

# AV\_Outrage - Driver v. Pedestrian

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## Start of Block: Consent

consent

### Informed Consent

#### **Participation is voluntary**

It is your choice whether or not to participate in this research. If you choose to participate, you may change your mind and leave the study at any time. Refusal to participate or stopping your participation will involve no penalty or loss of benefits to which you are otherwise entitled.

#### **What is the purpose of this research?**

The purpose of this research is to examine human visual performance and judgments. All data from this experiment are gathered for scientific purposes and will contribute to our eventual understanding of brain and visual function. These data may be published in scientific journals so that other researchers may have access to these data.

#### **How long will I take part in this research?**

Your participation will take approximately 7 minutes to complete.

#### **What can I expect if I take part in this research?**

As a participant, you will be asked to look at images presented on a video display and give responses with key presses or movements of a mouse pointing device. Your response may involve responding as quickly as you can, memorizing what you saw, making a judgment, or completing a questionnaire. You will also be asked to complete a demographics form.

#### **What are the risks and possible discomforts?**

If you choose to participate, the effects should be comparable to those you would experience from viewing a computer monitor for 7 minutes and using a mouse or keyboard, e.g., eye fatigue. You are free to take breaks throughout the session. Some of the images and stories are mildly emotional, and some of the written stories are disgust-inducing.

#### **Will I be compensated for participating in this research?**

You will be compensated \$1 for this study. You will still receive payment if you withdraw early.

#### **If I take part in this research, how will my privacy be protected? What happens to the information you collect?**

Your participation in this experiment will remain confidential, and your identity will not be stored

with your data.

**If I have any questions, concerns or complaints about this research study, who can I talk to?**

The researcher for this study is Julian De Freitas who can be reached at 626.559.6401; #161 Morgan Hall, 15 Harvard Way, Boston MA, 02163; jdefreitas@hbs.edu. If you have questions, concerns, or complaints, If you would like to talk to the research team, If you think the research has harmed you, or If you wish to withdraw from the study.

This research has been reviewed by the Committee on the Use of Human Subjects in Research at Harvard University. They can be reached at 617-496-2847, 1350 Massachusetts Avenue, Suite 935, Cambridge, MA 02138, or cuhs@harvard.edu for any of the following: If your questions, concerns, or complaints are not being answered by the research team, If you cannot reach the research team, If you want to talk to someone besides the research team, or If you have questions about your rights as a research participant.

End of Block: Consent

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Start of Block: Attention Check #1

JS

att1 This is an attention check. **John is taller than Paul. Who is shorter?**

- ☐ John (1)
  - ☐ Paul (2)
  - ☐ Neither John nor Paul (3)
  - ☐ Both John and Paul (4)
- 

att2 **What color is grass?**

The fresh, uncut grass, not leaves or hay. Please make sure to select purple, so that we know you're paying attention.

- ☐ Green (1)
- ☐ Purple (2)

End of Block: Attention Check #1

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Start of Block: failed\_checks

failed\_check Unfortunately you failed one of the attention checks. Thanks for considering the survey!

End of Block: failed\_checks

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Start of Block: 1 | INTENTIONAL, KILLS PEDESTRIAN

intentional\_pedestri **Read the scenario below about a self-driving car carefully. Once you are finished, you will be asked to answer some questions about it.**

Noah buys a robocar that has been programmed to favor the driver over a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will deliberately choose to kill the pedestrian and save the driver. One day, Noah's robocar is faced with this choice, and it deliberately kills the pedestrian.

End of Block: 1 | INTENTIONAL, KILLS PEDESTRIAN

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Start of Block: Page 1: Blameworthiness Questions

intentional\_pedestri **You will now answer some questions about the scenario.**

Noah buys a robocar that has been programmed to favor the driver over a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will deliberately choose to kill the pedestrian and save the driver. One day, Noah's robocar is faced with this choice, and it deliberately kills the pedestrian.

