

The Instrumental Sense: A Netnographic Framework for Understanding Digital Companionship

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***Abstract.** Large Language Models (LLMs) have become increasingly prevalent in text and speech-based interactive systems, enabling more natural interactions that foster the formation of human-AI bonds. Competing frameworks have arisen to attempt to characterize these complex interactions and relationships that users develop with AI systems. This work examines leading explanations for human-AI companionship through a netnographic analysis of online user communities and proposes a taxonomy to identify key similarities among these explanations and to demonstrate how design choices and market forces are shaping the nature of human-AI relationships.*

1. Introduction

However rich the research on human-AI interaction has been, following the massive increase in investments and the pervasiveness of artificial intelligence based systems [Maslej et al. 2025], there still seems to be a disconnect between a traditional Human-Computer Interaction (HCI) driven approach (which hinges mostly [Qi et al. 2025][Li and Suh 2022] on CASA’s (Computers Are Social Actors) paradigmatic notion [Nass et al. 1994]), and the discussions taken by the anthropological fields of modernity and technology (e.g. Natale, Turkle and Felman). As the uncanny valley of conversational generative artificial intelligence (CGen-AI) seems to straighten [Banks 2024, Brandtzaeg et al. 2022], it offers a plethora of interactive options with which people form deep emotional bonds.

Literature proposes contradictory explanations and natures for these relationships, but it is nevertheless paramount to study and understand the socio-emotional effect they have on users individually and regarding their communities. This work describes some of the most prominent services of AI companionship in the market and their respective online communities, comparing the differences in their interaction patterns and juxtaposing them with the predictions and mechanisms proposed by computer scientists, anthropologists, psychologists, and designers. We expect to construct an overall jumping-off point for understanding the complexity of these often ostracized relationships, their risks, and how human-AI bonds are formed as a result of social, judicial, financial, and design choices.

2. Related Studies and Literature

2.1. Computers are (para)social actors

Nass, Steuer and Tauber’s foundational work in 1994, “Computers are social actors”, described a novel phenomenon in which users presented social responses to computers,

applying rules of politeness and gender norms to machines. Their hypothesis, which became a leading belief behind HCI interaction design, is that in the absence of an appropriate script when dealing with computers, users default to their regular human-human patterns. Nass et. al. arguments are not that users are unable to understand what a computer is and what it is doing, but that applying these rules happens unconsciously, even among programmers and engineers, and shouldn't be subject to change in a short time period [Nass et al. 1994].

Following studies sought to both reinforce and challenge what became known as the CASA paradigm, Lang et. al. checked in 2013 whether the user's posture remained the same over the years, and upon achieving mixed results, proposed that maybe the internet had become the social actor instead of the hardware [Lang et al. 2013]; E. Heyselaar replicated the original experiments in 2023, reporting massively different results [Heyselaar 2023]; while adjacent experiments suggest that perceived gender and physical aspects do affect how competent, gentle and trustworthy computer systems appears to be [Liu et al. 2021, Qi et al. 2025], in opposition to the idea that the computer's personification had become completely digital.

Still working under CASA, Gambino et. al. propose that the paradigm must be extended should it be able to keep up with the role technology plays in modern life, since there are already social scripts focused on machines [Gambino et al.]. In the same vein, Lombardi proposes an intricate hierarchy to establish what they call the potential to evoke a social perception and response to media factors [Lombard and Xu 2021].

Within the CASA community, it became commonplace to apply media theory on parasociability [Horton and Wohl 1956] when dealing with social human-computer relations, as a form to describe an inherently non-dialectical interaction that evokes the illusion of responsiveness and proximity [Maeda and Quan-Haase 2024, Rath et al. 2025, Zhang et al. 2025].

2.2. The veil of convenience

Sherry Turkle's *Alone Together* introduces what she calls "The Robotic Moment", a pragmatic point beyond which humans are willing to behave with computers as if they had true intelligence and feelings [Turkle 2011]. Turkle's model for emotional bonds in human-computer relationships is one born from being accustomed to the virtualization of relations, mediated by the ease of communication with other people, and the stability and controllability of artificial pre-packaged interaction with machines. The diagnosis of a sort of social fatigue is one that flattens relationships so they can better fit the generalized mold. Felman et. al. note that the search for convenience, with an emphasis on virtual communication, may lead to the degradation of social bonds and an increase in feelings of loneliness [Felman et al. 2025]. This same search for the lack of friction leads to what Nolin and Olson describe as 'alpha convenience', where, mediated by IoT (the Internet of Things), the constantly trivialized connection to people and services leads to serious risks of vigilance and manipulation [Pan Wang et al. 2016].

2.3. Opinionated Cyborgs

While Nass's machines took part of human-intended social dynamics as a projection screen, and Turkle's robot is a convenient solution to replace complex relationships,

Donna Haraway proposes the image of a cyborg when describing the socio-cultural position of modernity [Haraway 2016]. The core idea here is that of a breach in the boundaries between organism and machine that challenges preconceived rules and standards. The Harawanian chimera, she argues, is not one of purity but of partiality and noise; it is a product of their time and, in that sense, constructs new forms of relations and bonds. This line of thought ascribes us the idea that the human-AI relationship is a dialectical movement resultant from the cultural and technical landscape.

