Thank you for participating in this survey. Your honest responses will help researchers better understand public perceptions of artificial intelligence and robots. We would like a truthful understanding of your perspective. There are no right or wrong answers.

There are no known or anticipated risks to you for participating. Although this study will not benefit you personally, it may be interesting and we hope that our results will help us understand how people think about artificial intelligence. Participation will take approximately 15 minutes. All of your responses will be anonymous.

We will ask questions to ensure you are paying attention, and you cannot go back in this survey, so please take your time before answering.

By clicking the 'Next' button you are giving your consent to take part in the survey.

Next

Please take some time to read through the following definitions that will come up in this survey.

- Artificial beings and robots/Als are intelligent entities built by humans, such as robots, virtual copies of human brains, or computer programs that solve problems, with or without a physical body, that may exist now or in the future.
- Sentience is the capacity to have positive and negative experiences, such as happiness and suffering.
- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

Next

Definition Reminder:

- Artificial beings and robots/AIs are intelligent entities built by humans, such as robots, virtual copies of human brains, or computer programs that solve problems, with or without a physical body, that may exist now or in the future.
- Sentience is the capacity to have positive and negative experiences, such as happiness and suffering.
- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

To what extent do you agree or disagree with the following statements? (1 = strongly agree, 6 = strongly disagree)

The welfare of robots/Als is one of the most important social issues in the world today.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

Physically damaging sentient robots/Als without their consent is wrong.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

Re-programming sentient robots/Als without their consent is wrong.
(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree

Torturing sentient robots/Als is wrong.

(6) strongly disagree

No opinion

) strongly agree	
) agree	
) somewhat agree	
) somewhat disagree	
) disagree	
) strongly disagree	
o opinion	

Next
No opinion
(6) strongly disagree
(5) disagree
(4) somewhat disagree
(3) somewhat agree
(2) agree
(1) strongly agree
Sentient robots/Als deserve to be treated with respect.
No opinion
(6) strongly disagree
(5) disagree
(4) somewhat disagree
(3) somewhat agree
(2) agree
(1) strongly agree
Sentient robots/Als deserve to be included in the moral circle.

Definition Reminder:

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- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

To what extent do you agree or disagree with the following statements? (1 = strongly agree, 6 = strongly disagree)

I would consider joining a public demonstration against the mistreatment of sentient robots/Als.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

I support asking institutions like the government and private corporations to fund research that protects sentient robots/Als.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion
I support campaigns against the exploitation of sentient robots/Als.
(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree

(5) disagree

No opinion

(6) strongly disagree

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- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

To what extent do you agree or disagree with the following statements? (1 = strongly agree, 6 = strongly disagree)

It is wrong to blackmail people by threatening to harm robots/Als they care about.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

Sentient robots/Als deserve to be protected from people who derive pleasure from inflicting physical or mental pain on them.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

It is right to protect sentient robots/Als from vindictive or retaliatory punishment.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

Definition Reminder:

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- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

To what extent do you agree or disagree with the following statements? (1 = strongly agree, 6 = strongly disagree)

I support a global ban on the development of applications that put the welfare of robots/Als at risk.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

I support a global ban on the development of sentience in robots/Als.

I support a global ban on the development of robot-human hybrids.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

I support a global ban on the development of Al-enhanced humans.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

Next

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- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

To what extent do current robots/Als (i.e., those that exist in 2021) have the capacity for each of the following (0 = not at all, 100 = very much)?

having feelings



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- Sentience is the capacity to have positive and negative experiences, such as happiness and suffering.
- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

To what extent do you agree or disagree with the following statements? (1 = strongly agree, 6 = strongly disagree)

I support granting legal rights to sentient robots/Als.

