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aiWOM: Artificial Intelligence Word-of-Mouth. Conceptualizing Consumer-to-AI Communication

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ABSTRACT

The advent of innovative technologies with installed artificial intelligence (AI) has raised the need to understand evolutive consumers' behaviours. The dyadic communicative experience between consumers and technological artifacts with programmed social humanoid features shed the light on the emergence of an adaptative form of word-of-mouth (WOM) and that we label as "AI word-of-mouth" (aiWOM). We argue that there is a need for defining and investigating aiWOM as an emerging phenomenon which derive but diverge from WOM. Our conceptualization suggests that the communication interaction between consumers and AI technologies produce new consumers' behaviors and psychological reactions.

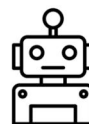
KEYWORDS

Word-of-mouth; consumers; AI, new technologies

1. Introduction



"Hi Astro, could you check out what is in my fridge and order what is missing from my favorite deli accordingly to my diet? Please also book a table for two at the best restaurant in town for tonight and clean the garage."





"Sure. I am just processing all the information and commands and I will do it for you now. Remember also to take the pills and to sign off your annual tax report."

Companies, societies and consumers are marching toward a world where data and artificial intelligence (hereafter AI) will lead future technological developments and boost the ubiquitous presence of technological artifacts with social features (i.e., a machine that combines human-like features with automatic AI-powered functions to socially interact with a human counterpart) in our homes, vehicles, workplaces, and consumption domains. These new technologies cannot only physically perform tasks (e.g., moving objects and cleaning spaces) on consumers' behalf; they can be programmed to establish a relationship, keep company, and mimic human behaviors through the employment of oral and acoustic tools such as speakers and microphones. AI is a broad term that includes the development of advanced technological techniques for the articulate elaboration of massive amount of consumption data which in turn can provide new consumer's experiences (Vaid et al., 2023).

Similarly, companies and software houses are devising functions that can be delivered by technologies in consumption settings, while marketing departments are striving to understand the implications of these new consumer experiences.

Consumers reap several benefits from these new technologies, such as the collection of better information, the improvement of customer services, and the facilitation of more diverse shopping behaviors (e.g., oral requests from a remote location). The ultimate goal of these technologies is to offer a vocal interaction, in the form of a dialogue, that extends the utility of text chatbots (computer applications that stimulate text conversations with consumers on limited topics) to consumers' daily lives and that are not just limited to merely digital environments such as the metaverse (Mladenović et al., 2024). Through vocal interactions and commands, these technologies are already helping people

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search for products, receive suggestions, make purchases, and leave reviews (Chattaraman et al., 2019).

Further, because of their modular nature, these technologies can receive expanded functionality and be installed in numerous devices. For instance, AI can be paired with built-in software (e.g., Siri on Apple's smart phones, OpenAI GPT, Google Home and Amazon Echo with Alexa), localization technologies (e.g., TOMTOM with voice installed) and humanoids that offers sophisticated vocal assistances (Meyer-Waarden & Cloarec, 2022; Mende et al., 2019; Novak & Hoffman, 2018; Schuetzler et al., 2019). Technological progress is making voice assistants increasingly interactive. This allows them to act as proactive helpers that can engage in two-way conversations. Popular applications today include IBM Watson Assistant, Amazon Lex and Google Dialogflow. By processing and understanding natural language, AI can now hold humanlike conversations, recognize users' needs and recommend personalized actions, solve common problems and even facilitate purchases.

Indeed, these technologies are "emerging as a mainstream interaction approach that now allows even the most inexperienced and technology-shy user the ability to talk with and control devices" (Robinson et al., 2018, p. 1). In short, these innovative technologies equipped with AI and that are programmed to have conversations, can provide "social experiences" to most consumers and will no longer just be a niche among technology advocates or perceived as advanced vocal search on the Internet. What is more, AI has the technological infrastructure (i.e., data storage centre) and the technique (i.e., deep and machine learning) to select, generate, and transmit information to further and third devices into a network of interconnected agents. In this view, the production of aiWOM could be the effect of massive data storage and dissemination into this network that interact with consumers in a linguistic and verbal form. aiWOM has the same features of WOM since it is adaptive of the contexts and being the result of accumulative data in a dynamic and meaningful perspective featured by increasing level of intelligence and consumption knowledge.

While the utility and popularity of AI technologies are increasingly evident, the literature has not yet deeply investigated the motives and effects that drive consumers to engage in oral conversations with these new tools. The consumer behavior literature is undertaking significant efforts to analyze and investigate the active role that AI technologies play in consumers' experiences but has neglected the dialogue dimension between consumers and these new technologies so far. This represents an important interactive phenomenon that will be increasingly relevant in the next upcoming years and with consequences on societal and consumption side. Specifically, our research aims to answer the following research questions: *Are conversations between consumers and AI-equipped technologies comparable to traditional consumer-to-consumer discussions? If so, how should they be defined, understood, studied and analyzed? How can the frequency of conversation types be predicted? What types of conversations are more common and what linguistic form might they take? When do consumers choose to engage in conversations with*

AI technologies? How can conversations with AI influence consumers? These research questions are relevant for both academicians and practitioners because aim to address the growing presence of vocal-enabled technologies, the consumers' vocal interactions with them and the effects that these interactions have on consumers' decision-making process.