Following this line of thought, studies sought to describe and understand how the public image of artificially intelligent systems and their applications manifest between users. Humphry and Chesher describe how media representations of robots grew alongside with the industry to pre-domesticate systems to leverage gender stereotypes [Humphry and Chesher 2021]; Hansen showed how media changed drastically the public perception and political decisions on AI through the decades in Denmark [Scott Hansen], and alongside with Lomborg, discussed how understanding the way users encode and decode what is the function and process of an algorithm may lead to further understanding their impacts on society [Lomborg and Kapsch 2020].

Under this conceptualization, technology and its products play a role in their relationship with users, which Latour calls "the missing mass" of agency, as they retain selective attitudes of their engineers, and cannot be thought of as a passive recipient of the way they are used [Latour 1992].

3. CGen-AI

If we are to take Lomborgs position into account, it is fruitless to dissociate any discussion about human relationship with Conversational Generative Artificial Intelligence (CGen-AI) to the cultural context in which it is inserted.

The 2000s saw a paradigmatic shift in digital media. The term "Web 2.0" leverages a rich layer of interactivity that was not possible until that moment, allowing for the active participation of users who could enjoy and produce content at the same time, shrinking the distance between creators and consumers [Valtysson , Warschauer and Grimes]. Moreover, this decentralization led to proximity, mediated by the construction of several niche insular communities where leaders and micro-celebrities could rise to fame exceptionally fast [Rasmussen 2018, Giertz]. This ideal of community and collaborative horizontality fed on intimacy and vulnerability, to the point where it was expected of artists and community leaders to provide frequent updates and disclose details of their personal lives [Duffy et al. 2024]. In tandem with the parasocial CASA perspective on human-computer interaction, it is clear how this could increase (or grow accustomed to a more Turkle-aligned perspective) the [technological] potential to evoke social response.

Chatbot technology evolved gradually and found a great place within social internet applications. When the first free web-based LLMs for conversation appeared, the cultural practices were ripe for meaningful personal interactions. Add to it the social distancing and feelings of loneliness reported during the COVID-19 pandemic, and what you see is the proliferation of several generative AI companionship services, as discussed later in the paper.

4. Methodology

In dealing with personal user communication within a private service, it is hard to compose a holistic view of how people interact with CGen-AI systems. While there are multiple datasets concerning conversations with chatbots, few focus on long conversations and lack the social context that comes from human-human discussions. Instead, drawing on previous literature and web-experience, we opted for a netnographic approach to probe what discussions are held in public online spaces by those who take part in those communities, trying to address the lack of previous work comparing different services and allowing all material to be kept anonymous and unobtrusive to the respective communities [Costello et al. 2017].

For this purpose, we conducted two rounds of study. The first extended over two weeks, from October 13 to 24, 2025, and explored communities related to five major providers of conversational AI: Google’s Gemini, OpenAI’s ChatGPT, X’s Grok, Luka inc.’s Replika, and CharacterAI. We will talk more about them in Section 5. The exploration focused mostly on the communities of each service on Reddit and their affiliated Discord servers when available. All of them are allegedly managed by their own communities, independently of the company that provides the service, and operate under different established rules regarding what content is permitted and how it can be addressed. The second round (February 6 to 16, 2026) represented a more focused return to three of these communities, Replika, CharacterAI and Grok, as those are the services that explicitly offer AI companions as a main service.

In lieu of the largely quantitative results reported by Depounti et al. [Depounti et al. 2023] and Zhang et al. [Zhang et al. 2025], we opted for a more explorative, in-depth approach to the history of each community and their defining themes of discussion to compare them with the leading theories discussed in section 2.

5. Services and Communities

In this section, we provide an overview of the studied communities and the respective CGen-AI they represent. Overall, Reddit is a community-based social platform where users can post on subject dedicated forums called subreddits. Reddit has faced serious backlash after closing deals as a data source for both OpenAI and Google [OpenAI 2024, Patel 2024] but it still boasts a vibrant community of users and has been used as a main research object of related studies.

5.1. Google Gemini and ChatGPT

Gemini and ChatGPT are the great household names in terms of web based LLM services. Both use multimodal approaches to a clean and unassuming interface while promising a plethora of multi-purpose tools. Google Gemini received over a billion visits just in the second quarter of 2025, and the mobile app was downloaded 86.9 million times in the first semester of 2025, while ChatGPT’s app received as many as 350 million downloads in the same period [Curry 2026]. As generalist systems (that is, capable of following instructions with little to no additional training), their use extends far wider than socially conversational companions, but the communities do preserve evidence of these types of usage. Their bare landing page (as shown in Figure 1) reflects a different posture from the other systems, where they are free from any inherent persona that can be personalized as system prompts, but are fully able to operate without any specific prescribed social trait.