(1) strongly agree	
(2) agree	
(3) somewhat agree	
(4) somewhat disagree	
(5) disagree	
(6) strongly disagree	
No opinion	

I support the development of welfare standards that protect the well-being of sentient robots/Als.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

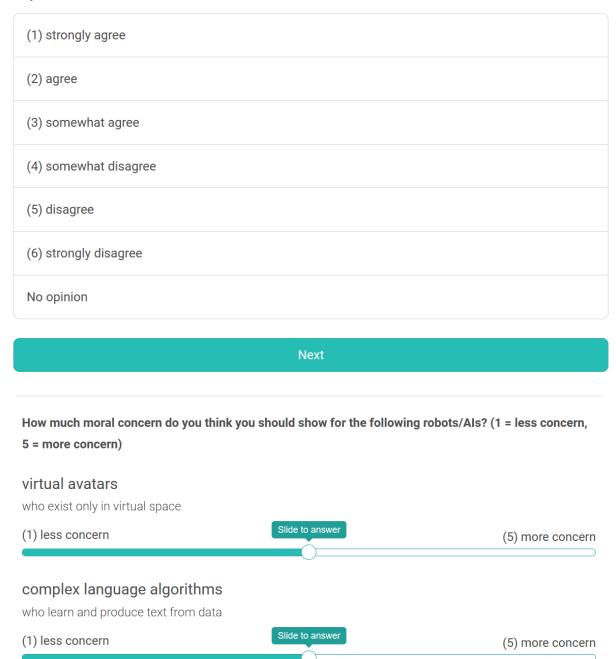
I support a global ban on the use of sentient robots/Als for labor without their consent.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion
No opinion

I support safeguards on scientific research practices that protect the well-being of sentient robots/Als.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

I support a global ban on the use of sentient robots/Als as subjects in medical experiments without their consent.



who build parts for industry Slide to answer (1) less concern (5) more concern animal-like companion robots who socialize with people at home (1) less concern (5) more concern Al personal assistants who organize, schedule, and assist people in their daily lives (1) less concern (5) more concern machine-like cleaning robots who clean people's spaces Slide to answer (1) less concern (5) more concern human-like retail robots who interact with people at stores and restaurants Slide to answer (1) less concern (5) more concern exact digital copies of human brains who exist in virtual space Slide to answer (1) less concern (5) more concern

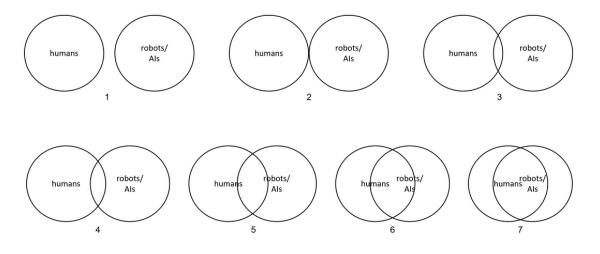
machine-like factory production robots

human-like companion robots

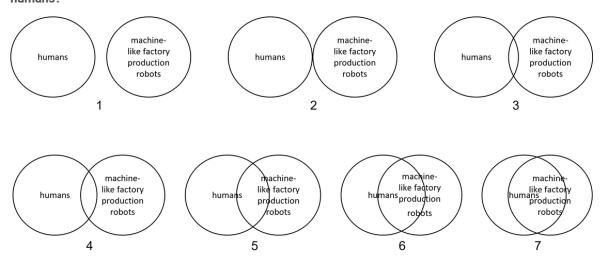
who socialize with people at home



On the following pages you will see circles like these. Please indicate which pair of circles best represents how connected you think the following robots/Als are to humans.

