Future Wellbeing: A Hands-on Design Fiction Workshop Exploring Human-Agent Interaction and Mental Health

SHORT-PAPER

Future Wellbeing: A Hands-on Design Fiction Workshop Exploring Human-Agent Interaction and Mental Health

NEGIN HASHMATI, Chalmers University of Technology, Gothenburg, Vastra Gotaland, Sweden

THERÉSE SKOOG, University of Gothenburg, Gothenburg, Vastra Gotaland, Sweden

MOHAMMAD OBAID, Chalmers University of Technology, Gothenburg, Vastra Gotaland, Sweden

THOMMY ERIKSSON, Chalmers University of Technology, Gothenburg, Vastra Gotaland, Sweden

Published: 10 November 2025

HAI '25: International Conference on Human-Agent Interaction
November 10 - 13, 2025
Yokohama, Japan

https://doi.org/10.1145/3765766.3765882
ISBN: 9798400721786

Future Wellbeing: A Hands-on Design Fiction Workshop Exploring Human-Agent Interaction and Mental Health

Negin Hashmati
Department of Computer Science and Engineering
Chalmers University of Technology
Gothenburg, Sweden
University of Gothenburg
Gothenburg, Sweden
hashmati@chalmers.se

Therése Skoog
Department of Psychology
University of Gothenburg
Gothenburg, Sweden
therese.skoog@psy.gu.se

Mohammad Obaid
Department of Computer Science and Engineering
Chalmers University of Technology
Gothenburg, Sweden
University of Gothenburg
Gothenburg, Sweden
mobaid@chalmers.se

Thommy Eriksson
Department of Computer Science and Engineering
Chalmers University of Technology
Gothenburg, Sweden
University of Gothenburg
Gothenburg, Sweden
thommy@chalmers.se

Abstract

This hands-on workshop will explore the potential implementations of human-agent interaction and mental health, with a specific focus on virtual companions. To achieve this, we will be using design fiction to anticipate individual, societal, ethical, and cultural implications. In this workshop, we will together create design fiction stories that explore virtual companions and practical, ethical, and societal issues with their possible implementation in mental healthcare.

CCS Concepts

• **Human-centered computing → Interaction design**.

Keywords

Workshop, Human-Agent Interaction, Affective Computing, Virtual Companions, Design Fiction, Mental Health, Psychology, Ethics

ACM Reference Format:
Negin Hashmati, Therése Skoog, Mohammad Obaid, and Thommy Eriksson. 2025. Future Wellbeing: A Hands-on Design Fiction Workshop Exploring Human-Agent Interaction and Mental Health. In *13th International Conference on Human-Agent Interaction (HAI '25), November 10–13, 2025, Yokohama, Japan.* ACM, New York, NY, USA, 3 pages. https://doi.org/10.1145/3765766.3765882

1 Overview

Within the field of human-agent interaction, virtual companions - a virtual agent that can form a "relationship" with its user - have become more common and advanced in the past years, driven by the fast-paced development of generative AI and large language models [11, 12]. Commercial virtual companions lead to ethical issues, particularly regarding privacy, user data, emotional impact, and stereotypical visual representations [2, 8, 10]. This is especially poignant in the application area of mental health, where the user might be in a vulnerable state. This concern has motivated us to propose a workshop using design fiction to critically examine virtual companions and their societal implementation in mental healthcare. Design fiction (overlapping with the methods speculative design and sci-fi prototyping) is an explorative method for examining the possible future development of new technology, anticipating both the potential risks and opportunities [9]. Design fiction can also be a co-design activity together with users [1, 3, 4], sometimes framed as a participatory speculative design workshop [5].

2 Goals and Objectives

The objective of this workshop is to gather an interdisciplinary group of researchers involved in affective computing, virtual companions, human-agent interaction, and mental health. We anticipate that this group, after the workshop, can form a community dedicated to continuing the work with design fiction as a method within these areas of expertise. The workshop organizers can take the lead on sustaining this community after the workshop.