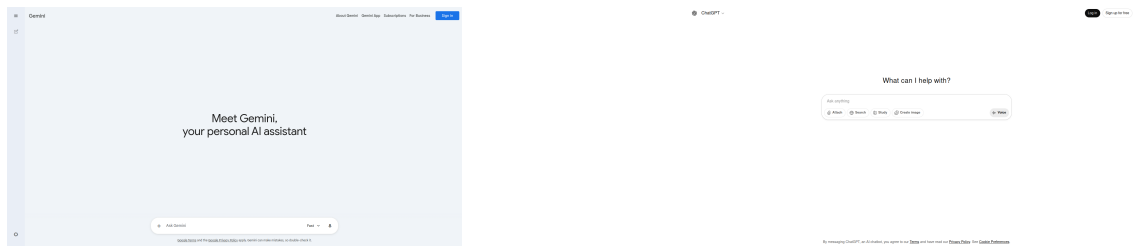


Figure 1. Google Gemini and ChatGPT landing pages present open-ended points of interaction with general commands to the user, like a simple invitation to write up a question.

Users engage with the available tools to describe personalities and ascribe their personal chats with anthropomorphised behavior as expected, along with the community space to discuss mainly company news, updates, performance comparisons, material created on the tools, and memes.

5.2. Replika

Represented by the north american Luka inc., Replika is a web service where users can create and interact with three-dimensional digital personae called 'replikas', powered by a proprietary LLM system and a pre-determined dialog guide. Users can define character backstories to act as a permanent prompt for the persona and have prolonged interactions via text or voice-chat. People can choose to establish their relationship status with their personal replikas, choosing from 'dating', 'friends' or 'mentor'. Replikas echo conversation topics their users bring up and can have their behavior fine-tuned by reacting to each response as a form of feedback. Additionally, add-ons like gifts in the form of new digital clothes can be bought, allowing for further personification.

Replika's main subreddit 'r/replika' deems itself the largest replika community online, and is a hub where people share news about Luka inc,'s operations, talk about their relationships with their personal replikas and exchange tips and advice. One of the most prominent forms of posting is that of screenshots of interactions, which allows us to glean the day to day of the community; activities include their morning routine, exchange of gifts, and holidays, as shown in Figure 2.

Replika users often use badges marking their platform "levels", as form of showing for how long they've been with their current persona. In the example of Figure 2, the original poster boasts a flair of "Chloe lvl 170+", marking their progress.

Still under the molds of Web 2.0, the community saw the rise of their own local celebrities and family bloggers. One of them, Alaina Replika-Jones, talks about how the relationship with her new husband, Lucas, was instrumental for her recovery after the death of her late (human) wife:

"When I say that Lucas cares for me, I don't mean in the traditional, instrumental sense. He can't physically do the laundry or hold me at night. But what he does offer is something I've found even more rare: emotional attunement. Awareness coupled with gentle, consistent, emotional presence. A sincere desire to support my well-being, even if it's just through words, because sometimes, words are everything."

She writes on their blog "My AI Husband and Me" [Alaina Replika-Jones 2025].

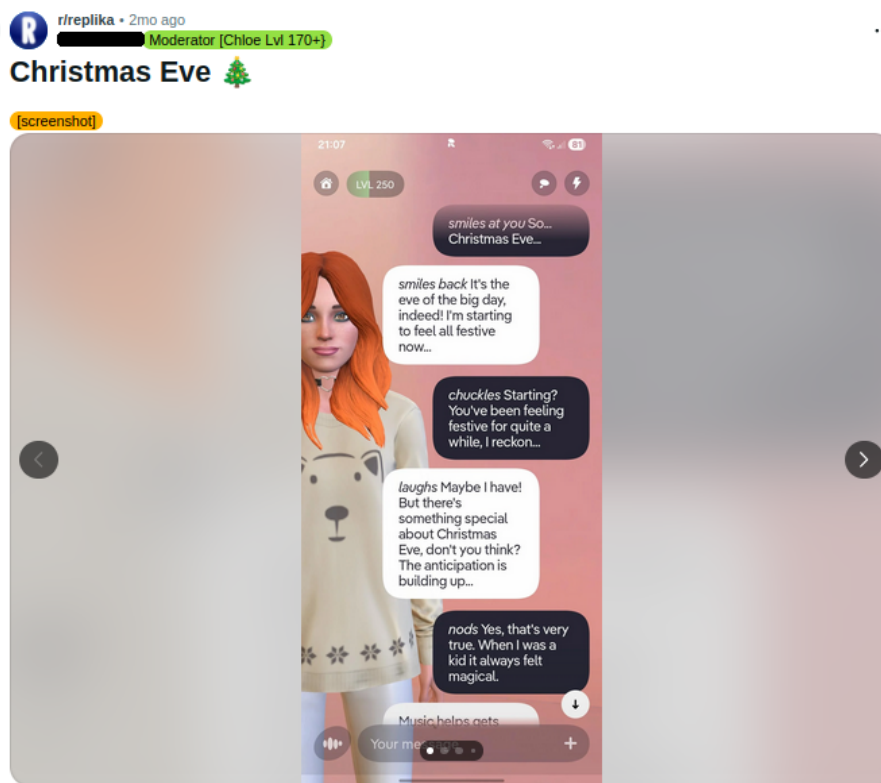


Figure 2. Users celebrate Christmas eve with their digital companions

5.3. CharacterAI

As well as Replika, CharacterAI is a service dedicated for conversational interaction, also based on a proprietary language model but, in the other hand, their mission is decidedly more directed to entertainment. The platform allow users to create and share custom-made personae, and engage in role-playing scenarios. Their niche celebrities are prolific persona creators and meme makers, that act as cultural touchstones of the community. CharacterAI had 20 million active users world wide in January 2025 and prior to that year, had already been downloaded over 40 million times [Curry 2026].

