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Affordances advancing user-created communication (UCC) in service: interactivity, visibility and anonymity

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Abstract

Purpose – Digital platform users not only consume but also produce communication related to their experiences. Although service research has explored users' motivations to communicate and focused on outcomes such as electronic word-of-mouth (eWOM), it remains largely unexplored how users iteratively interact with communication artifacts and potentially create value for themselves, other users and service providers. The purpose of this paper is, thus, to introduce communicative affordances as a framework to advance user-created communication (UCC) in service.

Design/methodology/approach – Drawing from the literature in communication, service research and interactive marketing, an affordance perspective on UCC in service is introduced.

Findings – Three UCC affordances for the service context are presented – interactivity, visibility and anonymity – opportunities and challenges for service providers associated with these affordances are discussed and, finally, affordance-specific research questions and general recommendations for future research are offered.

Research limitations/implications – By conceptualizing UCC in service from an affordances perspective, this paper moves beyond the traditional sender–receiver communication framework and emphasizes opportunities and challenges for service research and practice.

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Practical implications – Instead of focusing separately on specific technologies or user behaviors, it is recommended that service managers adopt a holistic perspective of user goals and motivations, use experiences and platform design.

Originality/value – By conceptualizing UCC as an augmenting, dialogical process concerning users' experiences, and by introducing communicative affordances as a framework to advance UCC in service, an in-depth understanding of the diverse and ever-evolving landscape of communication in service is offered.

Keywords User-created communication (UCC), Digital platforms, Affordances, Interactivity, Visibility, Anonymity

Paper type Research paper

Introduction

Significant advancements in information and communication technology have led to the proliferation of digital platforms, allowing their users to connect with each other in unprecedented ways, and surrounding them with customer experiences from various sources (Heller *et al.*, 2021; Huh, 2020). For instance, as of 2022, TripAdvisor's community of travelers has published over one billion reviews and opinions that support the decisions of millions of travelers each year (TripAdvisor, 2022). Concurrently, YouTube and Amazon have become the most important channels for discovering new products and services (Statista, 2021). Consequently, the communication created by digital platform users strongly influences other customers' perceptions and behaviors (Babić Rosario *et al.*, 2020). For firms, this communication represents a valuable source of customer insights (De Luca *et al.*, 2021): it has, like customer co-creation practices and initiatives (Gustafsson *et al.*, 2012), the potential to create value for service users and service providers.

Traditionally, firms send professionally created and managed content to their customers and other stakeholders (Colicev *et al.*, 2019). However, with the expansion of digital platforms, users started developing their own content and broadcasting it online, leading to an increase in communication created by users (Hollebeek and Macky, 2019). This kind of communication involves different types of actors (e.g. other customers, employees and chatbots) (Chung *et al.*, 2020), assumes different communication artifacts (e.g. posts and ephemeral videos) (Wakefield and Wakefield, 2018) and is shared through various technologies (e.g. mobile social media applications) (Larivière *et al.*, 2013), activities (e.g. posting and replying) (Muntinga *et al.*, 2011) and formats (e.g. text and video) (Grewal *et al.*, 2021).

It is against this background that research on communication in the service literature has been developing (Finne and Grönroos, 2017). Studies have examined service users' motivations to create communication on digital platforms (primarily social media) (Smith *et al.*, 2012), frequently from a uses-and-gratifications perspective (Shao, 2009), and have focused on outcomes such as electronic word-of-mouth (eWOM) (Bacile *et al.*, 2020). However, to understand the complex communication among users, studying users and their attitudes and the technology and its features in isolation is insufficient.

This research explains how users, aiming to potentially create value for themselves, other users and service providers, interact with communication artifacts to exchange information. In doing so, we offer an in-depth understanding of the diverse and ever-evolving landscape of communication in service. First, we conceptualize user-created communication (UCC) as an augmenting, dialogical process concerning user experiences. Then, drawing from the communication literature, we introduce communicative affordances (Evans *et al.*, 2017) as a relational framework to advance UCC in service. We spotlight three affordances particularly relevant in a service context: interactivity, visibility and anonymity. Finally, we highlight promising ways forward for future research on the topic – for example, the increasing importance of artificial intelligence (AI)-based technologies (e.g. chatbots) in service encounters.