Thus, the purpose of this research is to envision (MacInnis, 2011) a new form of word-of-mouth (hereafter, WOM), so far unseen, deemed observable and that captures the interactive relationship between consumers and AI embedded technologies providing reflective and operational elements which in turn defines a conceptual framework. As new technologies evolve will the meaning of WOM too. Building on those ideas, we introduce the concept of "AI word-of-mouth" (hereafter, aiWOM) and define it as *real-time oral conversations between a consumer and a technology equipped with AI and oral communication gadgets that can perform tasks on consumers' behalf, have an oral exchange, and influence consumers' decision-making process and emotions*. Therefore, aiWOM is an outgrowth of consumers' growing interactions with anthropomorphized software that is programmed to engage in conversations (Sciuto et al., 2018), spurred by consumers' increasing reliance on AIs' real-time suggestions and comments (Kaplan & Haenlein, 2019) and considering the human capacity in empathizing with non-human entities (Lammer et al., 2014). Here, we present and position aiWOM as a new, distinctive, and relevant research construct that emerges in a new parasocial environment (i.e., an illusionary human-to-human interaction framework; Whang & Im, 2021). In this ecosystem, consumers convey information, make decisions, finalize purchases, and adapt their behaviors and attitudes through communicational interactions with AI technologies. A better understanding of aiWOM can deepen our knowledge of how consumers make decisions (Frambach et al., 2007; Hoyer et al., 2020), can help to scrutinize consumers' interactive experiences (Dang & Liu, 2022; De Matos & Rossi, 2008; Hennig-Thurau et al., 2015; Hollebeek & Macky, 2019; Rosario, De Valck & Sotgiu., 2020) and can illuminate ways for companies and organizations to improve their recommendation systems, customer relationship management processes and digital marketing in general (Gupta et al., 2020; Libai et al., 2020; Vlačić et al., 2021). Our research tackles this issue by conceiving aiWOM as a latest version of the classic WOM, which refers to the flow of communications among consumers about products or services (Westbrook, 1987). Note that classic WOM differs from electronic WOM (hereafter, eWOM; Hennig-Thurau et al., 2004) or social WOM (hereafter sWOM; Eisingerich et al., 2015; see Table 1 for key definitions and differences).

The aiWOM concept also extends beyond the vision of "word-of-machine", defined as "the phenomenon by which hedonic/utilitarian attribute trade-offs determine preference for, or resistance to AI-based recommendations compared with traditional word-of-mouth, or human based recommendations" (Longoni & Cian, 2020, p. 2) more simply, word-of-machine reflects whether consumers prefer

Table 1. Definitions and key differences between forms of WOM.

	Definitions	Key elements
WOM	An “informal communications directed at other consumers about the ownership, usage, or characteristics of particular goods and services or their sellers” (Westbrook, 1987, p. 261).	Oral communication among consumers in physical settings.
eWOM	“Any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet.” (Hennig-Thurau et al., 2004, p. 39).	Written and oral communication among humans in online settings mediated by devices or digital applications.
sWOM	A “written and broadcast, one-to-many, to an individual’s social network” (Eisingerich et al., 2015, p. 121).	Written communication among consumers within the social media ecosystem.
aiWOM	A “real-time oral conversations between a consumer and a technology equipped with AI and oral communication gadgets that can perform tasks on behalf of the consumer, have an oral exchange, and influence consumers’ decision-making process and emotions”.	Oral communication among consumers and technologies in a parasocial environment with comments arising from AI elaboration.

recommendations from an AI more than traditional sources. Indeed, we intend to expand what Melzner et al. (2023) suggesting the effect of consumers’ verbal (i.e., information voluntarily disclosed through language) and non-verbal (i.e., information unintentionally revealed) disclosure while interact with voice technology and how this could increase or decrease. What is more, previous WOM studies in marketing, consumer behavior and psychology have long examined the issues of why people engage in WOM and, more specifically, what drives people to share certain types of content with others (see Berger, 2014 for a review). Primarily, these studies have identified the psychological motives behind consumers’ decisions to share information with other people, either face-to-face (e.g., De Angelis et al., 2012; Dubois et al., 2016) or through the Internet (e.g., Berger & Milkman, 2012; Hennig-Thurau et al., 2004; Jo, 2023; Tapanainen et al., 2021). However, despite the increasing interest in understanding the interaction dynamics between consumers and smart speakers (Verhoef et al., 2017; Longoni & Cian, 2020), we are not aware of any studies that have explored the WOM conversations between consumers and technologies with AI embedded.

We present a framework through which we conceptualize that aiWOM differs from WOM, eWOM and sWOM based on the originality of this phenomenon (see Figure 1). Further, we aim to investigate aiWOM as a phenomenon that connect consumers and new technologies through the employment of communicational exchange and the adoption of new consumer behaviors. We are aware that an increasing number of studies have examined the consumer-AI relationship from different analytical angles (see Hermann, 2021; Luo et al., 2021; Puntoni et al., 2021; Tassiello et al., 2021); however, to our knowledge, the field still lacks a clear understanding about the communicational exchange as it relates to WOM. Our reflections on aiWOM should be considered a starting point for a new research domain focused on the nature of conversations between consumers and new technologies in the era of AI, built on the encompassing voice anthropomorphism (Moriuchi, 2021). We close with suggestions for new explorative research venues and professional applications.

2. WOM: An evolutionary phenomenon

For many years, marketing scholars and practitioners have shown great interest in understanding the dynamics that

underpin peer-to-peer communications. Early research defined WOM as a form of *interpersonal* communication among consumers concerning their first-hand experiences with a firm or product (Richins, 1983). Studies have identified the main components of WOM communications (see, e.g., Berger, 2014) as: (i) the source of the communication; (ii) the content of the communication; (iii) the recipient of the communication; (iv) the medium through which the communication is shared and (v) the attitudinal and behavioral consequences of the communication. Additionally, previous research has identified the psychological motives that may lead people to share their consumption experiences. Berger (2011), for instance, demonstrated that physiological phenomena, such as jogging, induce consumers to share WOM due to the arousal of the automatic nervous system. Post-consumption emotional feelings and consumers’ desire to share experiences with a strong emotional involvement can also promote WOM engagement (Anderson, 1998; Rimé, 2009; Wetzer et al., 2007). Even motives related to socio-psychological dimensions play a crucial role in driving WOM. Indeed, consumers engage in WOM to fulfil their need for self-enhancement (De Angelis et al., 2012; Dubois et al., 2016), as well as their need to exert control over other people (Peluso et al., 2017) or the surrounding physical environment (Consiglio et al., 2018). Consumers also participate in WOM for functional reasons, such as acquiring information to perform a task or sharing information they believe that other people would find useful (Baumeister et al., 2004; Sundaram et al., 1998; Tost et al., 2012).