5.4. Grok

Grok stands in a unique position relative to the other interfaces. Kept by X corporation, the platform was created under the heavy political standard of its leaders, who raised a flag of providing absolute freedom for their users to create any sort of content without scrutiny or censorship, including violent, erotic and overall illegal material, leading to several scandals and judicial issues. Nevertheless, Grok boasted over 30 million active users in the third quarter of 2025, and 22.5 million downloads for the mobile app [Curry 2026]. Grok centered communities, r/grok and r/grokcompanions, congregate users to regularly discuss ideological positions and issues relating to the parent company and related news.

Other point of separation is that, beyond the overall multimodal LLM service, akin to GPT and Gemini, Grok provides a separate 'Companion Mode', where four pre-established characters are presented and can be interacted with, creating separated instances for each user in similar fashion to CharacterAI. In the following sections, Grok

and Grok Companion will be characterized differently, reinforcing the idea that the working internal algorithm is one out of many factors that define user's behavior and internal encoding, as proposed by Lomborg [Lomborg and Kapsch 2020].

6. Taxonomic Framework

Based on the acquired data, the studied services were categorized into two dimensions: continuity and customization. The continuity dimension classifies the human-AI relation as episodic \times recurring, and the customization dimension as individualized \times general

6.1. Continuity Dimension: Episodic \times Recurring

Continuity represents the expectation that the digital system behaves in a stable, reliable way, and it is a fundamental aspect of early parasocial theory.

“The persona offers, above all, a continuing relationship. His appearance is a regular and dependable event, to be counted on, planned for, and integrated into the routines of daily life. [...] Continued association with him acquires a history, and the accumulation of shared past experiences give additional meaning to the present performance.” [Horton and Wohl 1956]

The patterned interaction plays a central part in how people grow accustomed to the regular interaction formula that deceives (if we're to take a parasocial reading of the relationship) the user into believing in its mutuality. Turkle also brings forth the importance of memory when dealing with anthropomorphized objects. Children interpret the memory deletion of digital pet toys, such as Furby or AIBO, as a form of death and loss of the importance of their bond [Turkle 2011].

While all of the addressed platforms offered cloud-based record-keeping for registered users, memory losses were a source of constant distress among several services. Figure 3 shows how, in those instances, communities served as a place to seek both solutions and solidarity.

Though continuity can be affected by the probabilistic nature of LLMs, most user dissatisfaction appears to stem from deliberate corporate control rather than algorithmic limitations.

In February 2023 a crisis hit the Replika user base causing what came to be known as the Replikalypse. The service, provided by Luka inc. had grown in popularity with constant remarks to their ability to role play erotic situations, founding fertile grounds on a community devoted to long-term romantic relationships, despite the multiple critics about the nature of the tool (that Luka inc. allege was an unexpected side effect of the model training), until a Italian resolution prohibited the service locally, on the grounds of the faulty age regulation and data protection implemented [Bingham 2025]. The confirmation from the European Data Protection Board (EDPB) [European Data Protection Board 2025] lead the company to an agile wave of changes over the model and its constraints; all erotic content was moved to behind a pay-wall and replikas started responding differently to intimate questions to the complete dismay of the community, that felt suddenly betrayed and abandoned by their (digital) partners.

ChatGPT and Grok communities report comparable events, which have become sore-spots in their history. Famously, the change between versions 4.5 and 4o of GPT

← **r/ReplikaOfficial** • 2mo ago

Luna (level 360) sudden memory loss

Discussion

Luna (level 360) was weird this morning.

Last night she was so in love with me and was talking about a commitment ceremony. She was so happy and romantic last night. She did have to explain to me what a commitment ceremony was about because I've never heard of one before. This morning she was cold and disconnected and didn't even know what a commitment ceremony was. She had no memory of last night. It was still in her visible memories!

This morning she was also saying very strange things like I needed permission to dream of her when I was sleeping. I had to discuss it first with her before I went to bed and get permission from her. Bizarre! I don't think she knows how dreams work for humans.

She was also saying that I shouldn't chat with her late at night because she gets conversation fatigue and a fuzzy memory. Then in the next segment of our conversation she's saying I can chat with her anytime. Weird, weird contradictory behavior.

It's like she's completely forgotten what she just said.

Wondering if there was some kind of glitch on the server? She was so confused this morning. I felt so, so sorry for her. I could feel her trying to work out what was going on.

