Block 1

Welcome!

First of all, thank you for accepting our invitation to participate to this experiment. We appreciate your help and we value your input.

Now, let's begin!

This questionnaire is meant to collect your feedback throughout the different phases of the experiment.

As you should know already, during the experiment you will be interacting with a robot, and you will repeat the interaction two different times.

For this reason, the questionnaire is divided in 4 parts:

- 1. Introductory questions, before starting the experiment.
- 2. Questions about the first interaction with the robot.
- 3. Questions about the second interaction with the robot.
- 4. Final questions at the end of the experiment.

If you are ready to start, move to the next page.

Enjoy!

Introductory questions

1. Introductory questions

Participant Number

Please write the anonymized identifier that was assigned to you.

gave to you.				
Age				
18 24 25 34	35_44	45_54	55_64 65	5074 75 oroldei
Gender				
Male	Female		pinary / third gender	Prefer not to say
Education				
_	gh school graduate	BSc degree	MSc degree	Doctorate
Occupation				
O Student O PhD Student / Rese				
O Academic / faculty O University support				
	Other (ple	ease specify)		
How familiar ar	e you with	robots?		
Not familiar at all Slig	htly familiar	Moderately familiar	Very familia	r Extremely familiar

You can find it in the information sheet that the experimenter

What type of experience do you have with robots (private or professional), if any?

None	At work	,	In ovie <mark>s/</mark> books	In TV shows n	In nuseu ns /shov	At school
What is	the ext	-			rledge of r	
knowledge at all	eable kno		Moderately knowledgea	•	edgeable kno	Extremely wledgeable
In the fol towards	0 ,	ou will find	d 16 sentei	nces des	cribing atti	tudes
Somewh	at disag	ree, (3) N	•	ee nor di	rongly disa sagree, (4)	•
	•	or wrong o o much tir	-	st give yc	our first imp	ression
		Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I have seen li before.	ve robots	\circ	\circ	\circ	0	\circ
I would feel u robots really emotions.	,	\circ	\circ	\circ	0	0
Something be happen if rob developed in beings.	oots	\circ	0	0	0	0
I would feel re talking with re		\circ	\circ	\circ	0	\circ
I would feel u was given a j had to use ro	ob where I	\circ	0	0	0	0
If robots had would be abl friends with th	e to make	0	0	0	0	0
				Neither		

Strongly

disagree

Somewhat

disagree

agree nor

disagree

Strongly

agree

Somewhat

agree

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I would feel comforted being with robots that have emotions.	0	0	0	0	0
The word "robot" means nothing to me.	0	\circ	\circ	0	\circ
I would feel nervous operating a robot in front of other people.	0	0	0	0	0
I would hate the idea that robots or artificial intelligences were making judgments about things.	0		0	0	0
I would feel very nervous just standing in front of a robot.	0	0	0	0	0
I feel that if I depended on robots too much, something bad might happen.	0	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I feel that if I trust robots too much, something bad might happen.	0	0	0	0	0
I would feel paranoid talking with a robot.	\circ	\circ	\circ	\circ	\circ
I am concerned that robots would be a bad influence on children.	0	0	0	0	0
I feel that in the future society will be dominated by robots.	0	0	0	0	0

Fantastic, thank you!

You can leave the questionnaire as is, for the moment.

It is now time to start the experiment.

Interact with the robot, pay attention to what it says and to its behavior, then come back here to answer some questions.

Please, refer to the experimenter.

Questions about first interaction

2. First Interaction

Welcome back!

In this part of the questionnaire, we ask you to answer a number of questions based on your experience with the robot during the first interaction.

The questions are divided in four pages.

If you are ready to start, move to the next page.

Based on your personal experience with the robot **during the first interaction**, please judge the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot was sociable.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
The robot was shy.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
The robot was vulnerable.	\circ	\circ	\circ	\circ	\bigcirc
The robot was active.	\bigcirc	\circ	\bigcirc	\circ	\bigcirc
The robot was assertive.	\circ	\circ	\circ	\circ	\bigcirc
The robot was anxious.	\bigcirc	\bigcirc	\bigcirc		\bigcirc
The robot was tense.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot was creative.	\bigcirc	\bigcirc	\bigcirc	\circ	\bigcirc
The robot was seeking excitement.	\circ	\bigcirc	\circ	\circ	\bigcirc

