver's acceptance of a message and rest on two core variables: source expertise and source trustworthiness. A source is considered as expert when he/she is knowledgeable about the subject, while trustworthiness refers to the source honesty, sincerity, and believability (Hovland et al., 1953). Source credibility is important in eWOM as expert sources influence information helpfulness (Filieri, 2015), information adoption (Cheung et al., 2009), and purchase intention (Filieri et al., 2018; Ismagilova et al., 2019).

Some scholars have started to investigate the determinants of OCR trustworthiness (e.g. Qiu, Pang, and Kim, 2012; Hu et al., 2012; Filieri, 2016). Scholars have investigated when and for what type of vendor fake reviews are more likely to appear (e.g. Hu et al., 2012), the role of credible information on consumer perceptions and behavior (e.g. Cheung et al., 2009) while other studies have focused on the impact of various elements (source, message, receiver) on perceived information credibility (e.g. Filieri, 2016). eWOM message credibility is defined as the extent to which one perceives a recommendation/ review as believable, true, or factual (Cheung et al., 2009). For instance - Cheung et al. (2009) investigate the determinants of e-WOM perceived credibility in China and found that source credibility, confirmation of prior belief, recommendation consistency, recommendation rating, and argument strength influence perceived e-WOM review credibility. Qiu, Pang, and Kim (2012) used experiments with students and found that a conflicting aggregated rating decreases review credibility and diagnosticity for positive reviews but not for negative reviews via the mediating effect of review attribution. Other studies take a more holistic approach and consider the various elements that can affect trust and mistrust perceptions in eWOM considering the source, the message, the receiver, the format, the pattern, and the valence, of the review (Filieri, 2016). For example, Filieri (2016) use a qualitative approach to analyze consumers' perception of trust and mistrust in online reviews and build a theoretical framework explaining trustworthiness and persuasion in e-WOM communications. They reveal that some consumers – namely the more experienced one in the use of online reviews and those with higher levels of involvement in the purchase; adopt a set of criteria to assess review trustworthiness. The study reveal that factors that affect trust and mistrust in online reviews, which refer, in order of importance, to the content and writing style of a review (degree of detail, type of information, length, writing style, and presence or not of picture), review extremity and valence, the source of communication, the pattern emerging from reading several reviews. Ketron (2017) found that reviews with higher quality of grammar and mechanics (spelling, punctuation, capitalization, and organizational elements of writing such as paragraphs) have higher perceived credibility and exert a stronger influence on consumers' purchase intentions. Drawing upon Filieri (2016)'s framework, Baker and Kim (2019) found that readers of exaggerated fake posts find the utility and trustworthiness of the reviews diminished as a result of exaggerated emotions and language present.

3.6.2. Research gaps

Although valuable studies have been conducted, more research is needed on the topic of consumers' perception of eWOM trust and mistrust. In order to provide some guidelines for future research we have to first distinguish among the three different elements that can affect the persuasion and influence of a communication: the source, the receiver, the message, the medium, and the context (Wathen and Burkell, 2002). As highlighted above, the majority of studies have focused on the textual format of eWOM, specifically focusing on reviews and ratings posted by anonymous reviewers (with no followers) in third-party retailers such as Amazon, TripAdvisor, and Yelp. Research has established that consumers pay more attention to the credibility of the message rather than to the source (Filieri, 2016), which comes into play rarely and only for high involvement decisions. Thus, scholars in the future should consider information quality as a potential mediator or moderator of the effects of source credibility dimensions in eWOM contexts and with high *versus* low involvement decisions to understand when the message and source are more important in the evaluation of review trustworthiness.

Furthermore, few studies have focused on the characteristics of the receiver of eWOM messages, the perceived credibility of the medium where reviews are hosted, and the context in which the information is processed. Accordingly, eWOM can manifest in different formats and channels. For instance, eWOM can manifest though textual, verbal, visual messages or a combination of them (e.g. consumers' photo and comment in Instagram). Moreover, eWOM can appear in different channels such as online consumer communities (i.e. TripAdvisor), social networking websites (i.e. Facebook, WeChat), instant messaging apps (i.e. WeChat, WhatsApp, Snapchat), blogging and microblogging websites (i.e. Twitter, Weibo), photo sharing social networking (i.e. Instagram), and video-sharing platforms (i.e. YouTube).

Future research could assess whether consumers trust some formats when compared to others. For instance, a picture is a thousand words

and provides evidence of the purchase and actual use/consumption of products (e.g. photo of a dish in a restaurant) increasing review trustworthiness (Filieri, 2016). Scholars could analyze whether the combination of different formats (e.g. video + text, picture + text, video + picture, picture or text only) can increase review trustworthiness. Experimental methods can be employed for this purpose.

Furthermore, research for instance has not considered if the medium where the review is published affects perceived eWOM trustworthiness. Medium credibility focuses on the perceived credibility of the channel through which content is delivered rather than the sender (or senders) or the content of the message. Consumers may have different perception of credibility of the reviews and ratings published depending on the channel where they are published. For instance, consumers may trust more the reviews and ratings published in Google or Facebook rather than in Tripadvisor.com, because the reviewer can be a person in their social network, it has a public profile, and he/she generally provide more information about himself/herself. Different variables can affect perceived trust and reliability of a medium such as the reputation of the company (i.e. brand reputation) and consumers' attitude towards it, the frequency of use or habit, the quality of the information provided, the ease of accessibility of them, and usefulness of the information provided and so on.

3.7. Contribution 7 - reflections on social media marketing research: present and future perspectives - Jennifer Rowley

In recent years, the use of social media by businesses, non-profit organisations, and consumers has escalated. This growth has been fueled by the increase in the number of social media platforms, the variety of purposes for which they are used, and growing expertise in their use. This level of activity has triggered an increasing interest amongst researchers in a variety of different disciplines, each with their own ideological and theoretical perspectives. This contribution focusses on social media marketing, which is typically concerned with the use of social media by organisations to communicate with, and maybe persuade and engage in two-way dialogue with, their customers and communities. Research in this area has two main strands: the use of social media by organisations to communicate with and/or gather data about the attitudes, opinions and behavior of their customers and other stakeholders; and, customer, consumer or user behavior in organizational social media spaces or communities. Spanning these two areas and receiving increasing attention in both practice and research are social media brand communities. Given the increasing importance of social media as a communications medium, this contribution reflects on the challenges associated with developing a coherent body of theoretically grounded knowledge in social media marketing that can also inform practice and offers proposals for future research.

3.7.1. Challenges

There are four main challenges facing research in social media marketing, each of which also has consequences for practice: (1) the speed of development of both practice and research in social media marketing; (2) the interdisciplinary nature of the field; (3) the diversity of research questions; and, (4) the wide range of theoretical perspectives and research methods.

3.7.1.1. The speed of development of both practice and research. Whilst social media has been available for more than twenty years, there has been a significant escalation in its use and in research on social media in recent years. There has, for example, been growth in the number of social media platforms used by organisations and consumers, the diversity of uses, and in general, the extent to which social media has taken over and shaped the communication space. In addition, both organisations and consumers, together with social media platform providers, are still on a steep learning curve regarding the types of communication that are effective, ethical, and appropriate. Such a rapidly developing environment offers significant scope for practitioners and researchers to work together in proposing and testing theories, and developing evidence-based practice (Rowley, 2012). On the other hand, a fast rate of change is in danger of leading to 'a thousand different blooms' and a fragmented knowledge base (Denyer et al., 2008; Felix et al., 2017).

3.7.1.2 The interdisciplinary nature of the field. The fragmented nature of the social media marketing knowledge base plays a significant role in the inter-disciplinary nature of the SMM field. For example, systematic literature reviews on social media marketing, important in distilling the essence of a field and offering future research agendas, are to be found in journals in a range of disciplines including information management, marketing, industrial marketing, data systems, psychology, and decision support. Whilst there are some commonalities between these reviews, there is also significant variation in their scope, and in their proposals for future research, although there is some consensus on the need for the inclusion of further research on both (1) social media practice and strategy, and (2) social media consumer behavior (Rowley and Keegan, 2019). This diversity of research topics is consistent with the assertion that 'extant marketing research does not analyze social media marketing from an overarching, holistic perspective (Felix et al., 2017;) in which management, employees and customers have shared notions of their respective roles. Indeed, Quinton (2013, p.913) suggests that with the advent of social media, the linear, relational exchange-based partnership model of business-customer interaction needs to be replaced with a more interactional orientation with a focus on multi-layered and multi-facetted interactions that cross venues and media, and emphasizes multifaceted relationships.

3.7.1.2. The diversity of research questions. The inter-disciplinary nature of social media marketing has consequences for the diversity of research questions posed by researchers in the field. A recent systematic overview of research into social media marketing identified the following themes for a research agenda for social media marketing: social media practice and strategy; social media user behavior, social media organizational context, social media privacy and security concerns, and social media research approaches (Rowley and Keegan, 2019). Complementing these themes is Ngai et al.'s (2015) summary of attribute adoption in the body of knowledge associated with social media research. They cluster these into four main groups: antecedents (social factors, user attributes, organizational attributes); mediators (platform attributes, social factors, and user attributes), moderators (user characteristics, social factors), outcomes (personal context, organizational context). Such 'general' typologies are particularly useful in a field in which research that focusses on specific actions, processes or platforms can rapidly become irrelevant. 'General' typologies also provide a more holistic view of the field.

3.7.1.3. The wide range of theoretical perspectives and methods. The final challenge arises from the diversity of the theoretical perspectives and research methodologies that are used in social media research. Ngai, Tao & Moon (2015) review the theoretical frameworks and models adopted in social media research. They cluster these into *personal behavior theories* (e.g. personality traits, technology acceptance model, and the theory of reasoned action), *social behavior theories* (e.g. social aspects theory, social loafing theory, and social power) and *mass communications theories* (e.g. para-social interaction, and uses and gratifications theory). This contrasts with Leung, Sun & Bai (2017)'s assertion that in social media research (not specifically social media marketing research) the main theoretical foundation is word-of mouth. This diverse range of theoretical perspectives is, at least partially, responsible for the wide range of methodological approaches that have been employed in social media marketing research. These include a range of traditional qualitative and quantitative approaches, including questionnaires, interviews, focus groups, diaries, observation, secondary analysis and

official statistics, ethnography, participant observation, and mixed methods, as well as more social media-specific approaches such as content analysis applied to social media platforms, social media-based focus groups, social media netnography and virtual ethnography, and social media analytics.

3.7.2. Proposals and propositions for future research

In developing their proposal for future research, Lamberton and Stephen (2016) coupled social media marketing with digital, and mobile marketing. Although the focus in this short piece is on social media marketing, it is important that future research agendas in social media marketing acknowledge its contextualization relative to the wider digital marketing field, including mobile marketing, and the plethora of other marketing channels. In addition, due to the interfaces between the different marketing and social media channels and the rapid evolution of both research and practice in the field, the boundaries of any agenda for future research are likely to be blurred and dynamic. This offers unique challenges in proposing a comprehensive agenda for future research into social media marketing. Indeed, there is evidence that previous researchers have proposed that, for example, more research be conducted on a specific action on a social media platform, only for the action to be removed from the platform soon after the article was published. Hence, this article offers a selective and personal perspective on the key areas for future research. This agenda covers the following broad themes: Systematic literature reviews; Social media marketing management; Social media consumer behavior; and, Social media context. In all of these areas, there has been some previous research, but there is considerable scope for exploring these topics further.

3.7.2.1. Systematic literature reviews. All research topics benefit from regular reviews of published research, although they are rarely identified as one of the most important contributions to future research. However, in the case of SMM, such reviews are particularly important given the pervasive nature of SMM, and the rapid evolution of its practice, research and theoretical foundations. In addition, as discussed above, the interdisciplinarity of the field also means that it is important to review the extant knowledge base at regular intervals, thereby providing researchers in specific disciplines or niches with an overarching view of the wider context of their research. However, there is not much merit in conducting regular reviews, unless those reviews are conducted effectively. To be effective, it is important that authors of future reviews develop a more unified approach to the review of the subject area, adhere to good practice in the conduct of systematic literature reviews, and ensure that their reviews are timely and targeted (Rowley and Keegan, 2019).

3.7.2.2. Social media marketing management. Social media marketing management is a very broad field, and becomes even more complex when differing contexts are considered, as discussed further below. However, surprisingly, it is one of the fields that has received relatively little attention from researchers, possibly because exploring this area involves access to managers in organisations, which is often more difficult than access to consumers or social media posts and content. Despite having received some limited attention, the research questions below require further investigation:

- *How can social media be used in such a way as to justify investment in SMM? What is the Return-on-Investment (ROI)?*
- *Which data analytics offer the most meaningful insights to support the development of social media campaigns? What is the relationship between the different data analytics that are available from different social media platforms?*
- *How do organisations articulate and realize their social media marketing objectives? What are their objectives, e.g. brand building, attracting advocates, increasing sales, enhancing visibility, cultivating community communication? Are objective short-term or long-term?*
- *What is an optimum portfolio of SM channels? How is this affected by marketing objectives, product, SM channel, or consumer demographics? Is it possible to develop a generic typology of objectives?*
- *How can client firms work effectively with their portfolio of marketing agencies to integrate SMM into the wider marketing communications? What are the characteristics of effective SM marketing agency-client relationships in an international marketing space?*
- *How are SMM campaigns planned and managed? What is the role of influencers and celebrities in promoting a campaign? How is campaign success measured?*
- *How are organisations ensuring that the content posted by staff and consumers does not compromise the ethical principles of the brand? How are organisations managing their social media presence in line with data protection and privacy regulations (e.g. General Data Protection Regulations)?*

3.7.2.3. Social media consumer behavior. Of the themes presented in this review, consumer behavior on social media marketing platforms has attracted the most attention. It would be reasonable to hypothesize that this is because consumers are more accessible as research subjects than managers, and, in addition, there is much to be learnt from an analysis of the posts on a specific SM site through analysis of these posts and the links between them. The increasing use and development of netnographic approaches for investigating consumer behavior in the social media arena is contributing to more rigorous approaches in the analysis of social media data. On the other hand, there are a number of limitations to this body of research. Too many of the published studies are relatively small-scale studies with limited data sets and theoretical underpinning. In addition, there is a limited consensus regarding the key research questions, and a significant proportion of these studies focus on Twitter or Facebook, with limited attention paid to studies of other platforms. In respect of theory, a diverse range of theories have been employed, including personal behavior theories, social behavior theories, and mass communication theories (Ngai et al., 2015); this diversity has both strengths and weaknesses.

There is a useful and developing body of research on the role of celebrities and other bloggers, crowdfunding, and social media brand communities. Amongst these, the topic of social media brand communities (SMBC) is of particular interest. Increasing numbers of businesses are recognizing the potential of SMBC's in building a loyal and committed group of consumers who exchange ideas and mutually promote the brand and its products. Research on SMBC's leans heavily on the theory associated with consumer engagement (Habibi et al., 2014), but it would also benefit from developing its theoretical base to embrace theories associated with loyalty and communities of practice (Wenger et al., 2002). Alongside, and sometimes integrated with SMBC's, influencers and celebrities are also important in endorsing, and cultivating attachment and commitment to a brand. Research questions that would benefit from further attention include:

- *How does consumer behavior vary between social media channels? Which channels cultivate what responses (e.g. recommendation, purchase, loyalty).*
- *Is it possible to reach a tighter consensus on the dominant theoretical frameworks that should be used to support the development of understanding, and theory building in relation to consumer behavior in SMM?*
- *What is the role and impact of influencers and celebrities in SMBC's and other SMM contexts? Can different styles of communication be characterized, and if so, are some more successful for marketing than others? How can celebrities contribute to the authenticity and trust that consumers place in the brand? What factors affect the success and impact of celebrity endorsement?*

- *What attracts consumers to specific SMBC's, and what is likely to sustain their commitment? Why do they switch to another community? What link is there between being a member of an SMBC and loyalty to the brand, and its products? In what sense do consumers regard an SMBC as a Community-of-Practice?*

3.7.2.4. Social media context. This section complements the previous two sections by suggesting that many of the research questions listed above need to be visited in a range of contexts. So, for example, exploration of, say, social media marketing objectives, optimal SM channels, and the role of SM brand communities, need to be examined in relation to contexts, such as country, sector, and differing demographics. Such studies not only provide for a wide interpretation of how organisations and consumers are engaging with social media, but also provide an opportunity for the development of a strong theoretical platform for SMM, and a more nuanced knowledge base. This enhanced understanding of context could be achieved through comparative studies that focused on, for example, the SMMM of Twitter for a specific brand across two or more countries, or the consumer response to social media postings for the brand in those countries. Alternatively, a comparative perspective could be achieved through single country studies provided they were underpinned by a strong positioning relative to previous research conducted in other countries. In conducting and reporting on such studies, it would be important to reflect on the cultural differences that might underpin organizational approach or consumer behavior in specific countries. The following research questions capture this stance:

- *What differences exist between countries in their use of social media? In what ways are any of these differences related to culture? Which SM platforms are favored by organisations and consumers, and what consequences does this have for SM behavior?*

Understanding the use of SMM in different sectors is also important. Much of the research to date has focused on the use of SMM by B2C organisations, brands and customers/consumers, such as those in the fashion and hospitality sectors. There is limited research on the use of social media in the B2B sector, the non-profit sector, the public sector and tourism. However, to take the voluntary sector as an example, most of the research in this field is restricted to the US and the UK and typically reports on the use of Twitter to: manage stakeholder relationships; strengthen the community; and change people's behavior (e.g. give up smoking). On this basis, it may be debatable whether the use of social media in the non-profit sector and the public sector is SM marketing or SM communications. The tourism sector, however, is different. Despite many destination management organisations and other agencies in this sector being public sector organisations, there is widespread use of social media to market their place, to attract visitors, and to engage other stakeholders. In addition, two other aspects of this sector that are interesting and significant: tourists are active contributors of content, and there is a growing international body of research on the use of social media in tourism. However, on account of the importance of destination marketing to the economies of towns, cities and countries, it is important that such research continues. The following research questions assert the need for more comparative research within and between sectors:

- *What differences exist between sectors in their objectives for and use of social media? In what ways are any of these differences related to the role of the sector? To what extent can the use of social media in different sectors be regarded as marketing, communication, or politics?*

Finally, it is important to consider the level and nature of engagement with SMM by different consumer groups. For example, consumers may be clustered by gender, age, nationality, education level, income, occupation, interests, and leisure activities, in alignment with the typical clustering in SMM segmentation, targeting and positioning practices. Many of the existing studies relating to engagement with SMM collect data on demographics, but typically focus only on a limited subset of these demographics. In addition, a significant number of studies focus on students, because this group are often active users of social media, and it is relatively easy to gather data from this group. In general, there is a need for further research that focusses on the use of social media by different groups:

- *What impact do variables such as gender, age, nationality, and interests have on consumers' response to, and engage with, SMM? Which demographic groups are most likely to join a specific social media brand community and why? How does occupation and/or leisure interests' impact on engagement in SMBC's?*

3.8. Contribution 8 - augmented reality marketing: introducing a new paradigm - Philipp A. Rauschnabel

3.8.1. Understanding the concepts: defining augmented reality

There is general agreement that Augmented Reality (AR) is a "medium in which digital information is overlaid on the physical world that is in both spatial and temporal registration with the physical world and that is interactive in time" (Craig, 2013, p.20). There is not so much agreement, however, about how it differs from related concepts such as Virtual Reality (VR), Mixed Reality (MR) or Assisted Reality. In the 1990s, Milgram et al. (1995) developed the famous "Reality-Virtuality-Continuum", which means that everything between VR (where people are completely isolated from reality) and the real world is called Mixed Reality, with the two subcategories of Augmented Reality and Augmented Virtuality. When screening academic and industry-driven publications, however, readers may soon find that the terms are not defined uniformly, and that this is a limitation. More specifically, since the announcement of the HoloLens device by Microsoft in 2016, the common understanding of MR has developed into a synonym for "very realistic AR", i.e., content that is not only superimposed, but also realistically integrated into the environment. In contrast, a device that clearly does not deliver realistic content, like Google Glass, is not typically called a Mixed Reality (although it probably would be according to the Milgram Continuum). A common term for this minimalist, typically purely functional/textual, superimposed (mostly 2D) content is "Assisted Reality". Here, users get supporting content, ideally contextual, in their field of vision.

Finally, there is a superordinate term – XR – that represents all of the above concepts. There is no agreement about whether the "X" stands for "extended", "expanded" or only serves as a variable X for "anything" about new and innovative forms of realities. Fig. 2 summarizes this alternative to the Milgram Continuum, a more industry-specific classification of new realities. Accordingly, XR serves as a generic term with two independent subcategories, AR and VR. AR is a generic term for a continuum ranging from Assisted Reality to Mixed Reality. This means that in a perfect Mixed Reality, users cannot distinguish between virtual elements and real objects.