Conceptual background

Communication in service research

Service research acknowledges the customer as the creator and consumer of communication about offerings, brands and experiences (Beh *et al.*, 2020). However, it also distinguishes other actors in the communication landscape: from service provider representatives – which can be human (Lechermeier *et al.*, 2020) or nonhuman (e.g. AI conversational agents; Van Pinxteren *et al.*, 2020) – to independent parties, such as other customers (Jacobson *et al.*, 2020). While the focus of research has traditionally been on human actors, recent service research has increasingly addressed nonhuman communication (Zhao *et al.*, 2020).

Service research has also recognized user communication on digital platforms, including social media (Jacobson *et al.*, 2020), e-commerce websites (Diwanji and Cortese, 2020), email (Lechermeier *et al.*, 2020), virtual communities (Bacile *et al.*, 2020) and crowdsourcing platforms (Lang *et al.*, 2022). Such communication typically revolves around customers' purchases and consumption experiences in the form of eWOM (Babić Rosario *et al.*, 2020) and communication between different users (Heinonen, 2011). Generally, eWOM reflects customer experiences with service providers (e.g. staying at an Airbnb) as outcomes (Zhao *et al.*, 2020). Meanwhile, communication with other service users shapes customers' perceptions and experiences (Betzing *et al.*, 2020).

Moreover, service research has primarily focused on user communication in textual format (e.g. Mathwick and Mosteller, 2017), paying less attention to verbal and nonverbal communication (Diwanji and Cortese, 2020). However, with the rise of digital media and various features on digital platforms (Rangaswamy *et al.*, 2020), service users have been frequently exchanging images, video and audio recordings instead of plain text (Grewal *et al.*, 2021). Service users make use of interactive platform features to contribute to online conversations with various reactions and animations, such as likes, emoticon functions, shares or comments (Jacobson *et al.*, 2020).

Service research hints at the role of technology in communication, highlighting how technological features allow service users to create, share, modify and access different types of communication (Betzing *et al.*, 2020). For instance, technology plays an important role in how customers engage in activities related to reviews (Mariani *et al.*, 2019): customers can use their smartphones to share their experiences with a service provider through a livestream (e.g. on Instagram) or a recorded video (e.g. on YouTube).

To summarize, research on communication in service has so far examined in isolation who is communicating, where and what they are communicating and how they are communicating.

Introducing user-created communication (UCC)

In communication research, *communication* represents an inherently social process and can be defined as the "sharing of elements of behavior, or modes of life, by the existence of sets of rules" (Cherry, 1966, p. 6). In human communication, these rules are often based on language, and communication happens through spoken and written words as well as nonverbal means (e.g. gestures and symbols). Marketing research (e.g. Heinonen, 2011; Smith *et al.*, 2012) has examined user-generated content (UGC) as the means through which consumers share information, connect with each other and express themselves online (e.g. on social media). However, the element of reciprocity is central to understanding communication (Lewis, 2015): the created content must be received and acted upon to count as communication. Though it is the object around which sociality can occur (Smith *et al.*, 2012), UGC focuses on developing and disseminating content. Thus, while it may be the starting point of communication, UGC does not emphasize its potential for reciprocal value.

Similarly, communication in service research is largely considered an *informational* interaction (i.e. persuasive message-making) or *communicational* interaction (i.e. informing