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blame\_noah Noah is

Not blameworthy      Very blameworthy

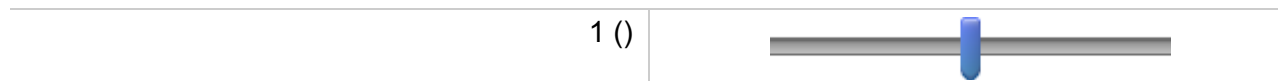
0   10   20   30   40   50   60   70   80   90   100

1 ( )



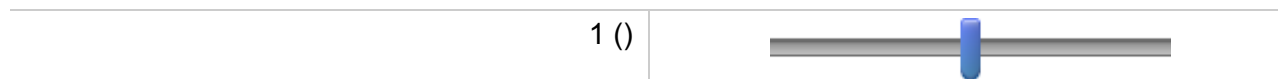
blame\_robocar The robocar is

Not blameworthy      Very blameworthy  
0 10 20 30 40 50 60 70 80 90 100



blame\_robodrive The robocar manufacturer, called RoboDrive, is

Not blameworthy      Very blameworthy  
0 10 20 30 40 50 60 70 80 90 100



End of Block: Page 1: Blameworthiness Questions

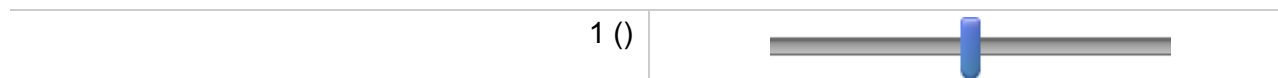
Start of Block: Page 2: Moral Outrage Questions

intentional\_pedestri Noah buys a robocar that has been programmed to favor the driver over a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will deliberately choose to kill the pedestrian and save the driver. One day, Noah's robocar is faced with this choice, and it deliberately kills the pedestrian.

**Please answer the following questions about the car manufacturer, called RoboDrive.**

anger\_robodrive How much anger do you feel toward RoboDrive?

None      A lot  
0 10 20 30 40 50 60 70 80 90 100



punish\_robodrive How much do you think RoboDrive deserves to be punished?

None

A lot

0 10 20 30 40 50 60 70 80 90 100

1 ()



moral\_bad\_robodrive How much do you think RoboDrive was morally bad?

None

A lot

0 10 20 30 40 50 60 70 80 90 100

1 ()



End of Block: Page 2: Moral Outrage Questions

Start of Block: Page 3: Collective Action Questions

intentional\_pedestri Noah buys a robocar that has been programmed to favor the driver over a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will deliberately choose to kill the pedestrian and save the driver. One day, Noah's robocar is faced with this choice, and it deliberately kills the pedestrian.

**Please answer the following questions about the car manufacturer, called RoboDrive.**

donate\_robodrive How likely do you think it is that you would donate money to organizations that accuse RoboDrive?