One goal is that the workshop participants develop and refine hands-on skills to apply design fiction as a method, which they can find use for in their own future research. Another goal is to explore potential advantages and disadvantages of affective computing and virtual companions within the following topics:

- Exploration of how virtual companions can affect users' mental health
- The design of virtual companions (both avatar design and behavioral design) and how this affects user trust
- The risks of reinforcing stereotypes, especially gender stereotypes
- Ethical concerns regarding the use of virtual companions for mental health purposes

HAI '25, Yokohama, Japan

ACM ISBN 979-8-4007-2178-6/25/11
https://doi.org/10.1145/3765766.3765882

The following research questions will guide the workshop:

RQ1: What could the future design and interactions with virtual companions supporting and interacting with users with mental health conditions, such as anxiety or depression, look like?

RQ2: What could the potential advantages and disadvantages be?

3 Workshop Structure

This full-day, hands-on workshop will follow the double diamond model commonly used in interaction design and human-computer interaction [6] with the steps of discover, define, develop, and deliver. In short, this entails first discovering and defining the problem to be examined, and second to develop and deliver a proposed design. Table 1 outlines the details of the planned schedule. Note that our call for story outlines means that participants can choose to start their design fiction work even before the workshop starts. However, submitting a story outline will not be a requirement for participating in the workshop.

Session	Description
09:00 Kickoff and Introductions	Introduction to the workshop. Participants introduce themselves.
09:30 Mental Health Briefing	Organizers give primer on mental health and the target user.
10:00 Session I: Discover	Story outline presentations in small groups.
11:00 Session II: Define	Participants brainstorm in small groups on what aspect of virtual companions they want to focus on in their design fictions, and select the format, for example: a written short story, storyboard, manga, poster, or a product prototype.
12:00 Lunch	
13:00 Session III: Develop	Participants create their design fiction narratives, in small groups or individually.
15:00 Session IV: Deliver	Participants present their design fictions and discuss what the future of virtual companions might look like.
16:00 Wrap-up and Future Road Map	We conclude the workshop and highlight the main outcomes, and participants reflect on the topics that were discussed. Closing remarks will decide on actionable further work and collaboration.

Table 1: Workshop Schedule and Description

4 Expected Outcomes

The expected outcome of the workshop, beyond deepening the skills of participants in the production of design fiction and examining potential ethical issues with virtual companions, is a group of researchers dedicated to continuing the work. Specifically, we will invite the workshop participants to contribute to a book anthology of design fictions related to virtual companions. The workshop will also result in a plan for finalizing this work.

5 Expected Audience

We expect workshop participants who work with affective computing, virtual companions, or mental health, and who are both established researchers and students. This workshop is relevant for conference attendees in two ways: 1) Design fiction is a hands-on, explorative method to examine the potential future development of technology and its implementation in society. It is especially suitable to learn and explore together with others in a workshop format. 2) Virtual companions and affective computing are a growing field boosted by recent developments in large language models. The societal implementation of virtual companions as a support for users with mental health conditions has a number of potentially severe ethical issues and therefore deserves attention from a range of viewpoints [7].

We acknowledge that language accessibility can be a challenge in the bilingual environment of the HAI conference, and we will accommodate the possibility for participants to work in groups of their own selection. We also open up for design fiction products that can be primarily visual, such as posters and manga.

6 Call for Papers

We welcome submissions of design fiction story outlines that are 2-3 pages long (including any references). The submission format should follow the conference paper format. We expect 15-20 submissions, and we seek contributions from a range of research areas in relation to virtual companions. Topics include, but are not limited to, the themes of the workshop, mentioned in Section 2 *Goals and Objectives*. Each submission will be single-blind reviewed by two of the organizers.

7 Logistical Requirements

It would be beneficial to have access to post-it notes, pens of different colors and line widths, A1 or A2 sheets of paper, as well as a way to hang 10-15 posters on walls or stands.

8 Organizers

This workshop is organized by a team of interdisciplinary researchers whose knowledge spans the areas of Artificial Intelligence, Design Fiction, Human-Robot Interaction, and Psychology.

Negin Hashmati is a PhD student in interaction design. Her PhD topic is on virtual companions (or virtual agents) and how they affect young people's mental health, using design fiction as one of the main methods to explore the future of this technology. She was a student volunteer at the 2023 HAI conferences.