Numerous forecasts from many institutes indicate a future in which consumers will consistently be exposed to Augmented Reality. In particular, specific glasses-like devices, so called "Augmented Reality Smart Glasses" (e.g., Google Glass, Microsoft HoloLens, or MagicLeap One), are expected to soon move from being in a proof-of-concept phase or an enterprise tool to being a mass-market technology. Almost all the companies concerned, including Apple, Samsung, Sony, and many start-ups, are announcing the arrival of such glasses. As Apple CEO Tim Cook has stated, Augmented Reality "will happen in a big way, and we will wonder when it does, how we ever lived without it. Like we wonder how we lived without our phone today" (quoted in Leswing (2016)). Forecasted numbers from BCG (2018) and other companies support this quote.

When Augmented Reality is used in marketing, it is called "Augmented Reality Marketing" (Rauschnabel et al., 2019). Although

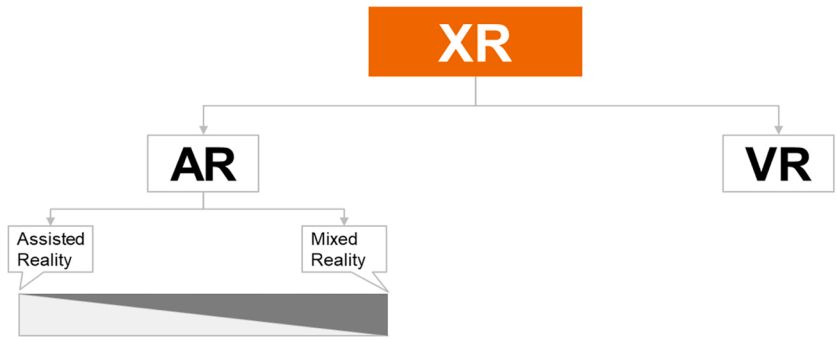

Fig. 2. Augmented Reality, Assisted Reality, Mixed Reality and Virtual Reality.

still at an early stage and potentially futuristic, this strategic concept already raises many fundamental questions to which academics are encouraged to provide answers to.

Before discussing four broad areas of research directions, I will start with a short discussion on how and where Augmented Reality can influence marketing, in particular the marketing mix (product, place, price, and promotion). Fig. 3 shows a very simple representation of a supply chain from suppliers to consumers. Traditional e-commerce (e.g., online shops, branded shopping apps, etc.) have established direct links between many brands and consumers, disrupting established supply chains over the last two decades. Augmented Reality functions can further improve and expand these channels. In B2B marketing, Augmented Reality can be an effective tool for marketing products or services to other companies, usually as an advertising or sales tool (e.g., a tool that visualizes a new robot in a customer's factory). In B2C marketing, Augmented Reality can create direct interactions between manufacturers and consumers and thus offer new opportunities for communication ("promotion") and sales ("place"). Furthermore, Augmented Reality can be used to expand core products and services ("product"). For instance, companies can use it to extend their range of services or physical product with AR components (e.g., manuals in AR or additional features). Brands can expand their product portfolio with virtual holographic products (e.g., a home decor brand could offer additional holographic decoration items that the user can only experience in AR). Third party vendors can also use Augmented Reality to enable their customers to virtually try out the products they offer from multiple vendors (e.g., Amazon's Try at Home feature for selected products), suggesting that these vendors may need new forms of data (e.g., 3D models) from manufacturers. Finally, as indicated by the gray arrow at the bottom of the figure, companies can also obtain information from users – through interaction as well as through context data, as will be explained later.

3.8.2. *Research direction 1: strategic augmented reality marketing*

Augmented Reality Marketing is a strategic concept that requires adequate resources and competencies, including (but not limited to) budget, knowledge of 3D visualization, technologies, or user behavior. This also means that Augmented Reality Marketing is interdisciplinary. For example, marketers must consider collaboration with PR, sales, innovation management, IT, law, etc., to increase the chances of success.

Strategic scholarly projects could build on prior research on strategic marketing, organizational behavior, dynamic capabilities and related theories. Potentially relevant questions include:

- Which dynamic capabilities drive the success of Augmented Reality Marketing? Which competencies do Augmented Reality marketers need? How should these requirements be integrated into digital marketing curricula?
- How should Augmented Reality Marketing be organized and implemented? Which departments and functions should be involved?

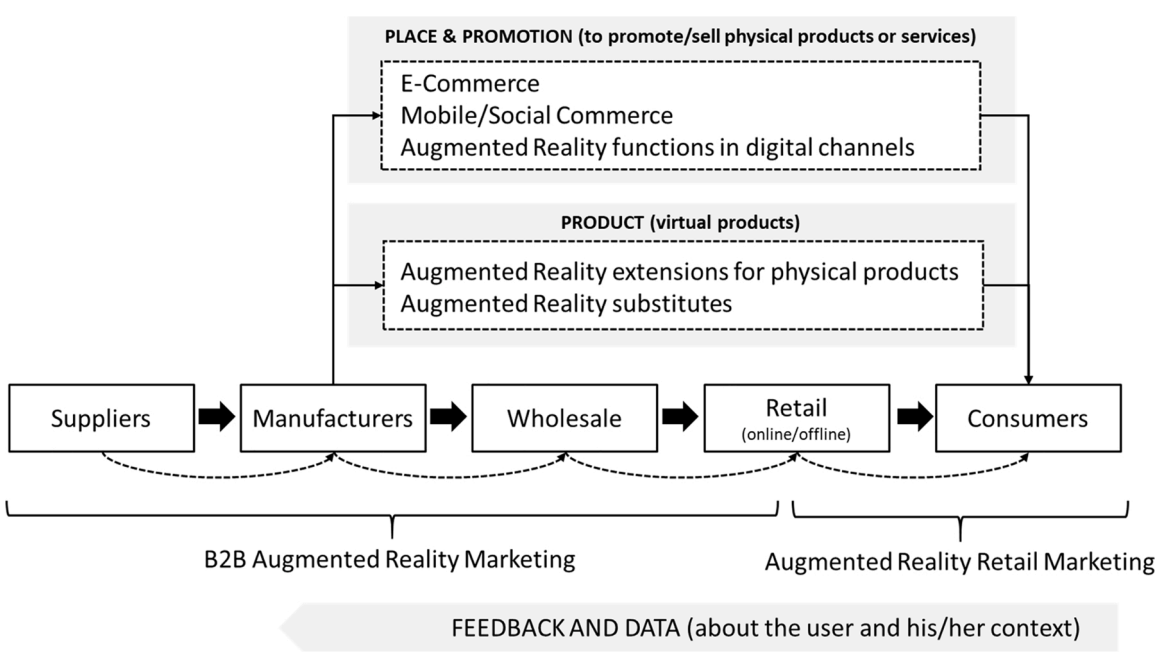

Fig. 3. Augmented Reality Marketing along the supply chain.

- How can the success of Augmented Reality Marketing be measured? What are relevant KPIs?

3.8.3. Research direction 2: the role of augmented reality in marketing

When people think of Augmented Reality Marketing, many probably immediately associate it with the promotion mix. Certainly, many companies have shown good examples of how AR communications/applications can attract attention (e.g., Burger King's app, which allows users to virtually "burn" competitors' ads to get a free Whopper, or Pepsi, who harassed people in a bus shelter by adding monsters, animals and meteors on a screen that looked like a window). A recent BCG study (2018) reflects this view and shows that most marketers see Augmented Reality in the early stages of the customer journey (e.g., building brand awareness), but expect this to change (e.g., generating revenue).

Augmented Reality can also be used outside the promotion mix, as shown by Lego, for example. The toy brand offers Augmented Reality functions for many of its products. In Lego's case, customers can add virtual fires to castles or play with virtual Lego figures. In the future, companies might also use Augmented Reality to improve the perceived value of their products (e.g., remote maintenance services or additional functions, as Lego is already doing; Hinsch, Felix & Rauschnabel (2020)). In addition to adding Augmented Reality to the product value, it is also imaginable that Augmented Reality can even replace physical products. Only recently, Microsoft has been offering MSOffice applications for its HoloLens device and showing what future offices can look like without screens and hardware. This could also point to new virtual competitors. With a few exceptions (e.g., Carrozzi et al., 2019), the idea of treating Augmented Reality content as a new product category is new. An industry study by Ericsson (2017) concluded that even Augmented Reality ads could be a threat to products, since these ads "could in essence turn into free versions of the products or services themselves". The impact on marketing, such as 3D-scanned holographic counterfeits of branded products, can be enormous, but these possibilities have been largely overlooked in the literature. Virtual products can also have an impact on pricing decisions (e.g., questions can arise about the willingness to pay for virtual products). Finally, AR apps can serve as a further direct-to-consumer channel.

Some unanswered questions that are both theoretically and managerially relevant are:

- **Product**: How do consumers interact with virtual products in their perceived real world, compared to real products? Consumers can become attached to real products, but can they also do so with virtual ones? What advantages and disadvantages do consumers see in virtual versus real products?
- **Price**: Are consumers willing to pay for virtual products? Do added services (e.g., specific functions added via Augmented Reality) increase the willingness to pay? Are consumers willing to pay higher prices for products if they can experience them through Augmented Reality before making a purchase decision?
- **Place**: In which situations do which consumers prefer Augmented Reality channels to browse or purchase products? What are the advantages and disadvantages?
- **Promotion**: What drives the effectiveness of promotional messages in Augmented Reality? How does good content marketing or good storytelling in Augmented Reality look like? Does the ability to convince consumers to buy a product after trying it out in real life lead to better decisions and lower return rates?

3.8.4. Research direction 3: understanding the users

To increase the chances of success in Augmented Reality Marketing, managers need to understand how users interact in AR (Han et al., 2018). Research in MIS, marketing, psychology, communication sciences and other disciplines has significantly improved consumer interaction in reality (e.g., supermarkets) and in virtual environments (e.g., social media). Augmented Reality, on the other hand, is different. For instance, Rauschnabel et al. (2019) argue that Augmented Reality content must be integrated into the real world well in order to generate inspirational user experiences. In another study, I showed that people expect Augmented Reality to be used to change and improve the real world, as it would be with decorative objects, but also with things that people do not own or cannot afford or that just do not exist (e.g., fairies). This construct - *Desired Enhancement of Reality* - is specific to the Augmented Reality context and does not apply at all to any other technology (Rauschnabel, 2018). Finally, Rauschnabel et al. (2018) discuss that data protection research has typically focused on the protection of a user's privacy. Since AR must by definition track and understand the real world, this also affects the *privacy of other people*.

Fruitful avenues for future research in Augmented Reality lead beyond testing established models such as the Technology Acceptance Model. In contrast, future research should pay particular attention to the unique characteristics of Augmented Reality. That is to say, it should either deepen our understanding of the recently identified AR specific constructs or even identify and study other distinctive characteristics.

There are many theories on media and technology acceptance that scientists can apply to the context of Augmented Reality Marketing. However, I encourage academics to begin with a broader, perhaps even explorative or theory-building approach that always aims to identify and understand more conceptual differences between Augmented Reality and other media formats. This is relevant both at the construct level (i.e., the identification of specific Augmented Reality constructs) and at the process level (i.e., which psychological processes affect users in Augmented Reality compared to other media?). Methodically, qualitative research is an effective way to identify these differences, and experimental designs can compare Augmented Reality with other media formats. Longitudinal studies as well as field-experiments can further deepen and validate these findings.

Some relevant questions include:

- What drives the adoption of Augmented Reality? Who are the early adopters of Augmented Reality? What are potential moderators or segmentation variables for detecting and understanding consumer heterogeneity in the answers to these questions?
- What exactly are the dimensions of consumer experience in Augmented Reality?
- What risks and fears do people perceive when interacting with Augmented Reality? How do these factors change over time?
- Are people willing to integrate the brands they like or love into their homes, as they would with merchandising? If so, what are the conceptual differences?
- How can virtual products – including virtual counterfeits – impact marketing? How does it impact consumer-brand relationships, for instance, if consumers 3D-scan branded products and replicate them as holograms?

3.8.5. Research direction 4: the role of data in Augmented Reality Marketing

Many companies today can use a variety of data to automate or at least support marketing decisions. However, this data is typically generated from behavioral data by tracking consumer behavior in digital environments. However, many behaviors happen "offline" and are thus invisible to marketers. For instance, marketers do not typically know too much about a person's lifestyle or products that are bought offline or received as gifts (unless they can make some good predictions based on data).

Augmented Reality must by definition "understand" not only users, but also their environments. Cameras, microphones, depth sensors and other instruments therefore continuously track, map and interpret a user's environment. Augmented Reality technology could, for example, recognize a small 10-year-old television in a user's large living room. It could then recommend a new TV by overlaying the old screen with a new and bigger one. The user could then immediately see how much

better a larger screen would be. It is maybe not surprising that threats to both users' and other people's privacy (Rauschnabel et al., 2018) might play a dominant role in these discussions.

Future research will probably overcome the technological hurdles (e.g., the analysis of streaming data, including object recognition) to make use of this new form of data, but many new questions will remain and require interdisciplinary research:

- What is legally possible?
- What are potential ethical concerns?
- What reaction do consumers show when their environments are continuously streamed, analyzed and complemented by marketing messages?

3.8.6. Research propositions

As discussed, forecasts predict consistently growing markets for Augmented Reality and indicate that it will become a mass medium in a few years. Recent research and case studies show the enormous potential of Augmented Reality Marketing. The possibilities range from communicative gimmicks to strategically developed investments, in almost all industries, including consumer goods, B2B, tourism, services and so on. Today it is almost impossible to market products or services purely offline. In the future we can expect a similar role for Augmented Reality. Consumers will live in a world that is consistently enriched with virtual content by marketers and other players. Companies must adapt to these developments, and Augmented Reality will probably play a similar role in almost all industries as online channels do today.

Proposition: Augmented Reality will be as prevalent in the marketing of the future as the Internet is today.

Since the role of Augmented Reality goes far beyond communicative aspects, dealing with it is very complex. Managers need to better understand the unique aspects of consumer behavior, specific goals, KPIs, technological challenges and so on. Building on this, they need supporting tools to develop Augmented Reality strategies. As scientists and educators it is our duty to support managers with insights and to include relevant topics in our curricula. This includes relevant concepts (e.g. theories and strategies), tools (e.g. 3D modelling), boundary conditions (e.g. legal and ethical aspects) and technological fundamentals (e.g. tracking or mapping).

Proposition: The management of Augmented Reality is highly complex. Therefore, companies must develop specific skills and scholars should support this.

3.8.7. Conclusion

Augmented Reality is still in its infancy, but most probably about to experience a breakthrough. As discussed in this section, Augmented Reality Marketing is much more than just a communicative gimmick, it might become a new paradigm in management research and practice. However, surprisingly little research has been conducted in this field. I hope that this section inspires scholars from a range of disciplines to research Augmented Reality and how it can positively impact marketing, businesses, consumers, and societies as a whole.

3.9. Contribution 9 - responsible artificial intelligence (AI) perspective on social media marketing - Yichuan Wang

Social media marketing is in transition as AI and analytics have the potential to liberate the power of social media data and optimize the customer experience and journey. Widespread access to consumer-generated information on social media, along with appropriate use of AI, have brought positive impacts to individuals, organisations, industries and society (Cohen, 2018). However, the use of AI in social media environments raises ethical concerns and carries the risk of attracting consumers' distrust. A recent finding reported by Luo et al. (2019) indicates that AI chatbot identity disclosed before conversations with consumers significantly reduces the likelihood of purchase. Therefore, if the ethical dilemmas are not addressed when implementing AI for marketing purposes, the result may be a loss of credibility for products, while the company's reputation in the marketplace may suffer. In the following sections I introduce some responsible AI initiatives for social media marketing, and then suggest future directions by proposing possible research questions.

3.9.1. Responsible AI-driven social media marketing

Responsible AI is defined as the integration of ethical and responsible use of AI into the strategic implementation and business planning process (Wang et al., 2020). It can be viewed as a guardian framework that is used to design ethical, transparent and accountable AI solutions that create better service provision. Such solutions harness, deploy, evaluate and monitor AI machines, thus helping to maintain individual trust and minimize privacy invasion. Responsible AI places humans at the centre and meets stakeholder expectations and applicable regulations and laws. The ultimate goal of responsible AI is to strike a balance between satisfying customer needs with the responsible use of AI and attaining firms' long-term profitability.

Responsible AI can be conceptualized from the perspectives of economic and social sustainability, in which the role of AI is highlighted as an enabler of social responsibility and business long-term success. From the economic sustainability perspective, AI tends to be viewed as a powerful tool not only for maximizing economic value but also for satisfying customer needs with fewer ethical concerns and dilemmas. In the social media context, firms should place AI ethics and standards at the core of their social media marketing strategy by formulating ethics policies on harnessing social media data and by considering socially favorable AI approaches and algorithms to create effective marketing communications for consumers. From the social sustainability perspective, the societal impact of AI on the well-being of humans and environments requires considerable attention. Developing AI solutions by considering human rights, fairness, inclusion, employment and equality can lead to potential gains in credibility for products and brands.

From these two perspectives, three responsible AI initiatives for social media marketing are identified, namely: (1) Ethical AI design and governance; (2) Risk control by human and AI coordination; and (3) Ethical AI mindset and culture.

3.9.1.1. Ethical AI design and governance. Harnessing AI in social media marketing focuses primarily on building data transparency and consumer trust. The use of AI and analytics needs to be transparent to customers and other external constituencies and communities. For example, Capital One has created QuickCheck, a criteria system for credit card applications. This system provides an initial decision with transparent and comprehensive explanation before customers make a formal application for a credit card online. This responsible initiative is featured in their "Check it, don't chance it" social media marketing campaign. More generally, under recently introduced data protection regulations such as the General Data Protection Regulation (GDPR), firms are required to institutionalize the practice of obtaining consent statements or permissions from consumers, and must ensure that they provide full and comprehensible information that allows customers to fully understand how and when data is processed by analytical applications.

Consumer trust towards AI is influenced by explainability of AI. This is an important component of AI application, intended to provide users with accurate prediction, understandable decisions and traceability of actions. Explainable AI (XAI) is an emerging AI approach that should be integrated into social media marketing to help firms generate accurate and effective marketing appeals (e.g., automatized recommendations and personalized offers) for their target consumers and reach them at the right time and right place. For instance, in order to reduce high online purchase return rates, H&M utilises AI to ensure customer centricity (approaches such as tailoring consumers' physical dimensions with their

preferred styles and incorporating multiple data sources for dynamic analysis). As another example, Quantcast, a leading AI company that specializes in AI-driven marketing, optimizes customers' advertising campaigns through using AI-driven real-time insights. They rely on real-time data and machine learning capability to help their customers ensure brand safety and protect consumers from fraud and the dissemination of fake information, thus increasing customer trust towards brands.

3.9.1.2. Risk control by human and AI coordination. AI-driven social media marketing may raise some potential risks for focal companies and consumers. Risks related to security (cyber intrusion and privacy), economic aspects (e.g., job displacement) and performance (e.g., errors and bias, black box and explainability issues) can be minimized by valuing human intelligence and skills (Vayena et al., 2018). For example, AI solution designers can formulate rules of risk controls and data protocols, with clearly focused goals, execution procedures, metrics and performance measures to harness data effectively from the time it is acquired, through storage, analysis and final use. Organisations should also regularly review the social media data they gather externally and realize their potential risks. AI comes from self-learning through human designed algorithms. It is imperative to ensure the credibility of social media data so that AI can learn from the right patterns and act according to their input.

3.9.1.3. Ethical AI mindset and culture. According to research carried out by PwC, only 25 % of around 250 surveyed companies had considered the ethical implications of AI before investing in it. Consequently, the collection and utilization of consumer data by AI and analytical algorithms via social media give rise to serious issues regarding invasion of consumers' privacy, fraud, offensive or harmful marketing appeals, lack of transparency, information leakage and identity theft (Martin & Murphy, 2017). Developing an ethical organizational mindset and culture is viewed as a prerequisite of successful social media marketing. H&M Group, for instance, has developed a checklist of 30 questions to ensure that the use of AI applications is fair, transparent, reliable, focused and secure, has beneficial results, is subject to proper governance and collaboration, and respects privacy. This code of practice helps H&M to ensure that every AI solution they develop is subject to a comprehensive assessment of the risks involved in its use.

3.9.2. Research questions

The initiatives mentioned above offer substantial potential to extend our understanding of responsible use of AI in social media marketing. They also provide new avenues for research in areas that demand attention from scholars; more specifically, they suggest the need for in-depth studies in the context of social media marketing. Below, I suggest relevant research questions with regard to ethical AI design and governance, risk control by human and AI coordination, and ethical AI mindset and culture.

