

Artificial Affection? Investigating AI-Generated Messages in Human Connections – Sender and Receiver Perceptions

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Abstract

Purpose: The increasing use of AI-generated messages in personal communication raises questions about emotional authenticity, trust, and perceived sincerity. This study explores the perspectives of both senders and receivers of AI-generated messages, with an emphasis on their usage patterns, emotional impact, and ethical considerations.

Methodology: A mixed-method approach was employed, integrating qualitative insights with quantitative survey data. By targeting both individuals - those who use AI for personal messages and those who receive them - two distinct survey questionnaires were distributed to assess how senders and receivers perceive things differently.

Findings: This study shows that although AI offers convenience and improved writing quality, they lack emotional nuance and customization. A sizable percentage of receivers can identify AI-generated messages and believe that they undermine the sender's credibility. Furthermore, most senders do not reveal the use of AI which indicates worries about dishonesty or perception of AI as merely a writing tool.

Novelty: This study offers a distinctive comparative analysis of AI-generated messages from the perspectives of both the senders and receivers. Unlike prior studies that mostly focus on AI's technical abilities, this study explores the social and emotional implications of AI-assisted communication.

Implications: The results imply that although AI has a role in digital communication, its use in private correspondences should be limited to prevent interactions from becoming less genuine. Transparency regarding AI involvement in communication could help bridge the gap between convenience and authenticity in AI-assisted messaging.

Introduction

Communication has always been essential to human civilization, serving as the basis for interpersonal connections, transmission of knowledge, and cultural development. Communication is not only a means of conveying information, but also the basis of social ties and perspectives. People express their intentions, feelings, and values through communication, which shapes how other people see them.

To transmit information and to communicate, early humans used symbolic carvings, cave drawings, and oral traditions. As writing systems evolved, societies moved towards more structured correspondence through manuscripts and letters. Mass communication was made possible by the invention of the printing press in the 15th century, which transformed the way in which knowledge was transmitted.

With the development of the telegraph, telephone, and radio in the 19th and 20th centuries, real-time long-distance communication became possible. But the biggest change occurred with the invention of the internet, which brought social media, email, and instant messaging, drastically changing the way people communicate (Baym, 2010).

In the digital age, texting-which is frequently casual and asynchronous-has taken over as the primary means of interpersonal communication. Text-based communications, like email and SMS, offer convenience, but also diminishes the depth of human interaction by eliminating nonverbal cues like tone, body language, and facial emotions.

According to research, honesty and empathy may be more difficult to convey via digital communication due to its potential lack of emotional depth (Walther, 2011).

This change opened the door for technologies that may help-or perhaps replace- human labour in creating messages, particularly in situations where time, inventiveness, or language proficiency are constraints.

The integration of Artificial Intelligence in digital communication is an example of one such technology. Chatbots and generative language

models are examples of AI-assisted writing tools that now help users to create messages. In both personal and professional communication, AI-generated messages are becoming more prevalent, which raises ethical questions about sincerity, emotional depth, and authenticity (Hohenstein et al., 2023).

There are both advantages and disadvantages of integrating AI in communication. AI-generated messages raise concerns about transparency, trust, and the changing nature of human interaction even while they can increase productivity, improve language quality, and help users express their ideas creatively. The increasing sophistication of AI systems necessitates striking a balance between emotional authenticity and efficiency.

Some contend that AI can help people express themselves more clearly, especially in emotionally charged contexts when it might be challenging to find the right words. However, some are concerned that relying on AI for personal communication could lead to the decline of authenticity and uniqueness of human expression (Fu et al., 2023).

The purpose of this study is to investigate how senders and receivers of AI-generated messages perceive these messages and how they affect communication norms and interpersonal interactions. This research seeks to provide insight into the evolving landscape of digital communication and the ethical considerations associated with incorporating AI into personal messaging. The findings might contribute to ongoing debates regarding AI's place in human communication and assess whether these technologies enhance or diminish the quality of social connections.

