Group number: 2C

Group members: Jiajun Guo (24065271), Pranav Naik (24065285), Satwik Pallerla (24065099), Siddharth Suresh (24065284), Pratheek Sudi (24065173), Samuel Beach (23080543)

|  |
| --- |
| **Research Question:**  Human Robotic Interactions and Charitable Donation – Are you more inclined to give to charity if the interaction is with a robot rather than a human?  **Hypotheses:**  “Generally, a non-human charity representative will increase the participants willingness to donate compared to when the interaction is with a human charity representative” |
| **Study Setup:**  **Environment and robot/participant placement:**   * Each experiment will be carried out within the Department of Engineering (Z) on the UWE Frenchay Campus. They will be done within a classroom environment. * For experiments using a robotic charity representative, the NAO will be standing alone on a desk for the entirety of the experiment in front of a screen with a small presentation. The participant will stand in front of them. * For experiments using a human charity representative, the human will stand alongside the NAO and give the presentation from the same screen. The participants position will remain the same. * Participants within the experiment will all be members of the student cohort for MSc Robotics or associated programmes. * All participants will have experience using/interacting with NAO robots and understand the purpose of conducting user studies (students on the HRI module). * Each experiment will take place during the designated tutorial time within the HRI module (Friday, 13:00 – 15:00) within the last two weeks of the semester.   **Robot behaviour:**   * There will be two experimental conditions, one where the robot gives the presentation for the charity. The second group will have the same presentation done by a human representative. After either presentation, the robot will ask selection of questions, culminating with whether the participant would like to donate. * For experiments using a robotic charity representative, the NAO robot will give a small presentation to the participant. It will ask a small set of questions about the charity that it is trying to get donations for. The participants will answer any questions asked. The number of questions asked is limited to the same amount for both the human and robot. The NAO will use any hand or head movements that will make the interaction more engaging. * For experiments using a human sales representative, the human will give the same presentation. The NAO will still ask the questions to close the experiment. The responses given will be limited to those of that are pre-programmed into the Robot.   **Experiment conditions:**   * No money (donation) belonging to the participant will be requested during the experiment. * At the start of the experiment, each participant will be given a £2 coin. At the end of the experiment, the participant will be asked to place this coin in a donation jar or a jar that earns the participant an incentive (likely a slice of Pizza). * Each participant will take part in the experiment individually, so that their decision whether to donate or not is not affected by their peers. * Each jar will be emptied between the experiments, so that actions of the previous participants do not affect those of the current one. * The robots emotion, speech and movement will stay consistent within the group. These will be optimised to provide the most convincing case to try and generate a donation. * The human giving the presentation will stay consistent between the groups. They will try and mimic the limited actions of the robot so that the sales technique is consistent between the two groups. However, tone, intonation and emotion within the verbal communication of a human is intrinsic to interaction with others, and this will be used to try and generate a donation. * All experiments will be carried out within the same room and using the same material.   **Robot/participant tasks:**   * In half of the experiments, the robot will give a presentation regarding a chosen charity. * In every experiment, the robot will ask the participant a series of questions and await responses from the participant. The robot will give out pre-generated responses when applicable * The participant will answer the questions. After the last question, they will choose whether to donate their £2 coin to charity, or collect the incentive instead, by placing the coin in one of two jars. |
| **Participants:**   * Ideal participants vary in age and demographic. We are not trying to analyse whether a certain age group is more susceptible to sales techniques of any kind. Therefore participants from a range of ages, genders and backgrounds should be considered. |
| **Measurements:**  **Subjective:**   * Questionnaire – subjective responses of how they felt the study went. * Likability Scale: "How much did you like interacting with the robot?" (Likert scale) * Convincibility: "How persuasive did you find the robot’s arguments?" * User Comfort: "How comfortable did you feel during the conversation?" * Naturalness: "Did the robot’s responses feel human-like?" * Trust in Responses: "Did you trust the robot’s responses?"   **Objective:**   * Godspeed questionnaire – answers to a number of questions through a rating system between 1 – 5 dependant on the participants experience within the study. * The ability of participants to answer a series of questions about the content of the presentation, to assess how well the participant has listened or engaged with what’s been said. * The length of time to complete the study. * The amount of participants that agree to a donate vs take the incentive in each scenario. |