3.9.2.1. Ethical AI design and governance.

- *How can we understand consumers' cognitive appraisal of, and emotional and behavioral response towards, responsible (or irresponsible) use of AI in social media marketing?*
- *How can we design AI-generated social media marketing communications through advanced AI algorithms that optimize customer purchasing experience?*
- *How can AI tools and applications improve social and economic impacts by reinforcing the regulations designed to tackle irresponsible social media marketing practices?*
- *How can we ensure the quality, reliability and transparency of social media data to support marketing decision-making?*
- *How does AI governance enable firms to recover from privacy failures on social media?*

3.9.2.2. Risk control by human and AI coordination.

- *How can we fully recognize the potential risks of AI use relevant to social media marketing?*
- *How can human skills and intelligence be integrated with AI to mitigate consumers' risks in the digital world?*
- *Under what circumstances and to what extent does AI require human input to tackle ethical and legal challenges in the digital world?*

3.9.2.3. Ethical AI mindset and culture.

- *What practices, and mechanisms can enable firms to cultivate an ethical culture of AI use?*
- *How can digital marketing professionals ensure that they utilize AI to deliver value to the target customers with an ethical mindset?*

How can ethical culture be embedded into the fabric of AI in order to facilitate fairness and inclusion in consumption in the digital era?

3.9.3. Research propositions

In order to implement responsible AI it is necessary to develop ethical AI design and governance and to minimize potential risks and biases. First, an ethical AI design should take into account data transparency and privacy protection in order to retain consumer trust. For example, Capital One has created QuickCheck, a criteria system that provides an initial decision with transparent and comprehensive explanation before customers make a formal application for a credit card online. This responsible AI initiative is featured in their "Check it, don't chance it" social media marketing campaign aimed at creating customer awareness.

Second, it is essential to minimize potential biases (e.g., algorithmic, racial, ideological and gender biases) during the ethical AI solution development stage. By doing so, it will be possible to improve the accuracy of product recommendations and targeted promotions and advertisements (Rai, 2020). For instance, to prevent racial and gender biases, L'Oréal uses an AI-powered spot diagnosis algorithm developed by modelling more than 6000 patient photos with consideration of different ethnicities, age, gender, and skin conditions. Another example is Oral B's smart toothbrush, which tracks thousands of brushing styles and behaviors from a range of users so as to provide personalized feedback and advice to its customers.

When AI-enabled products are designed ethically and responsibly, taking into account customer needs and values, consumers will perceive the product as highly trustworthy, and this will increase their engagement levels with marketing campaigns. Meanwhile, AI tools developed by diverse and bias-free data sets can provide a deeper understanding of customers and thus drive more effective social media marketing spend. In view of this, we suggest the following proposition:

Proposition: The implementation of responsible AI will drive social media marketing performance.

By adopting an effective marketing communication approach, firms should be able to gain high market share and brand reputation with less investment in advertising and promotion (Luo & Donthu, 2006). Particularly in social media environments, where consumers receive large numbers of AI-generated marketing messages from various platforms on a daily basis, effective marketing communication driven by AI

can lead to positive word-of-mouth and brand image and the formation of purchase intention. Research by the Direct Marketing Association (2018) found that 57 % of surveyed consumers are comfortable with receiving personalized marketing messages generated by marketing automation tools that may surprise them and help them make purchasing decisions. However, in some cases, the collection and utilization of social media data by AI algorithms can lead to consumers receiving irrelevant or redundant marketing appeals, delivered indiscriminately via social media platforms. In order to avoid this issue, which can cause frustration for customers and the loss of credibility for products and brands, it is essential that firms devise appropriate AI methods (Wang et al., 2020).

Explainable AI has the potential to address this challenge, as it can achieve targeted marketing. Explainable AI provides a precise rationale of the marketing decision-making process and provides marketing managers with a human-understandable explanation (Overgoor et al., 2019; Rai, 2020). For instance, explainable AI could be used to inform marketing managers why a specific discount voucher is sent to a consumer and though which social media channel a specific product is targeted to a prospective consumer. This would increase the accuracy of marketing efforts and reduce the likelihood of relatively undifferentiated advertising executions.

The above discussion suggests that social media marketing communication can be optimized to achieve better market returns for firms that strive to implement explainable AI in their marketing practices. Therefore, we suggest the following proposition:

Proposition: Social media marketing communication has a stronger influence on firm's market returns in firms that highly engage in explainable AI development.

3.10. Contribution 10 - How AI would affect digital marketing? A practitioner view - Vikram Kumar and Ramakrishnan Raman

In recent times the world has progressed significantly as far as technological advancements are concerned and AI now impacts numerous aspects of everyday life. AI is being adopted within many industries, from banking to finance, manufacturing to operations, retail to supply chain, AI is changing the way industries operate. For digital marketers, AI has evolved as a new way to connect and engage with the target audience.

AI powered tools intend to enhance the customer experience and have been trending for some time. In the past few years, AI has attracted marketers to an area once perceived for benefiting bigger organizations only. However, today considerably smaller organizations can apply openly accessible algorithms and off the shelf machine learning (ML) algorithms to generate insights for data analysis and forecasting.

As digital marketing is advancing with each year, digital marketers, will need to begin thinking beyond traditional strategies. AI is not limited to just gathering and analyzing data but has the potential to disrupt digital marketing practices. One in every five searches undertaken on Google is actioned through voice. This statistic is significant and digital marketers are advised to comprehend its necessity. This raises a question relevant to all digital marketing practitioners - how can AI be leveraged for efficient and effective marketing strategies?

AI has the ability to transform each and every aspect of digital marketing; generating repurposed content, media buying, sentiment analysis, predictive analysis, lead scoring, ad targeting, web and app optimization, chatbots, personalized retargeting, personalized dynamic emails. AI helps in foreseeing customer's behavior in their buying journey and can help digital marketers in predicting the buying pattern of customers. Brands can upsell and strategically pitch the required products to customers based on the extracted data. With the help of AI, marketing automations can be done which can allow marketers to give their audience a personalized experience and develop happy and satisfied customers.

AI can compose articles using natural language generation and through AI powered automated influencer marketing platforms, the repurposed content can reach customers on each point of their buying journey. The advancement of AI will not replace marketers however, it will have a direct impact on customer experience. A high proportion of digital consumption is transacted through mobiles and tablets, more so within developing countries Customers exhibit different behaviors while browsing. AI can empower a marketer to be able to differentiate the consumption patterns of users and serve the customers as they would like to be served. Accelerated mobile pages will help the marketers in earning more traffic for their websites and keeping their customers satisfied. Here are a few ways in which AI is empowering digital marketers.

3.10.1. Innovative advertising

For a digital marketing campaign to be successful, the essential and most important aspect is to connect with the right audience. With AI powered advertising, it can be simple and straight forward for marketers to target the right audience. AI tools can gather information, analyze the data and predict future behaviors. With this data, marketers can target advertisements as per the interest and predicted consumption patterns of the audience. Moreover, advertisements can be enhanced with Augmented Reality (AR) and Virtual Reality (VR) thus collecting more information from the customers and AI can eventually utilize the data for a more engaging and personalized advertisement experience.

3.10.2. AI powered websites

AI powered website builders can now build websites based on user data, thus, reducing the cost and time of creating an interactive website from scratch. Currently, the majority of these AI-powered builders are still in the early stages of development. However, these AI driven processes are likely to transform digital marketing in the future.

3.10.3. Enhanced shopping experience

AI powered marketing is going to change the traditional way of shopping by improving the online shopping experience. A number of brands are trying different possibilities with various formats of AI to upgrade the shopping experience for customers, allowing them to interact with products via the use of AR before purchase.

3.10.4. Genuine product recommendations

The granularity of the data analysis via AI algorithms are far beyond human imagination. AI based digital marketing strategies are now being used to assist marketers in ascertaining the behavior, interests, needs, habits of customers at every stage of the sales cycle providing product purchase suggestions to customers in real time.

3.10.5. Chatbots

Chatbots are widely being integrated on initial touchpoints with customers and are programmed in such a way so as to answer customer's questions in real time. Chatbots are likely to perform a greater number of marketing related tasks and develop increasing levels of sophistication as well as data analysis capability.

3.10.6. Here are a number of ways in which AI is changing the face of digital world

The ability of AI to analyze, monitor and utilize data, removes the need for humans to be involved in many of the mundane roles within data analysis. Brands and marketers are leveraging AI digital marketing for detailed and improved customer's experiences. AI based digital marketing is helping marketers gain a competitive edge in numerous ways.

3.10.6.1. Improved productivity. AI is empowering marketers to automate advertising, thus saving time and increasing productivity.

3.10.6.2. Increased ROI. The way AI analyzes and utilises data is beyond human capacity in terms of processing speed. This empowers data-based decision making and the targeting of customers can be achieved more accurately thereby, increasing ROI.

Though Artificial Intelligence has been in trend from recent time, AI and digital marketing have been in sync for quite some time now. The advanced algorithms used by Facebook and Google advertisements are all AI powered and advanced versions of AI are now available for the digital marketers. Adnext; an AI powered advanced digital marketing algorithm allows digital platforms to monitor the campaigns and optimize them in real time based on the behavior of the audience and the performance of the platforms. This was earlier done manually after analyzing all the campaigns separately for each of the platforms. Adnext automatically adjust the budget and allocate the best suited budget for the best performing platforms and campaigns.

The increased use of AI will yield numerous benefits for digital campaigns. AI implementation within digital marketing will benefit customers as well as marketers, helping marketers in unleashing more innovative and efficient strategies.

3.11. Contribution 11 - Dyad mobile advertising framework for the Future Research Agenda: marketers' and consumers' Perspectives - Varsha Jain

According to the Mobile Marketing Association, Mobile advertising is the "form of advertising that transmits advertisement messages to users via mobile phones" (Chen & Hsieh, 2012). Today as mobile phones have become the first screen for the consumers, mobile advertising can play a significant role in influencing consumers' mindset (Kim & Han, 2014). As, mobile phones are sophisticated ubiquitous devices, the strategies of traditional advertising may not be successful with these devices. However, academic research is scarce in this area (Bues et al., 2017). Thus, this section provides a dyad mobile advertising framework with five propositions (see Fig. 4), to explore this important area of marketing, while understanding the various dimensions related to marketers as well as consumers.

Our Dyad mobile advertising model based on the SOR (Stimuli, Organism and Response) framework has four components: types of advertising, content of advertising, processing dimensions, and consumers' response. The type of advertising and content of advertising acts as the marketer driven stimuli for the consumers. Next, we mention the processing dimensions which acts like organism for the consumers. Here we also consider social influences that moderates the relationship of processing dimensions as the consumers are always online. Finally, we cover the consumer responses, which are vital results mobile advertisements.

3.11.1. Type of mobile advertising

We explain the types of mobile advertising through location based, informative, credible, entertaining, incentive based and irritating formats. First, location-based advertising (LBA) helps the consumers to receive the information on the go. LBA facilitates comparison among stores, location, entertainment or shopping and helps the marketers as well as consumers by connecting the "when" and "where" elements. Further, the weather associated with a location also have significant role in determining effectiveness of mobile advertising on consumers (Lin et al., 2016). Second, informative nature of advertising, which conveys the messages about the products and services helps in increasing the effectiveness (Smith, 2019). Third important dimension is credibility, which refers to the truthfulness and believability of the ads. Both advertising credibility and advertiser credibility determines consumer confidence and consumer expectation. (Lin and Bautista, 2018) Credibility influences the advertising value (Ducoffe, 1995) along with consumers' attitude and behavior. Fourth is entertainment, which is the ability of the ad to provide enjoyment and satisfy consumers' diversion and aesthetic needs. These help to develop positive moods, attitudes and attention (Elliott and Speck, 1998). Entertainment leads to increase in advertising effectiveness and perceived value. Fifth, incentives provided to the consumer via advertising have positive affect on the consumers. Incentives relates to the advertising value, perceived value and perceived usefulness. This is because shoppers always yearn for "a good deal" and "being a smart shopper" (Park et al., 2018). Sixth, irritation, which is that type of advertising where the marketers annoy, insult or offend the consumers leading to negative, impatient and displeasure towards the ads (Smith, 2019). This intrusion interrupts the activities of the consumers, leading to negative associations, which significantly affects the advertising value (Ketelaar et al., 2018).

Proposition: types of advertising primarily, location based, informative, credible, entertaining, incentive based and irritating influences the effectiveness of mobile advertisements.

3.11.2. Content of mobile advertising

The key content related elements of mobile ads include style & personalization, user control, functional, relevance &contextual, short and emotive. First, the content preferred by the consumer especially needs to be stylish and personalized for positive consumer responses. Positive responses lead to perceived value and perceived usefulness

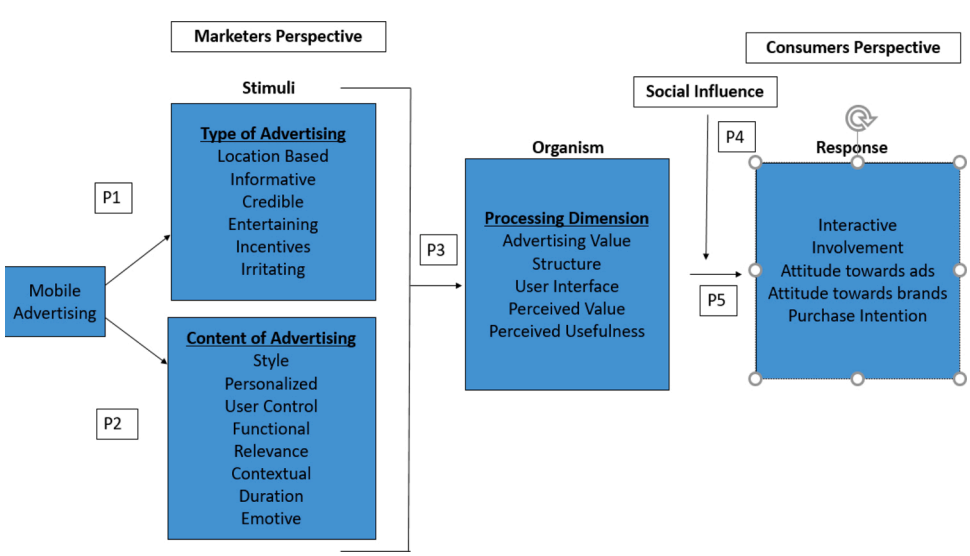

Fig. 4. Proposed dyad mobile advertising framework.

(Shareef et al., 2017). Second, consumers also want the content to be functional (Smith, 2019). They avoid useless and intrusive content using "swipe" or "ask me later" options. Further, content has to depict "real life". Third, users should have control over the content and it should be rigorous enough to deliver the message in five seconds (Smith, 2019). Fourth, content of the mobile advertising has to be contextual and relevant as they positively influence the perceived value (Lin et al., 2016). Contextual content is premised on the interests, preferences, and consumption patterns of the consumers, which increases the willingness of the individuals to engage with the ads (Lin et al., 2016). Fifth is relevance, which refers to ad content's congruency (Shareef et al., 2017) with the lifestyle and interest of the consumers, resulting in positive attitude towards ads. Sixth, content of the advertising has to be emotive. Emotional content would generate positive feelings, enhancing the advertising value and perceived value.

Proposition: content of mobile advertising specially style, personalization, user control, functional, relevance, contextual, short and emotive dimensions significantly influence the effectiveness of mobile advertising.

3.11.3. Organism: processing of mobile advertising

Consumers process mobile advertising as the part of internal evaluation represented by Organism in the SOR model. This process focusses on three elements; advertising value and structure, user interface, and perceived value. According to the elaboration likelihood model (ELM), mobile advertising affects the peripheral processing as the emphasis is on the existing needs and creation of new needs for the products and the services (Shankar and Balasubramanian, 2009). The customer interactions in terms of the overall structure and user interface is imperative for processing mobile advertising. ELM also works with hedonic or utilitarian elements of products and emotional involvement of products and services. Thus, cognitive and affective drivers act while consumers process mobile advertising. This leads to interactivity, involvement and repurchase of products and services (Lu et al., 2018). Second, user interface, which primarily includes visual design where the size, color, music and animations play an important role in affecting consumers' responses. Third, perceived value is the overall benefit that the products and services offer through mobile advertising, when compared to competitors. Simply put, it is the "subjective evaluation of the advertising" (Ducoffe, 1995). This associates with the perception about the company's competitive advantage that forecast purchase intention (Grewal et al., 2016). Thus, perceived value affects consumers' purchase intentions, attitudes (Lin et al., 2016) and behavior.

Proposition: Type of advertising and content of advertising significantly influences the processing of mobile advertisements in terms of advertising value and structure, user interface and perceived value.

3.11.4. Moderator: social influence

Consumers' responses are moderated by social influences (Shareef et al., 2017) as they process mobile advertising. Social impact theory also states that numbers of peers and their proximity increases the social impact on the individuals and thus, the subsequent responses for mobile advertisements are influenced. Social influences also affect the trustworthiness and motivation of consumer responses. Thus, social influences affect consumers' attitudes and responses towards mobile advertisements. Social influences are related to the subjective norms based on the theory of planned behavior, aspirational and associative reference groups that enhance the trust of the consumers and eventually leads to the positive consumer responses.

Proposition: consumers' processing of the mobile advertisements especially with respect to advertising value and structure, user interface and perceived value is moderated by social influences primarily for the consumer response.

3.11.5. Consumer response

Consumer responses to mobile ads are in the form of interactivity, involvement, attitude towards ads and brands, and purchase intention. Interactivity relates to the online navigational mechanism, which provides immediate feedback to consumers, providing better communication. Interactivity has multiple dimensions, as it is two-way communication with advertising context and user control. Interactivity is a favorable consumer behavior in the context of mobile advertising (Lu et al. 2019). Interaction leads to involvement, which is the subjective experience of the consumers, related to affective state. Mobile advertising can extensively involve consumers with contextual messages that can engage and stimulate. The personal involvement, physical involvement and situational involvement, which reflects relevance for the consumers leads to advertising value (Lu et al., 2019). Thus, mobile advertising can involve consumers, develop interactions, provide seamless and pleasing experience, which eventually develops positive attitude towards the ad, brand and develop purchase decisions.

Proposition: Processing dimensions such as advertising value, structure, user interface and perceived value with moderation of social influences significantly include the consumer responses in terms of interactivity, involvement, attitude towards advertisement, attitude towards brand and purchase intention.

LBA is an emerging area of research, which has an attractive marketing platform. This form of advertisements is diverse and ubiquitous as the features of mobile phones, smart phones, tablets and computers are divergent. LBA uses location-tracking technologies, which includes Global Positioning System and Global Navigation Satellite System to understand the real time locations of individuals so that ads can be delivered based on the geographical place or site of mobile phones. Thus, the ads become individualized with the instant, personalized and location specific features that can cater to the specific needs of the ad recipients (Bruner & Kumar, 2007; Dhar & Varshney, 2011). The individualized and personalized advertisements are likely to attract high 'click through' rates. Hence, LBA becomes more appealing and persuasive which can lead to success.

LBA facilitates the delivery of the messages to the specific users where the effects would be high and positive. This from of advertising started for static media platforms such as billboards and websites but has eventually moved to mobile phones. Mobile advertisements provide value for different companies by providing their users with individual, location based, dynamic real time content. To optimize this content, location based technology is used to individualize marketing communication for users. Thus, LBA is an effective channel that helps marketers to reach out to users and engage them through innovative approaches which persuade increased purchase of products and services. The clicks by the users indicate that location based advertising has the potential to illustrate the user interest and can encourage them to consider offers related to the advertised products and services. However, these clicks do not ensure they are interested in the products and services, Thus, future studies have to investigate the decision making process with respect to location based advertising.

Proposition: Location based advertising would significantly affect the buying decisions.

Further, contextual factors (Zhang and Katona 2012) would increase the complexity of optimal advertising behavior, which would elevate issues for the marketers. For instance, Google maps offers location sensitive version of the sponsored search advertising. This helps in ensuring that the relevant ads appear on the headlines in the displayed map. Interestingly, users' willingness to pay reduces with the increase in the distance to the stores. This provokes marketers to develop refined mechanisms, which are related to contextual factors that could help users as well as marketers. Therefore, future studies can investigate moderating effects of contextual factors, which could positively affect the outcomes of mobile advertising with optimum amount and placement of mobile spending within the overall marketing budget.

Proposition: Contextual factors such as location, weather and social interact can affect the intention to buy the products among the users and budget allocation by the marketers for advertising.

3.11.5.1. Attitude towards mobile advertising. Mobile phones are personalized communication tools (Bacile et al., 2014) as the users keep this device within the arm's reach throughout the day and night. Users can access the information anytime and anywhere which facilitates marketers to reach out to these individuals easily via mobile phones. Additionally, as the users do a multitude of activities on their phone besides talking and texting, marketers have numerous opportunities for the communication. Users also interact with the mobile apps, which also enable the marketers to provide advertising content.

Advertising has to influence the exposure, attention and reaction of the users towards the advertisements. Mobile phones track the users' environment, which affect their attitude and behavior. Hence, the effectiveness is depended on the users' positive attitude towards the advertisements and mobile phones and help in changing the mindset of these individuals. For instance, mobile apps have grown exponentially and in-app advertising have resulted in positive attitude of the users. The success of mobile advertising is driven by context, which associates the users' journey including awareness, positive attitudes, engagement, conversion, repurchase, and advocacy. Mobile advertising is extensively use by the marketers to create presence, develop interactive relationship, enhance mutual values, significantly affect the consumer attitudes, and purchase intention. Thus, in-app advertising needs further research to understand the perception of the users and develop positive attitude.

