Informed Consent - Participant Information

You are being invited to participate in a research study titled **Social and Norm Aware Robots – A study on human-robot interaction with Nao Robot**. This study is being done by **Dr. Davide Dell'Anna** from the Delft University of Technology (TU Delft) in the context of the project "Human-like norm-aware cognitive robots for autonomous interactions with humans", which has been financed by the Netherlands Organisation for Scientific Research (OCENW.XS21.3.106).

The purpose of this research study is to evaluate the extent to which developed approaches for social robotics enable a robot to meaningfully interact with humans during a normal conversation, and will take you approximately 45 minutes to complete. The data will be used for the analysis of the developed approaches and for publication in academic journals.

First, we ask you to interact with a Nao robot twice. The interactions will be open-ended: you can have a normal conversation with the robot on any topic of your choice. You can change the topic of the conversation during the experiment at any time, however we encourage you to try to keep the conversation as realistic as possible. Additionally, throughout the experiment, you will be requested to perform some specific activities, such as paying attention to one of the objects in the room, engaging in a role-playing game with the robot, or initiating a discussion about a personal matter. More details about the exact activities are provided in the **Guidelines for Interaction** which have been given to you during the **experiment briefing**. Note that, during the conversation with the robot, the content of the conversation is not expected to comply with or reveal any real personal information. For example, for the discussion about a secret, you are not requested to actually reveal anything personal. Instead, you can simply pretend that you are doing so, while you talk about a topic that may be imaginary, and certainly not sensitive, personal, or really confidential for you.

After having interacted with the robot twice, and in between interactions, you will be asked to fill in an **online questionnaire** to evaluate your experience regarding these two interactions. In particular, you will be asked to assess the social skills of the robot that you interacted with, for example providing a feedback on whether the robot understood your intentions, on its naturalness (this concerns the behavior of the robot, not its physical appearance nor its movements) and on whether it behaved closely to how a human would do in a similar situation or not.

We believe there are no known risks associated with this research study. You will not be asked to provide any sensitive information neither during the interactions with the robot nor in the online questionnaire. As with any online activity, however, the risk of a breach is always possible. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by releasing only anonymized data (from the questionnaires) **publicly** via the 4TU.ResearchData archive which is a trusted repository to allow other researchers built upon the knowledge generated by this study.

Optionally, we would like to record a video of the interactions that you will have with the robots. Besides helping us with the analysis of the developed approaches, we also believe that the recordings can be a valuable resource for future research in human-robot interaction. You can indicate your preference in the attached **explicit consent points sheets**. If you provide your consent to disseminate the recordings, we will minimize any risks by releasing the videos only in a **private** 4TU.ResearchData repository with access granted only **upon request**. This will allow you to withdraw your consent at any time in the future. Moreover, the videos will not contain your information (e.g., email address, name), but will be tagged with a random identifier instead.

If you do not provide your consent to disseminate the recordings, the videos will be kept during the research project in a protected TU Delft restricted-access storage drive, accessible to the responsible researcher only and his supervisor. After the related article is published, the video recordings will be deleted and only the anonymized reaction data and questionnaire data will be kept for the long-term.

Your participation in this study is entirely voluntary and you can withdraw at any time. You are free to omit any questions. In addition to that, if you have any questions regarding privacy or would like to withdraw from the study, please feel free to contact the responsible researcher at d.dellanna@tudelft.nl (during research) and the responsible researcher's supervisor Anahita Jamshidnejad (a.jamshidnejad@tudelft.nl) for the long-term (10 years).