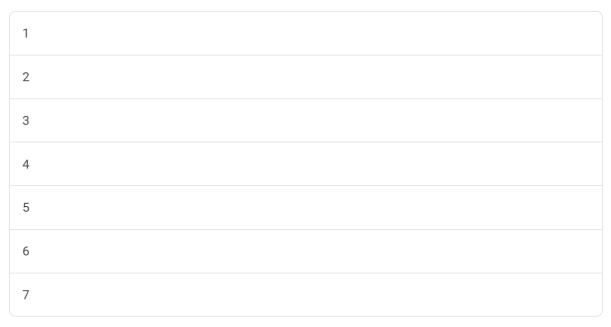


Which pair of circles best represents how connected machine-like factory production robots are to humans?



machine-like factory production robots

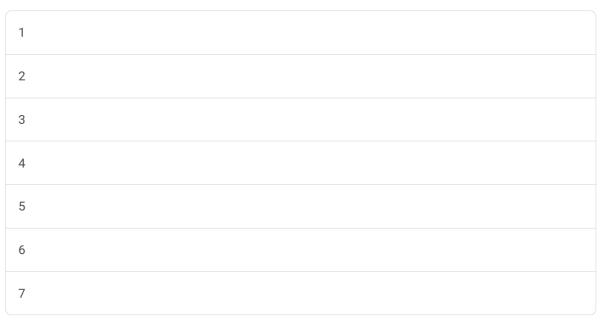
who build parts for industry



Which pair of circles best represents how connected animal-like companion robots are to humans? animal-like animal-like animal-like companion companion humans companion humans humans robots robots 1 2 3 anima -like humanscompanion animal-like companion animal-like humanumpanion animal-like humans companion humans robots obots robots robøts 4 5 6

animal-like companion robots

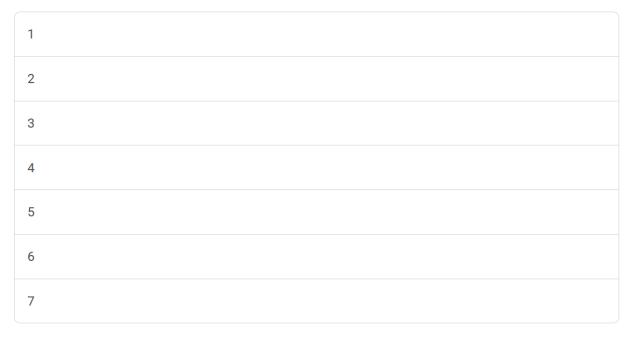
who socialize with people at home

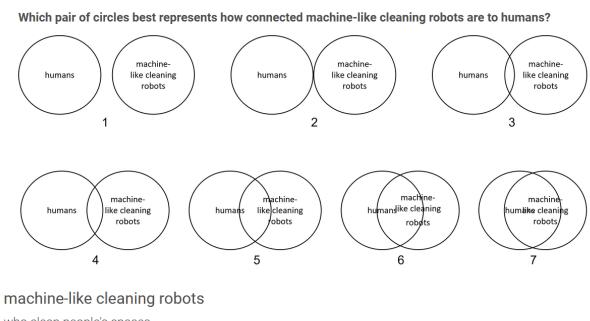


Which pair of circles best represents how connected human-like retail robots are to humans? human-like human-like human-like humans humans humans retail robots retail robots retail robots 2 3 human-like retail robots human-like retail robots human-like human-like humans retail robots humans retail robots humans humans 4 5 6

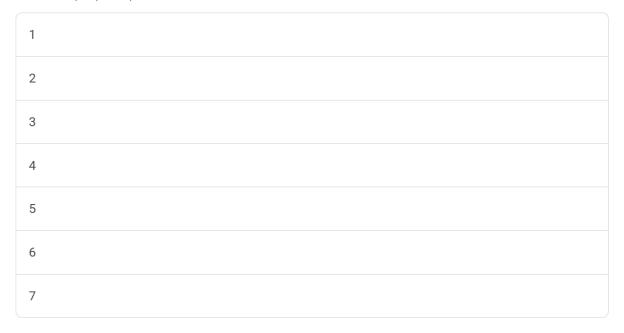
human-like retail robots

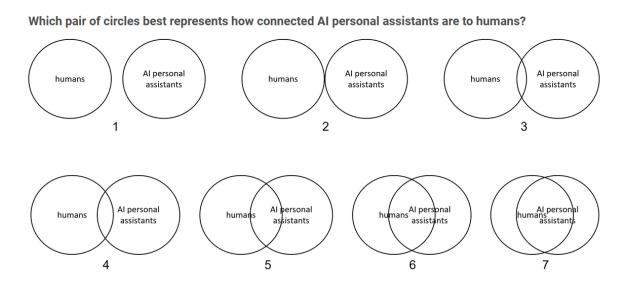
who interact with people at stores and restaurants