and listening), leaving its *dialogical* mode (i.e. learning) less explored (Ballantyne and Varey, 2006). Such dialogical interaction is multidirectional, altruistic, open-ended and discovery-oriented (Ballantyne and Varey, 2006). Traditionally, communication in this dialogical mode occurs between the customer and provider (i.e. face-to-face), and technology, if considered, has a mediating role (Spence, 2019). However, over the past two decades, communication has shifted from communicating *via* technology to communicating *with* technology (Sundar, 2020), with technological advancements equipping digital platforms with more and more advanced social features that allow users to create communication artifacts, paving the way for an enhanced communication mode between users (i.e. augmenting). This *augmenting* mode involves extending the scope, range and speed of users' interactions with diverse communication artifacts to facilitate reciprocal, value-creating outcomes for users (e.g. accomplishing user goals) (Sundar, 2020). Inspired by these developments and aiming to advance communication in service, we define *User-Created Communication (UCC) as an augmenting, dialogical process concerning user experiences*. Next, we offer a framework for UCC based on the communicative affordances literature, which is an ideal perspective since communicative affordances explain how the complex coevolution of users and technology alters communication outcomes (Schrock, 2015).

An affordances perspective on UCC in service

The affordance(s) concept was originally developed to describe the properties of an environment in relation to an animal: "The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill" (Gibson, 1977, p. 127). The reciprocal nature of the concept is apparent in this definition. An affordance is not simply an object/environment and its properties or a living organism/subject and its perceptions – it exists at their intersection. The idea of affordances was adopted in design research as the "fundamental properties that determine just how the thing could be used. A chair affords (is for) support and therefore affords sitting" (Norman, 1988, p. 9). Since affordances invite or trigger people to intuitively engage in certain actions, the design aspect is important. For example, a well-designed button that makes the user want to click it spontaneously has a clickability affordance.

Research on affordances has emerged in recent decades, especially with the increasing prevalence of digital technologies, going beyond design and human–computer interaction to disciplines including media and communication (Bucher and Helmond, 2017), sociology (MacKenzie *et al.*, 2017), science and technology studies (Davis and Chouinard, 2017), information systems (Mettler and Wulf, 2019) and management (Leonardi and Vaast, 2017). Thus, affordances research is multidisciplinary, with the potential for cross-disciplinary stimulation and fertilization. However, service research has only recently begun to adopt the affordances perspective (e.g. Azzari *et al.*, 2021; Vink and Koskela-Huotari, 2021).

The affordances literature, with its vague conceptual boundaries and a plethora of typologies, is complex. In this article, we rely on the communication literature and Evans *et al.*'s (2017) well-established conceptualization of affordances, which has three threshold criteria for identifying an affordance: (1) it cannot be an object itself or a feature (e.g. a smartphone or a search window are not affordances); (2) it cannot be an outcome (e.g. knowledge-sharing as an outcome of affordances is not an affordance itself) and (3) it must have variation (e.g. ubiquity is not an affordance). A concept that fails to adhere to at least one of these criteria is not an affordance.

To apply affordances for UCC in service, we adopt Schrock's (2015) definition of communicative affordances as the *interactions between the subjective perceptions of utility and the objective qualities of the technology that influence users' communicative practices*. UCC affordances are dynamic since they emerge at the intersection of users, an artifact and the

outcomes of such communication (Bucher and Helmond, 2017). Particularly, the intersection of users and artifacts constitutes the users' *experience*, the intersection of users and outcomes constitutes the *goals and motivations* and the intersection of the artifact and outcomes constitutes the *design* (see Figure 1). Appendix illustrates how this framework can be employed in a service setting.

Next, we elaborate three key UCC affordances for service research – interactivity, visibility and anonymity – that comply with the affordance criteria (Evans *et al.*, 2017). We also discuss the opportunities and challenges for service providers. The selection criteria for these three affordances included *parsimony* (given space constraints, we opted for a small number of affordances to give sufficient space for each), *breadth* (each affordance should apply across different digital technologies), *prominence* in the communication and affordances literature (each affordance is established) and, above all, *relevance* to the service context. All of these affordances substantially shape service-relevant outcomes.

