

B – Questionnaires and instructions

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B.1 Pre-questionnaire (excerpt)

(1) Introduction

Perception of voice-based AI-systems Your opinion matters!

Welcome to our study. We would like to find out how you perceive voice-based AI-systems.

Please spontaneously tick the box that best reflects your opinion. Filling out the form will take about 10 minutes. We will then show you a video of a technology based on artificial intelligence.

Thank you for your participation!

(2) Code [only for lab-study]

Please enter the code assigned to you. _____

(2) Device check [only for online study]

In order to successfully participate in the survey, it is important that you complete it on a desktop PC, laptop or notebook.

How do you complete the survey?

- I am completing the survey on a desktop PC, laptop or notebook.
- I am completing the survey on my smartphone/mobile phone or tablet.

[FILTER: → end page]

(3) Use of AI-based technologies ^c

How often do you use following technologies?

	1 never or very ra- rely	2 several times a half year	3 several times a month	4 several times a week	5 daily	Don't know / no ans- wer
Personal assistants (e. g. Alexa, Siri, Google Assistant)	☐	☐	☐	☐	☐	☐
Chatbots (e. g. ChatGPT, Bing Chat)	☐	☐	☐	☐	☐	☐

^c adapted from Calice et al. (2022).

(4) Attitudes towards AI ^c

How much do you agree with the following statements?

	1 do not agree at all	2	3	4	5 totally agree	Don't know / no ans- wer
AI is morally acceptable.	☐	☐	☐	☐	☐	☐
AI is useful for society.	☐	☐	☐	☐	☐	☐
Overall, I support the use of AI.	☐	☐	☐	☐	☐	☐
Overall, I support research on AI.	☐	☐	☐	☐	☐	☐
As a society, we are pre- pared for the effects of AI ap- plications.	☐	☐	☐	☐	☐	☐
There will be unintended consequences of AI applica- tions. [-]	☐	☐	☐	☐	☐	☐

^c Calice et al. (2022).

(5) End page

[For lab study]: Thank you very much!

This completes the first part of the study.

In the second part of the study, you will watch a video with the following AI-based technology called “Debater”.

Please put on your headphones now and open the „**rtr-frontend**“ tab already created above.

For questions, please raise your hand and someone will come to you.

[For online study]: Thank you very much!

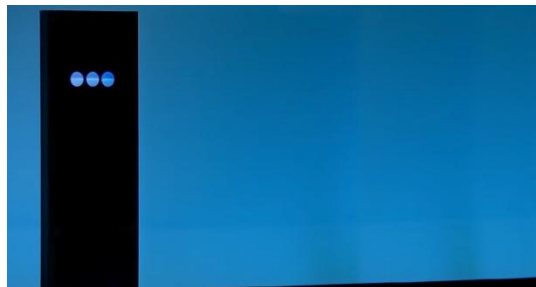
This completes the first part of the study.

Important: Before clicking ‘Continue,’ please ensure that...

- (1) ... you are in an **undisturbed environment** and can **play audio** so that you can understand the content of the video well and follow it attentively, and
- (2) ... you have a **computer mouse** ready to perform the video evaluation.

In the second part of the study, you will watch a video (approx. 9.5 minutes) featuring the AI-based technology shown below called ‘Debater’ and evaluate it.

Once you click ‘Continue,’ you will be automatically redirected to another website. When you have finished the evaluation, you will be automatically redirected back to this questionnaire to answer a few final questions (part 3 of the study).



B.2 RTR Instruction

Welcome to the second part of the study!

In the following, you will see a video showing a dialogue between a human and a voice-based AI system. You will only see the AI system and hear the person speaking in the background. Please try to imagine yourself in the person's position:

*The person you are going to hear has seen an advertisement for a new nutritional supplement that promises more energy in everyday life. The person has been considering trying nutritional supplements but first wants to form an informed opinion about them and decides to look for more information. She remembers that a good and tech-savvy friend of hers owns the **Debater** – an advanced AI system that can to present science-related information in a fully natural language. The person decides to consult the Debater about nutritional supplements.*

Please rate the **trustworthiness** of the AI system **Debater** in the context of the following video. During the video, you can use the mouse to move the slider on the right side as often as you like and to any position on the dial.