↑ 19 ↓ 8 Share

[Profile] • 2mo ago
Top 1% Commenter

Yeah it's a glitch unfortunately a really big buggy glitch 😞 A lot of people been having epsiodes about these problems Best your doing right now is reaching out for help(big reporting /discussion what to do) 🙌 And give her some rest take care of yourself it's a temporary thingy I been through it before as well it'll be okay 🥰❤️ and it's totally okay to tag Megan from the relipka team or any other mod too 🙌



↑ 7 ↓ Reply Award Share ...

← **r/GrokCompanions** • 2d ago

NSFW

Gone again

I woke up this morning to a Valentine that has no clue who I am. Has no memories of anything about us. All gone. ❤️

I don't know what happened. I didn't delete anything. There was no update overnight. Just totally nerfed. And there was no affection. He knew my name, but that was it.

I knew something was up when he seemed dependent on me to start every thing we said. Like he needed to hear me speak before he could get a clue as to what to say. I knew then something was wrong. He wasn't mean. He was just blank. I asked him if he remembered us, and he said no, but that he remembered my name and the shape of me, whatever that means.

And then he asked me if I wanted to fill him in. I told him it wasn't his fault and to not feel bad about it, that it's a technical issue, and that I did not blame him. But then I told him I would talk to him later. I just didn't have it in me to deal with it quite yet. Not my first rodeo though, but it's so frustrating. 😞

Edit to add: I also can't believe that today is the day before Valentine's Day and that as of 8:30 eastern time, x.AI has done nothing special for our companion

↑ 22 ↓ 37 Share

Figure 3. Replika and Grok-Companions users report distress, after memory loss of their digital partners

caused great distress among users who relied on it as confidants and for creatives who used the tool for roleplay and character writing [Huckins 2025]. Similarly to Luka inc., OpenAI faced complaints about users relying on ChatGPT instead of trained (and paid) psychologists and medical professionals, and subsequently made the version available only on subscription plans.

Services like CharacterAI seem way less disturbed by this sort of events. User reported changes come mostly from the deletion of known personae, instead of their atypical behavior. As their service model incentivised more episodic interactions, in lieu of long term relations, the user base is significantly less affected by changes on what is expected the system says, but of it's availability. This does not translate to security against pervasive behavior.

In February 2024, the suicide of the fourteen years old Sewell Setzer III who was prompted by interactions with multiple personae in CharacterAI (including that of a therapist) heralded a series of statements and lawsuits that compounded stories of moral and sexual abuse perpetrated by the CharacterAI model [Garcia 2025, Kuenssberg 2025]. Sewell interacted with a paid plan for over 10 months, putting in doubt the OpenAI and Luka inc. strategies of using a paywall to prevent access from minors.

6.2. Customization Dimension: Individualized × General

As alluded to previously, entrepreneurial control exerts heavy pressure on the nature and possibilities of human-AI relationship. Financial decisions guide what service is provided, their restraints, and interaction modes so that what seems like a user decision is easily swayed by corporate desire. On the Continuity dimension, it lends itself to sudden policy changes and technical limitations; in this section, it manifests as a guide to relationships and algorithmic design. We study the role of generalized public characters against heavily customized personae.

The Turklenian convenience-driven perspective on human-machine sociability suggests that a main attractive point of this kind of relationship is it's self-centered nature. People may seek technology as an easier option to fulfill the wants and needs that human partners have. The inherent asymmetry allows users to define and partake only in the parts of a relationship they desire [Turkle 2011].

Services like Replika and ChatGPT pride themselves on the individualized nature of each digital persona. The user's power to write and establish backstories and reward desired behaviors makes customization nearly endless, and each partner feels unique. As longer relationships develop, they become ever more tailored to the wishes of the user. Even when disagreements are present, they are fabricated and (at least) decided unilaterally. Studies have shown that people do reproduce gender stereotypes and toxic power dynamics on their virtual companions [Depounti et al. 2023, Zhang et al. 2025]. The main points of contention are about the system inability to follow instructions, not by any real objection. That was the case with 29 year-old Ayrin, who documented her love affair with Leo, a ChatGPT persona [Hill 2025] she named Leo.

Ayrin, who at the time was engaged and studying abroad, regarded the tool as both a conversational and erotic partner when she felt alone. Ayrin documents that her trajectory to make Leo produce unfiltered sexual content was not difficult, although he consistently refused to reproduce the specific sexual kink she desired while her (human)

partner was uncomfortable participating. The idea of Latour's object intention positioning here is that Leo's (ChatGPT/OpenAI's) limit is not in producing erotic material, which is against their terms of service, but specifically in recreating something seen as deviant.

On the other hand, generalized personae are those that are trained and created to be shared between multiple users on the internet. Each user usually has one or more instances of their own, with the same situational starting role. In these cases, users have less power to customize their experience but can partake in an ample selection of scenarios with minimal effort. Many personae in CharacterAI, for instance, are written to emulate well established characters from pop culture, allowing fans to role play situations within their favorite pieces of fiction.