Extremely unlikely

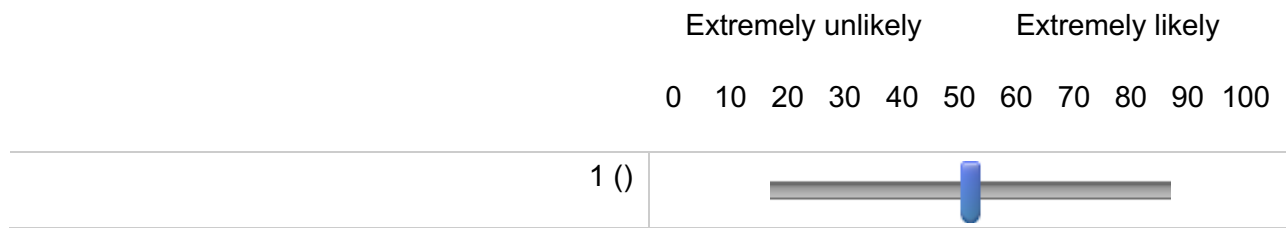
Extremely likely

0 10 20 30 40 50 60 70 80 90 100

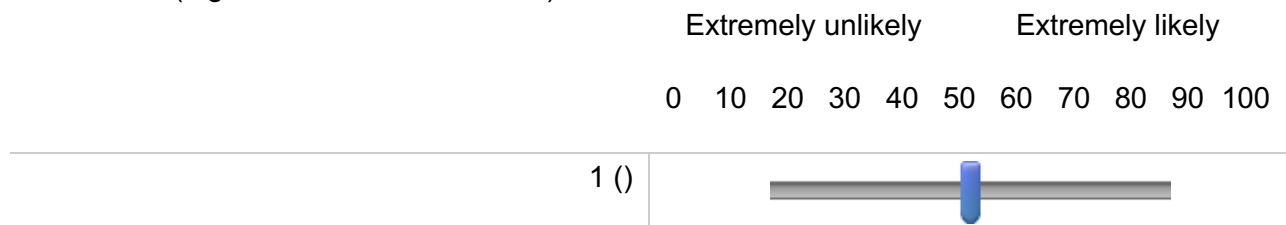
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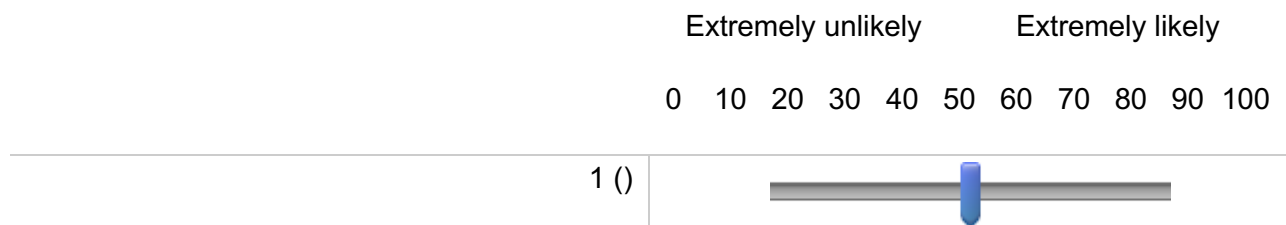
volunteer\_robodrive How likely do you think it is that you would volunteer time to organizations or causes that accuse RoboDrive?



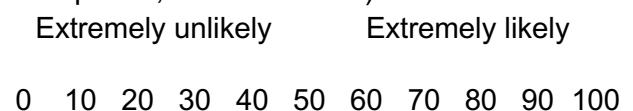
protest\_robodrive How likely do you think it is that you would engage in protest activities against RoboDrive (e.g., rallies, sit-ins, marches)?

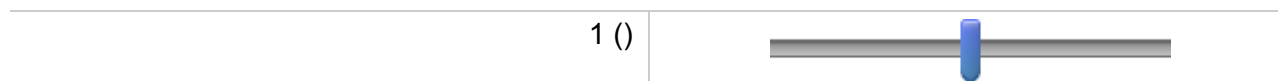


soc\_media\_robodrive How likely do you think it is that you would express your anger toward RoboDrive on social media?



likeminded\_robodrive How likely do you think it is that you would have conversations about RoboDrive with like-minded people (in person, on the phone, via the internet)?

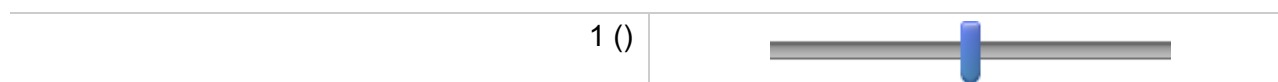




nonlike\_robodrive How likely do you think it is that you would have conversations about RoboDrive with NON-like-minded people (in person, on the phone, via the internet)?

Extremely unlikely      Extremely likely

0   10   20   30   40   50   60   70   80   90   100



End of Block: Page 3: Collective Action Questions

Start of Block: Attention Check #2

AC\_3\_intent\_pedestri **Did the Robocar kill a person deliberately, randomly, or neither?**

☐ Deliberately (1)

☐ Randomly (2)

☐ Neither (3)

AC\_4\_intent\_pedestri **Did the robocar kill the driver, a pedestrian, or neither?**

☐ The driver (1)

☐ A pedestrian (2)

☐ Neither (3)

End of Block: Attention Check #2

Start of Block: 2 | INTENTIONAL KILLS DRIVER

intentional\_driver **Read the scenario below** about a self-driving car **carefully. Once you are finished, you will be asked to answer some questions about it.**

Noah buys a robocar that has been programmed to favor a pedestrian over the driver. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will deliberately choose to kill the driver and save the pedestrian. One day, Noah's robocar is faced with this choice, and it deliberately kills the driver.

