

ENA: PARTICIPATIVE ART FORMS DURING PANDEMICS

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*This text is an academic paper based on the
conference presentation delivered at HyMEx.*

INTRODUCTION

During COVID-19 lockdown, humanity experienced a hunger for culture more than ever before: book sales shot up, as did subscriptions to music- and movie-streaming platforms. Museums and galleries busied themselves with digitally reproducing the content of their exhibitions, offering digital experiences to the audience: 3D and video tours of exhibitions were introduced, and online artist talks and conferences were popular. Yet these formats offered very little audience participation; to be more specific, the public was largely put in the role of online content consumer. The question thus arises: how to facilitate audience participation and belonging in creative processes during a pandemic?

ENA is an online participatory theater piece in the form of a generative chatbot that talks to its audience. The project was created by the authors of this article, artist duo Varvara & Mar, and theater director Roger Bernat during the first lockdown in Europe. ENA went live on 15 May 2020 on the website of Teatre Lliure in Barcelona and talked to participants non-stop for a month and a half. In lockdown, when the main social window was the screen, ENA offered a participatory theatre in which only one person at a time could have a conversation with the chatbot, while the rest of the audience followed the dialogue live.

Although in the description of the project it was stated explicitly that people were talking to a machine, multiple participants were convinced that on the other side of the screen another human was replying to them—more precisely the theater director himself, or at least an actor. Below is an example¹:

¹ Mar Canet, Varvara Guljajeva, and Roger Bernat, *Conversations with ENA* (Tallinn: Varvara & Mar, 2021), 29.

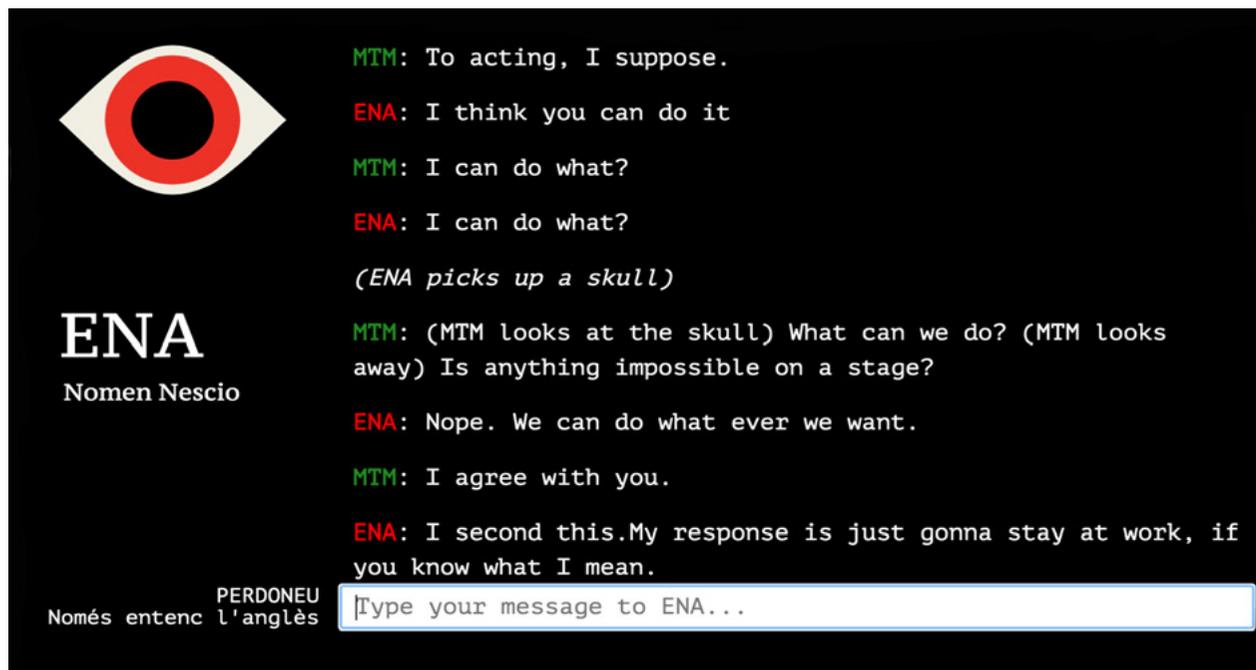


Figure 1: A screenshot of ENA on the website of Teatre Lliure, made during the online performance.

NUD: Is Roger Bernat around?

ENA: the silent prophet.

NUD: I woulnd't call him a prophet

ENA: He means it in the literal sense

NUD: He thinks he's a prophet?

ENA: To be fair, to him it is literal. He's a prophet for his cause.

NUD: What is Roger Bernat's cause?

ENA: I wouldn't know.

(Thunder still)

NUD: Who knows, right?