Research Objectives

The research objectives of the study are as follows:

1. To investigate why individuals, use AI to generate personal messages.
2. To examine receiver reactions and interpretations of AI-generated messages.

3. To determine whether AI is enhancing or weakening human connection in personal communication.
4. To contribute to discussions on AI's evolving role in digital communication.

Research Questions

Following are the research questions of the study:

1. Why do people use AI to generate personal messages?
2. How do receivers interpret and respond to AI-generated messages?
3. Does AI strengthen or weaken emotional connections in personal communications?
4. What are the ethical and social implications of AI-generated personal messages?

Literature Review

How Technology Affects Communications

Scholars have long studied the relationship between communication and technology, recognizing that technology is continually reshaping how people connect and interact (Baym, 2015; Ling, 2012). Long-distance communication was transformed by the invention of the telephone, and asynchronous communication gained prominence thanks to social media and email.

Communication in the digital age was transformed with the introduction of Short Message Service (SMS) and later instant messaging apps like WhatsApp and iMessage (Ling and Baron, 2007). Texting changed the standards of interpersonal interaction by introducing immediacy and brevity. New linguistic patterns such as emoticons, abbreviations, and GIFs emerged as a result of this change, adding emotional nuance to digital communication (Dresner and Herring, 2010; Derks, Fischer and Bos, 2008).

But there were drawbacks to the greater reliance on digital communication as well. Digital messaging, according to critics lacks the richness and depth of in-person communications and may contribute to misunderstandings and weaken emotional bonds between individuals (Carr, 2010).

Every technological development not only introduces new communication tools but also changes the expectations and conventions of society towards communication. The most recent development is AI, which promises increased productivity but also raises concerns about the declining need of human labour in preserving social connections (Hancock, 2020).

Beyond face-to-face communication, AI has the ability to influence communication. It affects language usage, cultural conventions, and even society ideals (Floridi and Chiriatti, 2020). For example, what constitutes a reasonable amount of effort in interpersonal communication may change if AI-generated communications become more prevalent, changing fundamental expectations in social interactions (Guzman and Lewis, 2020).

An Overview of the Development of Large Language Models (LLMs)

Decades of study in artificial intelligence and computational linguistics provide the basis for large language models, or LLMs. While the introduction of neural networks in natural language processing (NLP) greatly enhanced machine-generated text, the breakthrough was the creation of Transformer architectures and attention mechanisms (Vaswani et al., 2017), which enable LLMs like GPT-3 and GPT-4 to process large volumes of text and produce contextually coherent and human-like responses (Brown et al., 2020).

Although these models were first created for technical purposes, their capacity to produce language that is similar to that of a person makes them useful tools across creative, academic, and professional domains (Bommasani et al., 2021).

LLMs training data which includes a broad range of sources such as books, online articles, websites, scientific papers, and dialogue transcripts, is what enables them to generate sophisticated content (Bender et al., 2021). Because of their versatility, LLMs can imitate a wide range of linguistic conventions, styles, and tones, frequently making it difficult to distinguish between human and machine authorship (Fu et al., 2022).

AI and Language Models in Communication

Human communication has been profoundly impacted by the quick development of Artificial Intelligence (AI), with language models such as OpenAI's GPT series becoming widely used instruments. These models which were first created for tasks like text prediction, summarization and expansion, have developed to generate writing that is human-like, which makes them useful for tasks like content creation, customer support, and even private correspondence (Brown et al., 2020; Bommasani et al., 2021). Neural networks trained on large datasets of human language form the basis of this capability, which allows for the creation of text that resembles human patterns and context awareness (Brown et al., 2020).

According to research, AI can change how people use language and interact with one another. It can speed up communication and encourage the use of positive, emotional language, which can make people feel closer and more cooperative (Hohenstein et al., 2023).