Interactivity

Interactivity is defined as "a communication that offers individuals active control and allows them to communicate both reciprocally and synchronously" (Liu, 2003, p. 208). It refers to establishing opportunities for communication anywhere and anytime so that users can feel engaged in two-sided communication (Labrecque, 2014). Notably, Beh *et al.* (2020) discussed "conversationality" as an affordance that allows information exchange between users, which

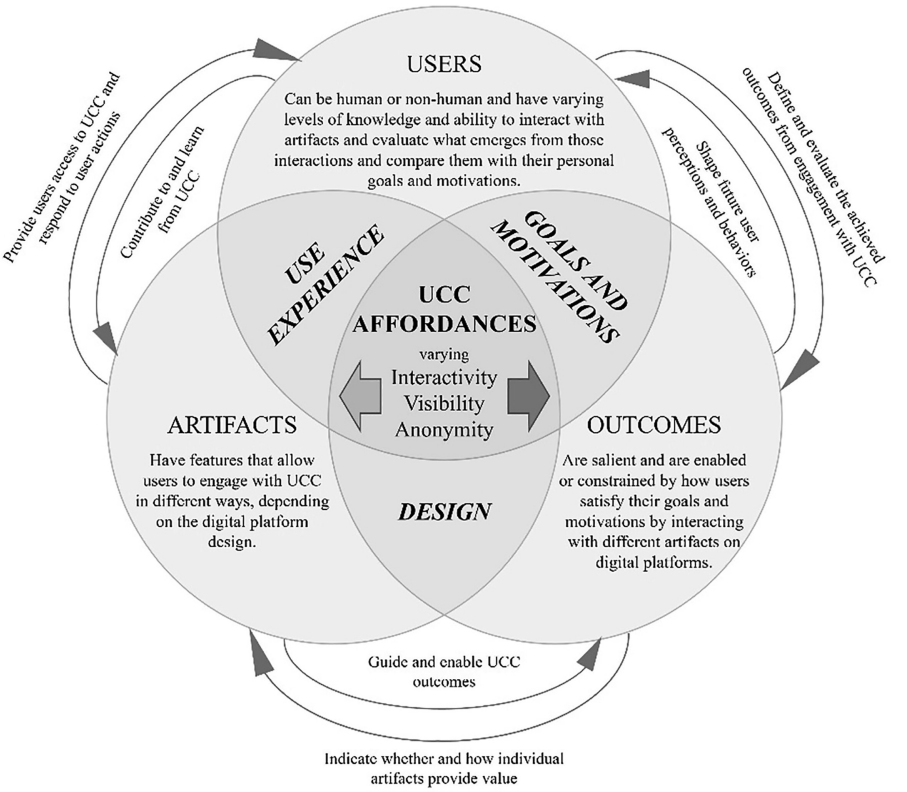

Figure 1.
User-Created Communication (UCC) affordances framework for service

we consider to be only a part of interactivity because it neglects the reciprocity of UCC beyond information exchange.

Interactivity presents service providers with *opportunities*, mainly by using employees and/or conversational agents to respond to UCC reactively or proactively without geographical and time constraints (Chung *et al.*, 2020). For instance, interactivity allows providers to respond to customers who communicate their experiences in public channels (e.g. review platforms) with appreciation messages and/or apologies (Liu *et al.*, 2017). Such an iterative exchange, by developing customer understanding and satisfying customer needs, strengthens providers' connections with their customers (Ni and Sun, 2018). In turn, interactivity can improve customer satisfaction, increase purchase intentions and boost customer loyalty (Sanchez *et al.*, 2020).

However, interactivity also poses *challenges*. To respond to rising UCC quickly and efficiently service providers can use AI communication agents on their owned media, such as websites and social media accounts (Van Pinxteren *et al.*, 2020). Though these agents can be helpful, they mainly react to direct customer inquiries rather than proactively interact with the UCC on third-party digital platforms. Some customers may also find communicating with AI agents uncomfortable, and since not all inquiries can be addressed by automated agents, customers can get frustrated (Luo *et al.*, 2019). Finally, monitoring and responding to UCC outside the service providers' control – such as on paid (e.g. influencer marketing) and earned (e.g. review websites) platforms – presents volume and resource challenges.

Visibility

Visibility refers to whether communication between users can be seen by other users and the ease of finding this communication (Evans *et al.*, 2017). The visibility of communication has increased drastically with the advent of new technologies, such as social media and sharing platforms (Sutherland and Jarrahi, 2018).