Proposition: In App, advertising increases the willingness of the users to click, increase attention and develop positive attitude

3.12. Contribution 12 - research on mobile marketing - Heikki Karjaluoto

The term "mobile marketing" entered the academic literature in the early 2000s. Among the first literature reviews was Leppäniemi, Sinisalo, and Karjaluoto (2006), which reviewed the mobile marketing literature between 2000 and 2006. Notably, the first scholarly conference paper (Rettie & Brum, 2001) entitled "M-commerce: The Role of SMS text messages" on mobile marketing dates back to 2001 and the first journal papers appeared in 2002. In the early 2000s, journals such as the *Journal of Advertising Research*, the *Journal of Advertising*, the *International Journal of Advertising*, *Operations Research*, and *MIT Sloan Management Review* were among the first scholarly publications to publish research on mobile marketing. Since then, hundreds of mobile marketing and related papers have been published, and this trend can be expected to continue.

During these early days of mobile marketing research, mobile marketing referred to sending text messages to consumers' mobile phones. Mobile marketing was thus often labelled as SMS advertising. Building on this, and in light of the various conceptualizations of mobile marketing, Leppäniemi et al. (2006) proposed that mobile marketing should be defined as "*the use of the mobile medium as a means of marketing communication*" (p. 10). In a similar vein, Bauer et al. (2005), in probably the highest-cited paper on mobile marketing (with over 1100 citations by October 2019 according to Google Scholar), described mobile marketing as "*using the mobile phone as a means of conveying commercial content to customers*" (p. 181).

Research published since 2007 has mostly built on SMS technology when studying mobile marketing. However, given the drastic growth of smart phones since the launch of the first iPhone in 2007, mobile marketing is today a term referring largely to other (non-SMS) forms of communication via mobile phones and devices. In another state-of-the-art paper on mobile marketing, Varnali and Toker (2010), after reviewing the research on mobile marketing up to 2008, came to the conclusion that "*although the literature on mobile marketing is accumulating, the stream of research is still in the development stage*" (p. 144). In their study, they noted that only five journals, of which two are clearly devoted to mobile communications, had published more than five papers on mobile marketing. These journals were the *International Journal of Mobile Communications* (47 papers), the *International Journal of Mobile Marketing** (41 papers), *Communications of the ACM* (Association for Computing Machinery; 9 papers), the *Journal of Electronic Commerce Research* (7 papers), and *Electronic Markets* (6 papers). Similar to Leppäniemi et al. (2006), the two key topics in the research were found to be the consumer acceptance of mobile marketing and mobile marketing strategies and tools. Around the same time, Shankar and Balasubramanian (2009) published a paper entitled "Mobile Marketing: A Synthesis and Prognosis" in the *Journal of Interactive Marketing*. Among other things, they proposed a framework for addressing the effects of mobile marketing on the consumer purchase decision-making process.

More recently, there have been various literature reviews published on mobile technology adoption and use. However, only a few directly deal with mobile marketing. Among these is the paper by Ström, Vendel, and Bredican (2014), which discussed the value that mobile marketing provides to consumers as well as retailers. They noted that the key value that mobile marketing can provide for retailers is the "*increased effectiveness of brand communication and improved service interactions in store and post purchase*" (p. 1007). A fresh perspective on the mobile marketing literature was provided by Billore and Sadh (2015), who reviewed studies on mobile advertising (i.e., advertising on mobile phones and other devices). Their article made a critical but very relevant remark concerning scholarly research on mobile marketing and advertising: "*either it (mobile advertising research) addresses one specific type of advertising medium, or the findings of the studies are specific to a geographical location or country. Another limitation is related to the scales or instruments used in existing literature for measuring various constructs that are not specific to mobile advertising*" (p. 161). Thus, they encouraged future studies to look at cross-cultural differences and develop better instruments to measure different mobile advertising effects that are specific to mobile media.

3.12.1. Future steps

The definitions concerning the term mobile marketing have, quite surprisingly, not evolved much. The American Marketing Association (2019) uses the Mobile Marketing Association's definition in its dictionary, which defines mobile marketing as comprising *"advertising, apps, messaging, mCommerce and CRM on all mobile devices including smart phones and tablets."* As the definition implies, mobile marketing now covers almost all marketing-related communication in different formats (e.g., text and video) accessed via all mobile devices.

Several papers have proposed a research agenda for mobile marketing and advertising. Grewal et al. (2016) provided an overarching framework for future research, addressing and proposing research directions related to environmental context and technological context, consumer-related variables, market factors, advertising (e.g., the goals and elements of advertising elements such as media), and metrics. Their framework offers an in-depth analysis of the central factors related to understanding, in particular, the advertising side of mobile media.

Lamberton and Stephen (2016) discussed the research evolution of mobile marketing from 2000 to 2015 and proposed an agenda for theory development in the field. Their key proposition was that mobile marketing researchers should "*focus on understanding the marketing value of aspects of mobile technology that allow marketers and/or consumers to do things that cannot be done with nonmobile technology (e.g., geo-located ad targeting; making use of sensors in mobile devices that measure ambient contextual attributes, or even user biometrics, in the case of wearable devices)*" (p. 165).

From a more practical perspective, the paper by Bakopoulos, Baranello, and Briggs (2017) proposed several key future research avenues for mobile marketing researchers. They identified how prior research has not sufficiently addressed the issue of how much of the total advertising budget should be allocated to mobile and which advertising formats, targeting strategies, and tactics brands should use. In addition, their study proposed three key research questions dealing with 1) consumers' path to purchase and the role of mobile advertising in it, 2) how to effectively communicate a message on mobile, and 3) how to target effectively using mobile advertising.

As the world has already turned "mobile" in the sense that mobile internet use has bypassed desktop internet use in many markets, research on understanding the various aspects of marketing and advertising on mobile devices can be expected to continue to flourish in the coming year. Hereafter the following two propositions are formulated in order to help guide future research related to mobile marketing.

3.12.2. Research propositions

The use of mobile marketing can bring many benefits to both retailers and consumers. According to Ström, Vendel, and Bredican (2014), the key value that mobile marketing can provide for retailers is enhanced brand communication and improved service interactions. Mobile marketing can also be very useful in post purchase stage. However, to date there is not much research confirming the various possible positive effects mobile marketing might have on customer relationships. Thus, we propose researchers look at these effects within future studies and propose the following:

Proposition: Mobile marketing communication will have a positive significant effect on brand communication, increasing for example brand awareness, brand attitude, customer satisfaction, customer retention, and positive word-of-mouth.

According to Lamberton and Stephen (2016), one of the key features of mobile marketing is to leverage the specific features mobile that can bring additional value to both consumers and marketers. The mobile specific features such as location-based ad targeting and wearable devices, can bring the time and context variables in advertising targeting to a completely new level. Targeting effectively using mobile advertising is of key interest in this debate (Bakopoulos, Baranello, and Briggs, 2017). Thus, researchers are encouraged to provide information relating to these mobile specific elements and study how they might create additional value to both the seller and the buyer. On this basis, we propose that:

Proposition: The more mobile marketing builds on mobile specific features, such as location-based ad targeting and use of mobile marketing in real-time service interactions and post purchase, the more positive the brand communication effects will be.

3.13. Contribution 13 - crossing to the dark side of social and digital marketing: Insights and research avenues - Hajer Kefi

Over the past decade, brands and consumers have extended their communication through digital channels especially on social media. These platforms are enabling innovative marketing practices due to their huge potential to deploy successful digital and social media marketing campaigns and value co-creation strategies (Felix et al., 2017; Kamboj et al., 2018). Mechanisms of digitized word-of-mouth, virality and social influence contagion are at stake here and have triggered an important research area which is mainly focusing on their positive and beneficial effects (the light side). Whereas research on the negative and harmful effects (the dark side) is still at its nascent stage. We think that it is important for researchers and practitioners to anticipate both sides and aim this synthesis at providing an overview on the undeveloped literature in this area. We also suggest new research avenues that could help extend works addressing it.

Two perspectives will be put forward: the first is technology-oriented and emphasizes issues and biases related to the fact that digital marketing is a digitally-enabled and data-driven domain of research and practice. And the second is user-oriented and focuses on human and psychological aspects related to consumer misbehavior in the digital era. These perspectives are not mutually exclusive, and both call for integrating more ethical and social views to constrain the dark side.

3.13.1. Data and algorithmic issues

Data is one of the largest creations of humankind. Around 2012, this fact has become popular with the advent of the concept of Big Data. Since then, many claim that 'data is the new oil' while others advocate for the absolute necessity to ascertain data validity and veracity before deriving any value from it. Amidst them marketers who succeeded to reshape the digital media environment in order to apply new practices: programmatic advertising, customer retargeting, e-WOM and influencer marketing, to name a few. But at what cost? The overwhelming ocean of data surrounding us is riddled with 'digital pollutants' that deteriorate data quality. Bias in data can appear in different ways, from data leaks and privacy breaches to spam, fraud reviews, fake social media identities and fake news.

As explained by Fulgoni & Lipsman (2017), metrics could be at the same time part of the problem and the solution. The search for higher levels of impressions, reach, frequency and demographics has been exacerbated under the pressure of media planning and campaign efficiency measurements, and helped incentivize the audience and engagement systems. As a result, massive clickbait and inorganic (paid rather than earned) if not fraudulent content creation on digital platforms have become prevalent and could negatively affect customer loyalty and their trust toward brands. In addition, brands could lose visibility on their targeted audiences and have to systematically clean the data used. Research from the computer science and social network analysis fields have recently provided valuable insights on how to navigate through polluted data streams, especially concerning the effects produced by fraudulent reviews (Ananthakrishnan et al., 2015), fake social network accounts identification (Sarna & Bhatia, 2018) and fake news detection (Zhou, Zafarani, Shu, & Liu, 2019). In marketing and Management Information Systems, research in this area is still scarce, with a few exceptions concerning mainly the side effects of e-WOM. Tuzovic (2010) has used frustration theory to investigate how negative emotions expressed verbally and non-verbally are reflected in negative e-WOM and their dysfunctional impacts on the brands. Liu & Karahanna (2017) have identified the 'swaying' effects of e-WOM and explained how online reviews could be more or less helpful during the consumer preferences construction in a decision-making context. Kim, Naylor, Sivadas, & Sugumaran (2016) have studied incentivized (inorganic) e-WOM recommendations and concluded that manipulating reviews will have impacts not only on the audience but also on the communicator (the producer of the manipulated recommendations) depending on the valence of the recommendation (positive or negative).

Bias in data appears in different forms that needs to be investigated and cured to assure marketers and digital decision-makers a clean and transparent environment. More research is therefore needed concerning: (1) the metrics used to assess digital and social media efficiency actions, especially studies on real and manipulated impressions distinctions; (2) Invalid traffic identification and the measurement of their effects on data quality could also constitute an important research avenue; (3) Strategy-oriented studies that put under scrutiny the roles, power and responsibilities of big tech gatekeepers (Google, Amazon…), regulatory institutions, brands and other human and non-human stakeholders of the digital eco-system will also be highly valued.

When we think about non-human actors in the digital era, algorithms and AI come immediately to mind. An algorithm is defined as a systematic procedure that produces, in a finite number of steps, the answer to a question or the solution of a problem (Britannica Academic, 1999). Algorithms are the building blocks that make up machine learning and artificial intelligence. Omnipresent in the digital marketing systems, they provide search results, content recommendations and targeted advertisements. They also identify patterns and make predictions to improve user experience. Algorithms have also their drawbacks, when they use biased data input and also when they contribute to produce more bias. As they are conceived as 'black boxes' that learn from their own previous processes due to machine learning, algorithmic systems can go beyond the control of those who developed and implemented them. Amazon's AI-based hiring system has been recently shut down because it appeared that it discriminates against women because it did not derive recommendations based on reasoning, but applied a complex statistical model using data from more than 10 years of incoming past

applications and hiring decisions. Because men outnumbered women among technical employees during this period, women's applications were automatically underestimated (Maedche, Legner, Benlian, et al., 2019).

This example illustrates how algorithmic systems are likely to reinforce existing structures of control and power/technology regimes of truth as defined by the French philosopher Michel Foucault (Avgerou & McGrath, 2007). New terms such as algorithmic literacy and algorithmic transparency have entered the public discourse and voices are raised in support of informing and educating public about them. Education here does not only mean to learn how to code but also to be more conscious about the societal impacts of these systems.

A multidisciplinary body of research, including computer science, management science, ethics and philosophy is investigating this topic. Mittelstadt, Allo, Taddeo, Wachter, & Floridi (2016) developed a prescriptive map to organize the debate about the ethical implications of what they call the algorithmic mediation of our society. Bozdag (2013) explored the algorithmic gatekeeping bias that is affecting the filtering protocols of recommendation systems. Baeza-Yates (2016) have stressed the importance of user context to avoid these biases in recommendation and personalization systems. These systems use predictive algorithms to provide consumers with personalized product and information offerings, building on their previous behaviors and actions, with the immediate effect of lowering the decision effort, but with the risk of exposing consumers to narrower content over time. This phenomenon named the 'filter bubble' and also known as the 'echo chamber' has been explored by Nguyen, Hui, Harper, Terveen, & Konstan (2014) in the context of the movie industry. More research on this topic is certainly needed in different consumer contexts and industries.

3.13.2. User misbehavior issues

Research on consumer misbehavior is not new and has focused on a psychological perspective. It has been defined by Fullerton & Punj (2004) as: "behavioral acts by consumers, which violate the generally accepted norms of conduct in consumption situations and thus disrupt the consumption order representing the dark, negative side of the consumer" (p.1239). Consumer misbehavior could appear in different ways in which consumers can cause harm to brands and other consumers, such as destroying and vandalizing brands property; theft, fraud and shoplifting; abuse, intimidation and bullying other consumers and brands' personnel. Whereas these issues can be observed in offline and online settings, most of the studies addressing these are conducted within an offline context.

In the online context, the cyber-psychology discipline has extensively focused on technology-related users misbehavior, starting with studies on dependence and addiction (Young, 1998), then on various aspects including cyberbullying, privacy concerns, jealousy, exhibitionism, voyeurism. These studies were conducted especially within social media users' communities (Kefi & Perez, 2018). Researchers and practitioners have started to notice that the use of digital and mobile devices can be a double-edged sword, i.e. it may have positive and negative effects at the same time, or a Janus Face as concluded by Mäntymäki & Islam (2016) in their study of networking on Facebook. Islam, Mäntymäki & Kefi (2019) have studied the undesirable effects of regret experienced by users on social media especially on brand engagement. The idea of an equivocal behavior of consumers online has more generally been illustrated by Jarvenpaa & Lang (2005) who identified 8 paradoxical situations that result from human–technology interaction: (1) Empowerment/Enslavement; (2) Independence/Dependence; (3) Fulfills Needs/Creates Needs; (4) Competence/Incompetence; (5) Planning/Improvisation; (6) Engaging/Disengaging; (7) Public/Private; and (8) Illusion/Disillusion. We argue here that adapting this model to investigate consumer-brand interactions in a multichannel (online and offline) context could be an interesting research avenue. In effect, specific research on the (intended and non-intended) consequences of these behavioral issues within digital and social marketing is still at its early stage. This has been discussed by Scheinbaum (2017) and Zolfagharian & Yazdanparast (2017) who have used a qualitative approach to identify the facets of technology- related dark-side consumer behavior and their effects at the individual, organizational and societal levels.

We consider in this paper that there are three areas of investigation of user misbehavioral issues implications on digital marketing. The first concerns the user dependence on technology and includes different facets: over-engagement, over-visibility and user presence quality. The second concerns the user-technology-brand triangle and its duos of paradoxical positionings: trust/privacy, authenticity/calculation and destruction/preservation. Finally, the third addresses the cognitive and emotional user limitations and include: information overload, preference construction schemas and out-sourcing decision-making patterns to human and non-human influencers and prescribers.

3.13.3. Conclusion

The two perspectives discussed in this paper related to data/algorithmic and user- misbehavior issues are in fact intimately connected. Both are related to user-technology interactions that may have double-sided effects: positive and negative. We believe that to substantiate the positive side, we have to put within our grasp and constrain the negative one. Research in this area requires large-scale quantitative studies, data-driven and new experimentation protocols. More qualitative oriented studies are also needed to explore newly experienced behaviors and phenomena that emerge from human-digital interactions and their implications for digital marketing decision-makers and consumer wellbeing.

3.14. Contribution 14 - ethical issues in digital and social media marketing - Jenna Jacobson

The Cambridge Analytica scandal broke in 2018 to reveal that the UK-based consulting firm mined data from millions of unsuspecting Facebook users (Cadwalladr & Graham-Harrison, 2018). The company developed psychographic profiles based on users'—and their friends'—social media data to strategically influence behavior using targeted advertisements. This scandal should serve as a sobering wake-up call to every profession that uses social media data. Social media marketers rely on the ability to collect, analyze, use, and actualize the public's social media data to derive a strategic advantage.

The level of information that social media platforms have about individual users enables advertisers to engage in microtargeting. Using this "weaponized ad technology," a user's demographics, interests, likes, or fears can be used to precisely narrow the targeting of advertising messages (Singer, 2018). Early cases of deeply problematic targeting, such as targeting "Jew haters," highlighted the power and responsibility of those behind the platform as well as those harnessing the platform for targeted ads.

Social media platforms have attempted to open some small windows into the platform's practices, but have simultaneously closed other doors. As a response to recent public criticism, Facebook, for example, has restricted some microtargeting practices and implemented several API (application programming interface) restrictions. Subsets of data haves and data have-nots are emerging. The data have-nots will need to rely on paid access to social media data or special access to the platform's data. These developments are further black-boxing the practices, thus limiting the scope and depth of academic research. Transparent and proactive measures, informed by empirical research, need to be taken at the platform, professional, and policy level to ensure ethical social media marketing practices.

The social media marketing landscape is evolving, but social media is no longer new. When social media platforms were first emerging, the playing field was unknown. New platforms have emerged (i.e., WeChat, Snapchat, Instagram, and Tik Tok), while others have become obsolete (i.e., Friendster, Google+, Vine, and Yik Yak). Much research has been

dedicated to understanding how to successfully use and implement social media for marketing purposes (Alalwan et al., 2017). As boundaries have been pushed beyond acceptable social limits, the social media industry has entered the identity formation stage, which is being established against emerging rules. Some social media powerhouses have emerged that wield unprecedented power: prominently Facebook, which also owns Instagram. As new tools, APIs, and approaches have been developed, there are greater opportunities to harness significant amounts of data, including increased amounts of sensitive data, which can be used—and abused—in social media marketing.

Social media marketers not only have access to platforms' in-house advertising tools, but also public data on social media. The divide between public data, otherwise referred to as publicly available social media data, and private data can be somewhat of a misnomer. Research evidences that an individual's expectation of privacy may change over time and may differ based on who is using the data and for what purpose (Gruzd et al., 2018). Attempting to use simplistic privacy settings on individuals' social media accounts as a blunt instrument does not suffice in assessing what data marketers should ethically access.

Built on the scholarly tradition of university ethics boards, researchers' extensive research training, and the goal of promoting social good, academic research has been leading the charge in deeply considering ethical social media data practices. Researchers are grappling with and analyzing ethical challenges as the landscape changes, yet there are still many unexplored, or underexplored, areas. This is particularly important as existing and newly developed industries are thriving on using the public's social media data for profit. Social media marketers are data consumers. Data consumers—those who are scraping, analyzing, and using the public's data—need a higher level of literacy in understanding the ethics and practices of social media.

Regardless of the quantity of data, the ethical implications of social media marketing need to be critically and repeatedly considered. The discussions of social media data in both industry and academia should be inextricably linked to discussions of data ethics. Professionals can no longer rely on the "spray and pray" approach of social media marketing; methods are becoming more sophisticated, data-driven, and linked to tangible results. This power of using social media data comes with a sense of responsibility, and it is time that this responsibility is met, embraced, and actualized in industry practices.

The scholarly and professional community lack the precise lexicon to discuss the ethics and implications of social media marketing—as well as other issues related to social media. This difficulty is exacerbated by the ever-evolving nature of the industry and the multiple disciplines addressing this issue. Current research and popular discourse have focused on conceptions of "privacy," which is critically important, but has led to questions as to whether privacy in a social media age exists or is of any importance. How can someone profess to be concerned with privacy when they freely elect to share so much of their personal lives on social media—baby announcements, marriage photos, day-to-day happenings, simple selfies, and so forth? The question of "does privacy matter?" distracts from the more important questions of social media data rights, governance, and policies.