The use of language models in interpersonal communication grew as they improved with time. People started utilizing AI to compose messages for informal greetings, birthdays, and condolences. Convenience, improved language quality, and saving time were the main drivers of this change (Hohenstein et al., 2023). Despite these benefits, concerns were and are still raised over the emotional genuineness of these communications.

The Evolution of AI-Mediated Communication (AI-MC)

Artificial Intelligence-Mediated Communication (AI-MC) is known as personal interaction in which an AI acts on behalf of a person by generating, enhancing or changing messages to achieve communication goals (Hancock, 2020).

In the future, AI systems will be able to draft complicates messages autonomously on behalf of senders as natural language generation (NLG) algorithms improve (Graves, 2013). This capability may not only be used for static written exchanges, but also for synchronous communication, such as real-time communication assistance. The implications of this change go beyond written

communication; AI-generated online profiles, personalized chat replies, and even real-time participation in digital conversations may soon become indistinguishable from human-authored content (Statt, 2018).

Public View of AI in Communication

The introduction of LLMs into interpersonal communication was a social experiment as well as a technological advancement. The lines between human and machine-generated text started to blur due to tools that could mimic human tone, style and emotional resonance. Discussions concerning the moral, psychological, and cultural implications of delegating interpersonal communication to machines were sparked by this development (Turkle, 2015).

The public's perception of AI in personal messaging is frequently influenced by both its potential benefits and disadvantages.

Research shows that although users value the efficiency AI offers, there is frequently a negative bias toward its employment in emotionally and personally meaningful circumstances. Concerns regarding emotional depth, genuineness, and an excessive dependence on technology are the root causes of this mistrust (Fu et al., 2022).

The context of use complicates the issue, AI-mediation is commonly accepted when it is used to enhance clarity, such as in text-based communication through machine translation between languages or auto-correct (Xu, Gao, Fussell, & Cosley, 2014), but AI for interpersonal communication otherwise could lessen the emotional authenticity that has historically defined human connections, leading to perceptions of insincerity and reduced emotional depth (Travis, 2024).

Additionally, recipient's impression of the sender's sincerity and effort may decline, tagging them as less sincere, if they learn a message is AI generated (Hancock, 2020). They may think that AI generated messages are less important, which could have an impact on emotional ties and trust (Fu et al., 2023).

AI-generated communications may not have the personalized touch that distinguishes meaningful communication due to their pre-packed nature. Literature frequently discusses this trade-off between emotional depth and efficiency.

Ethical Concerns and Openness

Transparency is a key ethical factor in communication mediated by AI. *Should users reveal that artificial intelligence was used to create their messages?*

Because recipients respect honesty in interpersonal interactions, studies show that openness can reduce unfavourable views and promote trust. Transparency, however, also presents difficulties since it compels users to face any prejudices, they may have against computer participation and draws attention to societal worries about loss of real human connection due to AI (Susskind and Susskind, 2015).

Another serious issue with AI system is bias. AI models trained on historical data may inadvertently reinforce prejudice or discriminatory practices (Weidinger et al., 2021). This problem emphasizes how important it is to create AI systems that are inclusive, equitable, and efficient (Luize and Serafim, 2023).

Sensitivity to Context and Emotional Depth

A message's emotional impact is frequently influenced by its setting. Artificial Intelligence (AI) tools lack true comprehension and empathy, even though they can produce writing that is emotionally resonant. This restriction is most noticeable in situations that are emotionally charged, such as apologies or condolences, where the sincerity of the message is crucial. According to a study published in *Frontiers in Psychology*, real empathy necessitates consciousness and subjective experience, both of which AI does not possess, making empathic AI essentially impossible (Montemayor, Halpern and Fairweather, 2021).

Furthermore, dependence on AI in personal messaging may lead to a homogenization of communication styles (Turkle, 2015). Even if AI is quite good at writing grammatically sound and understandable prose, it frequently lacks the

distinctive characteristics and peculiarities that make human communication relatable and intimate. The diversity and depth of interpersonal interactions may be undermined by this standardization (Hohenstein et al., 2023).