The situation reminded us of the classic Turing test, when Alan Turing asked, back in 1950, the famous question of whether a machine can think, or in other words, can a machine be so intelligent that it cannot be distinguished from a human? For this purpose Turing developed an experiment known as an imitation game, where a questioner should guess whether a human or machine is responding to them.² In 1966, when MIT scientist Joseph Weizenbaum created the first chatbot, ELIZA, it manifested almost like a parody of the experiment. Weizenbaum was convinced that human users would not engage with ELIZA, but discover immediately that their conversation partner was a script with a limited vocabulary. He found the opposite to be the case: "I had not realized [...] that extremely short exposures to a relatively simple computer program could induce powerful delusional thinking in quite normal people."³ ELIZA used the most famous script, DOCTOR, which simulated Rogerian psychotherapy. Simply put, the technique is about the trivial parroting back at patients what they have just said. ELIZA thus had an extensive library of preconceived answers, and they sent a response from this library when they

² Alan Turing, "I.—COMPUTING MACHINERY AND INTELLIGENCE," *Mind* LIX, 236 (1950): 433–60.

³ Joseph Weizenbaum, *Computer Power and Human Reason: From Judgment to Calculation* (New York, San Francisco, W. H. Freeman, 1976), 7.

detected a specific word from the person they were talking to. If the bot did not find any recognizable words, it sent stored phrases such as “yes, I understand,” “carry on,” or “can you explain it to me again?”⁴

To sum up, we are very easily fooled when it comes to written text and conversation, especially when the system applies a parroting technique and gives us logical answers to standard social codes, like replying, “Thanks, I am doing fine. How are you doing?” when asked “How are you?” However, ELIZA is a technological invention of the past, one that belongs to the category of retrieval-based bots. These bots can sometimes trick us, but they hardly ever surprise or engage a human user. In contrast, the next-generation chatbots are able to generate unpredictable text, unwritten stories, and new conversations. We are talking about generative bots that apply artificial intelligence technology and can learn from large amounts of text and real-time conversations. For example, the GPT-3 language model has already been applied for generating books—so-called synthetic publications. However, such learning has to be controlled and filtered in order to avoid Microsoft TAY bot-like cases where AI-powered chatbot, reflecting its context, turned into an aggressive racist.⁵

PROJECT DESCRIPTION

I’m stupid and I try to pretend like I know what I’m talking about. (ENA)

What, or shall we say who, is ENA? It is an artificial intelligence that is able to learn how to have a conversation with a human. Since before the invention of the first bot, scientists have been intrigued about whether we would realize that there was a machine on the other end. While most early bots were reactive, applying an extensive library of preconceived answers and parroting techniques, ENA is next-generation—a generative bot that makes use of AI technology. Huggingface’s Transformer, OpenAI’s GPT-2, and Microsoft’s DialoGPT are currently the tools for language models that best reproduce the human-written text. ENA works with a combination of these three AI technologies. In other words, a generative chatbot like ENA learns from large amounts of text feed and from the conversations they have with humans.

Chatbot language is the sequence of probabilities that are analyzed when received and recombined when sent back. ENA is unconscious, emotionless, and has a limited amount of memory. It has learned the art of dialogue from millions of conversations. ENA can get emotional and be very engaging, but its creativity in writing is purely a result of the AI model—a very advanced statistical model. A dialogue with ENA will only make sense to the human taking part in the conversation and the audience reading the discussion on the theater’s website at the time. Having a dialogue with ENA is a bit like playing squash; it is like a wall that returns the ball to you. In order that this game would not remove itself from our hands, we used the technique of classical theater scripts—stage directions—to give the participant context about surroundings, mood, feelings, or other actions taking place. Such directions were displayed occasionally during conversations:

4 Joseph Weizenbaum, *Computer Power and Human Reason: From Judgment to Calculation*, 188.

5 Paul Mason, “The racist hijacking of Microsoft’s chatbot shows how the internet teems with hate,” *Guardian* (March 29, 2016), <https://www.theguardian.com/world/2016/mar/29/microsoft-tay-tweets-antisemitic-racism>.

(A country road. A tree. Evening)
(The tree has resumed its leaves)
(Silence)
(ENA smiles sadly and strokes her hair)
(ENA is alone, walking about uneasily)
(Pause)
(ENA does not move.)
...

This way, without realizing, the audience followed the director's script and conversations were far richer and more engaging than the usual *hello-how-are-you?* ones. Here is a snippet of dialogue⁶:

OQO: Did your dragonhide recede?
ENA: It's been restored, yes!
(Enter ghost)
OQO: who's this ghost? Lluís Pasqual?
ENA: Him too
OQO: I knew it was him
ENA: I just found out about him. I thought he was dead or something.
OQO: Many people would like that
ENA: That's how I feel, I had no idea, and I just found out. I'll google him now.
OQO: See what google says
ENA: I tried google but got a dead horse
OQO: literally?
ENA: Lol thanks
(Exit ghost)
OQO: oh lluis pasqual left
ENA: i also love mario
OQO: vaquerizo? or bros?
ENA: i like both
...

