

Emotionally Intelligent Generative AI for Genealogy Research and Collaboration

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Emotional intelligence is critical for effective group collaboration, enabling communication, conflict resolution, and sustained motivation. We investigate the complex emotional experiences inherent in genealogy research, a long-term collaborative sensemaking task. Through a mixed-methods study on the research practices of amateur genealogists, we reveal several key emotional challenges they face during individual's research and collaboration. We conclude by discussing specific ways GenAI can be introduced to provide emotional support to enhance both individual and collaborative sensemaking.

1 Introduction

Generative artificial intelligence (GenAI) has demonstrated transformative ability in various domains, opening doors for HCI researchers to reimagine the ways that AI can support human work. Working with GenAI has become a common practice in both personal and professional settings [1, 13, 21]. However, the adoption of GenAI in group collaboration is underdeveloped.

In-person and virtual collaboration introduces more opportunities for the GenAI application but in a more complex environment. Successful group collaboration goes beyond an individual's ability to complete a task. It also requires, but is not limited to, effective communication [2], resolving conflicts [19], maintaining high motivation and engagement [4], and moderating knowledge and personality differences among group members [8, 17].

The root of successful group collaboration lies in the emotional capacity of the members of the group. Prior work shows strong positive relationships between the emotional intelligence of individuals and their collective performance and interpersonal dynamics [7, 10, 14, 15]. This insight may be extended to human-AI teams. For instance, Nair et al. [18] argues that in a multiagent system, AI could act as a "virtual human" and use emotions as a value system and cues of communication when collaborating with human agents.

GenAI has demonstrated the ability to recognize and influence human mental states in various contexts [5, 22, 23]. However, it is unclear whether and how its emotional capacity should be introduced to human collaboration. In this paper, we call the attention of HCI researchers to explore beyond the cognitive influence that GenAI brings to group work. We present findings on emotional experience during a large-scale collaborative task — online genealogy research — and discuss how GenAI could be introduced to this complex collaboration scenario. We argue for the need for HCI researchers to investigate the development and appropriate use of emotionally intelligent GenAI for various types of collaboration, and propose future research ideas on this topic.

2 Emotions in Genealogy Research

Genealogy (or family history) research is a large-scale collaborative task that attracts millions of practitioners, most of whom are amateurs who are interested in discovering the story of their own ancestors. Genealogists search through historical documents on the Internet and from local archival facilities for information about their ancestor. They identify information related to ancestors and correlate it with what they have known. They build family histories with stories, family trees

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and ancestral profiles. Lastly, they connect and collaborate with relatives and like-minded people around the world to expand their family tree.

However, the journey of genealogy research goes beyond a single cognitive activity because of its high relevance to self-identity and intimate family relations. Moore [16] shows that most genealogists researching their ancestors experience distressing emotions. To further investigate the causes and impact of emotions during genealogy research and explore possible interventions with technology, we conducted a mixed-method study on the emotional experience of genealogists from an HCI perspective.

In our study, we recruited 12 genealogists, observed their genealogy research practices, and interviewed them about their emotional experiences during a pair of lab-based family history sensemaking tasks. Our findings suggest that genealogists' emotions are affected by three elements: (1) the genealogical sensemaking process, (2) the information content that they are exposed to, and (3) interactions with others of the community. Specifically, we found the following common emotional reactions of genealogists and their causes:

- (1) Interest and enjoyment in the activity;
- (2) Excitement with new information and possible research opportunities;
- (3) Confidence and excitement with research progress and accomplishment;
- (4) Frustration with inability to find relevant information;
- (5) Confusion with conflicting information;
- (6) Resonance with ancestors' lives reflected in records;
- (7) Sense of responsibility to conduct family history research and anger towards others' mistakes.

We found evidence that some emotions may cause problems in genealogy research. For instance, our participant admitted that they could get too excited when they found new information and, consequently, did not review it critically before mistakenly accepting it. Then, genealogists' frustration with scarce information and tedious process can lead to avoiding research in a certain direction. Records about an ancestor may reveal tragic events. And genealogists who found such information may feel overwhelmed and have to stop their research. Emotions can also add friction to interpersonal interactions. Our participants mentioned conflicts with relatives who are disturbed by their genealogy findings. They also feel the hesitation to reach out to relatives in fear of sharing a story about an ancestor.