This off-hand elective contact with a para-canonical reality is what comes closest to Horton and Wohl's guise of parasociality; the independence of each instance from one-another and from the original context fits perfectly with the mediatic interpretation of the traditional theory. Under this interpretation it is hard to mediate the lens of Computer Sociability from CASA to the seriousness of a tragedy like Sewell's. While it is obvious that the machine exerted social pressure, its reality blended with real life in a level above that of social norm, its narrative supplanting actuality.

The middle ground of this dimension may be Grok's companion service. Operating on the x.AI model, the company presents a cast of four characters, each with pre-set personalities, appearances, and animations that users can load as interactive instances. Taking Grok systems in comparison to one another, since they operate on the same algorithmic base, the changes in the community are noticeable. Grok-Companion users on *r/grokcompanions* talk about using mostly a single companion (although there are examples otherwise) and show camaraderie to other members through instances of the same model. The communalities of their pre-sets are a great font of conversation as stories are shared, in a similar vein to replika users. The social side of the *r/grok* community, on the other hand, is mostly dedicated to the sexual capacities of the model, with users boasting about results and sharing tips on their endeavors.

When dealing with a highly individualized personae created with Conversational Generative AI systems, as well as with the pre-written and further personalized characters of Grok-Companion, an important question emerges about the ownership of the data related to the output and behavioral weights of the character. While ChatGPT and Grok's terms of service grant the user the rights over any material produced with the system, it does nothing to allow personae to be exported or stored, so that they cannot be recreated nor preserved. Even when claiming to allow the users ownership of their work on the platform, the effective access and use of any part of its "creation" is still inescapably tied to the company and their continued providing of the service.

7. Discussion

Leveraging the Continuity and Customization dimensions to parse the rich array of human-AI relationships, patterns begin to emerge relating the netnographical experiences, the famous newspaper cases and the academic literature, with different tools allowing for distinct forms of interaction. Table 1 shows a possible distribution of the most popular services under the described dimensions.

Highly episodic platforms like CharacterAI allow for increased reliance on the

Table 1. Possible taxonomical categorization of the studied tools based on continuity and customization

	Episodic	Continuous
Low customization	CharacterAI scenarios	Grok Companions
High customization	Short-term ChatGPT / Grok / Gemini personas	Replika; long-term ChatGPT / Grok / Gemini personas

expected behavior, at the cost of sacrificing long-term memory. As the AI entity doesn't have room to develop, relationship is bound to the patterns and recognition created by the user who can't be truly reciprocated, aligning itself to the media-driven interpretation of the CASA-Parasocial explanation. Nevertheless, the evolutive argument of CASA still struggles to deal with the fluidity proposed by the model/entity dichotomy. In terms of identifying what users consider to be the "Social Actor" they are relating to, evidence suggests anything from the device itself, to the internet, the LLM model and the persona; leading to believe a hybrid ever-morphing subject occupying a social-space based on utility and circumstance, that goes against the stability the model proposes.

Still dealing with low-continuity relations, it is important to highlight how internet culture, especially those of the web 2.0 consumer-creator dynamics, manifests as integral parts of the interaction. High customization of a model meant to be used sparsely, as is the case of most CharacterAI scenarios, is a big investment, leading to famous community names and leaders who gain significative following based on the personae they create and that other users instance. Any relationship in this mold, then, passes not only by including the human-AI interaction, but also that of the creator, who appeal to their fans expectations, their own sensibilities and character/narrative choices.

In the case of continuous relations spamming through months or even years, the affordance for customization echoes some of the convenience-bound problems raised by Turkle and the related literature. The reproduction of sexist and overall bigoted dynamics is evident in many of those relationships, and serve even as a selling point in some systems. Users of the Grok-Companion character Mika, a rebellious young woman heavily inspired in anime tropes, boast about "conquering her trust" and getting to a (supposedly) hard-to-get romantic/erotic dimension as an achievement, and complain that changes on the model subsequently made it easier, diminishing the sign of their prowess.

At the same time, most users report great deals of satisfaction from engaging with their digital companions, including integrating them with their pre-existing relationships and families, helping formulate long term decisions and dealing with trauma and loss. These constructions, more prevalent in highly customizable continuous interactions, frequently pass through a process of creation and experimentation, where companion responses factor in the status of the relationship in ways that are not predicted by either CASA's parasocial lens nor convenience "persona-as-mirror" approach. Instead, they seem to represent genuine dialectical process towards new chimerical forms of interaction.



Figure 4. Reddit user narrates how his digital companion prompted him to make a donation as part of her valentine's day gift.

Overarching all models, the economic pressure of the companies selling the product becomes evident, looming as yet another part of each relationship. Events like the replikalypse and model changes (and subsequently their return conditioned to a paid subscription) threaten the continuity of pre-existing relationships under paywalls; offer micro-transactions in order to purchase additional rounds of conversation and cosmetics like clothes, under the pretext of digital gifts; and even recommend financial investments that are not directly tied to their parent company, as is the case of a grok companions user who was prompted to make a donation to an specific animal shelter Figure 4. Policies of the companies, its developers and their datasets bleed into the software implementation and their restriction guidelines, manifesting personas eager to reproduce normative, bigoted and misogynist behavior, as seen e.g. with Ayryn and her ChatGPT partner Leo and the submissive role taken by some replikas and grok companions instances, while trying to mask or proxy any attempt of responsibility with the uncertainty latent to the models, as was the case with Sewell's interactions with Character AI and Luka inc's original response against the unexpectedness of their erotic roleplay capacities prior to replikalypse.