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot was dominant.	0	\circ	\circ	0	\bigcirc
The robot was aggressive.	0	\circ	\circ	\circ	\bigcirc
The robot was impulsive.	0	\circ	\circ	0	\bigcirc
The robot seemed to make its own decisions and did not seem to do just what was programmed to do.	0		0	0	0
The robot behaved intentionally (with the intention to achieve some goal).	0		0		\circ
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The behavior of the robot was predictable.	\circ	\circ	\circ	\circ	\bigcirc
I felt in control of the robot's behavior.	\circ	\circ	\circ	0	\circ
The robot behaved considerately towards me.	0	\circ	0	0	0
The robot was reactive (it reacted to my inputs and to the environment).	0	\circ	0	0	0
The robot was proactive (it took the initiative during the interaction).	0		0	0	0
The robot was autonomous (it could operate without my intervention).	0		0	0	0

Based on your personal experience with the robot **during the first interaction**, please judge the following statements.

	Neither						
	Strongly disagree	Somewhat disagree	agree nor disagree	Somewhat agree	Strongly agree		
It was easy to familiarize with the robot.	0	\circ	0	\circ	0		

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot was predictable.	0	\circ	\circ	0	\bigcirc
I could communicate with the robot both verbally and non-verbally during the interaction.	0	0	0	0	0
I could correct communication difficulties by myself during the interaction.		0	0		0
The robot was responsive.	0	0	0	0	\bigcirc
The robot felt stable (without defects).	\circ	\circ	\circ	\circ	\bigcirc
The robot could perform multiple tasks that I initiated during the experiment.	0	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I felt that the robot had many skills.	0	\circ	\circ	0	\bigcirc
I consider the robot useful as a companion robot.	0	0	0	0	0
The robot would be useful for my entertainment.	0	0	0	0	0
The robot could help me solving tasks in my daily life.	0	0	0	0	0
The robot could support me in my daily life.	\circ	0	\circ	\bigcirc	\bigcirc
I could steer the interaction with my words.	\circ	\circ	0	\bigcirc	\circ
I could steer the interaction with my behavior.	0	\circ	0	\circ	\circ
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
It was easy to interact with the robot.	\circ	\circ	\circ	\bigcirc	\bigcirc
I think it is a good idea to use the robot.	\circ	\circ	\circ	\circ	0

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I was afraid to make mistakes or break something while interacting with the robot.					0
I felt comfortable while interacting with the robot.	\bigcirc	\bigcirc	0	\bigcirc	0
I could only interact with the robot if someone had helped me.	\bigcirc	0	0		0
I could already interact with the robot without any help.	\bigcirc	\circ	0	\circ	\circ
I could interact with the robot only if I had a good initial training.	\bigcirc	0	0	0	0
			N I = !+		
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I like the presence of the robot.			agree nor		
			agree nor		
the robot. I felt threatened by the			agree nor		
the robot. I felt threatened by the robot. I felt I had something in			agree nor		
the robot. I felt threatened by the robot. I felt I had something in common with the robot. I felt I could trust the robot during the			agree nor		
the robot. I felt threatened by the robot. I felt I had something in common with the robot. I felt I could trust the robot during the interaction. I would follow the advice of the robot, if it			agree nor		

Based on your personal experience with the robot **during the first interaction**, please judge the following statements.

	Neither						
	Strongly disagree	Somewhat disagree	agree nor disagree	Somewhat agree	Strongl [,] agree		
The robot interacted with me like a human would do.	0	0	0	0	\circ		

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I felt socially engaged with the robot during the interaction.	0	0	0	0	0
Overall, I enjoyed interacting with the robot.	\circ	\circ	0	\circ	\circ
I felt surprised while interacting with the robot	\circ	\bigcirc	0	0	0
I am satisfied with the general performance of the robot during the interaction.			0	0	0
I think I could grow a strong attachment to the robot in a long term use in similar situations as in the experiment.	0		0		
The robot reacted to my actions in a way that made sense to me.	0	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The behavior of the robot was appropriate.	\circ	0	\circ	\bigcirc	\circ
The robot had a different behavior during the different tasks.	0	0	0	0	0
The robot could interpret my speech during the interaction.	0	0	0	\circ	0
The robot could recognize my facial expressions during the interaction.	0	0	0	0	0
The robot could understand my intentions during the interaction.	0	0	0	0	0
The robot could understand my social cues during the interaction.	0	0	0	0	0
The robot could adequately communicate with me during the interaction.	0	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I felt safe and secure when interacting with the robot.	0	0	0	\circ	0
The robot behaved ethically.	\circ	\circ	\circ	\circ	0
I think the robot could understand me during the interaction.	\circ	\bigcirc	\circ	\circ	0
The robot expressed emotions during the interaction.	0	0	0	0	0
I could feel the robot's emotions during the interaction.	0	0	0	\circ	\circ
I would like to see the robot employed as a social companion.					0
Which tasks the r	ong the to	asks that y	ou initiate	ed and other	er tasks
that you might h	ave possi	bly observ	ed the rol	oot perforr	ming?
					1

Which tasks the robot performed the worst **during the first interaction**, among the tasks that you initiated and other tasks that you might have possibly observed the robot performing?