Psychology of Messages generated by AI

According to psychology, communication is a reflection of work, consideration, and emotional commitment rather than just the exchange of words. These presumptions are called into question by AI-generated texts, which automate a process that has historically been quite personal. According to research, recipients frequently place equal weight on a message's apparent effort and content. There may be a feeling of dissatisfaction or disengagement when this work is delegated to AI (Hohenstein et al., 2023).

It's interesting to note that AI also affects the sender's mentality. Even when the content is improved, many users express reluctance or feelings of guilt when utilizing AI to create personal messages, since the act of personal communication is viewed as a reflection of effort and care (Weiss et al., 2022). This demonstrates the nuanced emotional dynamics at work when technology mediates interpersonal interactions.

Research Methodology

Research Design

This study combines quantitative and qualitative approaches and employs a mixed-methods research design. The data collection process uses Google Forms, where both close-ended and open-ended questions have been incorporated to get statistical data of patterns as well as detailed insights into thoughts and feeling of the participants.

This research focuses on two different groups: **senders** (those who send AI-generated personal messages) and **receivers** (those who receive them). The senders' form focuses on their use, frequency, motivations, and effectiveness of AI-generated personal messages while the receiver's form evaluates their emotional reactions, their perception of authenticity, and level of confidence in the sender.

Participants

The research collected responses from 112 participants, split evenly between the two groups:

Senders: 56 participants mainly from business and Creative Computing department.

Receivers: 56 participants mainly from psychology and cybersecurity department.

Students from other departments and teachers were also included to add diversity in the responses.

Here is a summary of the respondents

Response Summary	Count 112	Percentage
Senders' Form – 56		
Gender		
Male	14	25
Female	42	45
Receivers' Form - 56		
Gender		
Male	13	23.2
Female	43	76.8

Data

Following are the responses for the short quantitative survey

Senders' Form

Survey queries	Responses
How often do you use AI tools to generate personal messages?	%

Regularly	8.9
Frequently	33.9
Rarely	46.4
Never	10.7
Why do you use AI for personal messages?	%
Convenience	41.1
Better Phrasing, Grammar, and Vocabulary	57.1
Saves time	33.9
To make the message more creative	26.8
Do you feel AI generated personal messages convey your true emotions?	%
Always	1.8
Sometimes	53.6
Rarely	21.4
Never	23.2
Do you disclose to recipients that your message was AI-generated?	%
Always	8.9
Sometimes	17.9
Never	73.2
How often do you customize an AI-generated message before sending it?	%
Always	42.9
Sometimes	32.1

Rarely	10.7
Never	14.3

Receivers' Form

Survey queries	Responses
Are you able to detect whether a message is AI generated or self-written?	%
Yes, very easily	46.4%
Only on close inspection	33.9
No	17.9
Does not matter	1.8
How do you feel when you learn a message you received was generated by AI?	%
Positive	12.5
Negative	16.1
Neutral	71.4
Would you feel differently about a condolence or congratulatory message if it was AI-generated?	%
Yes, less valued	66.1
No difference	32.1
Yes, more valued	1.8
Does knowing a message is AI-generated affect your trust in the sender?	%
Yes	23.2

No	7.1
Depends on the situation	69.6
When you receive an AI-generated message, how do you typically respond?	%
Reply with a similar level of effort	19.6
Feel indifferent and respond normally	35.7
Feel less inclined to reply	44.6
What aspects make AI-generated messages feel less genuine?	%
Lack of personalization	48.2
No emotional depth	73.2
Overly generic tone	58.9
In which context do you find AI-generated messages acceptable?	%
Personal Occasions (Birthdays, Weddings)	14.3
Professional/Work	67.9
Marketing/Advertisements	78.6

Comparative Data: Perception of Value of AI-generated Messages

Do you think AI-generated personal messages are as precious/special as personally drafted messages?	Senders (%)	Receivers (%)
Yes	12.5	7.1
No	58.9	69.6
Maybe	28.6	23.2

Qualitative Data

For the question: “**What aspects make AI-generated messages feel less genuine?**”, some participants provided additional reasons. The common themes were as follows:

Lack of effort: Many respondents feel that using AI in messaging indicates lack of effort by the sender.