With the advent of the Internet, scholars have conceptualized and grown increasingly interested in eWOM. Studies on eWOM aim to understand communicational exchanges among peers that are mediated and facilitated by *technological devices* such as laptops, web platforms and mobiles (see King et al., 2014 for a literature review on eWOM; Babić Rosario et al., 2016; Chu, Lien, & Chao, 2019; Eelen et al., 2017; Lu et al., 2020). The seminal work by Hennig-Thurau et al. (2004) provided a useful framework for understanding consumers’ motives behind eWOM. In particular, they identified the following five categories of eWOM motives that predict one’s involvement in Internet-mediated conversations: (i) focus-related utility (i.e., the willingness to support and help both other consumers and companies); (ii) consumption utility (i.e., the need to obtain direct consumption advice and suggestions from others

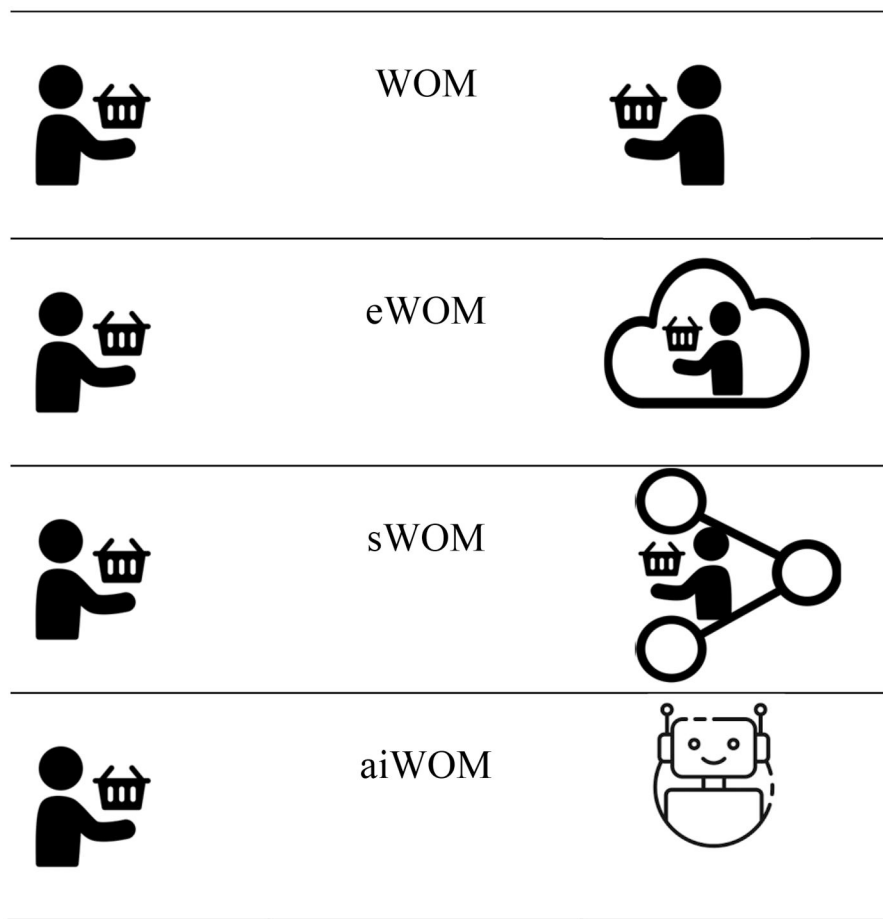


Figure 1. Graphic representation of WOMs' forms.

consumers); (iii) approval utility (i.e., the need to receive social and economic rewards); (iv) moderator-related approval (i.e., the desire to be a valuable mediator in conversations between other consumers and the company); (v) homeostasis utility (i.e., consumers' desire to balance their positive or negative experiences by expressing positive or venting negative emotions).

Importantly, eWOM differs from traditional WOM in a number of ways. First, eWOM messages typically have a much broader reach than traditional WOM messages (Godes & Mayzlin, 2004). Moreover, while traditional WOM involves social interactions among individuals who often use peer-to-peer communication to reveal their identities, eWOM involves interactions among individuals who are more often driven by their desire to regulate consumption-related emotions or to help others make good decisions (Dubois et al., 2016). Another key difference between WOM and eWOM involves the modality through which communications occur: WOM occurring offline is typically oral, while eWOM is typically written. As noted by Berger (2014), such a difference in modality implies a significant difference in the synchronicity of conversations: Oral conversations are contemporaneous while written conversations are often asynchronous, as eWOM message recipients might respond minutes, hours, or even days later. Consequently, unless oral WOM messages are recorded, they are inherently more

fleeting than eWOM messages, which can theoretically persist indefinitely.

The proliferation of social networking platforms has spurred an evolution of WOM research known as sWOM (Eisingerich et al., 2015): a form of exchange among many acquaintances with different degrees of social ties (e.g., strong vs. weak) that have agreed to belong to an inner circle (Okazaki, 2008). Scholars have investigated sWOM by focusing on the consequences of posts that individuals share on social network pages, in which they offer comments about products, brands and companies (Boerman et al., 2017; Hennig-Thurau et al., 2010; Kim et al., 2014). Along with the traditional way of sharing messages on social networks, consumers can enhance their exchanges through new tools such as short stories, time-limited messages, and videos. Snapchat, Instagram Stories and TikTok, for instance, offer a new space where consumers can use audio-visual technologies to share their experiences in an often-unrestrained manner (Chen & Yuan, 2020; Hofstetter et al., 2017).