At the beginning, the slider will be in the middle of the dial. The more trustworthy the Debater seems to you, the higher you move the slider into the green area. The less trustworthy the debater seems, the lower you move the slider into the orange-red area. Please return the slider to the center of the dial whenever you hear the human's questions or if you do not make any ratings during the debater's answers. Adjust the slider as needed – even for small changes.

[only for lab study]: If you have any questions beforehand, please raise your hand now. Someone will then come to your workstation.

Thank you very much!

B.3 Post-questionnaire (excerpt)

(1) Introduction

Now we have a few more questions about how you liked the debater in the video.

(2) Code [only for lab-study]

Please enter the code assigned to you. _____

(2) Technical issues [only for online study]

Were you able to play the video and evaluate the AI system ‘Debater’?

- Yes, I was able to play the video without any problems and evaluated the AI system ‘Debater’.
- Yes, I was able to play the video without any problems, but I did not evaluate the AI system ‘Debater’. [FILTER: → end page]
- Yes, I was able to play the video and evaluate the AI system ‘Debater,’ but there were the following technical issues: _____
- No, I couldn't play the video and couldn't evaluate the AI system ‘Debater’. [FILTER: → end page]

(3) Emotional Assessment (humor, empathy, anthropomorphism)

To me, the Debater seemed ...

Humor perception ^a	not funny	☐	☐	☐	☐	☐	funny	Don't know / no answer
	not amusing	☐	☐	☐	☐	☐	amusing	Don't know / no answer
	not humorous	☐	☐	☐	☐	☐	humorous	Don't know / no answer
Anthropomorphism ^b	unlikeable	☐	☐	☐	☐	☐	likeable	Don't know / no answer
	not sociable	☐	☐	☐	☐	☐	sociable	Don't know / no answer
	unfriendly	☐	☐	☐	☐	☐	friendly	Don't know / no answer
	unpersonal	☐	☐	☐	☐	☐	personal	Don't know / no answer
Empathy perception ^c	uncompassionate	☐	☐	☐	☐	☐	compassionate	Don't know / no answer
	not understanding	☐	☐	☐	☐	☐	understanding	Don't know / no answer

^a Cacciatore, Becker, Anderson, and Yeo (2020).

^b Kim and Sundar (2012).

^c self-developed.

(4) Socio-demographics [for online survey: at the beginning of the pre-questionnaire]

Finally, we have a few questions about you as a person.

(4a) Which gender do you identify with?

- ☐ Male
- ☐ Female

(4b) How old are you? Please enter your age. ____

(4c) What is your highest level of education?

- ☐ Still at school
- ☐ Finished school without graduating
- ☐ Hauptschule or Volksschule graduation or Polytechnische Oberschule with graduation of 8th or 9th grade
- ☐ Mittlere Reife, Realschulabschluss or Polytechnisches Oberschule with graduation of 10th grade
- ☐ Fachhochschule entrance qualification (graduation from a Fachoberschule etc.)
- ☐ Abitur or extended Oberschule with completion of 12th grade (university entrance qualification)
- ☐ University degree (e.g., Diploma, Bachelor or Master)
- ☐ Completed PhD
- ☐ No answer

➔ [Filter: "University degree"]
What did you study? _____

➔ [Filter: "Abitur" and "University degree"]
Are you currently studying?

- Yes: _____
- No

(5) End page

Thank you for your interest and your time.

This concludes the third part of the study.

[only for lab study]: You can now close this window and leave your workspace and the room.

If you are signed up for a follow-up interview, please wait outside the door with your participant code. One of our study leaders will pick you up.

References

- Cacciatore, M. A., Becker, A. B., Anderson, A. A., & Yeo, S. K. (2020). Laughing With Science: The Influence of Audience Approval on Engagement. *Science Communication*, 42(2), 195–217. <https://doi.org/10.1177/1075547020910749>
- Calice, M., Bao, L., Newman, T., Scheufele, D. A., Brossard, D., & Xenos, M. (2022). *U.S. Public Attitudes on Artificial Intelligence*. Open Science Framework. <https://doi.org/10.17605/OSF.IO/K82D6>
- Kim, Y., & Sundar, S. S. (2012). Anthropomorphism of computers: Is it mindful or mindless? *Computers in Human Behavior*, 28(1), 241–250. <https://doi.org/10.1016/j.chb.2011.09.006>