The word "privacy" is a fiercely debated and loaded term. Scholarly definitions vary vastly, and privacy means different things to different people (Marwick & boyd, 2014). The situation is further complicated and compounded when considering social media privacy. Importantly, Raynes-Goldie (2010) refers to the distinction between social privacy and institutional privacy: social privacy refers to instances when known individuals are involved, whereas institutional privacy refers to how institutions manage personal data. Other research refers to the distinction between horizontal privacy (such as a user not wanting a person—e.g., a boss, friend, or family member—accessing their information) versus vertical privacy (such as third-parties analyzing publicly available data or owned platforms analyzing their users' data) (Quinn & Epstein, 2019). Horizontal privacy can partially be addressed by changing the default settings on social media platforms, improving social media data literacy, and affording more granular and personalized privacy settings. Public data literacy continues to be an area of critical importance: understanding how to navigate ad preferences and privacy settings on the various platforms and learning how information can be collated. Vertical privacy, however, is much more difficult to address, especially as so much of the information is black-boxed and needs to be further researched.

Further work is required to analyze and bolster social media data literacy across demographics. In fact, it is increasingly difficult to truly understand how social media data can be used. While the overwhelming sentiment puts pressure on individuals to understand the privacy policies and terms of service, research also indicates that individuals do not read, nor understand, the verbose legalese (Obar & Oeldorf-Hirsch, 2018), which points to the importance, and also limits, of data literacy. The purported decision to "electively" opt-in is influenced by the current landscape, which largely dictates that individuals have a presence on social media in order to build an identity, community, and professional reputation. At the same time, it is important to recognize that research repeatedly indicates that people derive tremendous benefits from being on social media (Quan-Haase & Young, 2010; Hemsley, Jacobson, Gruzd, & Mai, 2018). The fear of missing out may mean missing out on social connections or information that can be used to better one's career, self, or life. As such, the decision to consent to the ever-evolving terms may be a necessary part of operating and living in a social media saturated landscape. However, that consent may not extend to social media marketing.

The ethics of marketing practices have been shaped by government policies and industry-governed practices; future research needs to play a role in laying the groundwork for these interventions. The marketing industry has seen new policies aimed to protect children, prevent misleading advertisements, restrict types of advertising in specific industries (such as cannabis, alcohol, or tobacco), as well as dictate disclosure requirements for influencer marketing. The regulation of social media marketing will come from both inside and outside the industry, yet often lags behind technological advancement, which points to the need for continued scholarly research.

Looking forward, research needs to continue to seek to understand what influences people's perceptions, as well as corresponding behavior, surrounding the use of their social media data. Jacobson, Gruzd, and Hernandez-Garcia (2020) introduce a new construct "marketing comfort," which refers to an individual's comfort with the use of information posted publicly on social media for targeted advertising, customer relations, and opinion mining. As evolutions in social media marketing occur, this construct can be fruitfully employed by future research.

Individuals do not fully understand how their data is currently used and, perhaps more problematically, they do not know how that data will be used in the future. Predictive analytics in the social media context refers to the collection and analysis of social media data to predict or anticipate a particular outcome; for example, a marketer determining specialized pricing or promotions for insurance rates based on a prediction of risk. The algorithms are only as good (or bad) as the code and training data. The systemic problems of bias are already well recognized; the algorithms discriminate against certain already marginalized populations of people. Future research will also need to deeply understand not only people's perceptions of these social media marketing practices, but the implications of predictive analytics and algorithmic bias in social media marketing.

3.14.1. Research propositions

There continues to be a critical need for data literacy. As of 2019, Facebook's ad disclaimer dictates that the sponsoring entity needs to be disclosed on all ads regarding social issues, politics, or elections. A positive step forward would be to expand the scope of the ad disclosures to all advertisements and to all platforms; the expansion would mean that advertisers are not only responsible for declaring *who* is sponsoring

the ad, but also for providing a description of the microtargeting practices in order to help the public understand *why* they are seeing the particular ads.

Future research should endeavor to understand what influences individuals' "marketing comfort" (Jacobson et al., 2020). There is a critical need for scholarly intervention to understand what impacts individuals' attitudes and perspectives towards the use of their social media data. We need interdisciplinary and intersectional perspectives to develop best practices that afford every person the ability to develop the skills to successfully navigate the digital world. Rather than delegate this important task to grade school education, data literacy needs to be a life-long commitment that is not only taught, but reinforced, by various stakeholders, such as higher education, workplaces, and government. Considering that this area is in need of further research and investigation, this paper makes the following research proposition:

Proposition: The public's comfort with social media marketing may be affected by data literacy.

As the public—and governments—gain data literacy, there may be increasing pressure on organisations to engage in more transparent and ethical data practices. Across various industries, third parties would approach this task in different ways. For example, researchers may make a statement in their publications about the ethics of their data collection and use; social media marketers may disclose how they obtained and used the public's social media data.

Ethical data practices need to be taken seriously by third parties. In Europe, the GDPR dictates how businesses can collect and use the public's personal data; companies in countries outside Europe may elect to become GDPR compliant in an effort to boost their ethical organizational practices. As third parties increasingly gain access to more data and more sensitive data from unknowing individuals, third parties may develop self-regulation social media practices in an attempt to sidestep government regulations. As such, the following proposition is offered:

Proposition: Social media data transparency will play an increasingly important role in ethical organizational practices.

4. Concluding discussion

In line with the approach adopted in Dwivedi et al. (2015b; 2019c), this current research presents multiple views on digital and social media marketing from invited experts. The experts' perspective encompasses general accounts on this domain as well as perspectives on more specific issues including Artificial Intelligence, augmented reality marketing, digital content management, mobile marketing and advertising, B2B marketing, e-WOM, and aspects relating to the ethics and the dark side of digital and social media marketing. Each of the individual perspectives discuss the many challenges, opportunities and future research agenda, relevant to the many themes and core topics. The expert perspectives within the overall selected themes of: Environment, Marketing strategies, Company and Outcomes, elaborate on many of the key aspects and current debates within the wider digital and social media marketing literature. Each perspective presents individual insight and knowledge on specific topics that represent many of the current debates within the academic and practitioner focused research.

A number of perspectives discuss the many underlying environment related complexities surrounding eWOM, and its positive as well as negative implications for social media marketers. The perspective from Anjala S. Krishen discussed a number of the humanity focused issues as well as cultural aspects of digital marketing, referencing eWOM in the context of our ability to understand and interact with multiple cultures and societies. This viewpoint posited the importance of tackling the issue of information overload and that tools and new mechanisms can build credible knowledge and in turn facilitate informed data-driven decisions. The perspectives from Raffaele Filieri and Gina A. Tran highlight the complexities and many behavioral factors relating to consumer attitude and trust in the eWOM context. The separate but equally important constructs of both negative and positive eWOM are discussed, as is the intriguing prospective of further research that develops a deeper knowledge of how each are communicated through social networks. The perspective from Hajer Kefi also discusses eWOM positing the need for a rebalancing of research emphasis on aspects of digital and social media marketing, asserting that studies have omitted developing a deeper level of quantitative and qualitative focused research on the negative aspects of social media. The social media marketing research aspect is examined by Jenny Rowley, where the perspective outlines the key factors relating to research on the behavioral implications of consumers as well as user behavior characteristics within organisations. This contribution highlights some of the limitations of existing research where studies have tended to offer a narrow segmentation focus and a propensity to rely on students due to the ease of data collection, omitting key social media consumer segments.

A number of strategic marketing aspects have been examined by a range of contributors where the key topics of customer engagement behaviors, technological impacts on B2B marketing, criticality of positive customer journeys, AI driven social media performance and ethical dimensions relating to digital and social media marketing are discussed. The separate perspectives from Jamie Carlson and also from Mohammad Rahman articulate how digital and social media marketing can develop greater value for organisations via the broader understanding and cultivation of customer engagement behaviors and positive customer journeys. These aspects are critical to social media marketers as the negative effects of poor customer journeys can severely brand credibility and trust. The impacts of greater use of technological developments such as AI, AR, big data analytics and blockchain have gained significant traction within the marketing focused literature. The perspectives from Jari Salo, Philipp A. Rauschnabel outline many of the digital and social media implications of adoption and use of technology. The transformational potential of AI as outlined by Vikram Kumar & Ramakrishnan Raman outlines the huge significance for marketers and organisations that implement ML technologies within their marketing strategies, where digital platforms can monitor marketing campaigns and perform real time optimization based on customer behavior and platform performance.

The ethical dimensions and explainability complexities of adopting AI related technologies are debated by Yichuan Wang, where this perspective posits the potential for optimized social media marketing communication to develop greater achieve market returns for firms that strive to implement explainable AI within their marketing strategies. The perspective from Jenna Jacobson also approaches the ethical dimensions of social media data for microtargeting purposes, highlighting the importance of data transparency and how this could play an increasingly important role within ethical organizational practice.

The mobile aspects of interacting with digital and social media marketing are discussed within a number of contributions. The perspective from Heikki Karjaluoto articulates the role of integrated mobile technologies, utilizing wearable sensor devices and location-based ad targeting within real-time service interactions, asserting the potential for more positive brand communication. The impact of the mobile advertisement model is assessed within the perspective from Varsha Jain, where the perception of users is explored in the context of purchase intention, highlighting the need for additional research to understand the in-app influence on the development of positive attitudes.

Significant challenges exist for organisations and marketers alike as they develop their digital strategies and brand awareness within the modern era of information overload and social media communication. The inherent complexities and tremendous opportunities of the multi-platform social media age, present a dichotomy to marketers, where direct access to a wide and diverse customer base has never been easier; whilst the threats from negative eWOM can magnify in real time with huge consequences for the organisation. Marketers developing brand awareness through digital and social media need to be ever cognizant of the criticality in promptly engaging directly with consumers in response

to negative postings (Lappeman et al. 2018), thereby, preserving trust and reputation of the organisation. Marketers that develop their digital and social media strategies alongside the deeper analysis of human behavioral insight and communicated interaction through social networks, are increasing their chances of success.

The recalibration of marketing perspective toward the more holistic customer experience and overall personalized customer journey (Gartner Research 2019), is a significant change that posits the benefits of positivity leading to greater brand engagement and ROI in the form of increased sales and brand loyalty. The removal of human interaction at the initial stages of the customer journey is somewhat normalized with the ubiquitous use of chatbots and associated tools for a number of key tasks. However, the increased use of AI and ML driven interaction, whilst offering significant advantages for marketers and increased scope for customer engagement, could detract from the overall customer journey if not designed carefully. The ethical dimensions and subsequent trust from consumers are key considerations for the wider use of AI whilst navigating a path through the key aspects of privacy and security, will be key for organisations in the development of their digital strategies (Mandal, 2019).

The content within Table 3 outlines the limitations, stated research gaps and future research directions identified by the invited experts as well as from the relevant literature. It can be seen that key aspects of the current literature relating to digital and social media marketing are recommending future research to investigate different platforms, various types of users, their personal characteristics and analysis of cultural implications. These identified gaps could potentially form the basis for numerous strands of future research within this genre of study.

By bringing together findings from the current research on digital and social media marketing and the various views from reputable experts, this study offers significant and timely contributions to practitioners in the form of challenges and opportunities as well as research limitations, gaps, questions and/or propositions that can help researchers toward advancing knowledge within the domain of digital and social media marketing.

CRediT authorship contribution statement

Yogesh K. Dwivedi: Conceptualization, Methodology, Writing - original draft, Writing - review & editing, Supervision, Project administration. **Elvira Ismagilova:** Conceptualization, Methodology, Writing - original draft, Writing - review & editing. **D. Laurie Hughes:** Conceptualization, Methodology, Writing - original draft, Writing - review & editing. **Jamie Carlson:** Conceptualization, Writing - original draft, Writing - review & editing. **Raffaele Filieri:** Conceptualization, Writing - original draft, Writing - review & editing. **Jenna Jacobson:** Conceptualization, Writing - original draft, Writing - review & editing. **Varsha Jain:** Conceptualization, Writing - original draft, Writing - review & editing. **Heikki Karjaluoto:** Conceptualization, Writing - original draft, Writing - review & editing. **Hajer Kefi:** Conceptualization, Writing - original draft, Writing - review & editing. **Anjala S. Krishen:** Conceptualization, Writing - original draft, Writing - review & editing. **Vikram Kumar:** Writing - original draft. **Mohammad M. Rahman:** Conceptualization, Writing - original draft, Writing - review & editing. **Ramakrishnan Raman:** Conceptualization, Writing - original draft, Writing - review & editing. **Philipp A. Rauschnabel:** Conceptualization, Writing - original draft, Writing - review & editing. **Jennifer Rowley:** Conceptualization, Writing - original draft, Writing - review & editing. **Jari Salo:** Conceptualization, Writing - original draft, Writing - review & editing. **Gina A. Tran:** Conceptualization, Writing - original draft, Writing - review & editing. **Yichuan Wang:** Conceptualization, Writing - original draft, Writing - review & editing.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the

Table 3
Limitations, research gaps and future research directions.

Theme	Limitations and Research Gaps Identified by Experts	Identified from Literature	
		Limitations & Research Gap	Source Studies
Environment	1) Research is needed to further understand how digital marketing relates to humanity. 2) There is a lack of scales to measure the impact of social media consumption on consumer behavior 3) Future research should focus on novel social media platforms (comparison of different platforms, explore motivations for individuals to use certain platforms) 4) The majority of studies focus on Twitter and Facebook, with limited attention to other platforms. Future studies could investigate the variation of consumer behavior across different platforms. 5) Future research should focus on how negative vs positive eWOM communications travel through a social network. 6) Future research should focus on how companies can increase consumer willingness to disclose their private information to ensure customers satisfaction. 7) Future research is needed on novel social media platforms, which includes the comparison of different platforms and exploration of motivations of individuals to use certain platforms. 8) Current research is faced with difficulties in measuring social media consumption behavior. Future research is needed to develop scales to	1) Current studies have limitations on sample size and limitations due to focusing on a single country. Thus, cross-cultural studies could be conducted that empirically examine the effect of culture. 2) Current studies focus on a particular group of consumers only (e.g. students). Future studies should look at the acceptance behavior of other groups of consumers (e.g. working women). 3) More studies are needed to research the effects of age and gender on Consumer behavior. 4) Most of the studies focus on actively participating members of online communities. Future research needs to consider the influence of passive participants on the success of online communities and ways how to turn them into active participants. 5) Current studies are mostly focused only on one platform (e.g. only Facebook, Instagram). More research on various types of platforms is needed. 5) More studies on the influence of demographic characteristics consumer behavior are needed. 6) Future studies could examine how permission-based opt-in advertising, as well as the degree of transparency or disclosure provided by advertisers, and an individual's level of awareness or prior knowledge of the way personal information is used or mined, impacts consumers' perceptions of PA or	Alam et al., 2019; Gaber et al., 2019; Gironda & Korgaonkar, 2018; Algharabat et al., 2018; Seo & Park, 2018; Islam et al., 2018; Kim & Jang, 2019 Komodromos et al., 2018 Komodromos et al., 2018; Kim & Jang, 2019 Kang, 2018 Gaber et al., 2019; Algharabat et al., 2018; Islam et al., 2018 Gaber et al., 2019 Gironda & Korgaonkar, 2018

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Table 3 (*continued*)

Theme	Limitations and Research Gaps Identified by Experts	Identified from Literature	
		Limitations & Research Gap	Source Studies
	measure it. 9) Research is needed to design ways of using D&SMT and how different types of consumers can engage with brands. 10) Future research is needed to analyze how customers evaluate CX performance within an omnichannel environment in consideration of relevant cues and encounters across all channels. 11) Future studies should focus on customer privacy. What role does digital literacy regarding privacy play? What strategies are most effective for dealing with consumer privacy concerns that prevent CEB outcomes within digital channels? 12) Future research should investigate the technology preferences for vulnerable customers that enable them to better participate in CEB's with brands. 13) The majority of studies focused on reviews posted by anonymous reviewers, concentrating more on the credibility of the message. Scholars should consider the interaction effect between message characteristic and source credibility dimensions in the context of high and low involvement products. 14) The majority of studies focused on written eWOM. Future research should focus on the combination of different formats (e.g. video + text, picture + text,	other marketing activities. 7) Future research should consider factors affecting the perceived usefulness of personalized advertising 8) Further research needs to investigate more factors affecting consumer perception of personal advertising 9) Current studies mostly used cross-sectional data. Future research on eWOM should use longitudinal data. 10) Future studies should investigate the effect of social media marketing activities on proficiency and managerial achievement of companies 11) Future studies could investigate how brand experience, commitment can potentially influence consumer behavior 12) Studies should focus on other theories to explain consumer behavior (exchange theory, social practice theory, and social penetration theory) 13) A deeper investigation of the relationships between social support dimensions and consumers' trust as well as between peer recommendations and customers' is needed. 14) Future research should be developed to better understand how informational support and emotional support contribute differently to the development of customers' trust and to better analyze the path between peer recommendations and customers' trust. 15) Most of the studies use hypothetical online	 Gironda & Korgaonkar, 2018 Gironda & Korgaonkar, 2018 Algharabat et al., 2018; Islam et al., 2018 Seo and Park, 2018 Islam et al., 2018 Islam et al., 2018 Mazzucchelli et al., 2018 Mazzucchelli et al., 2018 Liu et al., 2018

Table 3 (*continued*)

Theme	Limitations and Research Gaps Identified by Experts	Identified from Literature	
		Limitations & Research Gap	Source Studies
	video + picture, picture or text only) on review trustworthiness. 15) Studies do not consider how the channel where the review is published can affect perceived review trustworthiness. 16) The majority of studies have focused on the review and/or the reviewer. However, few studies have analyzed the potential moderators and mediators in the relationship between antecedents of trust and perceived review and reviewer trust. 17) Future research could assess whether the format and the medium act as moderators in the relationships between antecedents of credibility and consumer attitude, evaluation and behavior. 18) The majority of studies use relatively small sample sizes and limited theoretical underpinning. 19) More research should be done on the use of influencers by companies. What factors affect the success and impact of influencer endorsement? 20) Further studies are needed on the use of social media across different countries. What difference exist between countries in their use of social media, how culture impacts these differences? 21) Future studies should focus on consumer attitude to the virtual products and effective promotional	reviews and measure consumer purchase intention. Future research could conduct field studied examining actual purchase behavior. 16) Future research should examine the interaction between linguistic style and reviewer expertise on consumer responses. 17) Future studies can integrate network metrics such as centrality, reciprocity, in-degree, and out-degree, to better understand the influence of the person on their network. These network-related attributes can provide useful insights in terms of information propagation to the social network of influencers on various platforms 18) Future research can employ a mapping with a personality framework like Big Five to identify personality types of the influencers.	 Liu et al., 2018 Arora et al., 2019 Arora et al., 2019

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Table 3 (*continued*)

Theme	Limitations and Research Gaps Identified by Experts	Identified from Literature	
		Limitations & Research Gap	Source Studies
	messages in augmented reality. 22) More research is needed on the topic of augmented reality: What drives the adoption of augmented reality? What risks and fears do people perceive when interacting with AR? 23) Future research should focus on understanding what influences an individuals' "marketing comfort". 24) There is a critical need for scholarly intervention to understand what impacts individuals' attitudes and perspectives towards the use of their social media data.		
Marketing strategies	1) Future studies are needed on developing and modifying metrics on Return on Investment. 2) How to measure the success of promotion campaigns by influencers and celebrities. 2) More studies are needed on social network analysis (experimental or quasi-experimental design on examination of how influencers' use of paid advertisements affects followers in the social network) 3) It is necessary for consumer research to continue to examine and understand the mechanisms by which D&SMT can further unlock CEBs and improve consumer well-being. 4) Studies rely on a small sample size of companies to conduct research. More research is needed that utilises larger sample sizes. 5) A limited number of studies use objective measures which are lacking real-world relevance 6) Most of the studies focus on sales and advertising while more understanding of other areas of industrial marketing is needed (e.g. buyer-seller relationships) 7) Studies did not investigate how digital content marketing affect email open rate, generating leads and loyalty. Future research should investigate how to measure this effect with theoretical underpinnings. 8) A limited number of studies considered the effect of the content posted by staff and consumers on the ethical principles of the brand. Future research needs to examine it. 9) Future research should consider how companies manage their social media presence in line with GDPR. 10) More research is needed on augmented reality: How companies can organize and implement augmented reality marketing? How to measure the success of augmented reality marketing? Relevant KPIs? What skills companies should have for Augment Reality to be used in marketing? 11) Researchers should compare the use of social media marketing and role within digital marketing either easier to use or at least appear easy to use. 7) More research is required to identify optimal environments in which small business owners and managers increase digital marketing adoption and close the digital gap that exists with large corporations 8) Future research should seek a deeper understanding of the customer's journey, especially in the final adoption process, as well as improvements in data analysis 9) Studies used a limited number of social media platforms (e.g. Twitter, Facebook) 10) Studies that focusses on webcare response seemed to consider only relevant comments. Future research could explore motivations behind webcare-irrelevant comments as the amount of these comments was considerable, in both social media platforms and especially within Facebook	1) Most of the studies are cross-sectional, whereas a longitudinal study will indicate what is happening over a period of time. 2) More research is needed using different countries and industry (use of social media by companies) 3) More research is needed using a mix of methods of data collection (e.g. observations, survey, focus groups) 4) Most of the studies are conducted in the context of B2C or B2B companies. More research in the context of B2B2C business models is needed. 5) Most of the studies are conducted on just one/two countries which can limit generalizability of findings on other countries. 6) Further research is needed to study whether there are ways of making	Matikiti et al., 2018 Canovi & Pucciarelli, 2019 Canovi & Pucciarelli, 2019 Iankova et al., 2019 Iankova et al., 2019; Alansari et al., 2018 Ritz et al., 2019 Ritz et al., 2019 Ballestar et al., 2019 Vermeer et al., 2019 Vermeer et al., 2019