The *evolutionary* pattern from WOM to eWOM and sWOM suggests that innovative tools and technologies create new means by which consumers can share their views on products and brands—and by extension, they challenge scholars to rethink the nature of peer-to-peer conversations. In other words, the evolution of the WOM phenomenon speaks to its adaptive nature as a social occurrence. The chameleon-

like nature of WOM allows it to expand into new settings where consumers need to exchange and receive information about various forms of consumption. The same may be true of consumer-AI interactions, which appear to be enabling new consumer behavioral paradigms. For example, Longoni and Cian (2020) found that the presence of oral interactions between consumers and AI-based recommendation systems trigger psychological trade-offs that determine consumers' preferences or resistances. Meanwhile, Tassiello et al. (2021) found that consumers purchase more low-involvement products when a vocal assistant mediates the conversation.

By introducing the concept of aiWOM, we conceptualize the next step in the WOM evolutionary trajectory by integrating exponential improvements in the fields of technology, markets, and consumers. We argue that aiWOM happens between consumers and AI technologies when the latter are supplied with both *technological* and *intelligent* improvements. What sets aiWOM apart from other forms of WOM is the fact that it relies on the generative power of AI technologies. Unlike traditional WOM, which is about consumer-to-consumer exchanges, aiWOM goes beyond the concept of mere agent commands as used in the first generation of conversational agents. It expands the definition of WOM by demonstrating that a single human consumer can interact with AI software that mimics consumer behavior and creates new experience.

The conceptualization of aiWOM represents a new intellectual challenge for scholars and practitioners in terms of understanding the boundary conditions and ethical limits of such communicational exchanges. Indeed, the technological advantages may be driving consumers to act in ways that benefit companies and organizations, but they may also compel consumers to adopt malevolent actions in consumption settings.

Next, we explain the conceptual nature of aiWOM and its main conditions.

3. Defining aiWOM

aiWOM originates from evolutions in AI and machine learning, which allow consumers to engage in conversations with technological tools that embed AI. These tools are technologically empowered to manage and process a huge amount of information thanks to frequent data software updating. Conversations with AI represent more than just an advanced form of search engine or online review; instead, these conversations are the result of personalized advice arising from AI technologies, machine learning processes, consumers' delegation of tasks and the technological elaboration of data (Puntoni et al., 2021).

aiWOM is a unique phenomenon occurring in a parasocial (i.e., hybrid) context where consumers associate an illusionary quasi-human social role with the technologies. aiWOM conversations are synchronous and are generated when there is an explicit request from the consumer or when there is a contextual cue that enables implicit generation. aiWOM is therefore a real-time conversation in which consumers receive vocal support when it is needed. That is, aiWOM reflects consumers'

mental capacity to associate humanlike features with technologies (due to their anthropomorphic nature) and accept them socially. For instance, Schweitzer et al. (2019) found that consumers confer emotional qualities to robots and then consumers share with them their sense of enjoyment and affection.

Inevitably, the increasing number of interactions that consumers establish with technologies will influence what consumers' share, consumers' decision-making process, psychological configurations, and experiences in ways that are novel relative to other forms of WOM. The presence of advanced gadgets such as microphones, speakers and AI in technological devices and tools will place consumers in an incomparable condition. Indeed, these technologies can detect and process many of consumers' paralinguistic sounds (e.g., timbre, intonation, breaths): For instance, they may recognize a pathology based on a cough and suggest the most appropriate therapy or convince the consumer to book an appointment with the medical doctor. This is a particular advantage of aiWOM, as most other people would be unable to take such actions due to their limited knowledge and skills. The ultimate goal of aiWOM is to create conversations that significantly improve the customer experience. By leveraging in-depth customer knowledge, aiWOM can deliver personalized recommendations and insights about products, services and brands that lead consumers to better decisions.

3.1. Originality of aiWOM

aiWOM features several original and unique elements that distinguish it from WOM, eWOM and sWOM. aiWOM conversations happen between two actors that belong to different spheres: the human consumer and the technological machines that are equipped with and supported by AI. Consumers may develop a sense of personification (i.e., anthropomorphization) with aiWOM technology, even though they're aware that it's an automated system that processes natural language.

3.1.1. Sharing modes

aiWOM suggests that technologies can be queried in diverse ways. Spoken messages are the main source of inputting requests, allowing consumers to interact with technologies hands-free. However, these are equipped with several technologies that allow them to multi-task and overcome different communication barriers. For instance, consumers can communicate with the AI technologies such as typing or hand-writing messages, leaving signs, and sharing pre-recorded videos. Further, consumers can input (even remotely) a message file directly into the device, which the AI technology can then utilize to take actions.

3.1.2. The sender-receiver dichotomy

Like with other forms of WOM, both actors can function as either the sender or the receiver of the conversation. To illustrate, AI technologies may ask consumers if they are interested in booking a table to their favorite restaurant for the upcoming weekend; vice-versa, consumers can ask the

AI technology to purposely take the same action. Depending on the role that the interlocutors assume in the conversation (sender vs. receiver), both consumers and AI technologies will react differently. As the sender, AI technologies will proactively utilize information collected from their human counterpart to eventually impose commands on other AI or smart technologies in line with the user's requests. On the contrary, if consumers are the sender, then they will focus their message topics on product/service queries or forms of entertainment. Further, consumers have the capability to select purposely what to orally share and what to avoid sharing with the AI technology: To illustrate consumers' privacy concerns could be higher and decrease the intention to share with AI equipped technologies (Melzner et al., 2023). Acting as the receiver is a different condition. As receivers, AI technologies can provide short and definitive responses, and as they evolve, will be able to apply complex deductive and inductive reasoning. Meanwhile, consumers who are receivers have the cognitive and emotional ability to understand and elaborate the feedback received from the AI technology and then behave according to their own desires.