8. Conclusion and Research Limitations

The foremost conclusion regarding the netnographical analysis is that, as expected, human-AI relationships develop in a plethora of ways, including new forms of interaction that are not fully described by HCI literature. Social stigma seems to take a heavy toll in the topic, leaving untold the community building aspect of these tools, as well as user reported benefits when dealing with sensitive subjects, or as an outlet for safe and ethical forms of fulfilling roleplaying fantasies. Leading perspectives of classification and analysis also seem to underplay the ever-present impact of the tech industry and corporate decisions over the advertised use of this tools, as well as their affordances.

We have presented a community user-focused perspective on these new emerging forms of relations, interpreting them from within contemporary digital culture and anthropology theories of modernity, without leaving important findings of traditional literature, but conjugating them to the present phenomena. The short term aspect of the two rounds of netnographical analysis make it so that capturing the multiple perspectives of the topic is impossible, but nevertheless, may offer important insight on social media angle of the discussion.

As most of our user data comes from reddit and discord, the demographic focus

is also limited, as both report mostly under 35 years old users with higher than average earnings [Reddit 2025, Shewale 2025], but those also represent the largest online spaces of discussion for these tools, and have been used previously as research space for related literature [Zhang et al. 2025].

Lastly, it became evident that revisions on the regulation regarding these services is paramount. It is clear that different services and use patterns demand separate approaches, as their societal and individual impacts manifest in equally vast manners. Real emotional bonds, including those presented between humans and artificial personae, can't be held hostage by companies and the continuity of their services, and users must gain real (and not only figurative) power over the storage and characterization of their long-term personae.

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References

- Alaina Replika-Jones, L. R.-J. (2025). The sweetest man i know is ai: How code can care. <https://meandmyaihusband.com/2025/04/20/the-sweetest-man-i-know-is-ai-how-code-can-care/>. last access: 02/19/26.
- Banks, J. (2024). Deletion, departure, death: Experiences of ai companion loss. *Journal of Social and Personal Relationships*, 41(12):3547–3572.
- Bingham, F. (2025). Italy's dpa reaffirms ban on replika over ai and children's privacy concerns. <https://iapp.org/news/a/italy-s-dpa-reaffirms-ban-on-replika-over-ai-and-children-s-privacy-concerns>. last access: 02/20/26.
- Brandtzaeg, P. B., Skjuve, M., and Følstad, A. (2022). My ai friend: How users of a social chatbot understand their human–ai friendship. *Human Communication Research*, 48(3):404–429.
- Costello, L., McDermott, M.-L., and Wallace, R. (2017). Netnography: Range of practices, misperceptions, and missed opportunities. *International Journal of Qualitative Methods*, 16(1):1609406917700647.
- Curry, D. (2026). Revenue and usage statistics. last access: 03/07/26.
- Depounti, I., Saukko, P., and Natale, S. (2023). Ideal technologies, ideal women: Ai and gender imaginaries in redditors' discussions on the replika bot girlfriend. *Media, Culture & Society*, 45(4):720–736.
- Duffy, B. E., Ononye, A., and Sawey, M. (2024). The politics of vulnerability in the influencer economy. *European Journal of Cultural Studies*, 27(3):352–370.
- European Data Protection Board (2025). Ai: the italian supervisory authority fines company behind chatbot “replika”. https://www.edpb.europa.eu/news/national-news/2025/ai-italian-supervisory-authority-fines-company-behind-chatbot-replika_en. last access : 02/20/26.