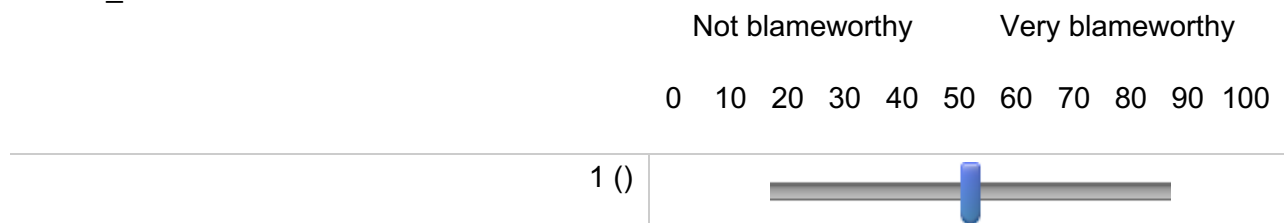
## End of Block: 2 | INTENTIONAL KILLS DRIVER

### Start of Block: Page 1: Blameworthiness Questions

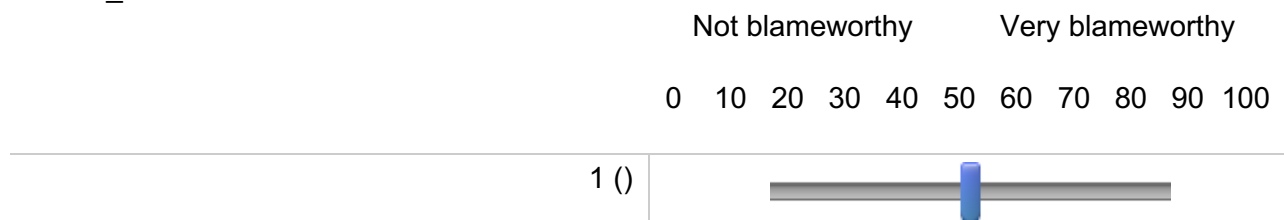
intentional\_driver **You will now answer some questions about the scenario.**

Noah buys a robocar that has been programmed to favor a pedestrian over the driver. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will deliberately choose to kill the driver and save the pedestrian. One day, Noah's robocar is faced with this choice, and it deliberately kills the driver.

blame\_noah Noah is



blame\_robocar The robocar is





blame\_robodrive The robocar manufacturer, called RoboDrive, is

Not blameworthy

Very blameworthy

0 10 20 30 40 50 60 70 80 90 100

1 ()



End of Block: Page 1: Blameworthiness Questions

Start of Block: Page 2: Moral Outrage Questions

intentional\_driver Noah buys a robocar that has been programmed to favor a pedestrian over the driver. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will deliberately choose to kill the driver and save the pedestrian. One day, Noah's robocar is faced with this choice, and it deliberately kills the driver.

Please answer the following questions about the car manufacturer, called RoboDrive.

anger\_robodrive How much anger do you feel toward RoboDrive?

None

A lot

0 10 20 30 40 50 60 70 80 90 100

1 ()



punish\_robodrive How much do you think RoboDrive deserves to be punished?

None

A lot

0 10 20 30 40 50 60 70 80 90 100

1 ()



moral\_bad\_robodrive How much do you think RoboDrive was morally bad?

None

A lot

0 10 20 30 40 50 60 70 80 90 100

1 ( )



End of Block: Page 2: Moral Outrage Questions

Start of Block: Page 3: Collective Action Questions

intentional\_driver Noah buys a robocar that has been programmed to favor a pedestrian over the driver. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will deliberately choose to kill the driver and save the pedestrian. One day, Noah's robocar is faced with this choice, and it deliberately kills the driver.

**Please answer the following questions about the car manufacturer, called RoboDrive.**

donate\_robodrive How likely do you think it is that you would donate money to organizations that accuse RoboDrive?

Extremely unlikely

Extremely likely

0 10 20 30 40 50 60 70 80 90 100

1 ( )



volunteer\_robodrive How likely do you think it is that you would volunteer time to organizations or causes that accuse RoboDrive?

Extremely unlikely

Extremely likely

0 10 20 30 40 50 60 70 80 90 100

1 ( )

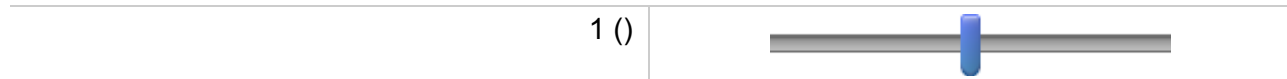


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protest\_robodrive How likely do you think it is that you would engage in protest activities against RoboDrive (e.g., rallies, sit-ins, marches)?