Visibility offers several *opportunities* for service providers. The high visibility of social media allows service providers to engage with users at a lower cost and superior efficiency than traditional communication technologies (Leeflang *et al.*, 2014). This is especially relevant for small- and medium-sized service providers with limited resources (Chatterjee and Kumar Kar, 2020). Furthermore, publicly displayed UCC allows service providers to monitor brand mentions and user sentiments (Misopoulos *et al.*, 2014). Ideally, any negative communication can be addressed publicly and directly by service providers (Zhao *et al.*, 2020). Additionally, insights from visible UCC can stimulate service innovation and assist future decision-making (Jeong *et al.*, 2019).

The visibility of UCC also creates *challenges* for service providers. Particularly, visibility might empower users more than service providers (Haji, 2014) – negative UCC that may reach large audiences can harm service providers (Babić Rosario *et al.*, 2020; Rust *et al.*, 2021). Negative UCC, in large, closed discussion groups on social media platforms is especially problematic because of its potential reach and the inability of service providers to access these groups and explain their service failures (Taylor *et al.*, 2020).

Anonymity

Anonymity refers to the degree to which a user perceives the source of a message as unknown or unspecified (Evans *et al.*, 2017). Digital platforms represent varying degrees of anonymity: some require users to disclose their identities (e.g. Facebook), while others (e.g. Reddit) do not. Even if anonymity is possible, some users may reveal their identities intentionally (e.g. by verifying accounts) or unintentionally (e.g. by adding self-disclosing multimedia, such as audio or video).

Anonymity, while underrepresented in service research, offers *opportunities* for service providers. For example, perceived anonymity can increase satisfaction with a service

complaint (Beh *et al.*, 2020). Studies in other fields have focused on communicative outcomes when digital platforms offer varying levels of anonymity. For instance, when the anonymity of online hotel reviews is not ensured, users are less likely to complain (Dyussembayeva *et al.*, 2020). For service providers, anonymity can thus entail more honest, direct and helpful feedback, overcoming social desirability. In organizational settings, as Wagenknecht *et al.* (2018) suggested, anonymity may be welcomed in corporate debates since it separates the person from the communication. However, it may also lead to more polarizing discussions or even incite the use of foul language.

For service providers, affording anonymity may come with *challenges*. High anonymity may enable unintended and negative outcomes, such as cyberbullying, fake reviews and misinformation. Restaurant reviewers who can post anonymous online reviews are likelier to provide lower ratings and express more negative emotions, which may lead to negativity bias: the more a user is exposed to negative anonymous communication, the more likely they are to also leave negative anonymous communication (Deng *et al.*, 2021). Perceived anonymity combined with frequent social media use can also lead to cyberbullying (Lowry *et al.*, 2016). This can translate into brand trolling, resulting in negative consequences for service providers (Demsar *et al.*, 2021). Anonymity can also enable nonhuman actors (e.g. social bots) to disseminate misleading communication (Liu, 2019).

Discussion

In this article, we discussed how service research has approached the separate facets of communication among users. We introduced UCC as an augmenting, dialogical process reflecting the interaction of users, artifacts and outcomes of communicative encounters. The UCC affordances framework offers an integrative conceptualization of UCC by moving away from the independent exploration of users' communication behaviors and attitudes, the adoption and use of different technologies and formats (artifacts) and the outcomes of communicative behavior. We, then, presented three key UCC affordances for service: interactivity, visibility and anonymity. By drawing on UCC examples, we developed future research questions related to each UCC affordance (Table 1). These questions reflect underresearched areas in the service literature related to the UCC affordances, with a specific focus on connecting service and communication research.

While the suggested UCC affordances reflect the state of the art in the communication literature (Evans *et al.*, 2017), it is by no means an exhaustive typology. In addition to our affordance-specific research agenda in Table 1, we, thus, present four more general lines of future inquiry.