Our findings suggested that genealogists managed to regulate their emotions to some extent, but challenges remain. In the next section, we discuss how GenAI could be introduced to support beyond human cognitive activity, but also cultivate desirable emotional experiences in genealogy research.

3 Emotionally Intelligent GenAI for Genealogy Research and Collaboration

Recent HCI studies on applying AI for human emotions present mixed results depending on their contexts. Studies focusing on the workplace found that (prospective) employers of an organization associate inference of emotions with workplace monitoring, raising concerns about privacy and justice [3, 20]. Researchers also suggested that large language models (LLM) could provide emotional benefits [9, 11], and people voluntarily seek actionable advice and emotional support from LLM-based conversational agents [12].

For the genealogist community, we believe that an emotionally intelligent GenAI can address genealogists' challenges with emotions in multiple ways. At the individual level, it could be a tutor or research assistant for genealogists. In addition to supporting the cognitive task, GenAI could:

- (1) Bring confidence in genealogy research by recognizing genealogists' research progress, even when there is no direct conclusive result;

- (2) Promote interest in researching in a certain direction and reduce frustration by presenting amusing historical contexts and questions;
- (3) Reduce overexcitement when making conclusions and cultivate a sense of responsibility by explaining the importance of accurate research for oneself, family, and the community;
- (4) Comfort with positive perspectives and empathy for genealogists who feel overwhelmed by the tragic events that occurred to their ancestor.

For collaboration, a GenAI may continue its role as a research assistant but also be a moderator between collaborators. Specifically, we believe that GenAI could:

- (1) Encourage and help genealogists initiate and engage in difficult conversations.
- (2) Promote respectful and constructive communication during collaboration.
- (3) Acknowledge differences of opinion and help to resolve or mitigate conflicts.

GenAI responses are highly personalized, which offer an opportunity to support the emotional aspect of genealogy research and collaboration more effectively. However, GenAI could itself be another source of negative emotions to its user. Farangi et al. [6] argued that negative emotions such as fear may rise due to user concern about bias, data privacy, and AI's inability to grasp complex human values, which should be thoroughly consolidated when designing GenAI-based tools for genealogy research and collaboration. In addition, we note that GenAI-based tools should be aware of and address cultural differences presented in genealogy research.

4 Conclusion

When designing technological support for collaboration, there are many factors involved. The nature of the cognitive task, the information content, scale and synchronicity of the collaboration, individuals' personality and expertise, and social context are all part of the consideration. Our study of genealogy research demonstrated the importance and challenge of involving human emotions when designing GenAI technology to support sensemaking and collaboration.

The emotional aspect of GenAI is transforming studies of CSCW, but the effect of it has not been thoroughly examined. Genealogy research incorporates complex cognitive activity, collaboration on different scales, rich historical and cultural content, and is associated with strong emotions of practitioners. The nature of genealogy research offers a unique opportunity to comprehensively examine the effects of GenAI in collaboration. With our findings on emotional experience in genealogy research, we explored possible ways GenAI could support genealogists' emotional needs. In the future, we aim to understand the effect of emotionally intelligent GenAI on genealogists' emotional state and their genealogy research, and explore how GenAI be introduced and incorporated into genealogy systems to help genealogy research activities and create appropriate emotional experiences for genealogists.

References

- [1] Oxford Analytica. 2023. GenAI will transform workplace tasks across industries. *Emerald Expert Briefings* oxaan-db (2023).
- [2] David P Baker and Eduardo Salas. 1992. Principles for measuring teamwork skills. *Human factors* 34, 4 (1992), 469–475.
- [3] Chun-Wei Chiang, Zhuoran Lu, Zhuoyan Li, and Ming Yin. 2024. Enhancing ai-assisted group decision making through llm-powered devil's advocate. In *Proceedings of the 29th International Conference on Intelligent User Interfaces*. 103–119.
- [4] Patricia L Costa, Ana M Passos, and Arnold B Bakker. 2014. Team work engagement: A model of emergence. *Journal of occupational and organizational psychology* 87, 2 (2014), 414–436.
- [5] Zohar Elyoseph, Elad Refoua, Kfir Asraf, Maya Lvovsky, Yoav Shimoni, and Dorit Hadar-Shoval. 2024. Capacity of generative AI to interpret human emotions from visual and textual data: pilot evaluation study. *JMIR Mental Health* 11 (2024), e54369.
- [6] Mohamad Reza Farangi, Hassan Nejadghanbar, and Guangwei Hu. 2024. Use of generative AI in research: ethical considerations and emotional experiences. *Ethics & Behavior* (2024), 1–17.

