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Editorial: Written by ChatGPT, illustrated by Midjourney: generative AI for content marketing

1. Introduction

Generative artificial intelligence (AI) represents a new generation of AI technologies that produces new digital content based on user-inserted prompts (De Cremer et al., 2023). Via generative AI, users can simply tell the AI tool the type and nature of the outputs they want (e.g. a compelling email to potential customers, a summary of benefits of a product category or a sketch of a visual design), and the AI will generate the requested outputs. What is more, many of the generative AI tools are "conversational"—they allow the user to provide additional specifications and requests, based on which the output is further refined. Examples of generative AI applications include: (1) ChatGPT for writing texts (e.g. social media posts and website content), (2) Dall-E and Midjourney for creating realistic images and visual art, (3) Steve AI for producing videos and animations and (4) Boomy for making original music. These platforms have encountered great enthusiasm and record-breaking technology adaptation curves (e.g. within only one week of its launch, ChatGPT acquired more than a hundred million users, see Dowling and Lucey, 2023). The reasons for this enthusiasm are the wide-ranging accessibility of these platforms, user-friendly application interfaces, quick responses by the tools and users' perceived quality of the output.

ChatGPT and other generative AI applications are all about content generation, and thus they are particularly valuable for content marketing. Content marketing can be generally defined as the identification, creation and dissemination of valuable and digitized content to engage customers, with the final goal of enhancing marketing performance (Hollebeek and Macky, 2019; Holliman and Rowley, 2014; Terho *et al.*, 2022). To illustrate the value of generative AI in content creation, consider for example a business-to-business marketing software firm that wants to create content on Instagram. The firm can ask ChatGPT to write a caption with this prompt: "Write me a story about typical failures in online marketing and use the perspective of a small business owner." For the visual, the user may request Dall-E to create an image with the input of: "A picture in an abstract style of an unhappy business owner." Almost instantly, ChatGPT and Dall-E generate the outputs, and the user can further iterate with those until feasible content is created. It is clear that generative AI will change content marketing outcomes, given the efficiency, creativity and short production time involved in using these tools.

Although promising for content marketers, scholars have argued that AI could also provide suboptimal or even harmful implications for them (De Bruyn et al., 2020), and more recently, about challenges with generative AI for content quality, validation and intellectual property, for instance (Dwivedi et al., 2023). It also remains unclear what are the implications of generative AI for individual marketing professionals and organizational practices in

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different contexts; after all, it is expected that generative AI tools will change all types of creative and knowledge work (De Cremer *et al.*, 2023).

To understand the benefits and challenges of using generative AI in content marketing, we propose a research agenda to study how generative AI affects content creation, digital marketing platforms (e.g. social media and search engines) and customer engagement. The research agenda contributes to the content marketing literature by clearly outlining the three contexts in which generative AI can complement, augment or even replace content marketers' work, and by proposing a set of urgent research questions in this area.

2. Research agenda

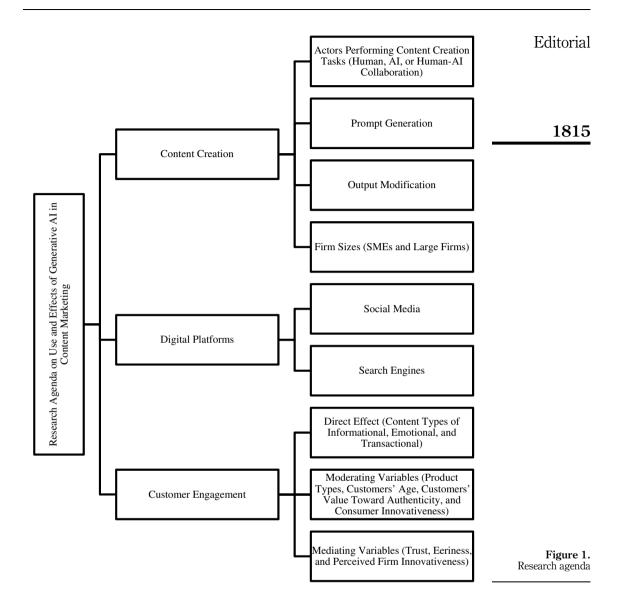
Literature on content marketing and social media content (Hollebeek and Macky, 2019; Liadeli et al., 2022; Terho et al., 2022; Wahid et al., 2023) is typically concerned about content creation processes, digital platforms where content is distributed and how content can influence customer engagement. Following this convention, we propose a research agenda on the use and effects of generative AI in content marketing focusing on three overarching facets of content creation, digital platforms and customer engagement. Figure 1 depicts the research agenda framework.