First, we encourage service researchers to identify other UCC service–relevant affordances based on Evans *et al.*'s (2017) three criteria for identifying an affordance (i.e. an affordance is not a feature, not an outcome and must have variation). In doing so, we encourage the identification and conceptualization of potential *service affordances* beyond UCC (e.g. De Luca *et al.*, 2021). For example, Cabiddu *et al.* (2014) suggested engagement as an affordance; future research must explore whether and how it complies with the three criteria for identifying affordances.

Second, although we introduced the three UCC affordances in isolation, multiple affordances may be present simultaneously. How do multiple affordances, each with different variability, interact and enable UCC simultaneously? The variability of each UCC affordance matters because different users interact with the same features of an artifact to achieve different outcomes (Evans *et al.*, 2017). The outcomes may differ depending on the study approach. Affordances have been studied quantitatively with surveys, as well as with qualitative and ethnographic methods, such as case studies and netnography (Beh *et al.*, 2020; Cabiddu *et al.*, 2014; McKenna, 2020). We, further, recommend configurational approaches

Table 1. Future research agenda for UCC affordances in service

UCC Affordance	Definition	UCC examples	Potential future research questions
Interactivity	The extent to which users perceive they are a part of or engaged in two-sided UCC	Through social media posts, UCC can offer consumers' increased interactivity, such as by providing consumers direct links to the service provider's websites so that they can make quick purchases Service providers can improve the perceived interactivity of UCC by approaching the users who add negative comments (e.g. on review websites) Service providers typically react to UCC as comments on owned social media by either replying or reacting (e.g. liking) to them. However, users increasingly prefer communications in other forms (e.g. audio recordings, videos), some of which are more interactive (e.g. you can pause/speed audio recordings and videos) Some service providers employ humans to reply to user inquires (i.e. interact with customers) during office hours, while chatbots take over outside of office hours Users can create online reviews that include different integrated interactive features (e.g. by adding a tab that asks them to provide answers to multiple-choice questions in Instagram Stories) Some service providers use interactive features on their websites to allow users to "experience" clothes/furniture virtually and get recommendations from professionals While the use of AI can be of great help to service providers (e.g. offer responses quickly and efficiently), it may also make UCC feel less personal and, consequently, less interactive	How can service providers create more seamless purchase experiences through UCC (e.g. when AI and/or human agents share relevant links in response to user inquires on different digital platforms)? When should service providers reply to UCC that is not directly addressed to them (e.g. paid and earned media)? Considering the increasing popularity of non-textual UCC formats, how should service providers adapt their approaches to responding to UCC (e.g. should they respond to video with video, should they use ephemeral communication, and so on)? How should service providers distribute communication tasks with users between human and nonhuman service provider representatives on different platforms (e.g. social media and websites)? How does service provider engagement with UCC in nonverbal forms (e.g. answering to a multiple-choice question) influence perceptions and behaviors of UCC creators/other users? How can service providers interact with users to support their decision-making in the context of mixed reality spaces? How should service providers leverage the different dimensions of AI (e.g. magnitude, autonomy and so on) to respond to the different types of user inquires (e.g. questions about opening hours vs a complaint)?

(*continued*)

Table 1.