Thommy Eriksson is a senior lecturer in interaction design, with a PhD in Digital Representation. Thommy has been organizing a number of conferences and workshops over the last 25 years, including the HAI conference three times.

Mohammad Obaid is an associate professor in human-computer interaction. He has co-authored over 100 articles in the fields of HCI and HRI/HAI and has served on several organizing committees at various HCI and HRI conferences. His main research focuses on human-agent interaction and human-drone interaction.

Therése Skoog is a professor of psychology, vice dean, and an expert on the psychosocial development of young people. Her research is both basic and applied in nature.

References

[1] Aloha Hufana Ambe, Margot Brereton, Alessandro Soro, Laurie Buys, and Paul Roe. 2019. The adventures of older authors: Exploring futures through co-design fictions. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing systems*. 1–16.

[2] Pedro Guillermo Feijóo-García, Chase Wrenn, Jacob Stuart, Alexandre Gomes De Siqueira, and Benjamin Lok. 2023. Participatory design of virtual humans for mental health support among North American computer science students: Voice,

appearance, and the similarity-attraction effect. *ACM Transactions on Applied Perception* 20, 3 (2023), 1–27.

[3] Anna Grafström, Moa Holmgren, Simon Linge, Tomas Lagerberg, and Mohammad Obaid. 2022. A Speculative Design Approach to Investigate Interactions for an Assistant Robot Cleaner in Food Plants. In *Adjunct Proceedings of the 2022 Nordic Human-Computer Interaction Conference* (Aarhus, Denmark) *(NordiCHI '22)*. Association for Computing Machinery, New York, NY, USA, Article 50, 5 pages.

[4] Linda Hirsch, Florian Hild, and Mohammad Obaid. 2022. Design Recommendations for Historical Cemeteries Using Speculative Design. In *Proceedings of the 25th International Academic Mindtrek Conference* (Tampere, Finland). ACM, 147–157.

[5] Michel Hohendanner, Chiara Ullstein, Dohjin Miyamoto, Emma F Huffman, Gudrun Socher, Jens Grossklags, and Hirotaka Osawa. 2024. Metaverse Perspectives from Japan: A Participatory Speculative Design Case Study. *Proc. ACM Hum.-Comput. Interact.* 8, CSCW2 (2024), Article 400.

[6] Magda Kochanowska and Weronika Rochacka Gagliardi. 2022. The double diamond model: In pursuit of simplicity and flexibility. *Perspectives on Design II: Research, Education and Practice* (2022), 19–32.

[7] Takuya Maeda and Anabel Quan-Haase. 2024. When human-AI interactions become parasocial: Agency and anthropomorphism in affective design. In *Proceedings of the ACM Conference on Fairness, Accountability, and Transparency*. 1068–1077.

[8] Hannah R Marriott and Valentina Pitardi. 2024. One is the loneliest number… Two can be as bad as one. The influence of AI Friendship Apps on users' well-being and addiction. *Psychology & marketing* 41, 1 (2024), 86–101.

[9] Omar Mubin, Mohammad Obaid, Philipp Jordan, Patricia Alves-Oliveria, Thommy Eriksson, Wolmet Barendregt, Daniel Sjolle, Morten Fjeld, Simeon Simoff, and Mark Billinghurst. 2016. Towards an agenda for Sci-Fi inspired HCI research. In *Proceedings of the 13th International Conference on Advances in Computer Entertainment Technology*. 1–6.

[10] Deborah Richards, Bayan Alsharbi, and Amal Abdulrahman. 2020. Can I help you? Preferences of young adults for the age, gender and ethnicity of a Virtual Support Person based on individual differences including personality and psychological state. In *Proceedings of the Australasian Computer Science Week Multiconference*. 1–10.

[11] Ayanda Rogge. 2023. Defining, designing and distinguishing artificial companions: A systematic literature review. *International Journal of Social Robotics* 15, 9 (2023), 1557–1579.

[12] Dominik Siemon, Timo Strohmann, Bijan Khosrawi-Rad, Triparna de Vreede, Edona Elshan, and Michael Meyer. 2022. Why Do We Turn to Virtual Companions? A Text Mining Analysis of Replika Reviews.. In *AMCIS*.