Pre-Experiment Survey

Administration: These questions will be administered before the human-robot interaction. Each of the participants will answer these questions on a tablet. Participants' answers to these questions will not disqualify them from participation in the experiment.

Familiarity
- Enter the participant ID of one of your two fellow participants: ___
- Which of these statements most closely matches your familiarity with this participant?
    - o I had not met this participant before we completed this study together; I do not know them.
    - o I have seen this participant before and we may have talked once or twice, I do not know them well.
    - o I would consider this participant and I acquaintances, we are moderately familiar with each other.
    - o This participant and I are friends, we spend / have spent time together outside of work/school together.
    - o I would consider this participant to be one of my closest friends.
- Do you have this participant's phone number?
    - o Yes
    - o No
- Are you connected via social media with this participant (follow/friends with on Facebook, Twitter, Instagram, etc.)?
    - o Yes
    - o No

Participant Exposure to Robotics and Computer Science
Which of these statements best indicates your prior exposure to Computer Science:
- I have never programmed before; I have little to no specific knowledge of computer science.
- I have completed some introductory programming class or program before, however, would say that I am a novice.
- I have completed several programming courses and would consider myself an intermediate programmer in at least one programming language.
- I have had a job or internship where a major component of my working hours were spent programming. I know how to program in several different programming languages comfortably.

Select as many of these as apply to your experience with Robotics:
- I have been exposed to robots in movies and science fiction.
- I have owned toy robots or robots in the home or workplace and am familiar interacting with them.
- I have participated in a study where I have interacted with a robot.
- I have held a conversation with a robot.
- I have programmed a robot.

Post-Experiment Survey

Administration: These questions will be administered at the end of the human-robot interaction. Each of the participants will answer these questions on a tablet.

<u>*Perception of the Robot (From Carpinella et al.)*</u>

Using the scale provided, how closely would you consider the following words associated with the Spheros?

Capable
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Responsive
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Interactive
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Reliable
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Competent
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Knowledgeable
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Scary
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Strange
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Awkward
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Dangerous
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Awful
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Aggressive
Definitely not associated   1 2 3 4 5 6 7 8 9 Definitely associated

Reference:
Carpinella, Colleen M., et al. "The Robotic Social Attributes Scale (RoSAS): Development and Validation." *Proceedings of the 2017 ACM/IEEE International Conference on Human-Robot Interaction.* ACM, 2017.

Impressions from the Experiment I:
Please indicate how much you agree/disagree with the following statements about the group interaction you just participated in with the other participant and the Spheros:
[The following questions are evaluated on this 7 point Likert scale:]

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
- I am satisfied with the routes I decided to take.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
- The Spheros were helpful during the experiment.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
- The Spheros were annoying during the experiment.

Strongly Disagree   1   2   3   4   5   6   7   Strongly Agree
- It was easy to discern which direction the Spheros were indicating.

Impressions from the Experiment II:
The following are long-response questions:
- How would you describe the Spheros' behavior during the experiment?
- Were there certain Sphero behaviors that made you more likely to go a certain way? Why?
- How would you describe your interactions with the Spheros during the task?
- How did the Spheros influence your behavior?