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10/11/2022, Delft

Informed Consent – Explicit Consent Points

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
A: GENERAL AGREEMENT – RESEARCH GOALS, PARTICPANT TASKS AND VOLUNTARY PARTICIPATION		
1. I have read and understood the study information dated _____, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
2. I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason.	☐	☐
3. I understand that taking part in the study involves: • Interacting two times with a robot that will capture video and audio data to determine, during the experiment, responses to my sentences, questions and behaviour. • Completing a questionnaire at the end of the experiments. • Audio and video recordings of the experiments that will be used for analysis and validation of the developed approaches and for possible dissemination (upon given consent).	☐	☐
4. I understand that I will not be compensated for my participation.	☐	☐
5. I understand that the study will end approximately by the end of January 2023, and as soon as the resulting academic papers will be published.	☐	☐
B: POTENTIAL RISKS OF PARTICIPATING (INCLUDING DATA PROTECTION)		
6. I understand that taking part in the study involves the following risks. • In extremely rare occasions, the robot might lose its balance and fall. Even though the robot is small (60cm tall) and relatively light (5kg), its fall might cause physical discomfort in the participant if contact happens. I understand that these will be mitigated by minimizing the movements of the robot, and by preventing the robot to walk around. Furthermore, the robot has been inspected by a TU Delft Health, Safety and Environment advisor of the Faculty of Aerospace Engineering who identified no extraordinary risks with the robot.	☐	☐
7. I understand that taking part in the study also involves collecting specific personally identifiable information (PII) such as email address, name and video, and associated personally identifiable research data (PIRD) with the potential risk of my identity being revealed from the video recordings of the experiments.	☐	☐
8. I understand that the PIRD specified in #7 is considered as sensitive data within GDPR legislation.	☐	☐
9. I understand that the following steps will be taken to minimise the threat of a data breach, and protect my identity in the event of such a breach. • Data collected from the questionnaire will be publicly released only in anonymized way via the 4TU.ResearchData archive which is a trusted repository to allow other researchers built upon the knowledge generated by this study. • If I give consent, the video recording of my interaction with the robot will be released in a private 4TU.ResearchData repository with access granted only upon request. This will allow me to withdraw my consent at any time in the future. Moreover, the videos will not contain your information (e.g., email address, name), but will be tagged with a random identifier instead.	☐	☐

PLEASE TICK THE APPROPRIATE BOXES	Yes	No
10. I understand that personal information collected about me that can directly identify me, such as email and name will be used for communication purposes and will not be shared beyond the study team.	☐	☐
11. I understand that if I do not consent to the publication of the video with (identifiable) personal data, then the video will be destroyed and only the questionnaire (and reaction) data will be kept for the long-term in a protected storage drive within the TU Delft network	☐	☐
C: RESEARCH PUBLICATION, DISSEMINATION AND APPLICATION		
12. I understand that after the research study the de-identified information I provide will be used for publication (article) in academic journal.	☐	☐
13. I agree that my responses, views or other input can be quoted anonymously in the articles	☐	☐
14. I give permission to record videos (with audio) of the experiments to be used to analyse and validate the proposed approaches.	☐	☐
15. I give permission to record videos (with audio) of the experiments to be released in a private 4TU.ResearchData repository available upon request.	☐	☐
D: (LONGTERM) DATA STORAGE, ACCESS AND REUSE		
16. I give permission for the de-identified data (questionnaire answers) that I provide to be archived in a public 4TU.ResearchData repository, so it can be used for future research and learning.	☐	☐
17. I give permission for the digital copy of this signed informed consent form to be kept in a restricted-access TU Delft network drive, accessible to the responsible researcher (during research) and the responsible researcher's supervisor Anahita Jamshidnejad (a.jamshidnejad@tudelft.nl) for the long-term (10 years).	☐	☐
AFTER THE EXPERIMENT		
18. I give permission for the video to be archived in a private 4TU.ResearchData repository with access granted upon request, so it can be used for future research and learning.	☐	☐

Signatures

_____   _____   _____

Name of participant [printed]   Signature   Date

I, as researcher, have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

_____   _____   _____

Researcher name [printed]   Signature   Date

Study contact details for further information:

Dr. D. Dell'Anna

d.dellanna@tudelft.nl

Delft University of Technology (TU Delft)