UCC Affordance	Definition	UCC examples	Potential future research questions
Visibility	The extent to which UCC can be seen by others and the relative ease for users to find and access it	Loyalty program members often provide direct but private negative feedback to service providers (e.g. hotels) via apps, which means that other users are unlikely to be affected by this negative content	To what extent should service providers encourage users to share negative feedback directly with them (vs on public digital platforms)?
		Users can write hotel reviews on public platforms (e.g. TripAdvisor) but record voice messages to share their experiences with a limited number of other users (e.g. friends on Facebook)	Under what circumstances does the same user communicate about the same experience with different audiences on different platforms (e.g. public vs private) using different formats?
		Users typically share reviews on public platforms (e.g. Yelp) after their experiences with service providers. However, on their personal social media accounts, users can share information about the experience with their friends (followers) while it is happening (e.g. while staying at a resort for a week)	How does the presence or absence of synchronicity impact the visibility of how users share their experiences?
		Both overly negative and overly positive feedback is posted by users on public platforms, and they may thus need to be addressed publicly by service providers, which can be challenging. For overly negative UCC, service providers may need to defend themselves against untruthful accusations. Moreover, when embracing positive UCC very enthusiastically, they risk appearing complacent or self-righteous	How should service providers address publicly available overly negative or overly positive UCC through both verbal (a textual or video reply) and nonverbal (e.g. likes, reposts and so on) communication means?
		Users search for UCC in a variety of contexts, such as trying to find the best restaurant to eat within an hour vs choosing a hotel for a trip that is months away	What is the influence of temporality on how users react and perceive UCC visibility?
		Users are increasingly concerned about their privacy in digital spaces and also when approached by service providers	When should service providers use less visible/invisible backstage channels, such as direct messages, and when should they be visible on the frontstage?
		Users can create content that remains visible for an unlimited amount of time (e.g. Facebook posts), as well as content that disappears after a certain amount of time (e.g. Facebook stories that are visible for only 24 h)	How does the limited visibility of UCC (e.g. due to ephemerality) impact the experience of users who are exposed (vs not exposed) to the UCC?

(*continued*)

Table 1.

UCC Affordance	Definition	UCC Examples	Potential Future Research Questions
Anonymity	The degree to which users perceive the source of UCC to be unknown or unspecified	Platform service providers (e.g., Facebook) are often blamed for ignoring cyberbullying, which users can engage in anonymously	What is the role of platform providers in dealing with unintended or negative outcomes of anonymous UCC (e.g., to what extent can AI be leveraged to prevent cyberbullying)?
		Digital platforms collect user data and use it to improve their services and gain revenue (e.g., from advertisers)	How does anonymity affect the business model of platform service providers (e.g., to what extent does user anonymity impact their analytics and market research)?
		Users who share textual reviews are more likely to remain anonymous compared to users who share video reviews (e.g., users can often see and hear reviewers in video reviews)	How does the anonymity of UCC in different formats change the degree to which other users are influenced?
		More reputable and socially acceptable platforms (e.g., Instagram) encourage users to share their personal information, while others (e.g., 9gag) are likely to do the opposite	How do different platforms' characteristics (e.g., reputation, theme, focus, and so on) influence user anonymity?
		Some users create "throw-away" (anonymous) accounts they do not want to be associated with their "main" account	Why does the same user need to behave differently on the same (anonymous) platform?
		Anonymous platform users (e.g., Reddit) accuse the media platform employees of posing as regular anonymous users to get inspiration for content (e.g., media articles)	What are the ethical implications of service provider anonymity (e.g., under what circumstances can / should service providers remain anonymous)?
		There is an increasing number of fake reviews and other untruthful information shared by users (often from fake/anonymous accounts) on various platforms that may create a distorted image about service providers	How can platform providers or other users fight against fake reviews and other untruthful information posted by users from fake/anonymous accounts (e.g., with the help of AI and/or user policies)?

(Fiss, 2007) that go beyond relating individual attributes to an outcome (e.g. through a regression model) and aim to uncover the different patterns of attributes that may lead to that outcome (e.g. through categorical principal components analysis). Such configurations could better capture the complex interplay of attributes related to the user, the artifact and their interaction.