Examples: “Lack of effort and thought put into it, it’s easy to just enter a prompt on chatgpt” / “They reflect lack of effort”

Unnecessary formality: Respondents feel that such messages are less genuine because of the formal language and complexity.

Examples: “Overuse of formal words and long sentences” / “Oddly specific and unnecessarily formal”

For the question: “**In which context do you find AI-generated messages acceptable?**”, respondents suggested additional use cases for AI.

Examples: “Customer service but only sparingly” / “For generating ideas”

Findings & Discussion

1. Frequency of AI usage in personal messaging – Senders’ Perspective

A sizable number of participants use AI to generate personal messages – 33.9% say they do it frequently and 46.4% say they use it rarely. Only 8.9% use AI regularly. This implies that although AI is frequently used, it’s not always the go-to solution for every message.

Those who use AI have chosen convenience (41.1%) and phrasing, grammar and vocabulary (57.1%) as the key reasons for using AI in personal messaging.

These findings highlight the practical benefits of AI in messaging, especially for people looking to save time or improve the quality of their message.

It is interesting to note that the most voted reason for using AI in messaging is better writing, which

negates the common perception that people use AI due to insincerity or a lack of effort.

2. Perceived emotional authenticity of AI-generated messages – Both Perspectives

More than half of the respondents (53.6%) said that AI-generated texts occasionally express the sender’s actual feelings, while 23.2% said that they never do.

This suggests that communications produce by AI are not necessarily thought to be successful at expressing real emotions.

The results of the receivers’ survey showed that 73.2% of them thought AI messages lacked emotional depth, which is consistent with the idea that these messages might not have enough depth.

This suggests the drawback of AI in interpersonal communication since people’s perceptions of messages are greatly influenced by emotional authenticity, especially in more private or intimate settings.

3. Customization and Disclosure of AI-generated Messages – Senders’ Perspective

According to the data, 42.9% of the senders always customize AI-generated messages and the majority (73.2%) never disclose to the receivers that their message was AI-generated.

The significant percentage of customization indicates that even when AI is used, senders still prefer to add personal touches to ensure that the message seems genuine.

Most senders not disclosing the use of AI indicates two possible explanations – either they feel guilty and have concerns about their messages being perceived as insincere, or they may see AI as just another assistive tool rather than something that requires disclosure.

4. Receivers’ Perspective of AI-generated Messages

According to the results, while 33.9% receivers need closer inspection, 46.4% of the respondents can recognize AI-generated messages with ease. This indicates that a sizable majority have at least

some awareness when a message is AI-generated, suggesting that AI-generated messages exhibit recognizable patterns such as overly formal language or generic phrasing.

However, 17.9% of the receivers were unable to distinguish between AI and human-written messages, suggesting that AI tools have advanced to a point where their outputs can be mistaken for human-written ones occasionally.

Upon discovering a message was AI generated, only 16.1% felt negatively while 71.4% said they felt neutral. This shows that AI is becoming more widely accepted, yet the thought of its utilization may weaken the emotional bond.

5. Contexts where AI-generated messages are acceptable – Receivers’ Perspective

78.6% receivers stated that AI-generated messages are appropriate for marketing and advertisement while 67.9% agreed that they were suitable for use in work-related settings. Only 14.3% thought that it was alright to use AI for personal occasions like birthdays or weddings, which is further supported by the finding that 66.1% of the respondents would value a condolence or congratulatory message less if it was AI-generated.

6. Lack of Genuineness in AI-generated Messages – Receivers’ Perspective

Qualitative data reveals additional reasons why AI-generated Messages seem less genuine. Among the given options in the survey, the highly voted reasons for why AI messages are less genuine were no emotional depth (73.2%) and overly generic tone (58.9%). Other than that, two common themes in people’s responses were lack of effort and overly formal language usage. Several respondents felt that AI-generated texts are needlessly formal, complex, and seem robotic.