2.1 The use of generative AI for content creation

2.1.1 Content creation tasks performed by generative AI and human labor. In content marketing, content delivered to customers needs to be valuable, relevant, compelling (Hollebeek and Macky, 2019) and frequent (Taiminen and Karjaluoto, 2017). To ascertain that the content meets the requirements, content creation is often treated as a joint process involving several departments in an organization (Terho et al., 2022). Content marketers may collaborate with experts (e.g. interviewing top engineers who master particular topics) to create informational and knowledge-laden content (Järvinen and Taiminen, 2016). Marketers also append visual illustrations to make the whole content more attractive (Wahid and Gunarto, 2022), where the design of the illustrations can be done by in-house design teams or external design agencies.

With the arrival and utilization of generative AI, the conventional content creation is likely to be augmented and transformed in multiple ways. For instance, generative AI may diminish or replace the experts' role as a source and creator of high quality content; consider, for instance, the ultra-realistic high definition "photographs" generated by the Midjourney AI tool. Indeed, generative AI may further take over (some of) the design teams' responsibility, where the production of images, animations, audio and videos is all or partly exercised by generative AI. In this current environment, we need to understand which content creation activities are performed by generative AI and which by humans to keep the whole content marketing effective and efficient. This aspect is a fundamental question of human–AI collaboration, and might lead to augmentation, automation or both (see also Raisch and Krakowski, 2021). An approach to uncover the knowledge is by proposing the following research question (RQ): What tasks are undertaken by generative AI, humans or a combination of both in content creation?

2.1.2 Prompt generation and output modification. Specific to the generative AI's outputs, their quality depends on the prompts constructed by users (Van Dis et al., 2023). New job roles such as "prompt engineers" and tasks such as "prompt engineering" are increasingly mentioned among practitioners as the next generation skills. Thus, the RQ relating to content marketing is: How can marketers design effective prompts for different content marketing purposes. Content marketing studies need to document aspects considered by content marketers when developing generative AI prompts for content creation. After prompt



formulation, the next critical issue is assessing and implementing the output of generative AI. Sometimes, AI-generated content lacks accuracy (e.g. texts created by ChatGPT suffer from "hallucination effects" where the texts seem credible while in fact they are incorrect, see Shen *et al.*, 2023) and displays visible flaws (e.g. hands looked deformed in a Midjourney-produced image, see Bhaimiya, 2023). There is also a possibility of a mismatch between AI-generated content and creators' nuanced needs (Suh *et al.*, 2021). Considering these weaknesses, content marketers need to evaluate AI-generated content and possibly modify it to ensure accuracy, quality and relevancy. Therefore, the RQs are: *How do marketers interpret and assess the appropriateness of AI-generated content for their content marketing? To what extent and how do marketers modify AI-generated content?*