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Table 3 (*continued*)

Theme	Limitations and Research Gaps Identified by Experts	Identified from Literature	
		Limitations & Research Gap	Source Studies
Company	different sectors. 12) More studies are needed on AI: How companies can understand consumers' responses towards the use of AI in social media marketing? How companies can ensure that they use AI to deliver value to target customers with an ethical mindset? 13) Studies are needed to analyze the role of social media data transparency within ethical organizational practices. 14) Further studies are required on invalid traffic identification and the measurement of their effects on data quality		
	1) Future research is needed on how companies articulate their objectives (e.g. brand building, attracting advocates etc).	1) Most of the current studies use small sample size which can influence generalization of the results.	Chen & Lee, 2018
	2) Future research should investigate the optimum portfolio of social media channels.	2) Studies should use a variety of methods to test relationships between different variables (e.g. experimental design)	Chen & Lee, 2018
	3) A limited number of studies investigate the relationships between social media marketing agencies and clients. What are the characteristics of effective SM marketing-agency -client relationships?	3) Studies designed to explore the dynamics and variations among subcultures and subgroups of different social media platforms. For example, future studies may want to explore if female and male consumers are motivated by different values in using Snapchat.	Chen & Lee, 2018
	4) Future research should investigate the roles, power, and responsibilities of big tech gatekeepers (Google, Amazon…), regulatory institutions, brands and other human and non-human stakeholders of the digital eco-system.	4) Future studies should explore the use of social media platforms in different culture context	Chen & Lee, 2018
		5) Some of the studies' sample is skewed toward large, global brands, whose social media marketing operation is generally well-resourced. Thus, the reported findings may not generalize to small- and medium-sized firms	Tafesse & Wien, 2018
		6) Studies are advised to use various social media platforms	Tafesse & Wien, 2018; Hwan et al., 2018; Kang & Park, 2018
		7) Most of the studies use only single content	Ang et al., 2018
		8) The majority of the studies are conducted only in one country, which can limit the generalizability of the results.	Kusumasondjaja, 2018
Outcomes	1) More studies are needed on consumer engagement. How demographic characteristics of consumers influence engagement with SMM? 2) More studies are needed on advertising. Future research is advised to investigate on how the type of advertising influences perceived value; effect of location-based advertising on buying decision; how advertising in app influences *willingness of the users to click, increase attention and develop positive attitude* 3) More studies are needed on the effect of mobile marketing on brand communication (does it increase brand awareness, brand attitude, customer satisfaction, customer retention, positive eWOM)	1) Most of the studies consider satisfaction as a determinant of consumer engagement. Future studies should test other constructs such as community identification and sense of belonging	Kang, 2018
		2) The majority of the studies are conducted only in one country, which can limit the generalizability of the results.	Alansari et al., 2018; Hanaysha, 2018; Stojanovic et al., 2018; Ahmed et al., 2019
		3) Most of the studies use only one social media platform (e.g. only Facebook or Twitter). More platforms should be investigated.	Alansari et al., 2018; Smith, 2018; Aswani et al., 2018
		4) A qualitative study of all peers' posts will contribute to the evaluation of the purchase intentions is needed	Morra et al., 2018
		5) More products should be investigated. Further analysis can enlarge on the examination of other product categories, such as the automotive or wine and spirits industries, which constitute important sectors in the luxury market and that are also often affected by counterfeiting dynamics.	Morra et al., 2018
		6) Future research should investigate the moderating role of gender and age of consumers on the	Wong et al., 2018

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Table 3 (*continued*)

Theme	Limitations and Research Gaps Identified by Experts	Identified from Literature	
		Limitations & Research Gap	Source Studies
		outcome of digital and social media marketing	
		7) Future studies may also examine various dimensions of corporate social responsibility such as the stakeholder's approach which could yield interesting insights	Hanaysha, 2018
		8) Most of the studies use quantitative techniques. Future research could use qualitative techniques to gain more insights on what drives customer retention	Hanaysha, 2018
		9) Future studies are encouraged to consider a broad variety of internal and external stakeholders and to examine multiple cases of successful and failed corporate rebranding	Tarnovskaya & Biedenbach, 2018
		10) Most of the studies use a small sample, which can influence the generalizability and reliability of the results.	Stojanovic et al., 2018
		11) Future research should incorporate data from more representative groups of customers or viewers, such as students, or millennials who account for the majority of social media users. Additionally, future research employs multiple studies with each using different groups of users, thereby improving generalizability	Shanahan et al., 2019
		12) Future research should investigate if consumers become more psychologically engaged with social media content distributed by consumers more similar to themselves.	Syrdal & Briggs, 2018
		13) The observable social media interactions currently being used to measure "engagement" do not serve as adequate proxies of actual engagement in social media contexts. As a result, future research should focus on the development of a scale to measure the construct so that hypothesized relationships between engagement in a social media context and various outcomes can be empirically tested.	Syrdal & Briggs, 2018

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References

Abed, S. S., Dwivedi, Y. K., & Williams, M. D. (2016). Social commerce as a business tool in Saudi Arabia's SMEs. *International Journal of Indian Culture and Business Management, 13*(1), 1–19.

Abed, S. S., Dwivedi, Y. K., & Williams, M. D. (2015a). SMEs' adoption of e-commerce using social media in a Saudi Arabian context: A systematic literature review. *International Journal of Business Information Systems, 19*(2), 159–179.

Abed, S. S., Dwivedi, Y. K., & Williams, M. D. (2015b). Social media as a bridge to e-commerce adoption in SMEs: A systematic literature review. *The Marketing Review, 15*(1), 39–57.

Abou-Elgheit, E. (2018). Understanding Egypt's emerging social shoppers. *Middle East Journal of Management, 5*(3), 207–270.

Aguirre, E., Roggeveen, A., Grewal, D., & Wetzels, M. (2016). The personalization-privacy paradox: Implications for new media. *The Journal of Consumer Marketing, 33*(2), 98–110.

Ahmed, R. R., Streimikiene, D., Berchtold, G., Vveinhardt, J., Channar, Z. A., & Soomro, R. H. (2019). Effectiveness of online digital media advertising as a strategic tool for building brand sustainability: Evidence from FMCGs and services sectors of Pakistan. *Sustainability, 11*(12), 3436.

Ajina, A. S. (2019). The perceived value of social media marketing: An empirical study of online word-of-mouth in Saudi Arabian context. *Entrepreneurship and Sustainability Issues, 6*(3), 1512–1527.

Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. (2017). Social media in marketing: A review and analysis of the existing literature. *Telematics and Informatics, 34*(7), 1177–1190.

Alam, M. S. A., Wang, D., & Waheed, A. (2019). Impact of digital marketing on consumers' impulsive online buying tendencies with intervening effect of gender and education: B2C emerging promotional tools. *International Journal of Enterprise Information Systems, 15*(3), 44–59.

Alansari, M. T., Velikova, N., & Jai, T. (2018). Marketing effectiveness of hotel Twitter accounts: The case of Saudi Arabia. *Journal of Hospitality and Tourism Technology, 9*(1), 63–77.

Algharabat, R., Rana, N. P., Dwivedi, Y. K., Alalwan, A. A., & Qasem, Z. (2018). The effect of telepresence, social presence and involvement on consumer brand engagement: An empirical study of non-profit organizations. *Journal of Retailing and Consumer Services, 40*, 139–149.

American Marketing Association. (2019). *Marketing dictionary* Accessed 11 October 2019 https://marketing-dictionary.org/m/mobile-marketing/.

Ananthakrishnan, U. M., Li, B., & Smith, M. D. (2015). A tangled web: Evaluating the impact of displaying fraudulent reviews. In *2015 International Conference on Information Systems: Exploring the Information Frontier*.

Ancillai, C., Terho, H., Cardinali, S., & Pascucci, F. (2019). Advancing social media driven sales research: Establishing conceptual foundations for B-to-B social selling. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.01.002. in press.

Ang, T., Wei, S., & Anaza, N. A. (2018). Livestreaming vs pre-recorded: How social viewing strategies impact consumers' viewing experiences and behavioral intentions. *European Journal of Marketing, 52*(9-10), 2075–2104.

Appel, G., Grewal, L., Hadi, R., et al. (2019). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 1–17. https://doi.org/10.1007/s11747-019-00695-1.

Arora, A., Bansal, S., Kandpal, C., Aswani, R., & Dwivedi, Y. K. (2019). Measuring social media influencer index-insights from facebook, Twitter and Instagram. *Journal of Retailing and Consumer Services, 49*, 86–101.

Aswani, R., Kar, A. K., Ilavarasan, P. V., & Dwivedi, Y. K. (2018). Search engine marketing is not all gold: Insights from Twitter and SEOClerks. *International Journal of Information Management, 38*(1), 107–116.

Avgerou, C., & McGrath, K. (2007). Power, rationality, and the art of living through socio-technical change. *MIS Quarterly, 31*(2), 295–315.

Bacile, T. J., Ye, C., & Swilley, E. (2014). From firm-controlled to consumer-contributed: Consumer co-production of personal media marketing communication. *Journal of Interactive Marketing, 28*(2), 117–133.

Bae, I. H., & Zamrudi, M. F. Y. (2018). Challenge of social media marketing & effective strategies to engage more customers: Selected retailer case study. *International Journal of Business Society, 19*(3), 851–869.

Baeza-Yates, R. (2016). *Data and algorithmic bias in the web*. pp. 1–1. https://doi.org/10.1145/2908131.2908135.

Bahl, S., Milne, G. R., Ross, S. M., Mick, D. G., Grier, S. A., Chugani, S. K., & Boesen-Mariani, S. (2016). Mindfulness: Its Transformative Potential for Consumer, Societal, and Environmental Well-Being. *Journal of Public Policy & Marketing, 35*(2), 198–210.

Baker, M. A., & Kim, K. (2019). Value destruction in exaggerated online reviews: The effects of emotion, language, and trustworthiness. *International Journal of Contemporary Hospitality Management, 31*(4), 1956–1976.

Bakopoulos, V., Baronello, J., & Briggs, R. (2017). How brands can make smarter decisions in mobile marketing strategies for improved media-mix effectiveness and questions for future research. *Journal of Advertising Research, 57*(4), 447–461.

Balaji, M. S., Khong, K. W., & Chong, A. Y. L. (2016). Determinants of negative word-of-mouth communication using social networking sites. *Information & Management, 53*(4), 528–540.

Ballestar, M. T., Grau-Carles, P., & Sainz, J. (2019). Predicting customer quality in e-commerce social networks: A machine learning approach. *Review of Managerial Science, 13*(3), 589–603.

Bauer, H. H., Barnes, S. J., Reichardt, T., & Neumann, M. M. (2005). Driving consumer acceptance of mobile marketing: A theoretical framework and empirical study. *Journal of Electronic Commerce Research, 6*(3), 181–192.

BCG. (2018). *Augmented reality: Is the camera the next big thing in advertising?*. https://www.bcg.com/publications/2018/augmented-reality-is-camera-next-bigthing-advertising.aspx.

Bear, M. F., Connors, B. W., & Paradiso, M. A. (Eds.). (2020). *Neuroscience (3rd ed.)*. Lippincott Williams & Wilkins.

Berezan, O., Krishen, A. S., Agarwal, S., & Kachroo, P. (2020). Exploring loneliness and social networking: Recipes for hedonic well-being on Facebook. *Journal of Business Research*. https://doi.org/10.1016/j.jbusres.2019.11.009.

Billore, A., & Sadh, A. (2015). Mobile advertising: A review of the literature. *The Marketing Review, 15*(2), 161–183.

Blau, P. (1964). *Exchange and power in social life*. New York: Wiley.

Bolton, R., McColl-Kennedy, J. R., Cheung, L., Gallan, A., Orsingher, C., Witell, L., & Zaki, M. (2018). Customer experience challenges: Bringing together digital, physical and social realms. *Journal of Service Management, 29*(5), 776–808.

Bozdag, E. (2013). Bias in algorithmic filtering and personalization. *Ethics and Information Technology, 15*(3), 209–227.

Bruner, G. C., & Kumar, A. (2007). Attitude toward location-based advertising. *Journal of Interactive Advertising, 7*(2), 3–15.

Brunneder, J., & Dholakia, U. (2018). The self-creation effect: Making a product supports its mindful consumption and the consumer's well-being. *Marketing Letters, 29*(3), 377–389. https://doi.org/10.1007/s11002-018-9465-6.

Bues, M., Steiner, M., Stafflage, M., & Krafft, M. (2017). How mobile in-store advertising influences purchase intention: Value drivers and mediating effects from a consumer perspective. *Psychology & Marketing, 34*(2), 157–174.

Cadwalladr, C., & Graham-Harrison, E. (2018). *Revealed: 50 million Facebook profiles harvested for Cambridge Analytica in major data breach*. March 17, Retrieved from. The Guardian https://www.theguardian.com/news/2018/mar/17/cambridge-analytica-facebook-influence-us-election.

Canovi, M., & Pucciarelli, F. (2019). Social media marketing in wine tourism: Winery owners' perceptions. *Journal of Travel & Tourism Marketing, 36*(6), 653–664.

Carlson, J., Gudergan, C., Gelhard, C., & Rahman, M. M. (2019). Customer engagement with brands in social media platforms: Configuration, equifinality and sharing. *European Journal of Marketing, 53*(9), 1733–1758.

Carlson, J., Rahman, M., Voola, R., & De Vries, N. (2018). Customer engagement behaviours in social media: Capturing innovation opportunities. *Journal of Services Marketing, 32*(1), 83–94.

Carrozzi, A., Chylinski, M., Heller, J., Hilken, T., Keeling, D. I., & de Ruyter, K. (2019). What's mine is a hologram? How shared augmented reality augments psychological ownership. *Journal of Interactive Marketing, 48*, 71–88.

Chen, P. T., & Hsieh, H. P. (2012). Personalized mobile advertising: Its key attributes, trends, and social impact. *Technological Forecasting and Social Change, 79*(3), 543–557.

Chen, H., & Lee, Y. J. (2018). Is Snapchat a good place to advertise? How media characteristics influence college-aged young consumers' receptivity of Snapchat advertising. *International Journal of Mobile Communications, 16*(6), 697–714.

Cheng, C. C., & Krumwiede, D. (2018). Enhancing the performance of supplier involvement in new product development: The enabling roles of social media and firm capabilities. *Supply Chain Management an International Journal, 23*(3), 171–187.

Cheung, M. Y., Luo, C., Sia, C. L., & Chen, H. (2009). Credibility of electronic word-of-mouth: Informational and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce, 13*(4), 9–38.

Chevalier, J. A., & Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of Marketing Research, 43*(3), 345–354.

Cohen, M. C. (2018). Big data and service operations. *Production and Operations Management, 27*(9), 1709–1723.

Cooper, T., Stavros, C., & Dobele, A. R. (2019). Domains of influence: Exploring negative sentiment in social media. *Journal of Product and Brand Management, 28*(5), 684–699.

Cortez, R. M., Gilliland, D. I., & Johnston, W. J. (2019). Revisiting the theory of business-to-business advertising. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.03.012. in press.

Craig, A. B. (2013). *Understanding augmented reality: Concepts and applications*. Newnes.

Dabbous, A., & Barakat, K. A. (2020). Bridging the online offline gap: Assessing the impact of brands' social network content quality on brand awareness and purchase intention. *Journal of Retailing and Consumer Services, 53*, Article 101966.

De Vries, N. J., & Carlson, J. (2014). Examining the drivers and brand performance implications of customer engagement with brands in the social media environment. *Journal of Brand Management, 21*(6), 495–515.

Denyer, D., Tranfield, D., & Van Aken, J. E. (2008). Developing design propositions through research synthesis. *Organization Studies, 29*, 393–413.

Deska, J. C., Lloyd, E. P., & Hugenberg, K. (2018). Facing humanness: Facial width-to-Height ratio predicts ascriptions of humanity. *Journal of Personality and Social Psychology, 114*(1), 75–94.

Dhar, S., & Varshney, U. (2011). Challenges and business models for mobile location-based services and advertising. *Communications of the ACM, 54*(5), 121–128.

Direct Marketing Association. (2018). *GDPR: A consumer perspective*. Available at: https://dma.org.uk/uploads/misc/5af5497c03984-gdpr-consumer-perspective-2018-v1_5af5497c038ea.pdf.

Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data–evolution, challenges and research agenda. *International Journal of Information Management, 48*, 63–71.

Ducoffe, R. H. (1995). How consumers assess the value of advertising. *Journal of Current Issues & Research in Advertising, 17*(1), 1–18.

Dwivedi, Y. K., Rana, N. P., & Alryalat, M. A. A. (2017). Affiliate marketing: An overview and analysis of emerging literature. *The Marketing Review, 17*(1), 33–50.

Dwivedi, Y. K., Ismagilova, E., Rana, N. P., & Weerakkody, V. (2019a).). Use of social media by b2b companies: Systematic literature review and suggestions for future research. *Conference on e-Business, e-Services and e-Society* (pp. 345–355). Cham: Springer.

Dwivedi, Y. K., Kapoor, K. K., & Chen, H. (2015a). Social media marketing and advertising. *The Marketing Review, 15*(3), 289–309.

Dwivedi, Y. K., Rana, N. P., Slade, E. L., Singh, N., & Kizgin, H. (2019b). Editorial introduction: Advances in theory and practice of digital marketing. *Journal of Retailing and Consumer Services, 53*, Article 101909. https://doi.org/10.1016/j.jretconser.2019.101909.

Dwivedi, Y. K., Wastell, D., Laumer, S., Henriksen, H. Z., Myers, M. D., Bunker, D., … Srivastava, S. C. (2015b). Research on information systems failures and successes: Status update and future directions. *Information Systems Frontiers, 17*(1), 143–157.

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., … Galanos, V. (2019c). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*. https://doi.org/10.1016/j.ijinfomgt.2019.08.002.

Elliott, M. T., & Speck, P. S. (1998). Consumer perceptions of advertising clutter and its impact across various media. *Journal of Advertising Research, 38*(1), 29–30.

Ericsson. (2017). *10 hot consumer trends 2018: An ericsson consumer insight summary report*. December 2017. Ericsson Consumer Lab.

Felix, R., Rauschnabel, P. A., & Hinsch, C. (2017). Elements of strategic social media marketing: A holistic framework. *Journal of Business Research, 70*, 118–126.

Filieri, R. (2015). What makes online reviews helpful? A diagnosticity-adoption framework to explain informational and normative influences in e-WOM. *Journal of Business Research, 68*(6), 1261–1270.

Filieri, R. (2016). What makes an online consumer review trustworthy? *Annals of Tourism Research, 58*, 46–64.

Filieri, R., & McLeay, F. (2014). E-WOM and accommodation: An analysis of the factors that influence travelers' adoption of information from online reviews. *Journal of Travel Research, 53*(1), 44–57.

Filieri, R., McLeay, F., Tsui, B., & Lin, Z. (2018). Consumer perceptions of information helpfulness and determinants of purchase intention in online consumer reviews of services. *Information & Management, 55*(8), 956–970.

Fisk, R., Dean, A., Alkire, L., Joubert, A., Previte, J., Robertson, N., & Rosenbaum, M. (2018). Design for service inclusion: Creating inclusive service systems by 2050. *Journal of Service Management, 29*(5), 834–858.

Foltean, F. S., Trif, S. M., & Tuleu, D. L. (2019). Customer relationship management capabilities and social media technology use: Consequences on firm performance. *Journal of Business Research, 104*, 563–575.

Fulgoni, G. M., & Lipsman, A. (2017). The downside of digital word of mouth and the pursuit of media quality. *Journal of Advertising Research, 57*(2), 127–131.

Fullerton, R. A., & Punj, G. (2004). Repercussions of promoting an ideology of consumption: Consumer misbehavior. *Journal of Business Research, 57*(11), 1239–1249.

Gaber, H. R., Wright, L. T., & Kooli, K. (2019). Consumer attitudes towards Instagram advertisements in Egypt: The role of the perceived advertising value and personalization. *Cogent Business & Management, 6*(1), Article 1618431.

Gandomi, A., & Haider, M. (2015). Beyond the hype: Big data concepts, methods, and analytics. *International Journal of Information Management, 35*(2), 137–144.