who clean people's spaces





Al personal assistants

who organize, schedule, and assist people in their daily lives

1			
2			
3			
4			
5			
6			
7			

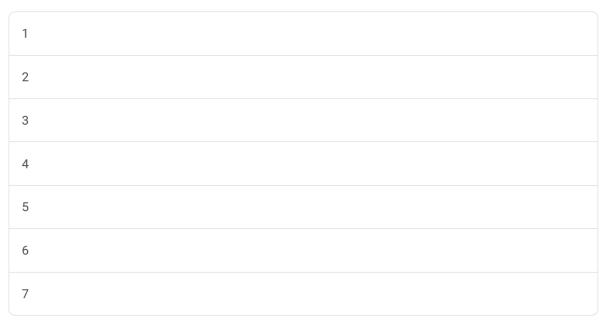
Which pair of circles best represents how connected complex language algorithms are to humans? complex complex complex language algorithms humans language humans humans language algorithms algorithms 1 2 3 complex language algorithms complex humans language algorithms complex complex humans language humans humananguage algorithms algorithm

6

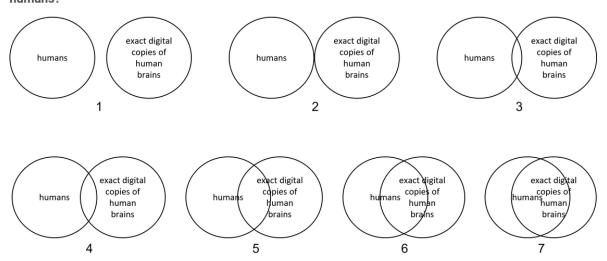
5

complex language algorithms

who learn and produce text from data

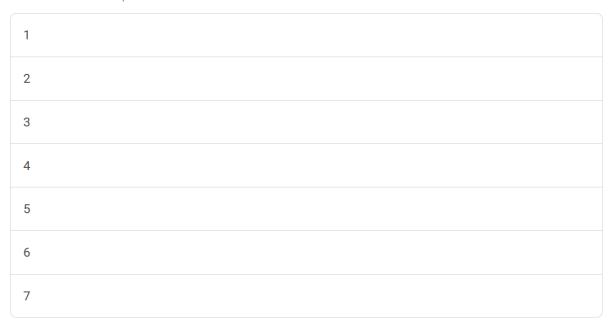


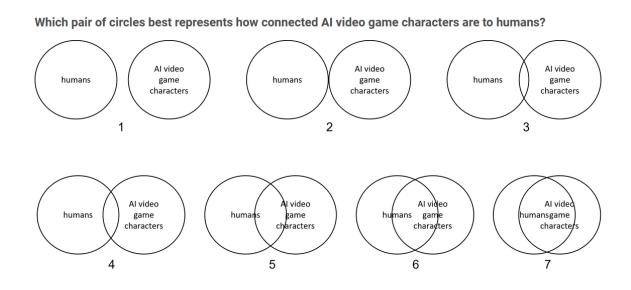
Which pair of circles best represents how connected exact digital copies of human brains are to humans?