Third, the UCC landscape is constantly evolving with emerging technologies, trends and changes in customer demands and expectations, as well as geopolitics (Gartner, 2020). Also evolving are service encounters empowered by new technologies, such as AI or augmented reality (Kunz *et al.*, 2019). We, thus, recommend that service scholars consider how the interactions between service users and novel technology artifacts *push the boundaries of UCC*. The future of UCC is increasingly dynamic and multimodal (Grewal *et al.*, 2021). Future research should determine what bids (e.g. requests and demands) novel artifacts' place on service users and how novel artifacts respond to users' desired actions (e.g. encouragement, discouragement and refusal; Davis and Chouinard, 2017). Such research could take inspiration from the field of human–machine communication (Spence, 2019; Sundar, 2020), where the interest lies in the communication between humans and smart technologies as actors themselves (e.g. chatbots, social robots and algorithms) rather than as media through which communication between humans takes place. Particularly, this research invites contributions concerning the functional, relational and metaphysical aspects of AI as a communicator (Guzman and Lewis, 2020). The functional aspects could be researched to evaluate "how people interpret the human and machine-like traits and characteristics of communicative technologies" (Guzman and Lewis, 2020, p. 76), leading to service design improvements. The relational aspects could be studied to explore how (different types of) users integrate AI-based technologies into their personal and social lives and doing so can generate knowledge for service delivery. Moreover, the metaphysical aspects – for example, the blurring of the boundaries between humans and machines – point to ethical questions (e.g. around overtrust and deception; Aroyo *et al.*, 2021) from which service researchers should not shy away.

Finally, expanding the notions of communication as an element of service value (Heinonen and Strandvik, 2005) and dialogical interaction (Ballantyne and Varey, 2006), we argue that UCC has the potential to create value for service users as well as service providers. For example, by guiding service users throughout the customer experience, UCC can make service users better off (e.g. by supporting decision-making at different stages along the customer journey). Similarly, by offering customer insights to service providers, UCC can help firms improve their offerings (e.g. identify opportunities for touchpoint innovation along the customer journey). According to the service perspective on marketing and business, such improvements in the well-being or performance of individuals or organizations form the essence of value creation (Grönroos, 2008). Value is created "through the integration of resources, provided by many sources, including a full range of market-facing, private and public actors" (Vargo and Lusch, 2016, p. 9). We, thus, encourage service and communication researchers to undertake future research in this area that aims to substantiate the *value-creating properties of UCC* and, ultimately, generate implications for service and communication theory and practice.

For service managers, our UCC affordance framework offers practical guidance. Rather than focusing separately on technologies or user behaviors, the framework shifts attention to UCC as an integrative phenomenon of user experiences, platform design, and user goals and motivations. Service managers should develop an in-depth understanding of both user experiences and user goals and motivations through user-centered methods, such as netnography (Kozinets, 2020) or interviews where users comment on their own trace data (Latzko-Toth *et al.*, 2017). The insights gained can then be used iteratively to improve communication and service design.

Furthermore, by recognizing the opportunities and challenges of the three suggested UCC affordances – interactivity, visibility and anonymity – service managers can better develop successful communication practices. These UCC affordances raise issues that service providers should address now (e.g. deciding whether to invest in nonhuman communication through chatbots, dealing with public negative feedback on social media, engaging or abstaining from sociopolitically charged communication, for example, in terms of social justice issues) and in the future (e.g. shift from textual to video communications, augmented and virtual realities, and metaverse environments). Taken together, this article guides service managers on how to better understand and navigate the complex, diverse and ever-evolving UCC landscape.

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Appendix

An illustration of the UCC framework in a service setting

Let us assume Twitter user Rebecca tweets about her positive experience when visiting a new restaurant in her neighborhood, mentioning the name of the restaurant in the tweet. In this case, Rebecca is the user, Twitter is the artifact and outcomes include positive eWOM for the restaurant, satisfaction on Rebecca's part when other users like or retweet her tweet – or simply with the act of remembering her positive experience –, and informational benefits on the part of her followers who see the tweet. "Use" describes Rebecca's specific activity of tweeting, "design" involves Twitter's structural properties (e.g. 280-character limit, possibility to easily embed pictures, hashtags and algorithmic curation of the feed) that foster the outcomes described above (e.g. the use of a specific hashtag in Rebecca's tweet might mean that non-followers people notice the restaurant, creating positive word of mouth) and "goals" refer to Rebecca's motives for tweeting (e.g. altruism and social gratification). A particularly relevant affordance in this example is visibility: Twitter's design choices (e.g. most accounts are public, it is easy to follow other users and tweets can be shared from multiple devices) afford seeing Rebecca's tweet relatively easily on the part of her followers (or even strangers through the hashtag or Twitter's search function), thus creating attention.

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