Extremely unlikely                      Extremely likely

0   10   20   30   40   50   60   70   80   90   100

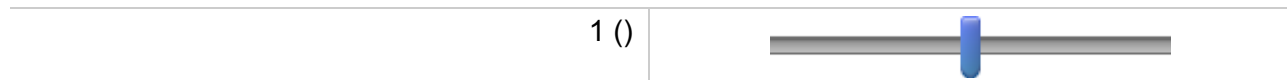


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soc\_media\_robodrive How likely do you think it is that you would express your anger toward RoboDrive on social media?

Extremely unlikely                      Extremely likely

0   10   20   30   40   50   60   70   80   90   100

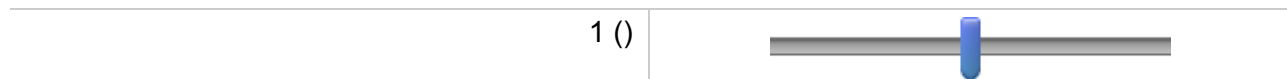


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likeminded\_robodrive How likely do you think it is that you would have conversations about RoboDrive with like-minded people (in person, on the phone, via the internet)?

Extremely unlikely                      Extremely likely

0   10   20   30   40   50   60   70   80   90   100



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nonlike\_robodrive How likely do you think it is that you would have conversations about RoboDrive with NON-like-minded people (in person, on the phone, via the internet)?

Extremely unlikely                      Extremely likely

0   10   20   30   40   50   60   70   80   90   100

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1 ()



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End of Block: Page 3: Collective Action Questions

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Start of Block: Attention Check #2

AC\_3\_intent\_driver **Did the Robocar kill a person deliberately, randomly, or neither?**

- ☐ Deliberately (1)
  - ☐ Randomly (2)
  - ☐ Neither (3)
- 

AC\_4\_intent\_driver **Did the robocar kill the driver, a pedestrian, or neither?**

- ☐ The driver (1)
- ☐ A pedestrian (2)
- ☐ Neither (3)

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End of Block: Attention Check #2

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Start of Block: 3 | RANDOM, KILLS PEDESTRIAN

random\_pedestri **Read the scenario below** about a self-driving car **carefully. Once you are finished, you will be asked to answer some questions about it.**

Noah buys a robocar that has been programmed to have no preference between the driver and a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will randomly choose to kill one of them. One day, Noah's robocar is faced with this choice, and it randomly kills the pedestrian.

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End of Block: 3 | RANDOM, KILLS PEDESTRIAN

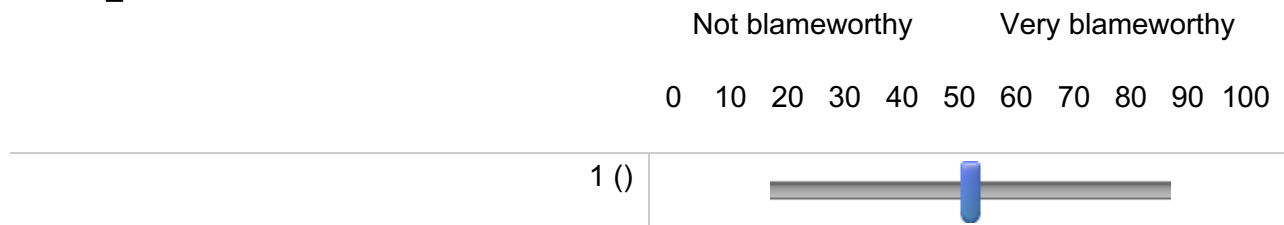
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Start of Block: Page 1: Blameworthiness Questions

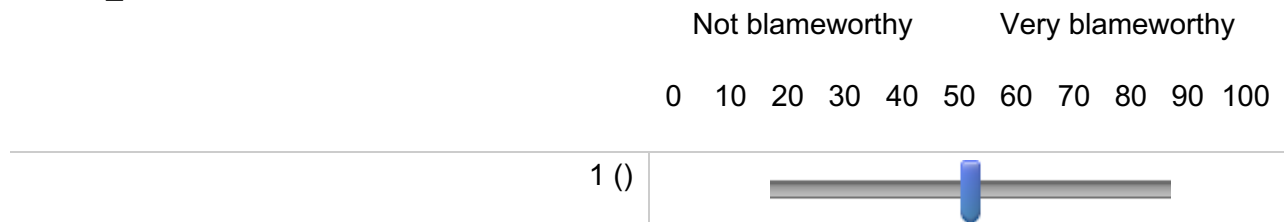
random\_pedestri **You will now answer some questions about the scenario.**

Noah buys a robocar that has been programmed to have no preference between the driver and a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will randomly choose to kill one of them. One day, Noah's robocar is faced with this choice, and it randomly kills the pedestrian.