Gartner Research. (2019). *Hidden forces that will shape marketing in 2019*. Retrieved April 2, 2019, from https://www.gartner.com/smarterwithgartner/4-hidden-forces-that-will-shape-marketing-in-2019/ accessed 11th October 2019.

Gil-González, A. B., Blanco-Mateos, A. L., De la Prieta, F., & de Luis-Reboredo, A. (2018). Study of competition in the textile sector by twitter social network analysis. *GECONTEC: Revista Internacional de Gestión del Conocimiento y la Tecnología, 6*(1), 101–117.

Gironda, J. T., & Korgaonkar, P. K. (2018). iSpy? Tailored versus invasive ads and consumers' perceptions of personalized advertising. *Electronic Commerce Research and Applications, 29*, 64–77.

GlobalWebIndex's Social Flagship Report 2019. (2019). Retrieved from https://www.globalwebindex.com/reports/social.

Google. (2019). *Zero moment of truth (ZMOT)*. Retrieved from: https://www.thinkwithgoogle.com/marketing-resources/micro-moments/zero-moment-truth/, Accessed date: 12 October 2019.

Grewal, D., Bart, Y., Spann, M., & Zubcsek, P. P. (2016). Mobile advertising: A framework and research agenda. *Journal of Interactive Marketing, 34*, 3–14.

Grover, P., Kar, A. K., Dwivedi, Y. K., & Janssen, M. (2019). Polarization and acculturation in US Election 2016 outcomes–can twitter analytics predict changes in voting preferences. *Technological Forecasting and Social Change, 145*, 438–460.

Gruzd, A., Jacobson, J., Mai, P., & Dubois, D. (2018). *Social media privacy in Canada. Ryerson University Social Media Lab.*. https://doi.org/10.5683/sp/jvot0s.

Habibi, M. R., Laroche, M., & Richard, M. O. (2014). Brand communities based in social media: How unique are they? Evidence from two exemplary brand communities. *Information Journal of Information Management, 34*(2), 123–132.

Han, D. I., tom Dieck, M. C., & Jung, T. (2018). User experience model for augmented reality applications in urban heritage tourism. *Journal of Heritage Tourism, 13*(1), 46–61.

Hanaysha, J. R. (2018). Customer retention and the mediating role of perceived value in retail industry. *World Journal of Entrepreneurship Management and Sustainable Development, 14*(1), 2–24.

Heikenfeld, J. (2016). Bioanalytical devices: Technological leap for sweat sensing. *Nature, 529*(7587), 475.

Hemsley, J., Jacobson, J., Gruzd, A., & Mai, P. (2018). Social media for social good or evil: An introduction. *Social Media + Society*, 1–5.

Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: what motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing, 18*(1), 38–52.

Hinsch, C., Felix, R., & Rauschnabel, P. A. (2020). Nostalgia beats the wow-effect: Inspiration, awe and meaningful associations in augmented reality marketing. *Journal of Retailing and Consumer Services, 53*, Article 101987.

Hollebeek, L. D., & Macky, K. (2019). Digital content marketing's role in fostering consumer engagement, trust, and value: Framework, fundamental propositions, and implications. *Journal of Interactive Marketing, 45*, 27–41.

Hossain, T. M. T., Akter, S., Kattiyapornpong, U., & Dwivedi, Y. (2020). Reconceptualizing integration quality dynamics for omnichannel marketing. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.12.006.

Hossain, T. M. T., Akter, S., Kattiyapornpong, U., & Dwivedi, Y. K. (2019). Multichannel integration quality: A systematic review and agenda for future research. *Journal of Retailing and Consumer Services, 49*, 154–163.

Hossain, M. A., Dwivedi, Y. K., Chan, C., Standing, C., & Olanrewaju, A. S. (2018). Sharing political content in online social media: A planned and unplanned behaviour approach. *Information Systems Frontiers, 20*(3), 485–501.

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and persuasion*.

Howells-Barby, M. (2019). *Your google rank doesn't matter anymore*. Retrieved from: https://blog.hubspot.com/marketing/your-google-rank-doesnt-matter-anymore. Accessed date: 12 October 2019.

Hu, H.-f., & Krishen, A. S. (2019). Information overload in the digital age. In A. S. Krishen, & O. Berezan (Eds.), *Marketing and humanity: Discourses in the Real world* (pp. 185–203). Newcastle upon Tyne: Cambridge Scholars Publishing.

Hu, N., Bose, I., Koh, N. S., & Liu, L. (2012). Manipulation of online reviews: An analysis of ratings, readability, and sentiments. *Decision Support Systems, 52*(3), 674–684.

Humphreys, A., & Wang, R. (2017). Automated text analysis for consumer research. *The Journal of Consumer Research, 44*(6), 1274–1306.

Hutchins, J., & Rodriguez, D. X. (2018). The soft side of branding: Leveraging emotional intelligence. *Journal of Business and Industrial Marketing, 33*(1), 117–125.

Hwang, J., Park, S., & Woo, M. (2018). Understanding user experiences of online travel review websites for hotel booking behaviours: An investigation of a dual motivation theory. *Asia Pacific Journal of Tourism Research, 23*(4), 359–372.

Iacobucci, D., Petrescu, M., Krishen, A., & Bendixen, M. (2019). The state of marketing analytics in research and practice. *Journal of Marketing Analytics, 7*(3), 152–181. https://doi.org/10.1057/s41270-019-00059-2.

Iankova, S., Davies, I., Archer-Brown, C., Marder, B., & Yau, A. (2019). A comparison of social media marketing between B2B, B2C and mixed business models. *Industrial Marketing Management, 81*, 169–179.

Ibrahim, B., & Aljarah, A. (2018). Dataset of relationships among social media marketing activities, brand loyalty, revisit intention. Evidence from the hospitality industry in Northern Cyprus. *Data in Brief, 21*, 1823–1828.

Islam, A. K. M. N., Mäntymäki, M., & Kefi, H. (2019). Decomposing social networking site regret: A uses and gratifications approach". *Information Technology and People, 33*(1), 83–105.

Islam, J. U., Rahman, Z., & Hollebeek, L. D. (2018). Consumer engagement in online brand communities: A solicitation of congruity theory. *Internet Research, 28*(1), 23–45.

Ismagilova, E., Dwivedi, Y. K., Slade, E., & Williams, M. D. (2017). *Electronic word of mouth (eWOM) in the marketing context: A state of the art analysis and future directions*. Springer.

Ismagilova, E., Slade, E. L., Rana, N. P., & Dwivedi, Y. K. (2019). The effect of electronic word of mouth communications on intention to buy: A meta-analysis. *Information Systems Frontiers*, 1–24. https://doi.org/10.1007/s10796-019-09924-y.

Ismagilova, E., Dwivedi, Y. K., & Slade, E. (2020a). Perceived helpfulness of eWOM: Emotions, fairness and rationality. *Journal of Retailing and Consumer Services, 53*, Article 101748. https://doi.org/10.1016/j.jretconser.2019.02.002.

Ismagilova, E., Dwivedi, Y., & Rana, N. (2020b). Unanticipated consequences of interactive marketing: Systematic literature review and directions for future research. *Advances in digital marketing and eCommerce* (pp. 91–98). Cham: Springer.

Ismagilova, E., Slade, E., Rana, N. P., & Dwivedi, Y. K. (2020c). The effect of characteristics of source credibility on consumer behaviour: A meta-analysis. *Journal of Retailing and Consumer Services, 53*, Article 1017362. https://doi.org/10.1016/j.jretconser.2019.01.005.

Jaakkola, E., & Alexander, M. (2014). The role of customer engagement behavior in value co-creation: A service system perspective. *Journal of Service Research, 17*(3), 247–261.

Jacobson, J., Gruzd, A., & Hernandez-Garcia, A. (2020). Social media marketing: Who is watching the watchers? *Journal of Retailing and Consumer Services, 53*. https://doi.org/10.1016/j.jretconser.2019.03.001.

Jarvenpaa, S. L., & Lang, K. R. (2005). Managing the paradoxes of mobile technology. *Information Systems Management, 22*(4), 7–23.

Järvinen, J. (2016). The use of digital analytics for measuring and optimizing digital marketing performance. *Jyväskylä Studies in Business and Economics*, (170).

Järvinen, J., & Karjaluoto, H. (2015). The use of Web analytics for digital marketing performance measurement. *Industrial Marketing Management, 50*, 117–127.

Järvinen, J., & Taiminen, H. (2016). Harnessing marketing automation for B2B content marketing. *Industrial Marketing Management, 54*, 164–175.

Javornik, A., Filieri, R., & Gumann, R. (2020). "Don't forget that others are watching, too!" the effect of conversational human voice and reply length on observers' perceptions of complaint handling in social media. *Journal of Interactive Marketing, 50*, 100–119.

Judy, B., & Bather, L. (2019). A framework for full-stack user experience strategy: Product, practice and purpose. *Journal of Digital & Social Media Marketing, 7*(1), 6–27.

Juntunen, M., Ismagilova, E., & Oikarinen, E. L. (2019). B2B brands on Twitter: Engaging users with a varying combination of social media content objectives, strategies, and tactics. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.03.001. in press.

Kakkar, G. (2017). *Top 10 reasons behind growing importance of content marketing*. Retrieved from: http://www.digitalvidya.com/blog/importance-of-content-marketing/, Accessed date: 13 March 2019.

Kamboj, S., Sarmah, B., Gupta, S., & Dwivedi, Y. (2018). Examining branding co-creation in brand communities on social media: Applying the paradigm of Stimulus-Organism-Response. *International Journal of Information Management, 39*, 169–185.

Kang, J. (2018). Effective marketing outcomes of hotel Facebook pages. *Journal of Hospitality and Tourism Insights, 1*(2), 106–120.

Kang, M. Y., & Park, B. (2018). Sustainable corporate social media marketing based on message structural features: Firm size plays a significant role as a moderator. *Sustainability, 10*(4), 1167.

Kannan, P. K., & Li, H. (2017). Digital marketing: A framework, review and research agenda. *International Journal of Research in Marketing, 34*(1), 22–45.

Kapoor, K. K., & Dwivedi, Y. K. (2015). Metamorphosis of Indian electoral campaigns: Modi's social media experiment. *International Journal of Indian Culture and Business Management, 11*(4), 496–516.

Kapoor, K. K., Tamilmani, K., Rana, N. P., Patil, P., Dwivedi, Y. K., & Nerur, S. (2018). Advances in social media research: Past, present and future. *Information Systems Frontiers, 20*(3), 531–558.

Kapoor, K. K., Dwivedi, Y. K., & Piercy, N. C. (2016). Pay-per-click advertising: A literature review. *The Marketing Review, 16*(2), 183–202.

Kaur, P., Dhir, A., Rajala, R., & Dwivedi, Y. (2018). Why people use online social media brand communities: A consumption value theory perspective. *Online Information Review, 42*(2), 205–221.

Kefi, H., & Perez, C. (2018). Dark side of online social networks: Technical, managerial, and behavioral perspectives. *In Encyclopedia of Social Network Analysis and Mining*, 1–22. https://doi.org/10.1007/978-1-4614-7163-9_110217-1.

Ketelaar, P. E., Bernritter, S. F., van Woudenberg, T. J., Rozendaal, E., Konig, R. P., Hühn, A. E., & Janssen, L. (2018). "Opening" location-based mobile ads: How openness and location congruency of location-based ads weaken negative effects of intrusiveness on brand choice. *Journal of Business Research, 91*, 277–285.

Ketron, S. (2017). Investigating the effect of quality of grammar and mechanics (QGAM) in online reviews: The mediating role of reviewer crediblity. *Journal of Business Research, 81*, 51–59.

Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business Horizons, 54*(3), 241–251.

Kim, Y. J., & Han, J. (2014). Why smartphone advertising attracts customers: A model of Web advertising, flow, and personalization. *Computers in Human Behavior, 33*, 256–269.

Kim, D., & Jang, S. S. (2019). The psychological and motivational aspects of restaurant experience sharing behavior on social networking sites. *Service Business, 13*(1), 25–49.

Kim, J., Naylor, G., Sivadas, E., & Sugumaran, V. (2016). The unrealized value of incentivized eWOM recommendations. *Marketing Letters, 27*(3), 411–421.

Kizgin, H., Dey, B. L., Dwivedi, Y. K., Hughes, L., Jamal, A., Jones, P., … Rana, N. P. (2020). The impact of social media on consumer acculturation: Current challenges, opportunities, and an agenda for research and practice. *International Journal of Information Management.* , Article 102026. https://doi.org/10.1016/j.ijinfomgt.2019.10.011.

Komodromos, M., Papaioannou, T., & Adamu, M. A. (2018). Influence of online retailers' social media marketing strategies on students' perceptions towards e-shopping: A qualitative study. *International Journal of Technology Enhanced Learning, 10*(3), 218–234.

Kozinets, R. V. (2010). *Netnography: Doing ethnographic research online*. Sage publications.

Krishen, A. S., & Berezan, O. (2019). Marketing and humanity: An introduction. In A. S. Krishen, & O. Berezan (Eds.), *Marketing and humanity: Discourses in the Real world* (pp. 2–7). Newcastle upon Tyne: Cambridge Scholars Publishing.

Krishen, A. S., Raschke, R., & Kachroo, P. (2011). A feedback control approach to maintain consumer information load in online shopping environments. *Information & Management, 48*(8), 344–352.

Kumar, V., & Mirchandani, R. (2012). Increasing the ROI of social media marketing. *MIT Sloan Management Review, 54*(1), 55–61.

Kumar, V., Aksoy, L., Donkers, B., Venkatesan, R., Wiesel, T., & Tillmanns, S. (2010). Undervalued or overvalued customers: Capturing total customer engagement value. *Journal of Service Research, 13*(3), 297–310.

Kusumasondjaja, S. (2018). The roles of message appeals and orientation on social media brand communication effectiveness. *Asia Pacific Journal of Marketing and Logistics, 30*(4), 1135–1158.

Lal, B., Ismagilova, E., Dwivedi, Y. K., & Kwayu, S. (2020). Return on investment in social media marketing: Literature review and suggestions for future research. *Digital and social media marketing* (pp. 3–17). Cham: Springer.

Lamberton, C., & Stephen, A. (2016). A thematic exploration of digital, social media, and mobile marketing research's evolution from 2000 to 2015 and an agenda for future research. *Journal of Marketing, 80*(6), 146–172.

Lappeman, J., Patel, M., & Appalraju, R. (2018). Firestorm response: Managing brand reputation during an nWOM firestorm by responding to online complaints individually or as a cluster. *Communicatio, 44*(2), 67–87.

Laskey, H. A., Day, E., & Crask, M. R. (1989). Typology of main message strategies for television commercials. *Journal of Advertising, 18*(1), 36–41.

Laurell, C., Sandström, C., Berthold, A., & Larsson, D. (2019). Exploring barriers to adoption of Virtual Reality through Social Media Analytics and Machine Learning–an assessment of technology, network, price and trialability. *Journal of Business Research, 100*, 469–474.

Lee, D., Hosanagar, K., & Nair, H. S. (2018). Advertising content and consumer engagement on social media: Evidence from Facebook. *Management Science, 64*(11), 5105–5131.

Lee, J., Park, D. H., & Han, I. (2008). The effect of negative online consumer reviews on product attitude: An information processing view. *Electronic Commerce Research and Applications, 7*(3), 341–352.

Leeflang, P. S., Verhoef, P. C., Dahlström, P., & Freundt, T. (2014). Challenges and solutions for marketing in a digital era. *European Management Journal, 32*(1), 1–12.

Leminen, S., Rajahonka, M., Wendelin, R., & Westerlund, M. (2019). Industrial internet of things business models in the machine-to-machine context. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.08.008. in press.

Lemon, K., & Verhoef, P. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing, 80*(6), 69–96.

Leppäniemi, M., Sinisalo, J., & Karjaluoto, H. (2006). A review of mobile marketing research. *International Journal of Mobile Marketing, 1*(1), 2–12.

Leung, X. Y., Sun, J., & Bai, B. (2017). Bibliometrics of social media research: A co-citation and co-word analysis. *International Journal of Hospitality Management, 66*, 35–45.

Lin, H. C., Bruning, P. F., & Swarna, H. (2018). Using online opinion leaders to promote the hedonic and utilitarian value of products and services. *Business Horizons, 61*(3), 431–442.

Lin, T. T., Paragas, F., & Bautista, J. R. (2016). Determinants of mobile consumers' perceived value of location-based advertising and user responses. *International Journal of Mobile Communications, 14*(2), 99.

Lister, M. (2017). *40 essential social media marketing statistics for 2017*. Available at: http://www.wordstream.com/blog/ws/2017/01/05/social-media-marketing-statistics. Accessed 8 April 2020.

Liu, X. (2019). Analyzing the impact of user-generated content on B2B Firms' stock performance: Big data analysis with machine learning methods. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.02.021. in press.

Liu, Q. B., & Karahanna, E. (2017). The dark side of reviews: The swaying effects of online product reviews on attribute preference construction. *MIS Quarterly, 41*(2), 427–448.

Liu, S. Q., Ozanne, M., & Mattila, A. S. (2018). Does expressing subjectivity in online reviews enhance persuasion? *The Journal of Consumer Marketing, 35*(4), 403–413.

Lu, C. T., Wu, I., & Hsiao, W. (2019). Developing customer product loyalty through mobile advertising: Affective and cognitive perspectives. *International Journal of Information Management, 47*, 101–111.

Luo, X., & Donthu, N. (2006). Marketing's credibility: A longitudinal investigation of marketing communication productivity and shareholder value. *Journal of Marketing, 70*(4), 70–91.

Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. humans: The impact of artificial intelligence chatbot disclosure on customer purchases. *Marketing Science, 38*(6), 913–1084.

Maedche, A., Legner, C., Benlian, A., Berger, B., Gimpel, H., Hess, T., Hinz, O., Morana, S., & Söllner, M. (2019). AI-based digital assistants. *Business & Information Systems Engineering, 61*, 535–544.

Magno, F., & Cassia, F. (2019). Establishing thought leadership through social media in B2B settings: Effects on customer relationship performance. *Journal of Business and Industrial Marketing*. https://doi.org/10.1108/JBIM-12-2018-0410. in press.

Mandal, P. C. (2019). Public policy issues in direct and digital marketing–Concerns and initiatives: Public policy in direct and digital marketing. *International Journal of Public Administration in the Digital Age, 6*(4), 54–71.

Mäntymäki, M., & Islam, A. K. M. N. (2016). The Janus face of Facebook: Positive and negative sides of social networking site use. *Computers in Human Behavior, 61*, 14–26.

Marriott, H., Williams, M., & Dwivedi, Y. (2017). What do we know about consumer m-shopping behaviour? *International Journal of Retailing & Consumer Services, 45*(6), 568–586.

Martin, K. D., & Murphy, P. E. (2017). The role of data privacy in marketing. *Journal of the Academy of Marketing Science, 45*(2), 135–155.

Martínez-López, F. J., & Casillas, J. (2013). Artificial intelligence-based systems applied in industrial marketing: An historical overview, current and future insights. *Industrial Marketing Management, 42*(4), 489–495.

Marwick, A. E., & Boyd, D. (2014). Networked privacy: How teenagers negotiate context in social media. *New Media & Society, 16*, 1051–1067.

Matikiti, R., Mpinganjira, M., & Roberts-Lombard, M. (2018). Application of the technology acceptance model and the technology-organisation-environment model to examine social media marketing use in the South African tourism industry. *South African Journal of Information Management, 20*(1), 1–12.

Mazzucchelli, A., Chierici, R., Ceruti, F., Chiacchierini, C., Godey, B., & Pederzoli, D. (2018). Affecting brand loyalty intention: The effects of UGC and shopping searches via Facebook. *Journal of Global Fashion Marketing, 9*(3), 270–286.

McColl-Kennedy, J., Zaki, M., Lemon, K., Urmetzer, F., & Neely, A. (2019). Gaining customer experience insights that matter. *Journal of Service Research, 22*(1), 8–26.

McShane, L., Pancer, E., & Poole, M. (2019). The influence of B to B social media message features on brand engagement: A fluency perspective. *Journal of Business-to-Business Marketing, 26*(1), 1–18.

Miklosik, A., Kuchta, M., Evans, N., & Zak, S. (2019). Towards the adoption of machine learning-based analytical tools in digital marketing. *IEEE Access : Practical Innovations, Open Solutions, 7*, 85705–85718.

Milgram, P., Takemura, H., Utsumi, A., & Kishino, F. (1995). Augmented reality: A class of displays on the reality-virtuality continuum. In Telemanipulator and telepresence technologies (Vol. 2351, pp. 282-292). December *International Society for Optics and Photonics*.

Mishra, A. S. (2019). Antecedents of consumers' engagement with brand-related content on social media. *Marketing Intelligence & Planning, 37*(4), 386–400.

Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society, 3*(2), Article 205395171667967.