2.1.3 Firm sizes and their application of generative AI for content creation. Large firms tend to have sufficient resources to develop successful content marketing strategies (Wahid et al., 2022a). Opposing such a size advantage, SMEs encounter problems in exercising effective content due to their limited capabilities (Kraus et al., 2019). Research has also uncovered that SMEs tend to focus more on running their core business activities, and as such, they have limited time to formulate valuable content for their customers (Taiminen and Karjaluoto, 2015). As indicated before, generative AI tools are relatively easy to operate and they are excellent for idea generation and instant content creation (Paylik, 2023), Generative AI can then potentially remove SMEs' knowledge and time limitations, therefore providing SMEs a lower barrier to entry to compete with larger industry incumbents. Appropriately implemented, generative AI may function as a powerful tool for SMEs to combat their larger firm counterparts. Pertaining to this outlook, we may inquire: How can SMEs use generative AI to complement their sparse resources in content creation? Additionally, given the discrepancies in resources and sizes, large firms and SMEs may create content using generative AI differently. For instance, while large firms can hire experts to check the accuracy of texts written by ChatGPT, SMEs may neglect this expert verification due to economic reasons. To this possibility, we may advance the RQ of: How does generative-AIassisted content creation differ in large companies and SMEs?

2.2 AI-generated content on digital platforms

2.2.1 Social media. Content marketing and social media content scholars (Haenlein et al., 2020; Holliman and Rowley, 2014; Wahid et al., 2023) have strongly recommended avoiding the "one-size-fits-all" approach for content marketing on social media. Each medium has its own infrastructure and culture (Voorveld et al., 2018). For instance, while TikTok specializes in short videos, Twitter serves mostly as an arena for textual content. Due to this rationale, one type of content may succeed in one platform but fail in others (Wahid and Gunarto, 2022). Grounded on this, AI-generated content may cause losses in one medium but generate benefits in others—due to reasons such as one social media application may be more capable than others in identifying whether content is created by humans or machines, and consequently, the particular social media's algorithm may favor human-produced content more than AI-created content, for example. Some platforms might also get crowded out by AI-generated content, effectively lowering the value of all content, or alternatively making unique and high quality content even more valuable. Informed by these prospects, we suggest the following question: In which social media platform does generative AI bring the most benefits when used for content marketing?

2.2.2 Search engines. Search engines such as Google and Bing may also be able to detect whether a piece of content is AI-generated or human-made. The detection of AI-generated content could be due to its characteristics of being generic (Houde et al., 2020) or containing misinformation (Pavlik, 2023). For instance, if attributed as machine-generated, search engines may consider the content as spam. Because of this and the search engines' algorithm which prioritizes quality over spammy content (Erdmann et al., 2022), search engines may rank AI-generated content last, and thus AI-generated content may adversely impact search engine optimization. Alternatively, AI-generated content might be tailored to fare well in terms of search engine optimization when appropriately prompted. We need to investigate this negative outlook because search engine optimization links with content marketing—being found by search engines is one form of content marketing strategy (Wahid et al., 2023). The RQ for the investigation is: What are the implications of AI-generated content on search engine optimization?

2.3 Relationships between AI-generated content and customer engagement According to Harmeling et al. (2017, p. 316), customer engagement is "a customer's voluntary resource contribution to a firm's marketing function, going beyond financial patronage". Examples of customer engagement include social media likes, word of mouth, reviews and

feedback (Harmeling *et al.*, 2017; Meire *et al.*, 2019; Pansari and Kumar, 2017). Customer engagement is imperative for businesses as it can affect gross advertising revenue, customer lifetime value and sales (Kanuri *et al.*, 2018; Meire *et al.*, 2019; Saboo *et al.*, 2016). Streams of research on content marketing and social media content (Hollebeek and Macky, 2019; Liadeli *et al.*, 2022; Terho *et al.*, 2022; Wahid *et al.*, 2023) usually investigated how content can influence customer engagement. Motivated by this tradition and the effect of customer engagement on business performance, it would be necessary to examine the relationship between AI-generated content and customer engagement.

2.3.1 Direct effects of AI-generated content on customer engagement. Content marketing and social media content research typically segregate content into three overarching types of informational, emotional and transactional (De Vries et al., 2012; Meire et al., 2019; Tellis et al., 2019; Wahid et al., 2023). Informational content refers to the pieces of content that carry organizations' information-related messages in a nonpromotional fashion (Wahid et al., 2023). Examples of informational content include general information, news and tutorial (Dolan et al., 2019; Wahid et al., 2022b). Emotional content is those organizations' messages that are laden with affective elements aiming to elicit emotional or sensory experiences (Meire et al., 2019). Entertainment, charity and humor fall under the category of emotional content (Shahbaznezhad et al., 2021; Wahid and Gunarto, 2022). In the case of transactional content, it relates to content that is loaded with transactional messages, such as giveaways, donations and promotions (Shahbaznezhad et al., 2021; Wahid et al., 2022b).