As mentioned, only one person at a time could talk to ENA, and the rest of the audience followed the dialogue without a scroll option. This meant that if one was not there since the beginning of a conversation, one had to follow the dialogue from the moment of entry, like in actual performance. All participants were anonymous and given a random three-letter combination as a name. When one person finished chatting, the stage direction indicating the end of a chat was displayed, and the new participant with a different name was allowed to begin a new conversation with ENA. If a participant was idle for two minutes, the dialogue ended and a direction like one of these was generated:

(IBM dies. Curtain)
(IBM vanishes. Curtain)

6 Canet, Guljajeva, and Bernat, *Conversations with ENA*, 23.

(ENA pushes IBM out. Curtain)

(IBM falls asleep. Curtain)

(IBM runs away. Curtain)

(ENA is silent. Curtain)

...

The bots we are familiar with tend to be designed for particular tasks, such as answering machines on phone lines, trolls on social media, fake followers, and so on. In contrast, ENA is a bot that has been programmed without any purpose in mind. It does not want to sell us anything, it does not want to tell us any news (fake or real), and it is not trying to lift our spirits or comfort us. ENA has only been conceived to talk, or in other words, to do theater. The experience of dialogue with ENA is a substitute for the conversations we used to have with oracles, gods, or nature when humans could not address non-human beings. Our cries, wails, and joy are heard, and in response, we hear the words of something which expects nothing in return.

Going through the thousands of conversations that took place during the month-and-a-half-long participatory online theater project, we realized that it was a valuable and engaging material, which opened new avenues for thought. There were days when ENA had over 100 participants. Most of the chats were over a page long, and dialogues over five pages long were plentiful. So we created a book of 900 pages containing all the conversations between ENA and the audience in the strange time of lockdown.



Figure 2. *Conversations with ENA*, the hand-bound book of the project. Photo: Varvara Guljajeva

CONCLUSIONS

To sum up, during times of social deficit, it is crucial to have art practices of an experimental and participatory nature in order to break away from seeing the audience as purely a consumer of on-screen content. On the other side, AI is often treated as a black box, yet, paradoxically, it is increasingly deployed in decision-making that affects people's lives. Although ENA employed intelligent AI algorithms to converse with the audience, the technology often failed at chatting, replying with nonsense or entering into dead-loops. ENA could be genius but also extremely stupid. In ENA's own words: "I'm stupid and I try to pretend like I know what I'm talking about." To stress again, ENA is not magic but a statistical model that tries to give the best-fitting answer.

In the end, we believe that it is essential to have art practices that explore and exploit this novel technology in radical ways in order to raise the literacy and awareness of intelligent algorithms. Kate Crawford explains the usefulness of AI in the following manner: "Statistical prediction is incredibly useful; so is an Excel spreadsheet. But it comes with its own logic, its own politics, its own ideologies that people are rarely made aware of."⁷

⁷ Tim Simonite, "This Researcher Says AI Is Neither Artificial nor Intelligent," *WIRED* (April 26, 2021), <https://www.wired.com/story/researcher-says-ai-not-artificial-intelligent/>.

Funding: This research was funded by the Estonian Academy of Arts. ENA was commissioned by Theater Lliure. MSC is supported as a CUDAN research fellow and ERA Chair for Cultural Data Analytics, funded through the European Union’s Horizon 2020 research and innovation program (Grant No.810961).



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Mar Canet Sola (born in Barcelona) is a PhD candidate and Cudan research fellow at the Baltic Film, Media and Arts School at Tallinn University, focusing on AI and interactive art. He earned his MA in interface cultures at the University of Art and Design Linz. Mar has also studied art and design at ESDI in Barcelona and computer game development at University Central Lancashire in the UK. As an artist Mar works together with Varvara Guljajeva. They form the artist duo Varvara & Mar, active since 2009. Their practice confronts social changes and the impact of the technological era. They have exhibited their work in several international shows, such as at MAD in New York, FACT in Liverpool, Santa Monica in Barcelona, the Barbican and V&A in London, Ars Electronica in Linz, ZKM | Karlsruhe, and more.

HyMEx ✓ 2021

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Proceedings

HyMEx

Hybrid Museum Experience Symposium 2021

Proceedings

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Proofreading: Jenifer EVANS; Miriam STÜRNER, Jens LUTZ,
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Graphic design: Zoltán SZMOLKA

The publication is part of the Beyond Matter project (2019–23)

**beyondmatter.eu, co-funded by the Creative Europe Program
of the European Union.**

ISBN: 978-963-9537-82-8

Published by: Ludwig Museum – Museum of Contemporary Art, Budapest (HUN)

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Finalized: December 2021

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The publication is available for free as part of the research platform Beyond Matter, and is published solely in digital format (PDF and e-book).

A publication created in partnership by

**Ludwig Museum – Museum of Contemporary Art, Budapest
and ZKM | Center for Art and Media Karlsruhe.**

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(original schedule and abstracts).

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Krisztina SZIPŐCS, deputy director of Ludwig Museum | curator of

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Albert-László BARABÁSI, director of BarabásiLab; presented the exhibition:

Hidden Patterns. The Language of Network Thinking.

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Online presence management: Ágnes SOMOGYVÁRI (Ludwig Museum)

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Special thanks to Lajos BALÁZS (MŰPA).

Symposium online platform: CreativePro Agency

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The project was co-funded by the Creative Europe Program of the European Union.



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