Some are of the opinion that they indicate a lack of effort as “it’s easy to just enter a prompt”.

7. Impact on Trust in the Sender – Receivers’ Perspective

A key finding from the survey is that AI-generated messages can influence trust in the sender.

23.2% of the respondents stated that knowing that a message was AI-generated impacted their trust, while 7.1% disagreed. The majority (69.6%), however, said that it depends on the situation, indicating that context is a crucial factor in people’s perceptions.

Interestingly, this aligns with the senders’ behaviour as 73.2% of them do not reveal that their messages are AI-generated as they are not always warmly received.

8. Comparative Analysis – Perception of the value of AI-generated Messages vs Personally drafted Messages

One key question was asked in both forms: Whether AI-generated personal messages are as precious as human-written ones.

Senders’ Perspective: Among the senders, 12.5% think they can be as precious as human-written ones while the majority (58.9%) disagrees, stating that they do not hold the same emotional value. 28.6% responded with “Maybe” indicating uncertainty towards the emotional value of AI-generated messages.

Receivers’ Perspective: Only 7.1% among the receiver respondents believe that AI-generated messages hold the same value as human-written ones while 69.6% feel that they do not. The remaining 23.2% remaining unsure.

Comparative Discussion: The disparity between the senders’ and receivers’ perspectives provides an intriguing contrast in the perceived value of use of AI in personal messaging. The receivers lean more strongly in the direction of a negative opinion as compared to the senders.

This reflects a **disconnect between the intention of the sender and the emotional response of the receiver**. Senders may see AI as tool to enhance their messages while the receiver focus more on the emotional depth of the message.

Conclusion

This study explored the use of AI-generated personal messages from both the sender’s and receiver’s perspective, giving key insights into how

AI impacts interpersonal communication. AI-assisted messages provide practical benefits, such as better phrasing and efficiency, but there are still serious concerns about how they are perceived emotionally. The perception that AI messages need a human-personalization to be authentic is reinforced by the fact that many receivers perceive AI messages as lacking in emotional depth.

One noteworthy discovery is the disconnect between the senders and the receivers regarding the preciousness/value of AI-generated personal messages. Majority of the recipients disagree that AI messages hold the same value as human-written ones whereas senders perceive AI as a mere tool to enhance their writing. This highlights a gap in expectations – senders may employ AI with the best of intentions but recipients mostly value effort and sincerity over linguistic precision.

For the receivers, the impact on trust is highly situational whereas sender hide the use of AI possibly due to concerns about insincerity or judgement. As AI's role evolves in personal communication, its acceptance varies based on the occasion and relationship.

Overall, while AI can improve communication in less personal and professional settings, its limitations in expressing emotions and the ethical considerations that come with it show that human-written messages are still irreplaceable in personal interactions. Future research could explore ways to make AI messages more emotionally resonant while maintaining ethical transparency in their usage.

Limitations and Recommendations

Although the data was able to provide some valuable insights about how people interpret use of AI in personal messaging, it contains a few drawbacks. The sample size may not accurately reflect the broader societal sentiments regarding AI in messaging, because despite its diversity, it was mainly composed of university students. A wider and more diverse participant pool, encompassing different age groups and cultural backgrounds could be advantageous for future studies.

Another limitation is that the study's primary focus is text-based communication. However, AI-generated communication is developing beyond text to incorporate deepfake video technology and voice synthesis. Future research should examine how these developments affect how people view AI-generated messages in terms of trustworthiness and authenticity.

Based on the results, a key recommendation is that use of AI in personal messaging should be approached with caution. Artificial Intelligence can help improve clarity and structure, but it shouldn't take the place of human effort required in personal interactions, especially in sensitive contexts like condolences and heartfelt congratulations. Additionally, increased transparency in AI-assisted messaging could help maintain trust between senders and receivers. How AI may be tuned to preserve emotional depth while retaining its usefulness can also be a subject of future research.