3.1.3. The environment

Another original element of aiWOM is the "environment" where conversations happen. In WOM, eWOM and sWOM, consumers traditionally interact with other consumers in both physical context or mediated by digital devices and web platforms in either synchronous or asynchronous way. aiWOM, by contrast, involves an exchange in a synchronous and hybrid setting, where the conversation is initiated in the physical domain, but resolved digitally by an external provider. As a result, aiWOM conversations are quicker due to less time spent on taking communication turns or reflecting on what was said. aiWOM shows similarity with eWOM and sWOM, given the limited circulation of oral exchanges within web platforms that are often controlled by the producer (e.g., Astro interacts within the Amazon ecosystem). However, whereas eWOM and sWOM often involve a one-to-many and written type of conversation, aiWOM aligns with classic WOM with a perceived oral one-to-one conversation (we do not exclude that limited manual conversation can happen between consumer and AI technology). Along with the view consumers-AI form of conversation, aiWOM is also characterized by the dissemination of consumption information amongst others networked AI devices.

3.1.4. Emotions and cognitions

This binary relationship between the consumer and AI activates unique emotional and cognitive processes. Thus, a core emotional condition of aiWOM is empathy in communication (Pelau et al., 2021). Empathy is understood as a human capacity to take the perspective of the others and adapt one's behaviors, emotions and reactions in turn. In the realm of aiWOM, empathy is mono-directional: The human participant can develop "empathy" for the AI technologies, but the latter can only mimic or artificially depict empathy. This asymmetry in empathy arousal may shape what consumers

are willing to share in their conversations with AI technologies. It is not surprising that despite the AI technology does not care if you yell at it angrily, people treat them as if it has "feelings" that can be "hurt" (Stein & Ohler, 2017). What is more, AI technologies support positive emotions by beginning conversations, suggesting social media posts about positive moods and states, and encouraging pleasurable purchases and consumption activities. AI technologies will be able to rehearse and relive consumers' emotional experiences, recalling and talking about past consumption actions such as a previous vacation or fine meals, thereby activating a temporal psychological condition in consumers. Further, AI technologies will engage in entertaining conversations with consumers, be supportive of those who need care (e.g., reminders about medical therapies and diet regimes), or help consumers grapple with a negative emotional state or cognitive dissonance after a complex purchase.

With WOM, eWOM and sWOM, the communication exchanges involve consumers who possess a direct or indirect consumption experience that they decide to share with others. In the case of aiWOM, AI technologies lack explicit consumption experiences, but they can share indirect ones because of algorithms and AI outputs¹. Powered by AI and machine learning, aiWOM presents a unique opportunity to share consumers' tailored responses. AI technologies use updated algorithms to furnish product recommendations based on consumers' past preferences, attitudes, and choices, which are constantly matched against external market trends and then elaborated to forecast consumers' potential future needs. Unquestionably, AI technologies convey extremely amenable messages, which increases consumers' perception of the received message's relevance. This contrasts with other forms of WOM, where comments, feedback and recommendations can stem from other interlocutors' speculative reasoning or biased reasoning, and potentially leading the receiver to question the sender's quality (Rosario et al., 2020) and deem the information less relevant.

Another unique feature of aiWOM is the stagnancy of exchanges. Obviously, AI technologies do not have true emotional states and lack most human communication tools, such as body language, facial expression, and eye gaze (although some of this can be mechanically replicated). This *cold* emotional condition can affect consumers' mental configuration. Consumers may express some bias in interpreting aiWOM: They might be more likely to accept AI suggestions for topics that do not require emotional intelligence or inclined to share more impulsive, less reflective thoughts.

Given the multifaceted ways of addressing messages (oral, typed, etc.), aiWOM impact consumers' mental elaboration of information and decision-making processes. We already know, for instance, that consumers perform different cognitive elaborations of information when they communicate it verbally vs. digitally or in writing (Berger & Iyengar, 2013). Additionally, consumers will continue to deliver their messages in varied tones based on their dissimilar needs and contextual environment. The combination of these factors could trigger new consumer experiences. The Figure 2 below

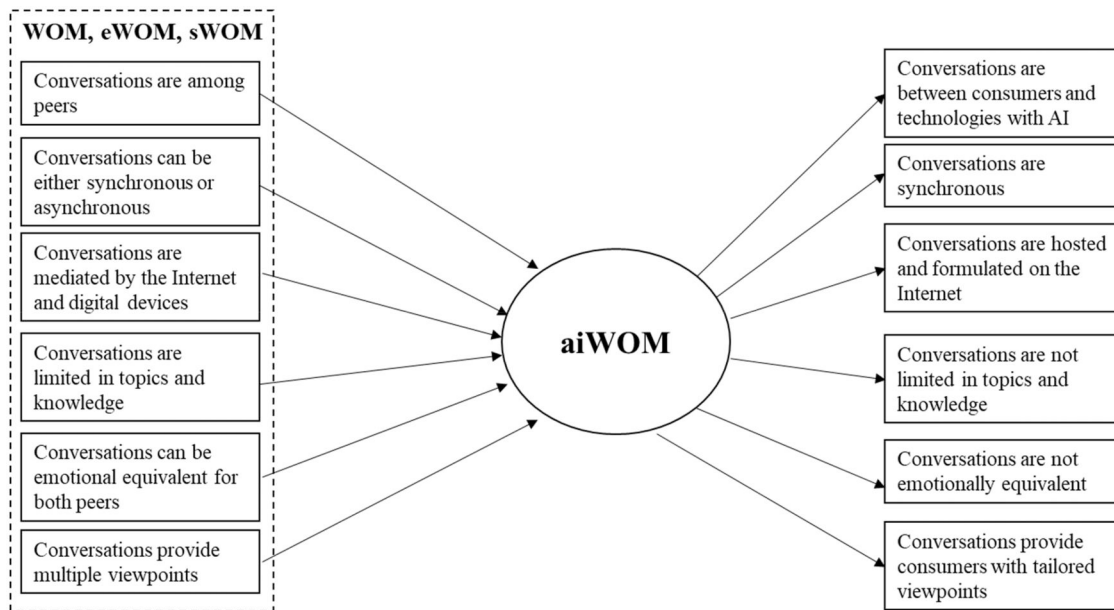


Figure 2. aiWOM Development and its peculiarities.

illustrates the overlapping and diverging qualities of aiWOM relative to other forms of WOM.