Generative AI can facilitate the creation of informational (e.g. ChatGPT writes a tutorial), emotional (e.g. Dall-E draws a funny image for memes), and transactional (e.g. ChatGPT creates texts for promotions) content. However, bearing in mind that generative AI has several weaknesses, content that is generated by the tool may affect customer engagement. For instance, AI-generated content is often inaccurate (Pavlik, 2023). Imagine an organization that publishes an AI-generated social media post containing misinformation. Likes on the content may drop, and comments may escalate because customers react to the particular content negatively. Also, AI-generated content might be generic and boring (Houde *et al.*, 2020). Thus, AI-generated emotional content may lack the necessary "human touch" that could lead to lower engagement. Alternatively, some AI tools might be able to help creating content that is even more engaging than the traditional content; the question remains open, and might vary across different content types and AI tools. Therefore, we need to empirically inquire these different possibilities via asking: *Do AI-generated content types of informational, emotional and transactional affect customer engagement?*

2.3.2 Moderating variables on the relationship between AI-generated content and customer engagement. Studies suggested that product types require different content strategies (Dessart, 2017). Customers of high-involvement products actively search for information, and thus, firms' content should be information-laden (Barreto and Ramalho, 2019). On the other hand, customers of low-involvement products engage more with visual cues and often neglect the information (Barreto and Ramalho, 2019). This customer behavior signals that product types may moderate the relationship between AI-generated content and customer engagement. As an illustration, consider a healthy food brand as a high-involvement product, sharing an Instagram post with a lengthy caption explaining the benefits of vitamin C for skin. Customers of high-involvement products actively seek information to minimize risks (Dholakia, 2001), and imagine if they discover that the Instagram caption about vitamin C is generated by ChatGPT. As ChatGPT often produces incorrect information (Pavlik, 2023), customers may disengage with the AI-generated content due to the likely misinformation and risks. Simultaneously, pictures fabricated by AI sometimes are imperfect (e.g. hands have a deformed look). If content marketers share the AI-generated pictures without alterations, customers of low-involvement products may disengage with AI-generated content because they care about visual cues. Content marketing scholars should empirically investigate these possibilities by advancing the RQ: Do product types (low versus high involvement; and hedonic versus utilitarian) moderate the relationship between AI-generated content and customer engagement?

In their exploratory survey, Sands *et al.* (2022) found that younger customers are more receptive toward emerging technologies than older generations. Therefore, similar as for other emerging technologies, younger generations may have more positive sentiments toward generative AI than older people. Thus, we may propose the following RQ: *Does customers' age moderate the relationship between AI-generated content and customer engagement?*

Further, Kreuzbauer and Keller (2017) suggested that human-made products have higher authenticity than machine-made products. The scholars also indicated that customers who seek authenticity favor more human-made than machine-produced products. Based on this insight, it is possible that customers' value toward authenticity negatively moderates the effect of AI-generated content on customer engagement. In particular, when customers' value toward authenticity is high, customer engagement with AI-generated content reduces due to the low authenticity attached to AI-generated content. It would be essential to inspect such a possibility with this RQ: Does customers' value toward authenticity moderate the relationship between AI-generated content and customer engagement?