- [7] Crystal IC Farh, Myeong-Gu Seo, and Paul E Tesluk. 2012. Emotional intelligence, teamwork effectiveness, and job performance: the moderating role of job context. *Journal of applied psychology* 97, 4 (2012), 890.
- [8] Annemarie Horn, Eduardo Urias, Julie T Klein, Andi Hess, and Marjolein BM Zweekhorst. 2023. Expert and non-expert at the same time: knowledge integration processes and dynamics in interdisciplinary teamwork. *Sustainability Science* 18, 5 (2023), 2357–2371.
- [9] Zihui Hu, Hanchao Hou, and Shiguang Ni. 2024. Grow with your AI buddy: designing an LLMs-based conversational agent for the measurement and cultivation of children’s mental resilience. In *Proceedings of the 23rd Annual ACM Interaction Design and Children Conference*. 811–817.
- [10] Gill Hubbard, Kathryn Backett-Milburn, and Debbie Kemmer. 2001. Working with emotion: Issues for the researcher in fieldwork and teamwork. *International journal of social research methodology* 4, 2 (2001), 119–137.
- [11] Eunkyung Jo, Daniel A Epstein, Hyunhoon Jung, and Young-Ho Kim. 2023. Understanding the benefits and challenges of deploying conversational AI leveraging large language models for public health intervention. In *Proceedings of the 2023 CHI conference on human factors in computing systems*. 1–16.
- [12] Kyuha Jung, Gyuho Lee, Yuanhui Huang, and Yunan Chen. 2025. "I've talked to ChatGPT about my issues last night": Examining Mental Health Conversations with Large Language Models through Reddit Analysis. *arXiv preprint arXiv:2504.20320* (2025).
- [13] Matthew Law and Rama Adithya Varanasi. 2025. Generative AI and Changing Work: Systematic Review of Practitioner-Led Work Transformations Through the Lens of Job Crafting. In *International Conference on Human-Computer Interaction*. Springer, 131–152.
- [14] Joseph Luca and Pina Tarricone. 2001. Does emotional intelligence affect successful teamwork? (2001).
- [15] ANTOINETTE McCALLIN and Anita Bamford. 2007. Interdisciplinary teamwork: is the influence of emotional intelligence fully appreciated? *Journal of nursing management* 15, 4 (2007), 386–391.
- [16] Susan M Moore. 2023. Family history research and distressing emotions. *Genealogy* 7, 2 (2023), 26.
- [17] Frederick P Morgeson, Matthew H Reider, and Michael A Campion. 2005. Selecting individuals in team settings: The importance of social skills, personality characteristics, and teamwork knowledge. *Personnel psychology* 58, 3 (2005), 583–611.
- [18] Ranjit Nair, Milind Tambe, and Stacy Marsella. 2005. The Role of Emotions in Multiagent Teamwork.
- [19] Thomas A O'Neill and Matthew JW McLarnon. 2018. Optimizing team conflict dynamics for high performance teamwork. *Human Resource Management Review* 28, 4 (2018), 378–394.
- [20] Cassidy Pyle, Kat Roemmich, and Nazanin Andalibi. 2024. US job-seekers’ organizational justice perceptions of emotion AI-enabled interviews. *Proceedings of the ACM on human-computer interaction* 8, CSCW2 (2024), 1–42.
- [21] Yuan Sun, Eunhae Jang, Fenglong Ma, and Ting Wang. 2024. Generative AI in the wild: Prospects, challenges, and strategies. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems*. 1–16.
- [22] Liying Wang, Tanmay Bhanushali, Zhuoran Huang, Jingyi Yang, Sukriti Badami, and Lisa Hightow-Weidman. 2025. Evaluating Generative AI in Mental Health: Systematic Review of Capabilities and Limitations. *JMIR mental health* 12, 1 (2025), e70014.
- [23] Xuechang Xian, Angela Chang, Yu-Tao Xiang, Matthew Tingchi Liu, et al. 2024. Debate and dilemmas regarding generative AI in mental health care: scoping review. *Interactive Journal of Medical Research* 13, 1 (2024), e53672.