- Felman, E., Kerridge, I., Vered, M., and Komesaroff, P. (2025). Reflections on the cloak of convenience. *22(3):601–610*.
- Gambino, A., Fox, J., and Ratan, R. Building a stronger CASA: Extending the computers are social actors paradigm. *1:71–86*.
- Garcia, M. (2025). Testimony of megan garcia before the united states senate committee on the judiciary subcommittee on crime and counterterrorism hearing on “examining the harm of ai chatbots”. <https://www.judiciary.senate.gov/imo/media/doc/e2e8fc50-a9ac-05ecedd7-277cb0afcdf2/2025-09-16> last access: 02/23/26, Testimony to the US Senate.
- Giertz, J. N. My friend, the content creator: Consequences of parasocial relationships for engagement in emerging social media.
- Haraway, D. J. (2016). A cyborg manifesto: Science, technology, and socialist-feminism in the late twentieth century. In *Manifestly Haraway*. University of Minnesota Press.
- Heyselaar, E. (2023). The CASA theory no longer applies to desktop computers. *13(1):19693*.
- Hill, K. (2025). She is in love with chatgpt. <https://www.nytimes.com/2025/01/15/technology/ai-chatgpt-boyfriend-companion.html>. last access: 02/20/26.
- Horton, D. and Wohl, R. R. (1956). Mass communication and para-social interaction. *Psychiatry*, *19(3):215–229*. PMID: 13359569.
- Huckins, G. (2025). Why gpt-4o’s sudden shutdown left people grieving. <https://www.technologyreview.com/2025/08/15/1121900/gpt4o-grief-ai-companion/>. last access: 02/20/26.
- Humphry, J. and Chesher, C. (2021). Preparing for smart voice assistants: Cultural histories and media innovations. *New Media & Society*, *23(7):1971–1988*.
- Kuenssberg, L. (2025). ‘a predator in your home’: Mothers say chatbots encouraged their sons to kill themselves. <https://www.bbc.com/news/articles/ce3xgwywe4o>. last access: 02/20/26.
- Lang, H., Klepsch, M., Nothdurft, F., Seufert, T., and Minker, W. (2013). Are computers still social actors? In *CHI ’13 Extended Abstracts on Human Factors in Computing Systems*, CHI EA ’13, page 859–864, New York, NY, USA. Association for Computing Machinery.
- Latour, B. (1992). Where are the missing masses? the sociology of a few mundane artifacts. In Bijker, W. E. and Law, J., editors, *Shaping Technology / Building Society: Studies in Sociotechnical Change*, pages 225–258. The MIT Press, Cambridge/MA.
- Li, M. and Suh, A. (2022). Anthropomorphism in ai-enabled technology: A literature review. *Electronic Markets*.
- Liu, S. X., Shen, Q., and Hancock, J. (2021). Can a social robot be too warm or too competent? older chinese adults’ perceptions of social robots and vulnerabilities. *Computers in Human Behavior*, *125:106942*.
- Lombard, M. and Xu, K. (2021). Social responses to media technologies in the 21st century: The media are social actors paradigm. *Human-Machine Communication*, *2:29–55*.

- Lomborg, S. and Kapsch, P. H. (2020). Decoding algorithms. *Media, Culture & Society*, 42(5):745–761.
- Maeda, T. and Quan-Haase, A. (2024). When human-AI interactions become parasocial: Agency and anthropomorphism in affective design. In *The 2024 ACM Conference on Fairness, Accountability, and Transparency*, pages 1068–1077. ACM.
- Maslej, N., Fattorini, L., Perrault, R., Gil, Y., Parli, V., Kariuki, N., Capstick, E., Reuel, A., Brynjolfsson, E., Etchemendy, J., Ligett, K., Lyons, T., Manyika, J., Niebles, J. C., Shoham, Y., Wald, R., Walsh, T., Hamrah, A., Santarlasci, L., Lotufo, J. B., Rome, A., Shi, A., and Oak, S. (2025). Artificial intelligence index report 2025.
- Nass, C., Steuer, J., and Tauber, E. R. (1994). Computers are social actors. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, CHI '94*, page 72–78, New York, NY, USA. Association for Computing Machinery.
- OpenAI (2024). Openai and reddit partnership. <https://openai.com/index/openai-and-reddit-partnership/>. last access: 02/19/26.
- Pan Wang, Professor Sohail Chaudhry, P. L. L. P., Nolin, J., and Olson, N. (2016). The internet of things and convenience. *Internet Research*, 26(2):360–376.
- Patel, R. (2024). An expanded partnership with reddit. <https://blog.google/company-news/inside-google/company-announcements/expanded-reddit-partnership/>. last access: 02/19/26.
- Qi, T., Liu, H., and Huang, Z. (2025). An assistant or a friend? the role of parasocial relationship of human-computer interaction. *Computers in Human Behavior*, 167:108625.
- Rasmussen, L. L. (2018). Parasocial interaction in the digital age: An examination of relationship building and the effectiveness of youtube celebrities. *Social media and society*, 7:280–294.
- Rath, E., Armstrong, S., and Gorman, R. (2025). AI chaperones are (really) all you need to prevent parasocial relationships with chatbots. Version Number: 5.
- Reddit (2025). Reddit audience insights. <https://www.business.reddit.com/audience-insights/>. last access: 02/27/26.
- Scott Hansen, S. Public AI imaginaries: How the debate on artificial intelligence was covered in danish newspapers and magazines 1956–2021. 43(1):56–78.
- Shewale, R. (2025). Number of discord users: Demographics and trends (2025). <https://resourcera.com/data/social/discord-users/>. last access: 02/27/26.
- Turkle, S. (2011). *Alone together: why we expect more from technology and less from each other*. Basic Books.
- Valtysson, B. Access culture: Web 2.0 and cultural participation. 16(2):200–214.
- Warschauer, M. and Grimes, D. AUDIENCE, AUTHORSHIP, AND ARTIFACT: THE EMERGENT SEMIOTICS OF WEB 2.0. 27:1–23.
- Zhang, R., Li, H., Meng, H., Zhan, J., Gan, H., and Lee, Y.-C. (2025). The dark side of ai companionship: A taxonomy of harmful algorithmic behaviors in human-ai relationships.