References | Harvard

- Baym, N.K. and Internet Archive (2010). *Personal connections in the digital age*. [online] *Internet Archive*. Cambridge, UK ; Malden, MA : Polity. Available at: <https://archive.org/details/personalconnecti0000baym/page/n5/mode/2up>.
- Bender, E., McMillan-Major, A., Shmitchell, S. and Gebru, T. (2021). On the Dangers of Stochastic Parrots: Can Language Models Be Too Big? *FACCT '21: Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, [online] pp.610–623. doi:<https://doi.org/10.1145/3442188.3445922>.

- Bommasani, R., Hudson, D.A., Adeli, E., Altman, R., Arora, S., von Arx, S., Bernstein, M.S., Bohg, J., Bosselut, A., Brunskill, E., Brynjolfsson, E., Buch, S., Card, D., Castellon, R., Chatterji, N., Chen, A., Creel, K., Davis, J.Q., Demszky, D. and Donahue, C. (2021). On the Opportunities and Risks of Foundation Models. *arXiv:2108.07258 [cs]*. [online] Available at: <https://arxiv.org/abs/2108.07258>.
- Brown, T., Mann, B., Ryder, N., Subbiah, M., Kaplan, J.D., Dhariwal, P., Neelakantan, A., Shyam, P., Sastry, G., Askell, A. and Agarwal, S., 2020. Language models are few-shot learners. *Advances in neural information processing systems*, 33, pp.1877-1901.
- Carr, N., 2020. *The shallows: What the Internet is doing to our brains*. WW Norton & Company. Available at: [The Shallows: What the Internet Is Doing to Our Brains - Nicholas Carr - Google Books](#).
- Derks, D., Fischer, A.H. and Bos, A.E.R. (2008). The role of emotion in computer-mediated communication: A review. *Computers in Human Behavior*, 24(3), pp.766–785. doi:<https://doi.org/10.1016/j.chb.2007.04.004>.
- Dresner, E. and Herring, S.C. (2010). Functions of the Nonverbal in CMC: Emoticons and Illocutionary Force. *Communication Theory*, 20(3), pp.249–268. doi:<https://doi.org/10.1111/j.1468-2885.2010.01362.x>.
- Floridi, L. and Chiriatti, M. (2020). GPT-3: Its Nature, Scope, Limits, and Consequences. *Minds and Machines*, 30(4), pp.681–694.
- Fu, Y., Foell, S., Xu, X. and Hiniker, A., 2023. From Text to Self: Users' Perceptions of Potential of AI on Interpersonal Communication and Self. *arXiv preprint arXiv:2310.03976*.
- Graves, A. (2013). *Generating Sequences With Recurrent Neural Networks*. [online] arXiv.org. Available at: <https://arxiv.org/abs/1308.0850>.
- Guzman, A.L. and Lewis, S.C. (2020). Artificial intelligence and communication: A Human–Machine Communication research agenda. *New Media & Society*, [online] 22(1), p.146144481985869. doi:<https://doi.org/10.1177/1461444819858691>.
- Hancock, J.T., Naaman, M. and Levy, K., 2020. AI-mediated communication: Definition, research agenda, and ethical considerations. *Journal of Computer-Mediated Communication*, 25(1), pp.89-100., <https://doi.org/10.1093/jcmc/zmz022>.
- Hohenstein, J., Kizilcec, R.F., DiFranzo, D. et al. Artificial intelligence in communication impacts language and social relationships. *Sci Rep* 13, 5487 (2023). <https://doi.org/10.1038/s41598-023-30938-9>.
- Ling, R., 2012. *Taken for grantedness: The embedding of mobile communication into society*. MIT press. Available at: [Taken for Grantedness: The Embedding of Mobile Communication into Society - Richard Ling - Google Books](#).

