Investigating conversational behaviours – study 2

Participant Information Sheet

You are invited to take part in a study investigating social closeness with a digital human. A digital human is a computer agent similar to an avatar, made by Soul Machines, a New Zealand based technology company. To participate in this study, you must be aged 18 years or over and speak fluent English.

This project is run by Alesha Wells, a Master’s student in the Department of Psychological Medicine at University of Auckland, and supervised by Professor Elizabeth Broadbent from the Department of Psychological Medicine at University of Auckland (supervisor). It is being run in conjunction with Soul Machines Ltd.

It is important to read this document carefully so that you can make an informed decision about whether you would like to participate.

Purpose of the study: This study aims to investigate whether humans can feel socially close to a digital human.

Eligibility: We are recruiting 72 female’s aged 18 years over, who speak fluent English, and have not previously taken part in the “Getting close to Digital Humans” research project or “Investigating conversational behaviours” study 1. Participants must not wear glasses (contact lenses are fine), as it interferes with data collection. Approximately 40-minutes is required to complete the study at University of Auckland’s Clinical Research Centre.

What would happen if you chose to participate?
If you choose to participate in this research, you will be asked to come to the University of Auckland to complete one 40-minute session at University of Auckland’s Clinical Research Centre. You will be randomized to interact with a digital human who will display one of three
different patterns of nonverbal behaviours, as we are interested in how nonverbal cues affect the development of social closeness.

**Questionnaires**
During this session, you will be asked to complete two brief questionnaires that together collect information about demographics, health, stress, mood, social support, and perceptions of the digital human.

**Physiological Measures**
You will also be asked to wear an Empatica E4 tracker on your wrist, which collects data on pulse volume, galvanic skin response (a change in electrical resistance of the skin), and skin temperature. These are indicators of physiological stress and relaxation. You will be required to wear this device for the entire duration of the session. In order to get accurate readings we ask that you do not consume any caffeine or alcohol for two hours prior to the study session.

**Social Closeness Conversational Task**
You will take part in a task that will help you to get to know a digital human for 15 minutes. During this time, your interaction will be video-recorded and your eye-gaze will be tracked. Video data will be securely stored at University of Auckland, the researcher will sign a confidentiality agreement, and data will be labelled with an ID code, not your name. Data will be analyzed in aggregate by computer software to count language and behaviour indicative of the success of the interaction. It will also be annotated for behaviours.

**Your rights as a participant:** Participation in this study is entirely voluntary (your choice). If you choose to participate, you can change your mind at any time without giving a reason and without any negative consequences. You can withdraw from the study at any time and withdraw any data traceable to you until up to 1 week after you have finished the study. Whether or not you participate in this study will not affect your relationship with the researchers. You will be given a copy of this document to keep.

**Compensation:** You will receive $20 at the end of the session as compensation for agreeing to participate in this research. You will receive this irrespective of whether you withdraw during the study.

**Risks and discomforts:** The procedures outlined in this protocol are completely non-invasive and have been performed in other research settings.

**Data storage:** All data (questionnaires, physiological data, and video recordings) will be securely stored in electronic format by the researcher at University of Auckland. A copy of de-identified data will also be stored at Soul Machines and held in a secure, encrypted server. Consent forms will be stored in a locked filing cabinet in the researcher’s office at the University of Auckland, and will be kept for a period of six years. If a third party data processor is used for annotation and/or transcription, data will be sent to the third party processor via a secure, encrypted
channel, held by the third party processor in a secure, encrypted server, and deleted following completion of transcription and/or annotation.

**Confidentiality:** All personal information will remain strictly confidential and no material that could personally identify you will be used in any report on this study. Participant names will only appear on the consent form, which will be coded with a participant identification number so that your identity is kept confidential on all questionnaire, physiological, and video data files. After completion of the study, all confidential data, including computer data files, will be kept for a minimum period of six years to allow for publication and re-analysis, after which time it will be securely and confidentially disposed of. Research publications and presentations from the study will not contain any information that could personally identify you. We will publish the results but not the data itself. The purpose the data is collected is to investigate the research question, publish results in a journal paper and/or presentation, and Soul Machines may use the data to improve eye gaze software.

**Results:** A summary of the results of this study in non-academic language will be sent to you if you wish. As it takes some time to analyze the results of studies, it may be more than a year after your participation that you receive this information.

**Technology confidentiality:** We hope that you will enjoy your participation in the “Investigating conversational behaviours” study 2 (**Research**) being conducted by Soul Machines Limited and the University of Auckland. We do ask that you do not discuss your experiences during the research with anyone. Accordingly, before you take part in the Research, we ask that you sign a non-disclosure agreement with Soul Machines. If you do not wish to sign the agreement, you are free to withdraw from the research. If you have any questions, please email privacy@soulmachines.com.

**We appreciate the time you have taken to read this information. If you have any questions please contact:**

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For any concerns regarding ethical issues you may contact:
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APPROVED BY THE UNIVERSITY OF AUCKLAND HUMAN PARTICIPANTS ETHICS COMMITTEE ON
06/06/2019 FOR THREE YEARS. Reference Number 023084.