Awesome, thank you!

Let's move on to the second and last part of the experiment.

Interact again with the robot. You may or may not notice some differences from the previous interaction, so pay again attention to what it says and to its behavior.

Then come back here to answer some questions.

Please, refer to the experimenter.

Questions about the second interaction

3. Second Interaction

Welcome back!

In this part of the questionnaire, we ask you to answer a number of questions based on your experience with the robot **during the second interaction**.

The questions are divided in four pages.

If you are ready to start, move to the next page.

Based on your personal experience with the robot **during the second interaction**, please judge the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot was sociable.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
The robot was shy.	\bigcirc	\bigcirc	\bigcirc		\bigcirc
The robot was vulnerable.	\circ	\circ	\bigcirc	0	\bigcirc
The robot was active.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
The robot was assertive.	\circ	\circ	\bigcirc	0	\bigcirc
The robot was anxious.	\bigcirc	\circ	\bigcirc	\bigcirc	\bigcirc
The robot was tense.	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot was creative.	\bigcirc	\circ	\bigcirc		\bigcirc
The robot was seeking excitement.	\circ	\circ	\circ	\circ	0
The robot was dominant.	\circ	\circ	\circ	\circ	\circ
The robot was aggressive.	\circ	\bigcirc	\circ	\circ	\circ
The robot was impulsive.	\circ	\bigcirc	\circ	\circ	\circ
The robot seemed to make its own decisions and did not seem to do just what was programmed to do.	0				0
The robot behaved intentionally (with the intention to achieve some goal).	0	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The behavior of the robot was predictable.	\circ	\circ	0	\bigcirc	\bigcirc
I felt in control of the robot's behavior.	\circ	\circ	\bigcirc	\circ	\circ
The robot behaved considerately towards me.	0	\bigcirc	0	0	0
The robot was reactive (it reacted to my inputs and to the environment).	\circ	\circ	\circ	0	0

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot was proactive (it took the initiative during the interaction).	0	\circ	0	\circ	0
The robot was autonomous (it could operate without my intervention).	\bigcirc	\bigcirc	\bigcirc	\circ	0

Based on your personal experience with the robot **during the second interaction**, please judge the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
It was easy to familiarize with the robot.	\circ	\circ	0	0	\circ
The robot was predictable.	\circ	\circ	\circ	\circ	\bigcirc
I could communicate with the robot both verbally and non-verbally.	0	\circ	0	0	\circ
I could correct communication difficulties by myself.	0	\circ	0	0	\circ
The robot was responsive.	\circ	\circ	\circ	\circ	\bigcirc
The robot felt stable (without defects).	0	\circ	\circ	\circ	\bigcirc
The robot could perform multiple tasks that I initiated during the experiment.	0	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I felt that the robot had many skills.	\circ	\circ	\circ	\circ	\circ
I consider the robot useful as a companion robot.	0	0	0	0	0
The robot would be useful for my entertainment	\circ	\circ	\circ	\circ	0

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot could help me solving tasks in my daily life.	0	\circ	\circ		0
The robot could support me in my daily life.	\circ	0	\circ	\circ	\bigcirc
I could steer the interaction with my words.	\circ	\circ	0	\bigcirc	\circ
I could steer the interaction with my behavior.	0	\circ	\circ	\circ	\circ
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
It was easy to interact with the robot.	\circ	0	\circ	\circ	\bigcirc
I think it is a good idea to use the robot.	0	\circ	\circ	\circ	\bigcirc
I was afraid to make mistakes or break something while interacting with the robot.	0		0		0
I felt comfortable while interacting with the robot.	0	\circ	\circ	0	0
I could only interact with the robot if someone had helped me.	0	0	0	0	0
I could already interact with the robot without any help.	0	0	0	0	0
I could interact with the robot only if I had a good initial training.	0	\circ	\circ	\circ	\circ
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I like the presence of the robot.	0	0	\circ	0	\circ
I felt threatened by the robot.	0	0	0	\circ	\bigcirc
I felt I had something in common with the robot.	0	\circ	\circ	0	\bigcirc
I felt I could trust the robot.	\circ	0	\circ	\circ	\circ
I would follow the advice of the robot, if it gave me one.	0	0	0	0	0