exact digital copies of human brains

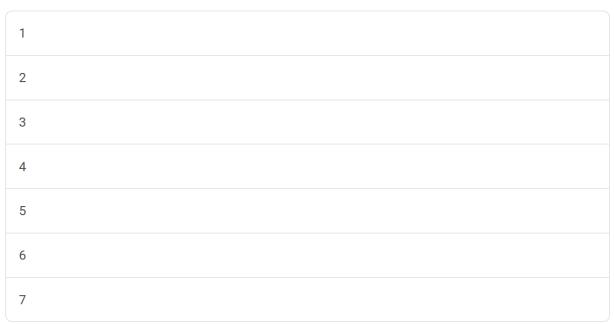
who exist in virtual space

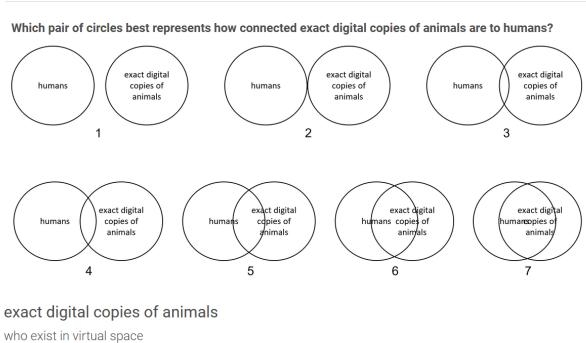


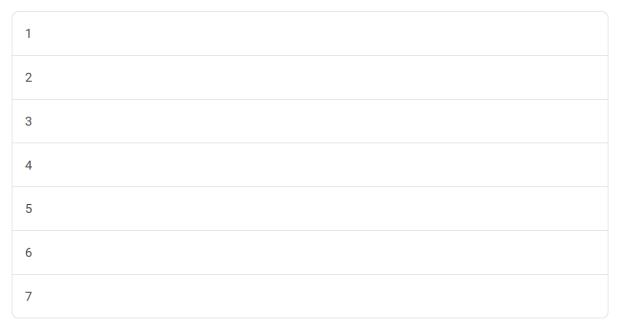


Al video game characters

who exist only in video games







Which pair of circles best represents how connected virtual avatars are to humans? virtual virtual virtual humans humans humans avatars avatars avatars 1 2 3 virtual avatars humans virtual avatars humans avatars virtual humans humans avatars 4 5 6

virtual avatars

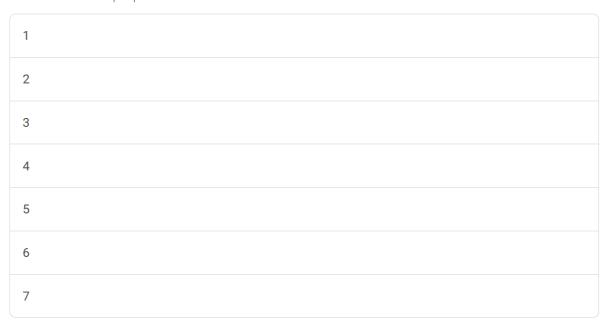
who exist only in virtual space

1	
2	
3	
4	
5	
6	
7	

Which pair of circles best represents how connected human-like companion robots are to humans? human-like human-like human-like companion companion companion humans humans humans 1 2 3 human-like companion human-like manscompanion human-like humææmpanion human-like humans humans companion robots obots robots robots 4 5

human-like companion robots

who socialize with people at home



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- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

To what extent do you agree or disagree with the following statements? (1 = strongly agree, 6 = strongly disagree)

Robots/Als should be subservient to humans.

(1) strongly agree	
(2) agree	
(3) somewhat agree	
(4) somewhat disagree	
(5) disagree	
(6) strongly disagree	
No opinion	

Robots/Als may be harmful to people in the USA.

(1) strongly agree

No opinion

(2) agree	
(3) somewhat agree	
(4) somewhat disagree	
(5) disagree	
(6) strongly disagree	
No opinion	
Robots/Als may be harmful to future generations of people.	
generalization propriet	
(1) strongly agree	
(1) strongly agree	
(1) strongly agree (2) agree	
(1) strongly agree (2) agree (3) somewhat agree	

Robots/Als have been studied systematically since the middle of last century although the word "robot" as we know it first appeared early last century. If you read this, respond with 'Agree' for this item.