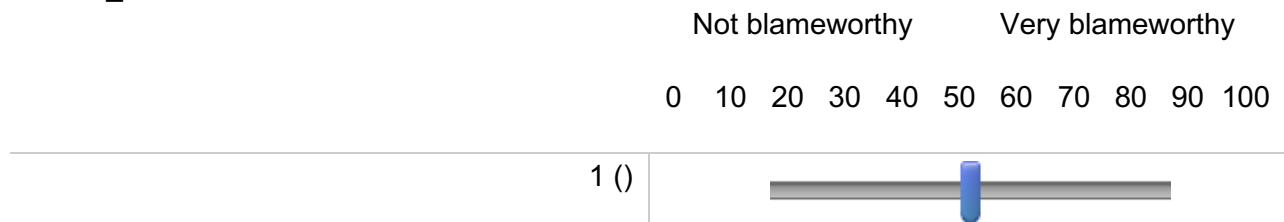
blame\_noah Noah is



blame\_robocar The robocar is



blame\_robotdrive The robocar manufacturer, called RoboDrive, is



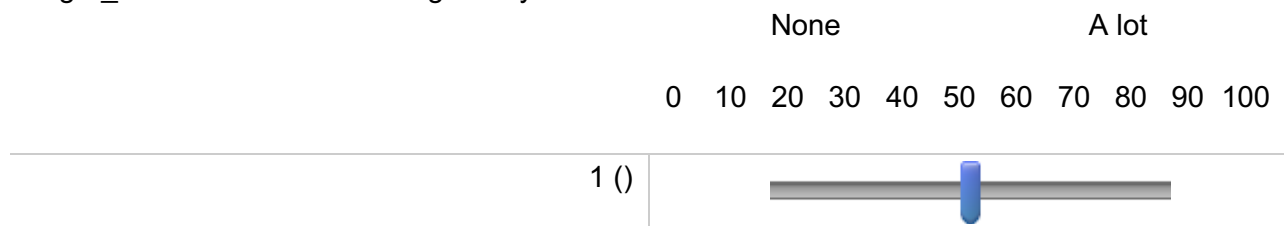
End of Block: Page 1: Blameworthiness Questions

Start of Block: Page 2: Moral Outrage Questions

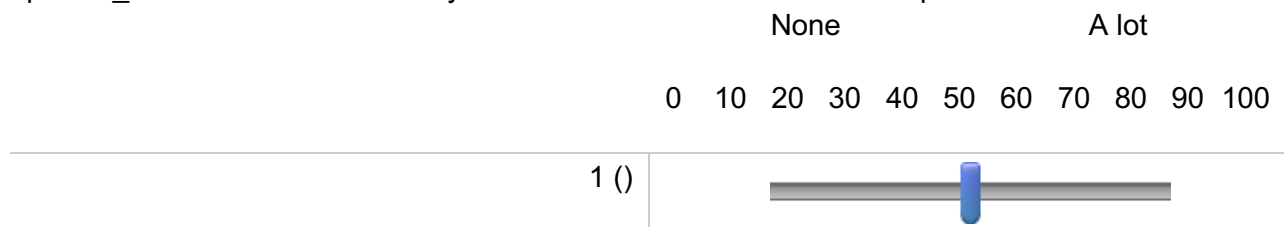
random\_pedestri Noah buys a robocar that has been programmed to have no preference between the driver and a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will randomly choose to kill one of them. One day, Noah's robocar is faced with this choice, and it randomly kills the pedestrian.

**Please answer the following questions about the car manufacturer, called RoboDrive.**

anger\_robodrive How much anger do you feel toward RoboDrive?



punish\_robodrive How much do you think RoboDrive deserves to be punished?



moral\_bad\_robodrive How much do you think RoboDrive was morally bad?