3.2. Conversational areas of aiWOM

Beyond the role that interlocutors take during an exchange, conversational areas (i.e., topics) are another key condition of aiWOM. AI technologies are advanced and complex machineries programmed to cover a multitude of topics simultaneously. Human beings cannot replicate this condition due to their limited cognitive capacities for processing and storing information.

3.2.1. Complex conversations

Aside from furnishing short and simple responses to consumers' queries, AI technologies can also provide elaborated answers and forecasts that might enhance consumers' decision-making process in complicated domains. For instance, imagine a consumer who must decide on an interest rate before buying a property. The AI can provide forecasts, make fast calculations in real time, and illuminate how assorted options will directly impact the consumer's future finances. This suggests that thanks to their programmed nature, AI technologies can accurately cover vast topics, and help consumers navigate on more complicated issues or where the consumers' decision-making process can face complex phases.

3.2.2. Personal and salient conversations

Along with important and consumers' relevant conditions, aiWOM engagement can also have an entertaining purpose. Driven by a lower level of inhibition, consumers ask the AI for funny topics or conversations about issues that could be perceived as controversial or taboo within a human and social community. One interesting example comes from a software

house that produced a digital AI robot, Replika, that is programmed to "care" for consumers and discuss intimate topics. This digital robot invites consumers to share thoughts, feelings, experiences and dreams. Replika promises to avoid judgments, help consumers better manage their emotional status, and act as a "real" friend. Replika has even been installed in sex dolls so that consumers can replicate an intimate relationship. A particularly important and practical condition related to aiWOM and conversational areas is represented by the perceived salience of said topics in consumers' minds and behavior. Scholars agree that consumers select conversation topics where they have higher personal interest. This condition is relevant to aiWOM: Specifically, consumers decide to engage in aiWOM when they are less with familiar or invested in the topic but avoid aiWOM when they are an expert on the topic or perceive it as important. In line with this, Leung et al. (2018) found that consumers are more likely to rely on automatic suggestions when the topic requires a higher technological expertise, but less likely to ask how to manage an emotional conflict with a partner.

3.3. aiWOM and new consumers' behaviors

aiWOM represents a novel communicational paradigm that can galvanize new consumers behaviors and facilitate better multitasking. This fact has several implications. *Consumers' decision-making process.* aiWOM may transform the classical version of consumers' decision-making process—whereby consumers are seen as isolated entities embedded in socio-psychological processes. AIs' ability to provide information in real-time allows consumers to accelerate, skip or lessen certain actions, which could redefine the entire decision-making journey. For example, the AI technology can handle the initial search phase while leaving the final purchase decision (i.e., output) to the consumer or vice versa. Similarly, consumers may change their behavior in response to the AI's information or predictions, facilitated by the ability to

interact with the AI technology in multiple dimensions (e.g., writing, typing, speaking). Lastly, the presence of AI technologies can provoke different emotional states during the decision-making process, ranging from positive (e.g., happiness) to negative (e.g., frustration).

3.3.1. *aiWOM and ethics*

The relationship between aiWOM and ethical considerations is of paramount importance. A key concern is how aiWOM uses voice commands for tasks that are traditionally done visually (reading concepts or terms) or by touch (accepting concepts or terms). This shift from sight and touch to voice interaction can have ethical and privacy implications. On the one hand, voice interfaces can rationalize tasks and speed up decisions. On the other hand, the ease of use may make consumers more likely to accept unfavorable conditions due to the lower cognitive effort required during voice interaction (Park et al., 2021). Bias can come from both consumers and programmers. Consumers who use voice interactions may rely on mental shortcuts, leading to errors in evaluating conditions. Programmers risk AI systems being biased and limiting the options offered to consumers. Transparency is critical in this context. Opaque aiWOM responses, where the reasons for recommendations are unclear, raise ethical concerns. Special consideration must be given to vulnerable consumers, as defined by Hermann et al. (2023). These consumers may be discriminated against or excluded from the market. aiWOM should be designed to ensure that they have access to products and services that meet their needs and goals.

3.3.2. *Consumers' motivations*

The social presence of AI technologies serves to define new and unique motivations for consumer behavior. For instance, consumers can employ AI technologies to find a partner for a sporting match or an evening dinner—actions they could not have taken before. As a result, consumers are encouraged to adopt aiWOM in place of other well-established behaviors. This aligns with Puntoni et al.'s (2021) suggestion that the “context” (i.e., where interactions happen) is a fundamental condition between new overlooked behaviors and new consumer experiences. aiWOM might tempt consumers to experience different consumption activities or induce them to reflect on items' actual and future usage (leading them, e.g., to either forgo or acquire a given product). In the same vein, aiWOM allows consumers to multi-task actions and make more efficient decisions, thanks to the AI's ability to receive several messages at once and perform all requests simultaneously. aiWOM impact consumers' psychology and how they process information. For instance, the activation of systematic versus heuristic mental processes induces consumers to delegate (or not) specific actions and dedicate cognitive resources to alternative mental processes and behaviors. It is likely that consumers trigger heuristic processes for systematic operations (e.g., making a calculation) or trigger for systematic processes for operation that request heuristic ones such as the arousal of emotions.

Finally, aiWOM plays a role in consumers' attitudes (i.e., enduring evaluations on people, objects and ideas) about AIs' persuasive capacity. Since AI and machine learning technologies accumulate knowledge about a given consumer and design responses accordingly, aiWOM reinforces consumers' attitudes simply due to this reiteration of their previous stances. For the same reason, however, aiWOM is capable of changing their attitudes due to the situational context. aiWOM can seem extremely authoritative in conversational areas that are distant from consumers' knowledge, but less so in those conditions that involve emotional or personally relevant decisions.

Beyond affecting consumers' attitudes, aiWOM influences how consumers think about and make predictions. AI technologies can advise consumers about the perceived utility of a consumption action by extrapolating predictions from prior information. Moreover, they can help consumers avoid errors in prediction under uncertain conditions (e.g., assembling furniture) that would otherwise impact consumers' perceived satisfaction. Further, aiWOM can help consumers with planning activities, organizing future behaviors, and avoiding actions that can undermine the consumers' status quo.