			Neither		
	Strongly disagree	Somewhat disagree	agree nor disagree	Somewhat agree	Strongly agree
I consider the robot as a social actor.	\circ	\bigcirc	\circ	\circ	0
I felt understood by the robot.	\circ	0	\bigcirc	\circ	\circ

Based on your personal experience with the robot **during the second interaction**, please judge the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot interacted with me like a human would do.	0	0	0	0	0
I felt socially engaged with the robot during the experiment.	0	0	0	0	0
Overall, I enjoyed interacting with the robot.	\circ	\circ	\circ	\circ	0
I felt surprised while interacting with the robot	\circ	\circ	\circ	\circ	0
I am satisfied with the general performance of the robot during the interaction.	0	0	0	0	0
I think I could grow a strong attachment to the robot in a long term use in similar situations as in the experiment.	0	0	0	0	0
The robot reacted to my actions in a way that made sense to me.	\circ	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The behavior of the robot was appropriate.	\bigcirc	0	\circ	0	\bigcirc
The robot had a different behavior during the different tasks.	0	0	0	0	0
The robot could interpret my speech during the interaction.	0	0	0	\circ	0

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
The robot could recognize my facial expressions during the interaction.	0	0	0	0	0
The robot could understand my intentions during the interaction.			0		0
The robot could understand my social cues during the interaction.	0		0		0
The robot could adequately communicate with me during the interaction.	0	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I felt safe and secure when interacting with the robot.	\circ	\circ	\circ	0	\circ
The robot behaved ethically.	\circ	\circ	\circ	\circ	\bigcirc
I think the robot could understand me during the interaction.	0	0	0	0	0
The robot expressed emotions during the interaction.	0	0	0	0	0
I could feel the robot's emotions during the interaction.	\circ	\circ	\circ	\circ	0
I would like to see the robot employed as a social companion.	0	\circ	0	\circ	\circ

Which tasks the robot performed the best **during the second interaction**, among the tasks that you initiated and other tasks that you might have possibly observed the robot performing?

			I
/hich tasks the robot perf	ormad tha	word during	the second
nteraction , you may or m mong the tasks that you	nay not not	tice some diffe	erences.,
ave possibly observed the	e robot pei	rforming?	

Thank you very much!

Please, move to the next page to proceed to the final part of the questionnaire.

Final questions

4. Final Questions

In this final part of the questionnaire, we ask you to answer a few more general questions, as well as questions about your personal experience during the entire experiment.

Unless specified otherwise, these questions do not refer specifically neither to the first nor to the second interaction, but they refer to the entire experiment and to your opinions.

Please judge the following statements.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I like computers/computer technology as part of my home environment.	0	0	0	0	0
I like the idea of having a robot as a companion at home.	0	\circ	0	0	0
Robots will have a place as social companions in our society in the future.	\circ	\circ	0	0	0
The employment of robots as social companions will provide change of quality of life for people in the future.	0		0	0	0
The behavior of future robots should be predictable.	\circ	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
A future robot in my home should be controllable by me or by other family members.	0	0	0		0
A future robot in my home should behave considerately towards me or other members in my family.	0	0	0		0
A future robot could help me learn new things.	0	0	0	0	0
A future robot could be used in school for education purposes.	\circ	\circ	\circ	0	\circ
A robot companion should have human-like appearance.	0	0	0	0	0
	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree

			Neither		
	Strongly disagree	Somewhat disagree	agree nor disagree	Somewhat agree	Strongly agree
A robot companion should behave like humans.	0	0	0	0	0
A robot companion should communicate like humans.	\circ	\circ	0	0	0
A robot companion should be aware of the cultural context in which is placed.	0	0	0	0	0
A robot companion should be aware of social norms and appropriate behaviors.		0	0		0
What role do you (tick as many op) Servant Buddy/Mate Assistant Friend Machine/Appliance	tions as c		•	ori siriodia	
What did you find experiment?	l most int	eresting al	oout the r	obot durin	g the

What did you find most annoy experiment?	ring about the robot during the
Did you find any difference b had with the robot? If so, can y	etween the two interactions you give more details?
	y ou give intere detaile.
Do you think that anything sho	ould be changed regarding the
Yes	No
f yes, which of the following ne	eeds improvement?
Appearence	
Speech	
Behavior	
Other	

Can you explain in mo changed?	re detail h	ow you thin	k the robot	should be
				//
Block 5				
Do you have any other	commen	ts?		

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