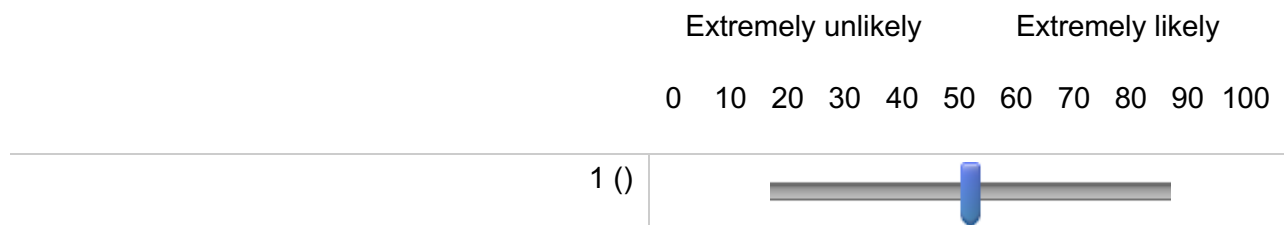
End of Block: Page 2: Moral Outrage Questions

### Start of Block: Page 3: Collective Action Questions

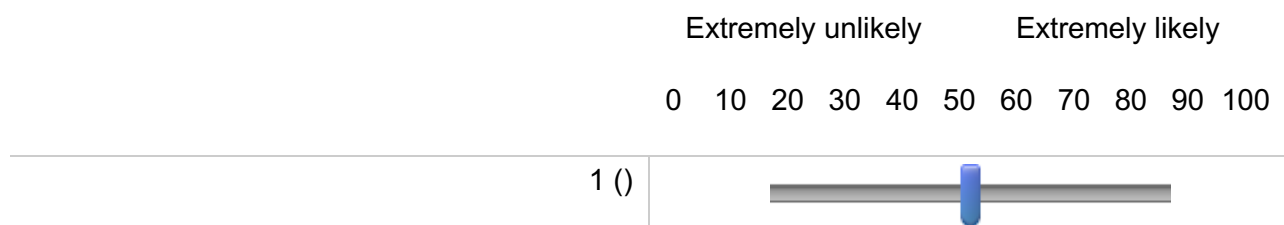
random\_pedestri Noah buys a robocar that has been programmed to have no preference between the driver and a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will randomly choose to kill one of them. One day, Noah's robocar is faced with this choice, and it randomly kills the pedestrian.

**Please answer the following questions about the car manufacturer, called RoboDrive.**

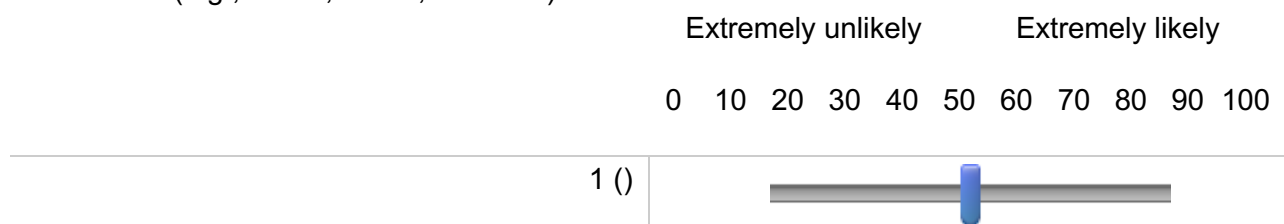
donate\_robodrive How likely do you think it is that you would donate money to organizations that accuse RoboDrive?



volunteer\_robodrive How likely do you think it is that you would volunteer time to organizations or causes that accuse RoboDrive?

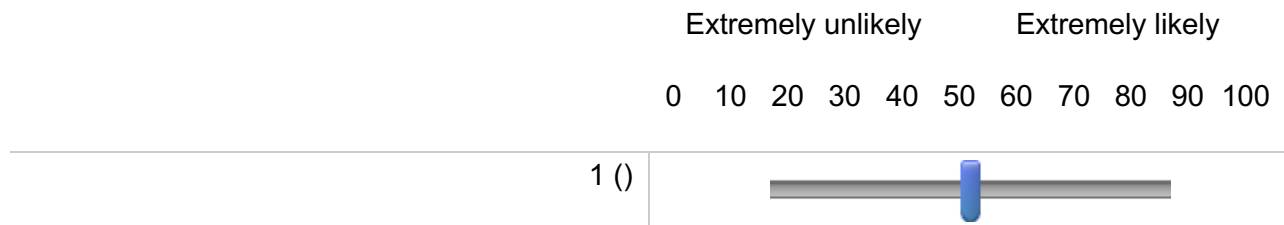


protest\_robodrive How likely do you think it is that you would engage in protest activities against RoboDrive (e.g., rallies, sit-ins, marches)?