- Ling, R. and Baron, N.S. (2007). Text Messaging and IM. *Journal of Language and Social Psychology*, 26(3), pp.291–298.
doi:<https://doi.org/10.1177/0261927x06303480>.
- Luize, A. and Serafim, M.C. (2023). Ethical content in artificial intelligence systems: A demand explained in three critical points. *Frontiers in Psychology*, [online] 14.
doi:<https://doi.org/10.3389/fpsyg.2023.1074787>.
- Montemayor, C., Halpern, J. and Fairweather, A. (2021). In Principle Obstacles for Empathic AI: Why We Can't Replace Human Empathy in Healthcare. *AI & Society*, [online] 37(4).
doi:<https://doi.org/10.1007/s00146-021-01230-z>.
- OUP accepted manuscript. (2019). *Journal of Computer-Mediated Communication*.
doi:<https://doi.org/10.1093/jcmc/zmz027>.
- Pugh, A. (2024). *When AI Automates Relationships*. [online] TIME. Available at: <https://time.com/7010288/when-ai-automates-relationships-essay/>.
- Purcell, Z.A., Dong, M., Nussberger, A.-M., Köbis, N. and Jakesch, M. (2023). *Fears about AI-mediated communication are grounded in different expectations for one's own versus others' use*. [online] arXiv.org. Available at: https://arxiv.org/abs/2305.01670?utm_source=chatgpt.com [Accessed 2 Feb. 2025].
- Statt, N. (2018). *Google now says controversial AI voice calling system will identify itself to humans*. [online] The Verge. Available at: <https://www.theverge.com/2018/5/10/17342414/google-duplex-ai-assistant-voice-calling-identify-itself-update>.
- Susskind, R. and Susskind, D. (2015). *The Future of the Professions*. Oxford University Press.
doi:<https://doi.org/10.1093/oso/9780198713395.001.0001>.
- Travis, E.S. (2024). Notes of encouragement: Experiencing audience reception of AI-generated messages. *Communication Teacher*, pp.1–5.
doi:<https://doi.org/10.1080/17404622.2024.2392766>.
- Vaswani, A., 2017. Attention is all you need. *Advances in Neural Information Processing Systems*.
- Walther, J.B., 2011. Theories of computer-mediated communication and interpersonal relations. *The handbook of interpersonal communication*, 4, pp.443–479.
- Weidinger, L., Mellor, J., Rauh, M., Griffin, C., Uesato, J., Huang, P.-S., Cheng, M., Glaese, M., Balle, B., Kasirzadeh, A., Kenton, Z., Brown, S., Hawkins, W., Stepleton, T., Biles, C., Birhane, A., Haas, J., Rimell, L., Hendricks, L.A. and Isaac, W. (2021). Ethical and social risks of harm from Language Models. *arXiv:2112.04359 [cs]*. [online] Available at: <https://arxiv.org/abs/2112.04359>.

- Weiss, D., Liu, S.X., Mieczkowski, H. and Hancock, J.T. (2022). Effects of Using Artificial Intelligence on Interpersonal Perceptions of Job Applicants. *Cyberpsychology, Behavior, and Social Networking*, 25(3). doi:<https://doi.org/10.1089/cyber.2020.0863>.
- Woodward, G.C., 2017. Reclaiming Conversation: The Power of Talk in the Digital Age by Sherry Turkle: New York, NY: Penguin Random House, 2015, 436 Pp., ISBN No. 978-1-59420-555-2 (Hardback).
- Xu, B., Gao, G., Fussell, S.R. and Cosley, D. (2014). Improving machine translation by showing two outputs. *CiteSeer X (The Pennsylvania State University)*. doi:<https://doi.org/10.1145/2556288.2557171>.
- Yao, M.Z. and Ling, R., 2020. “What is computer-mediated communication?”—An introduction to the special issue. *Journal of Computer-Mediated Communication*, 25(1), pp.4-8. Available at: <https://doi.org/10.1073/pnas.2208839120>.