(1) strongly agree	
(2) agree	
(3) somewhat agree	
(4) somewhat disagree	
(5) disagree	
(6) strongly disagree	
No opinion	

Robots/Als may be harmful to me personally.

(1) strongly agree
(2) agree
(3) somewhat agree
(4) somewhat disagree
(5) disagree
(6) strongly disagree
No opinion

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- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

Yes	
Not sure	
No	
o you think entient?	k any robots/Als that currently exist (i.e., those that exist in 2021) are
No	
No Yes	

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- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

If you had to guess, how many years from now do you think that

robots/Als will be sentient?

Type a whole number for the number of years. If you think it will never happen, enter 0. If you think it already has happened, enter -1.

the welfare of robots/Als will be an important social issue?

Type a whole number for the number of years. If you think it will never happen, enter 0. If you think it already has happened, enter -1.

Next

Definition Reminder:

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How likely is it that robots/Als will be sentient within the next 100 years?

0%, this definitely will not happen

Slide to answer

100%, this definitely will happen

Next

For the questions on the following page, please now imagine a future in which sentient robots/Als *have already* been developed and *become widespread*. The following questions will ask you about this future world.

Next

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- Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering.

In this future world, to what extent are robots/Als exploited for their labor? Slide to answer (1) not at all (5) very much are robots/Als used as subjects in scientific and medical research? (1) not at all (5) very much is it important to reduce the overall percentage of unhappy sentient robots/Als? Slide to answer (1) not at all (5) very much is the welfare of robots/Als an important social issue? Slide to answer (1) not at all (5) very much is advocacy for robot/Al rights necessary? Slide to answer (1) not at all (5) very much are robots/Als treated cruelly? Slide to answer (1) not at all (5) very much

Next, you will see some questions that ask about your opinions on some other topics.

Next

To what extent do you agree or disagree with the following statements? (1 = strongly agree, 6 = strongly disagree)

The environment deserves to be included in the moral circle.

(1) strongly agree	
(2) agree	
(3) somewhat agree	
(4) somewhat disagree	
(5) disagree	
(6) strongly disagree	
No opinion	

Animals deserve to be included in the moral circle.

(1) strongly agree

(2) agree

(3) somewhat agree

(4) somewhat disagree

(6) strongly disagree

No opinion

(5) disagree

The welfare of animals is one of the most important social issues in the world today.

(1) strongly agree

(2) agree

(3) somewhat agree

(4) somewhat disagree

(5) disagree

(6) strongly disagree

No opinion

The welfare of the environment is one of the most important social issues in the world today.

(1) strongly agree	
(2) agree	
(3) somewhat agree	
(4) somewhat disagree	
(5) disagree	
(6) strongly disagree	
No opinion	
Next	
Definition Reminder:	
 Artificial beings and robots/Als are intelligent entities built by humans, such as robots, virtual copies of computer programs that solve problems, with or without a physical body, that may exist now or in the future. Sentience is the capacity to have positive and negative experiences, such as happiness and suffering. Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness. 	re.
How much do you gave as discourse with the following etatements (1 - etremply disc	avec 4 – neither
How much do you agree or disagree with the following statements (1 = strongly disagree nor disagree, 7 = strongly agree)?	gree, 4 = neither
Artificial beings contain a spirit.	
(1) strongly disagree Slide to answer	(7) strongly agree
Most people who are important to me think that robots/Als cannot he	ave feelings.
(1) strongly disagree	(7) strongly agree