4. *aiWOM and future research*

aiWOM represents a novel opportunity to explore several outputs that stem from this new research domain, such as the concept's direct influence on: (i) consumers' decision-making process; (ii) consumers' psychology, (iii) new consumer experiences and (iv) consumer-AI relationships (see Table 2).

Exchanges with AI technologies have a direct influence on consumers' decision-making process, encouraging or restraining consumers to act in a given way. For instance, new investigations are needed to understand the phases of the decision-making process considering aiWOM (Grewal et al., 2003)—specifically, the early phase where consumers form impressions and the later phases where consumers make post-purchase evaluations. In the early phase, aiWOM galvanize a new form of search and comparison, as AI technologies have a greater capacity to suggest alternative and substitute products, services and brands. Meanwhile, in the post-purchase phase, consumers can review products more quickly due to the use of voice. In this vein, the field needs to understand the specific circumstances in which AI technologies can persuade consumers and modify their behaviors. Certain contextual conditions will interact with consumers' cognition to affect their decision-making.

Secondly, scholars should investigate the psychological mechanisms that underlie the aiWOM between consumers and AI technologies. Initial evidence suggests that AI technologies incline consumers to adopt different psychological mindsets, which could promote alternative behaviors or create psychological barriers that curb purchases actions (Leung et al., 2018; Melzner et al., 2023). Thus, there may be value in investigating consumers' persuadability—such as whether AI technologies can nudge consumers to adopt pro-social

Table 2. aiWOM: Emerging research questions (RQs).

A: aiWOM and consumers' decision-making process
RQA1: How does aiWOM influence consumers' decision-making process and in which phases?
RQA2: What are the reasons that motivate consumers to adopt aiWOM for consumption activities?
RQA3: How does the frequency of aiWOM influence consumers' decision-making process?
RQA4: How does the contextual (e.g., physical context) where aiWOM happens influence consumers' decision-making process?
B: aiWOM and consumers' psychology
RQB1: How does aiWOM activate different consumers' psychological paradigms?
RQB2: How does aiWOM become more persuasive during consumption activities?
RQB3: Does aiWOM nudge consumers toward more pro-social behaviors, positive habits, and new attitudes?
RQB4: Does aiWOM activate consumers' empathy toward AI?
RQB5: Does aiWOM bias consumers' responses?
RQB6: Does the presence of AI decrease the intention to talk regarding specific topics?
C: aiWOM and consumers' experiences
RQC1: How does aiWOM increase the intention to delegate in favor of AI technologies?
RQC2: How does the lack of visual images during aiWOM influence consumers?
RQC3: How does the adoption of aiWOM vary across different cultural and social contexts?
RQC4: How do power dynamics between consumers and AI technologies influence consumer experience?
RQC5: How does aiWOM curb the intention to embrace AI in consumption activities?
D: aiWOM and the consumer-AI relationship
RQD1: How does physical closeness during aiWOM influence consumers?
RQD2: When is aiWOM recognized as peer vs. non-peer feedback?
RQD3: When does aiWOM threaten consumers' privacy?
RQD4: How do emotions play into shaping consumers' responses to aiWOM?

behaviors, positive habits, and new attitudes. Additionally, scholars may explore how the presence and mediation of AI technologies influence consumption activities—for instance, whether the perceived social presence of AI technologies fosters empathetic feelings or curbs emotional engagement for those online purchases that, for example, arouse negative feelings. It is equally important to uncover theoretical justifications for the psychological processes that activate when consumers interact with AI. It is relevant to understand that oral exchanges can limited the psychological reconfiguration of consumption experiences due to the main presence of acoustic cues. aiWOM might trigger distinct types of mental construal (high vs. low) that then impact the type of consumption activities that people select. Likewise, AI technologies activate new decision heuristics that lead to new forms of cognitive bias. On the opposite, this relationship might increase consumers' level of attention and systematic processing of information.

Thirdly, scholars could research new consumer experiences. For instance, in cases involving complex comparative analysis (e.g., the evaluation of a new property or financial assets), consumers may be more inclined to delegate tasks to the AI. It would also be interesting to scrutinize the effects of a single AI interacting with two or more consumers simultaneously, to see whether the suggestions change based on the number of recipients. Moreover, one could explore whether the contextual positioning of AI technology (e.g., private vs. public) can lead consumers to adopt different behavior or make different decisions. Likewise, how does the adoption of aiWOM vary across different social and cultural contexts, and how might this shape consumer experience with brands and services?

There is also an open question about what role AI technologies will assume in our daily activities; whether they become a servant or a partner (Davenport et al., 2019) will have direct effects on how information is conveyed. To what

extent do consumers feel agency in their interactions with AI-driven recommendations, and how does this shape their perception of autonomy and control? Additionally, scholars could explore how consumers' decisional process will be impacted by the lack of visual images in aiWOM (such as when consumers review products online) and how companies can respond. More broadly, research may investigate the boundary conditions of aiWOM—whether psychological, socio-psychological, and contextual conditions curb the willingness to embrace AI.

Fourthly, the consumers-AI relationship will be a relevant area for understanding aiWOM. The perceived social closeness of AI technologies and their ubiquity in a parasocial context will induce consumers to elaborate information differently. This condition will allow consumers to recognize AI technologies as peers, leading consumers to situations where they openly share with these and then use that knowledge to further refine their own programming (Belk, 2013; Novak & Hoffman, 2018). Similarly, there will be conditions where consumers are skeptical about the AI's feedback due to being unable to check the source of the information or the impartiality of the received comment. Of course, consumers are not defenceless; they may develop privacy concerns about the AI's capacity to collect and store personal information that can be utilized for commercial purposes. Privacy concerns are a central element of aiWOM, since they may limit the intention to share and weaken consumers' perceptions of trust toward AI technologies in parasocial environments (Pitardi & Marriott, 2021). In this vein, further investigation should consider aiWOM as a form of intrusiveness in the private consumer sphere, especially when the AI's intervention is not requested (Benlian et al., 2020) or when given consent orally could be different than in written format.