Consumer innovativeness may also interact with AI-generated content in affecting customer engagement. Consumer innovativeness corresponds to consumers' tendency to consume new products or services (Roehrich, 2004). Consumers with high innovativeness like to enjoy new technologies (Bhadauria and Chennamaneni, 2022), and because of this, consumer innovativeness positively influences technology adoption (Lee *et al.*, 2021). Underpinned by the same notion, due to the novelty of generative AI, consumers with high innovativeness may engage more with content created by generative AI than consumers with low innovativeness. The RQ for the hypothesis is: *Does consumer innovativeness moderate the relationship between AI-generated content and customer engagement?*

2.3.3 Mediating variables on the relationship between AI-generated content and customer engagement. The first mediation variable is trust. Chatbot research (Luo et al., 2019) suggested that humans perceive chatbots as less empathetic and knowledgeable. Because of this, customers have low trust toward chatbots—especially in highly critical serviceswhich eventually lowers customer retention (Mozafari et al., 2022). In line with this reasoning, as generative AI often spawns flawed and erroneous outputs (Pavlik, 2023), customers may distrust AI-generated content. This situation may cause negative effects on customer engagement. The second mediating construct is eeriness. In their extensive study, Mende et al. (2019) showed that customers experience a feeling of eeriness when they know that they are served by service robots. The explanation is that customers feel threatened by the robots. Eeriness eventually affects customers' perceptions and behavior. Customers may also experience eeriness when they view machine-made content. Customers may feel unease because now machines act human-like and they can take over human jobs in content creation. This may lead to an increase or decrease in customer engagement. The third mediating factor is perceived firm innovativeness. The concept of perceived firm innovativeness refers to a consumer's perception of a firm's capability to offer creative, novel and impactful solutions and ideas (Kunz et al., 2011). Research (Manchanda and Deb, 2021) has confirmed that perceived firm innovativeness positively mediates the relationship between a firm's innovative offerings and attitude. Considering generative AI's newness, organizations that deploy generative AI to create content may be perceived as innovative. Accordingly, AIgenerated content may influence perceived firm innovativeness, and perceived firm innovativeness affects customer engagement. All in all, we may test these three potential mediating effects by proposing the RQ of: Do (1) trust, (2) eeriness and (3) perceived firm innovativeness mediate the relationship between AI-generated content and customer engagement?

Overarching theme	Specific topic	Research questions	Editorial
The use of generative AI for content creation	Content creation tasks performed by generative AI and human labor Prompt generation and output modification	What tasks are undertaken by generative AI, humans, or a combination of both in content creation? How can marketers design effective prompts for different content marketing purposes? How do marketers interpret and assess the appropriateness of AI-generated content	1819
	Firm sizes and their application of generative AI for content creation	for their content marketing? To what extent and how do marketers modify AI-generated content? How can SMEs use generative AI to complement their sparse resources in content creation?	
	for content creation	How does generative-AI-assisted content creation differ in large companies and SMEs?	
AI-generated content on social media and search engines	Social media	In which social media platform does generative AI bring the most benefits when used for content marketing?	
	Search engines	What are the implications of AI-generated content on search engine optimization?	
Relationships between AI- generated content and customer engagement	Direct effects	Do AI-generated content types of informational, emotional and transactional affect customer engagement?	
	Moderating variables	Do (1) product types (low versus high involvement; and hedonic versus utilitarian), (2) customers' age, (3) customers' value toward authenticity and (4) consumer innovativeness moderate the relationship between AI-generated content and customer engagement?	Table 1.
	Mediating variables	Do (1) trust, (2) eeriness and (3) perceived firm innovativeness mediate the relationship between AI-generated content and customer engagement?	Directions for future research on generative AI for content marketing

3. Conclusion

Google, Microsoft and other influential technology companies are investing massively in generative AI (Leswing, 2022). Such investment is likely to promote both adoption and competition over this novel technology. As a result, providers and varieties of digital content (e.g. texts, pictures, videos, and audio) of generative AI will grow in number and quality. As we live in "the era of content"—where content is king and content is everywhere—we predict that the usage of generative AI for content marketing is both inevitable as it is transformative. The research agenda formulated in this article responds to the urgent theoretical, managerial and societal needs to investigate the opportunities and drawbacks of deploying generative AI for content marketing (see the summary of the future research directions in Table 1).

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