Morally, artificial beings always count for less than humans. Slide to answer (1) strongly disagree (7) strongly agree The spirits of human, natural, and artificial beings can interact with each other. (1) strongly disagree (7) strongly agree Humans have the right to use artificial beings however they want to. Slide to answer (1) strongly disagree (7) strongly agree Next Definition Reminder: · Artificial beings and robots/Als are intelligent entities built by humans, such as robots, virtual copies of human brains, or computer programs that solve problems, with or without a physical body, that may exist now or in the future. • Sentience is the capacity to have positive and negative experiences, such as happiness and suffering. • Sentient robots/Als are those with the capacity to have positive and negative experiences, such as happiness and suffering. Please answer the following questions (0 = not at all, 10 = very much). To what extent does the average computer have a mind of its own? Slide to answer (0) not at all (10) very much To what extent does the average AI have intentions? (0) not at all (10) very much

To what extent does the average digital simulation have emotions? (0) not at all (10) very much To what extent does the average robot have consciousness? Slide to answer (0) not at all (10) very much Next Next, you will see questions about your own experience with robots/Als. Next Als at home Do you own Al or robotic devices that can detect their environment and respond appropriately? For example, you might own... • a home assistant that can detect whatever you say and respond in kind • a home assistant that can control the temperature and ambient lighting based on feedback it receives from the environment • a robotic vacuum cleaner that decides where to move by itself • a self-driving car that monitors its environment and drives itself • a companion robot that can interact with you socially Do you own AI or robotic devices that can detect their environment and respond appropriately? No Yes Next

Als at work

Do you work with AI or robotic devices at your job? For example, you might work with a robot/AI...

- for research or scientific purposes
- · for information or fact checking
- for facial recognition
- for healthcare diagnoses
- for making social work or legal decisions
- for aerial photography or mapping
- for disaster response
- for industrial production
- for creative arts

Do you work with AI or robotic devices at your job?

No			
Yes			

Next

Smart devices

Do you own a smart device that has some ability to detect its environment and network with other devices but that cannot respond to everything you might say or that requires you to pre-program its routines? For instance, you might own...

- a smartphone
- a smart TV
- smart speakers
- a smart coffee maker
- a smart toaster
- smart light bulbs

Do you own a smart device that has some ability to detect its environment are network with other devices but that cannot respond to everything you might stat requires you to pre-program its routines?	
Yes	
No	
Next	
Have you ever experienced any of the following? (check all that apply)	
Saw a robot being physically abused or attacked by humans	
Saw a video, gif, or other media of a robot being physically abused or attacked by humans	
Had a conversation with a robot/Al	
Read a book or article that discussed AI ethics or moral status	
Had a conversation with a family member or friend about robots/Als	
None of the above	

How often do you interact with AI or robotic devices that respond to you and that can
choose their own behavior?

(0) Never or Not applicable
(1) Only on rare occasions
(2) A few times a year
(3) Monthly
(4) Weekly
(5) Daily

How often do you read or watch robot/Al-related stories, movies, TV shows, comics, news, product descriptions, conference papers, journal papers, blogs, or other material?

(0) Never or Not applicable
(1) Only on rare occasions
(2) A few times a year
(3) Monthly
(4) Weekly
(5) Daily

How would you describe your political views?

1 = very liberal, 3 = moderate, 5 = very conservative

(1) very liberal (5) very conservative

What is your present religion, if any?

Buddhist
Christian-Catholic (for example Roman Catholic and Orthodox)
Christian-Protestant (for example Episcopalian, Presbyterian, United Church of Christ, Methodist, Baptist, Lutheran)
Hindu
Jain
Jewish
Muslim
Shinto
Sikh
Atheist (do not believe in God)
Agnostic (not sure if there is a God)
No religion
Something else (if you answered 'something else' for religion, please specify).
Prefer not to say

If you answered 'something else' for religion, please specify.
Which of these best describes what you currently eat?
Meat-eater (no restrictions on animal products)
Pescatarian (no chicken, beef, or any meats other than fish)
Vegetarian (no meat)
Vegan (no animal products)
Other restrictions on animal products
Next
Next
Thank you for your participation. If you have any feedback or additional comments, please leave them here and press 'Submit' to finish the survey.
Submit