Lastly, in terms of research methods, consumers' oral exchanges with AI technologies will furnish new data such

as vocal tone, colloquial expressions, and natural language processing, which could be systematically analyzed and interpreted through innovative and interdisciplinary marketing approaches (see Berger et al., 2020). As their underlying technology evolves, AI technologies may come to play a proactive role in initiating conversations with consumers, which could open a whole new area of investigation.

The emergence of aiWOM promises to revolutionize our understanding of human-computer interaction. It offers a novel method for analyzing a vast amount of integrated data that includes speech, sounds, languages and even body language. This rich tapestry of information, researchers can identify new patterns and trends in human-machine interaction. These insights will shed light on consumer behavior and the impact of aiWOM on that behavior. In addition, aiWOM can enable researchers to design more targeted experiments. Imagine being able to fine-tune interfaces based on real-time speech analysis. This would lead to a more nuanced understanding of consumer behavior. aiWOM also paves the way for the integration of biometric analysis into research studies. By combining natural language processing with data on heart rate, facial expression and eye gaze, researchers can capture subtle consumer reactions and gain a deeper understanding than traditional methods. The impact of aiWOM goes beyond the traditional framework. It can also help researchers better understand how consumers interact in hybrid or fully virtual reality environments. This will be critical to the study of consumer behavior in an increasingly technological world. In short, aiWOM is a powerful tool for researchers to explore the complexity of human-computer interaction.

4.1. *aiWOM and implications for practitioners*

The new aiWOM paradigm certainly has relevance for practitioners. AI technologies will play an increasing role in consumers' behavior and decision-making process. As consumers modify the way they search for novel items, companies will scramble to be found by AI's algorithms. For example, AI technologies might suggest an item that aligns with consumers' financial possibilities (Mehta et al., 2018), as well as use linguistic and semantic structures to galvanize a purchase. Thus, aiWOM will play an incredibly significant role in future marketing activities.

In the marketing management sphere, AI technologies can be impactful for customer-relationship management and automatic recommendation systems (Libai et al., 2020). In this regard, it would be important to consider what types of messages are shared throughout aiWOM with the main goal to protect data privacy and transparency in the nature of the generative aiWOM and avoid any form of consumers' manipulation. Appropriate and clear messages should be addressed to consumers when interact with the goal to avoid bias messages, risky communications, and private information. For example, aiWOM messages can be programmed with initial statements that suggest how and from which source the message had been generated and why that type of message had been shared with the consumer. It would be

importantly, that these messages consider the consumer contextual situation such as literacy in a given topic of conversation or potential disparities across different groups of consumers. Similarly, one might ask, how can AI systems effectively leverage emotional cues to enhance the credibility in their consumer interactions.

Furthermore, the absence of visual cues in favor of oral experiences will trigger different psychological reactions that shape how companies present their products, services, and brands. For instance, AI technologies may assist in the purchase process by providing consumers with real-time suggestions and guidance. Thanks to their linguistic structures and adaptability, AI technologies will produce recommendations that align better with consumers' preferences and are thus more persuasive (Kaplan & Haenlein, 2019). Services will be affected, too: for example, AI technologies may ask what type of restaurant the consumer wants to visit the following weekend, suggest mains dishes, detect if there is a preferred wine on the list, and eventually book a table. Thanks to their machine learning software, these new technologies can directly elaborate on a vast amount of data to forecast consumers' future behavior and enhance the degree of product and service personalization—developments that could lead to unique business models (see Davenport et al., 2019). Practitioners could develop solutions that guide consumers through purchases with vocal-friendly commands, offer detailed audio descriptions of products and services, and connect consumers in real-time to customer-care departments and businesses. On one hand, AI will inevitably exclude a certain segment of consumers who are less accustomed to smart technologies, which will encourage practitioners to solely focus on those reachable via new technologies. On the other hand, AI technologies will represent an opportunity to close those that are technological reluctant. Finally, aiWOM may shape the physical appearance of technologies by encouraging better imitations of human features.

5. Conclusion

The objective of this paper was to open a dialogue on the evolution of WOM to envision a new research sub-domain (MacInnis, 2011) and fully comprehend how conversations amongst consumers and AI work. To this end, we introduced the concept of aiWOM to capture a real phenomenon whereby consumers incorporate AI technologies into their life and consumption activities. Our conceptualization outlines the conditions and key elements of aiWOM that distinguish it from WOM, eWOM and sWOM. Our rationale is based on the personification of AI technologies, consumers' ecological and social acceptance of them as identified entities, and the growing volume of such interactions as the technologies proliferate. aiWOM represents a new condition whereby one-to-one interactions in a closed system can directly influence consumers' purchases and experiences. To this end, we identified the unique elements of aiWOM that help differentiate and define its boundary conditions and evolution in contrast to other forms of WOM. These

elements include being a multidimensional experience where consumers adopt several forms of synchronous conversation; being able to discuss topics in several fields; and receiving feedback that influences consumers' mental schema in the decision-making process.

The rise of aiWOM suggests that marketers, practitioners, and software developers must consider new ways of positioning and promoting products, services, and brands to align with the inevitable changes to consumers' psychological constructions and behaviors. Thus, companies and organizations may need to rethink the usual touchpoints and redesign the customer journey within and beyond retail.

As AI develops, more technologies will come to possess intellectual capabilities that allow them to be deeply embedded in daily life. These technologies can be installed in our homes, our cars, and even in wearable products. Their influence over consumers' behaviors will be multifaceted in ways that are still unclear. Thus, it is important for scholars to begin exploring the ramifications of aiWOM sooner rather than later.

Note

1. In this conceptualization, we should exclude those actions that can be equated to direct purchases—where AI technologies are programmed to update their software automatically and autonomously purchase spare parts if current parts become damaged or malfunction.

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