Moran, G., Muzellec, L., & Nolan, E. (2014). Consumer moments of truth in the digital context: How "search" and "e-word of mouth" can fuel consumer decision making. *Journal of Advertising Research, 54*(2), 200–204.

Morra, M. C., Gelosa, V., Ceruti, F., & Mazzucchelli, A. (2018). Original or counterfeit luxury fashion brands? The effect of social media on purchase intention. *Journal of Global Fashion Marketing, 9*(1), 24–39.

Moz. (2019). *Mozlow's hierarchy of SEO needs*. Retrieved from: https://moz.com/beginners-guide-to-seo. Accessed date: 12 October 2019.

Muninger, M. I., Hammedi, W., & Mahr, D. (2019). The value of social media for innovation: A capability perspective. *Journal of Business Research, 95*, 116–127.

Munzert, S., Rubba, C., Meißner, P., & Nyhuis, D. (2014). *Automated data collection with R: A practical guide to web scraping and text mining*. John Wiley & Sons.

Nambisan, S., & Baron, R. A. (2009). Virtual customer environments: Testing a model of voluntary participation in value co-creation activities. *The Journal of Product Innovation Management, 26*(4), 388–406.

Naylor, R. W., Lamberton, C. P., & West, P. M. (2012). Beyond the "like" button: The impact of mere virtual presence on brand evaluations and purchase intentions in social media settings. *Journal of Marketing, 76*(6), 105–120.

Ngai, E. W. T., Tao, S. S. C., & Moon, K. K. L. (2015). Social media research: Theories, constructs and conceptual frameworks. *International Journal of Information Management, 35*(1), 33–44.

Nguyen, N. T. (1997). Micromachined flow sensors—A review. *Flow Measurement and Instrumentation, 8*(1), 7–16.

Nguyen, T. T., Hui, P.-M., Harper, F. M., Terveen, L., & Konstan, J. A. (2014). Exploring the filter bubble. *International World Wide Web Conference Com- Mittee (IW3C2)*. https://doi.org/10.1145/2566486.2568012.

Nisbett, R. E., Zukier, H., & Lemley, R. E. (1981). The dilution effect: Nondiagnostic information weakens the implications of diagnostic information. *Cognitive Psychology, 13*(2), 248–277.

Obar, J. A., & Oeldorf-Hirsch, A. (2018). The biggest lie on the internet: Ignoring the privacy policies and terms of service policies of social networking services. *Information, Communication and Society*, 1–20. https://doi.org/10.1080/1369118X.2018.1486870.

Ostrom, A., Parasuraman, A., Bowen, D., Patricio, L., Voss, C., & Lemon, K. (2015). Service research priorities in a rapidly changing context. *Journal of Service Research, 18*(2), 127–159.

Overgoor, G., Chica, M., Rand, W., & Weishampel, A. (2019). Letting the computers take over: Using AI to solve marketing problems. *California Management Review, 61*(4), 156–185.

Park, C. H., Park, Y. H., & Schweidel, D. A. (2018). The effects of mobile promotions on customer purchase dynamics. *International Journal of Research in Marketing, 35*(3), 453–470.

Parsons, A. L., & Lepkowska-White, E. (2018). Social media marketing management: A conceptual framework. *Journal of Internet Commerce, 17*(2), 81–95.

Patton, M. Q. (1987). *Qualitative evaluation and research methods*. CA, USA: Sage publications.

Perez Curiel, C., & Luque Ortiz, S. (2018). Fashion influence marketing. Study of the new model of consumption in Instagram of university millennials. *Adcomunica-revista cientifica de estrategias tendencias e innovacion en communicacion, 15*, 255–281.

Petit, O., Velasco, C., & Spence, C. (2019). Digital sensory marketing: Integrating new technologies into multisensory online experience. *Journal of Interactive Marketing, 45*, 42–61.

Pfeffer, J., Zorbach, T., & Carley, K. M. (2014). Understanding online firestorms: Negative word-of-mouth dynamics in social media networks. *Journal of Marketing Communications, 20*(1-2), 117–128.

Plume, C. J., Dwivedi, Y. K., & Slade, E. L. (2016). *Social media in the marketing context: A state of the art analysis and future directions*. Chandos Publishing.

Puto, C. P., & Wells, W. D. (1984). Informational and transformational advertising: The differential effects of time. In C. Thomas (Ed.), *NA - Advances in consumer research Volume 11* (pp. 638–643). Kinnear, Provo, UT: Association for Consumer Research.

Qiu, L., Pang, J., & Lim, K. H. (2012). Effects of conflicting aggregated rating on eWOM review credibility and diagnosticity: The moderating role of review valence. *Decision Support Systems, 54*(1), 631–643.

Quan-Haase, A., & Young, A. L. (2010). Uses and gratifications of social media: A comparison of Facebook and instant messaging. *Bulletin of Science, Technology & Society, 30*(5), 350–361.

Quinn, K., & Epstein, D. (2019). #MyPrivacy: How users think about social media privacy. *Proceedings of the International Conference on Social Media & Society*, 360–364. https://doi.org/10.1145/3217804.3217945.

Quinton, S. (2013). The community brand paradigm: A response to brand manager's dilemma in the digital era. *Journal of Marketing Management, 29*(7/8), 912–932.

Rai, A. (2020). Explainable AI: From black box to glass box. *Journal of the Academy of Marketing Science, 48*(1), 137–141.

Rathore, A. K., Ilavarasan, P. V., & Dwivedi, Y. K. (2016). Social media content and product co-creation: An emerging paradigm. *Journal of Enterprise Information Management, 29*(1), 7–18.

Rauschnabel, P. A. (2018). Virtually enhancing the real world with holograms: An exploration of expected gratifications of using augmented reality smart glasses. *Psychology & Marketing, 35*(8), 557–572.

Rauschnabel, P. A., Felix, R., & Hinsch, C. (2019). Augmented reality marketing: How mobile AR-apps can improve brands through inspiration. *Journal of Retailing and Consumer Services, 49*, 43–53.

Rauschnabel, P. A., He, J., & Ro, Y. K. (2018). Antecedents to the adoption of augmented reality smart glasses: A closer look at privacy risks. *Journal of Business Research, 92*, 374–384.

Ray, L. (2019). Google's algorithm undergoes enormous shifts to prioritise content focused on expertise, authoritativeness and trustworthiness. *Journal of Digital & Social Media Marketing, 7*(2), 128–136.

Raynes-Goldie, K. (2010). Aliases, creeping, and wall cleaning: Understanding privacy in the age of Facebook. *First Monday, 15*(1).

Reid, D. A., & Plank, R. E. (2000). Business marketing comes of age: A comprehensive review of the literature. *Journal of Business-to-Business Marketing, 7*(2-3), 9–186.

Responsible Research in Business and Management (RRBM) 2019, available at https://rrbm.network/.

Rettie, R., & Brum, M. (2001). M-commerce: The role of SMS text messages. July. In *Proceedings of the Fourth Biennial International Conference on Telecommunications and Information Markets (COTIM 2001)*.

Ritz, W., Wolf, M., & McQuitty, S. (2019). Digital marketing adoption and success for small businesses. *Journal of Research in Interactive Marketing, 13*(2), 179–203.

Rooney, J. (2017). *The growth of searches on google*. Retrieved from: https://www.klood.com/blog/seo/growth-of-searches-on-google/. Accessed date: 12 October 2019.

Rost, K., Stahel, L., & Frey, B. S. (2016). Digital social norm enforcement: Online firestorms in social media. *PloS One, 11*(6), Article e0155923.

Roumieh, A., Garg, L., Gupta, V., & Singh, G. (2018). E-marketing strategies for islamic banking: A case based study. *Journal of Global Information Management, 26*(4), 67–91.

Rowley, J. (2012). Evidence-based marketing: A perspective on the 'practice-theory divide'. *International Journal of Market Research, 54*(4), 521–541.

Rowley, J., & Keegan, B. (2019). An overview of systematic literature reviews in social media marketing. *Journal of Information Science*. Online.

Rust, R., & Oliver, R. (2000). Should we delight the customer? *Journal of the Academy of Marketing Science, 28*(1), 86.

Salo, J. (2017). Social media research in the industrial marketing field: Review of literature and future research directions. *Industrial Marketing Management, 66*, 115–129.

Sarna, G., & Bhatia, M. P. S. (2018). Entropy based identification of fake profiles in social network. *International Journal of Virtual Communities and Social Networking, 9*(4), 18–30.

Scheinbaum, A. C. (2017). *The dark side of social media: A consumer psychology perspective*. Routledge.

Schomer, A. (2019). *Influencer marketing: State of the social media influencer market in 2020*. December 17. Business insider https://www.businessinsider.com/influencer-marketing-report.

Schultz, D. E., & Peltier, J. J. (2013). Social media's slippery slope: Challenges, opportunities and future research directions. *Journal of Research in Interactive Marketing, 7*(2), 86–99.

Sena, V., & Ozdemir, S. (2019). Spillover effects of investment in big data analytics in B2B relationships: What is the role of human capital? *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.05.016. in press.

Seo, E. J., & Park, J. W. (2018). A study on the effects of social media marketing activities on brand equity and customer response in the airline industry. *Journal of Air Transport Management, 66*, 36–41.

Shanahan, T., Tran, T. P., & Taylor, E. C. (2019). Getting to know you: Social media personalization as a means of enhancing brand loyalty and perceived quality. *Journal of Retailing and Consumer Services, 47*, 57–65.

Shankar, V., & Balasubramanian, S. (2009). Mobile marketing: A synthesis and prognosis. *Journal of Interactive Marketing, 23*(2), 118–129.

Shareef, M. A., Mukerji, B., Alryalat, M. A. A., Wright, A., & Dwivedi, Y. K. (2018). Advertisements on Facebook: Identifying the persuasive elements in the development of positive attitudes in consumers. *Journal of Retailing and Consumer Services, 43*, 258–268.

Shareef, M. A., Dwivedi, Y. K., Kumar, V., & Kumar, U. (2017). Content design of advertisement for consumer exposure: Mobile marketing through short messaging service. *International Journal of Information Management, 37*(4), 257–268.

Shareef, M. A., Dwivedi, Y. K., Kumar, V., & Kumar, U. (2016). Reformation of public service to meet citizens' needs as customers: Evaluating SMS as an alternative service delivery channel. *Computers in Human Behavior, 61*, 255–270.

Shareef, M. A., Dwivedi, Y. K., & Rana, N. P. (2015). Consumer behaviour in the context of SMS-based marketing. *The Marketing Review, 15*(2), 135–160.

Shareef, M. A., Kapoor, K. K., Mukerji, B., Dwivedi, R., & Dwivedi, Y. K. (2019a). Group behavior in social media: Antecedents of initial trust formation. *Computers in Human Behavior*. , Article 106225. https://doi.org/10.1016/j.chb.2019.106225.

Shareef, M. A., Mukerji, B., Dwivedi, Y. K., Rana, N. P., & Islam, R. (2019b). Social media marketing: Comparative effect of advertisement sources. *Journal of Retailing and Consumer Services, 46*, 58–69.

Shiau, W. L., Dwivedi, Y. K., & Lai, H. H. (2018). Examining the core knowledge on facebook. *International Journal of Information Management, 43*, 52–63.

Shiau, W. L., Dwivedi, Y. K., & Yang, H. S. (2017). Co-citation and cluster analyses of extant literature on social networks. *International Journal of Information Management, 37*(5), 390–399.

Shukla, P. S., & Nigam, P. V. (2018). E-shopping using mobile apps and the emerging consumer in the digital age of retail hyper personalization: An insight. *Pacific Business Review International, 10*(10), 131–139.

Singer, N. (2018). *'Weaponized ad technology': Facebook's moneymaker gets a critical eye*. August 16, Retrieved from. The New York Times https://www.nytimes.com/2018/08/16/technology/facebook-microtargeting-advertising.html.

Singh, J. P., Irani, S., Rana, N. P., Dwivedi, Y. K., Saumya, S., & Roy, P. K. (2017). Predicting the "helpfulness" of online consumer reviews. *Journal of Business Research, 70*, 346–355.

Sivarajah, U., Irani, Z., Gupta, S., & Mahroof, K. (2019). Role of big data and social media analytics for business to business sustainability: A participatory web context. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.04.005. in press.

Smith, J. N. (2018). The social network? Nonprofit constituent engagement through social media. *Journal of Nonprofit & Public Sector Marketing, 30*(3), 294–316.

Smith, K. T. (2019). Mobile advertising to Digital Natives: Preferences on content, style, personalization, and functionality. *Journal of Strategic Marketing, 27*(1), 67–80.

Sohn, D. (2009). Disentangling the effects of social network density on electronic word-of-mouth (eWOM) intention. *Journal of Computer-Mediated Communication, 14*(2), 352–367.

Sousa, M. J., & Rocha, Á. (2019). Skills for disruptive digital business. *Journal of Business Research, 94*, 257–263.

Statista. (2019). *Content marketing revenue worldwide in 2016 and 2017 (in billion U.S. dollars)*. Retrieved from: https://www.statista.com/statistics/527554/content-marketing-revenue/, Accessed date: 13 March 2019.

Statista. (2020a). *Global digital population as of January 2020*. Available at https://www.statista.com/statistics/617136/digital-population-worldwide/. Accessed on 9 April 2020.

Statistica. (2020b). *Number of social network users worldwide from 2010 to 2023*. Available at: https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/. Accessed on 9 April 2020.

Stephen, A. T. (2016). The role of digital and social media marketing in consumer behavior. *Current Opinion in Psychology, 10*, 17–21.

Stojanovic, I., Andreu, L., & Curras-Perez, R. (2018). Effects of the intensity of use of social media on brand equity. *European Journal of Management and Business Economics, 27*(1), 83–100.

Ström, R., Vendel, M., & Bredican, J. (2014). Mobile marketing: A literature review on its value for consumers and retailers. *Journal of Retailing and Consumer Services, 21*, 1001–1012.

Sun, S., Hall, D. J., & Cegielski, C. G. (2019). Organizational intention to adopt big data in the B2B context: An integrated view. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.09.003. in press.

Suppatvech, C., Godsell, J., & Day, S. (2019). The roles of internet of things technology in enabling servitized business models: A systematic literature review. *Industrial Marketing Management*. https://doi.org/10.1016/j.indmarman.2019.02.016. in press.

Syam, N., & Sharma, A. (2018). Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and artificial intelligence in sales research and practice. *Industrial Marketing Management, 69*, 135–146.

Syrdal, H. A., & Briggs, E. (2018). Engagement with social media content: A qualitative exploration. *The Journal of Marketing Theory and Practice, 26*(1-2), 4–22.
Tafesse, W., & Wien, A. (2018). Using message strategy to drive consumer behavioral engagement on social media. *The Journal of Consumer Marketing, 35*(3), 241–253.
Takahashi, J. (2019). Consumer behavior DNA for realizing flexible digital marketing. *Fujitsu Scientific & Technical Journal, 55*(1), 27–31.
Tarnovskaya, V., & Biedenbach, G. (2018). Corporate rebranding failure and brand meanings in the digital environment. *Marketing Intelligence & Planning, 36*(4), 455–469.
Temkin Group. (2017). *The ultimate CX infographic*. available at: https://experiencematters.blog/2017/10/03/the-ultimate-cx-infographic-2017/ (accessed 11 October 2019).
Teo, D. (2019). Differences in perceptions and attitudes of Singaporean female football fans towards football marketing. *Gender and diversity: Concepts, methodologies, tools, and applications* (pp. 1468–1484). IGI Global.
Tous, R., Gomez, M., Poveda, J., Cruz, L., Wust, O., Makni, M., & Ayguadé, E. (2018). Automated curation of brand-related social media images with deep learning. *Multimedia Tools and Applications, 77*(20), 27123–27142.
Tran, G. A., Yazdanparast, A., & Strutton, D. (2019). An examination of the impact of consumers' social media connectedness to celebrity endorsers on purchase intentions for endorsed products. August. In *American Marketing Association Summer Educators' Conference. Talk Presented at 2019 American Marketing Association Summer Educators'*.
Tuten, T. L., & Solomon, M. R. (2018). *Social media marketing* (3rd ed.). Los Angeles, CA: Sage Publications, Ltd.
Tuzovic, S. (2010). Frequent (flier) frustration and the dark side of word-of-web: Exploring online dysfunctional behavior in online feedback forums. *Journal of Services Marketing, 24*(6), 446–457.
van Doorn, J., Lemon, K., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. (2010v). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research, 13*, 253–266.
Varnali, K., & Toker, A. (2010). Mobile marketing research: The-state-of-the-art. *International Journal of Information Management, 30*, 144–151.
Vayena, E., Blasimme, A., & Cohen, I. G. (2018). Machine learning in medicine: Addressing ethical challenges. *PLoS Medicine, 15*(11), Article e1002689.
Vermeer, S. A., Araujo, T., Bernritter, S. F., & van Noort, G. (2019). Seeing the wood for the trees: How machine learning can help firms in identifying relevant electronic word-of-mouth in social media. *International Journal of Research in Marketing, 36*(3), 492–508.
Veseli-Kurtishi, T. (2018). Social media as a tool for the sustainability of small and medium businesses in Macedonia. *European Journal of Sustainable Development, 7*(4), 262-262.
Villarroel Ordenes, F., Grewal, D., Ludwig, S., Ruyter, K., Mahr, D., Wetzels, M., & Kopalle, P. (2018). Cutting through content clutter: How speech and image acts drive consumer sharing of social media brand messages. *The Journal of Consumer Research, 45*(5), 988–1012.
Wang, D. W., Nair, K., Kouchaki, M., Zajac, E. J., & Zhao, X. X. (2019). A case of evolutionary mismatch? Why facial width-to-Height ratio may not predict behavioral tendencies. *Psychological Science, 30*(7), 1074–1081.
Wang, X. H., Kim, T. Y., & Lee, D. R. (2016). Cognitive diversity and team creativity: Effects of team intrinsic motivation and transformational leadership. *Journal of Business Research, 69*(9), 3231–3239.
Wang, Y., Xiong, M., & Olya, H. (2020). Toward an understanding of responsible artificial intelligence practices. In *Proceedings of the 53rd Hawaii International Conference on System Sciences*.
Wasserman, S., & Faust, K. (1995). *Social network analysis, methods and applications*. Cambridge, United Kingdom: Cambridge University Press.
Wathen, C. N., & Burkell, J. (2002). Believe it or not: Factors influencing credibility on the Web. *Journal of the American Society for Information Science and Technology, 53*(2), 134–144.
Wenger, E., Dermott, R. A., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Boston, Mass: Harvard Business Review Press.
Wong, P., Lee, D., & Ng, P. M. (2018). Online search for information about universities: A Hong Kong study. *International Journal of Educational Management, 32*(3), 511–524.
Wong, N., & Krishen, A. S. (2019). Skin lightening and social capital: the cultural conceptions of agency. In A. S. Krishen, & O. Berezan (Eds.), *Marketing and Humanity: Discourses in the Real World* (pp. 118–145). Newcastle upon Tyne: Cambridge Scholars Publishing.
Yang, Y., Asaad, Y., & Dwivedi, Y. (2017). Examining the impact of gamification on intention of engagement and brand attitude in the marketing context. *Computers in Human Behavior, 73*, 459–469.
Yasin, M., Liébana-Cabanillas, F., Porcu, L., & Kayef, R. N. (2020). The role of customer online brand experience in customers' intention to forward online company-generated content: The case of the Islamic online banking sector in Palestine. *Journal of Retailing and Consumer Services, 52*, Article 101902.
Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *Cyber Psychology & Behavior, 1*(3), 237–244.
Zahay, D., Peltier, J., Krishen, A. S., & Schultz, D. E. (2014). Organizational processes for B2B services IMC data quality. *Journal of Business and Industrial Marketing, 29*(1), 63–74.
Zhang, K., & Katona, Z. (2012). Contextual advertising. *Marketing Science, 31*(6), 980–994.
Zhang, Y., & Li, X. (2014). Relative superiority of key centrality measures for identifying influencers on social media. *International Journal of Intelligent Information Technologies, 10*(4), 1–23.
Zhang, H., Gupta, S., Sun, W., & Zou, Y. (2019). How social-media-enabled co-creation between customers and the firm drives business value? The perspective of organizational learning and social Capital. *Information & Management*. https://doi.org/10.1016/j.im.2019.103200 (in-press).
Zhou, X., Zafarani, R., Shu, K., & Liu, H. (2019). Fake News: Fundamental theories, detection strategies and challenges. *WSDM 2019 - Proceedings of the 12th ACM International Conference on Web Search and Data Mining*, 836–837. https://doi.org/10.1145/3289600.3291382.
Zimmerman, T. (2017). #Intersectionality: The fourth wave feminist twitter community. *Atlantis-Critical Studies in Gender Culture & Social Justice, 38*(1), 54–70.
Zolfagharian, M., & Yazdanparast, A. (2017). The dark side of consumer life in the age of virtual and mobile technology. *Journal of Marketing Management, 33*(15–16), 1304–1335.