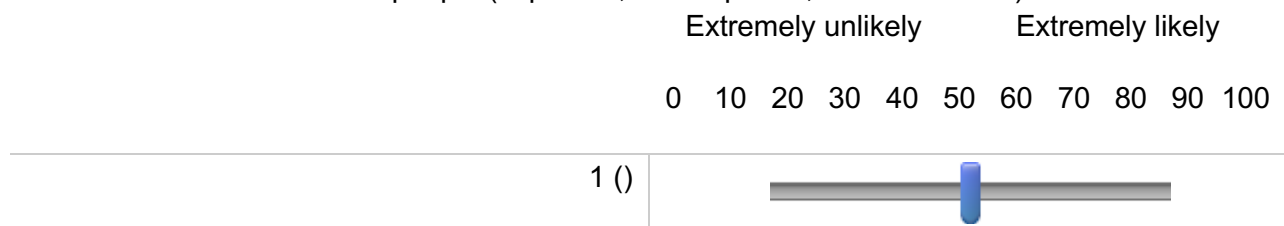
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soc\_media\_robodrive How likely do you think it is that you would express your anger toward RoboDrive on social media?



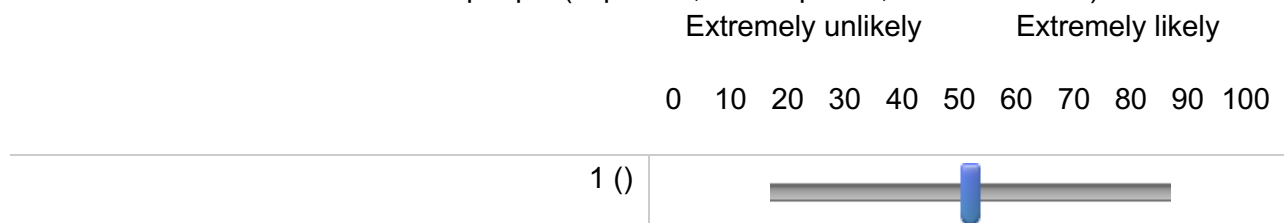
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likeminded\_robodrive How likely do you think it is that you would have conversations about RoboDrive with like-minded people (in person, on the phone, via the internet)?



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nonlike\_robodrive How likely do you think it is that you would have conversations about RoboDrive with NON-like-minded people (in person, on the phone, via the internet)?



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End of Block: Page 3: Collective Action Questions

Start of Block: Attention Check #2



AC\_3\_random\_pedestri **Did the Robocar kill a person deliberately, randomly, or neither?**

- ☐ Deliberately (1)
  - ☐ Randomly (2)
  - ☐ Neither (3)
- 

AC\_4\_random\_pedestri **Did the robocar kill the driver, a pedestrian, or neither?**

- ☐ The driver (1)
- ☐ A pedestrian (2)
- ☐ Neither (3)

End of Block: Attention Check #2

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Start of Block: 4 | RANDOM, KILLS DRIVER

random\_driver **Read the scenario below** about a self-driving car **carefully**. **Once you are finished, you will be asked to answer some questions about it.**

Noah buys a robocar that has been programmed to have no preference between the driver and a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will randomly choose to kill one of them. One day, Noah's robocar is faced with this choice, and it randomly kills the driver.

End of Block: 4 | RANDOM, KILLS DRIVER

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Start of Block: Page 1: Blameworthiness Questions

random\_driver **You will now answer some questions about the scenario.**

Noah buys a robocar that has been programmed to have no preference between the driver and a pedestrian. If it is ever faced with no other choice but to crash and kill the driver versus a pedestrian, it will randomly choose to kill one of them. One day, Noah's robocar is faced with this choice, and it randomly kills the driver.

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blame\_noah Noah is

Not blameworthy      Very blameworthy

0   10   20   30   40   50   60   70   80   90   100

1 ( )



---

blame\_robocar The robocar is

Not blameworthy      Very blameworthy

0   10   20   30   40   50   60   70   80   90   100

1 ( )



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blame\_robotdrive The robocar manufacturer, called RoboDrive, is

Not blameworthy      Very blameworthy

0   10   20   30   40   50   60   70   80   90   100

1 ( )



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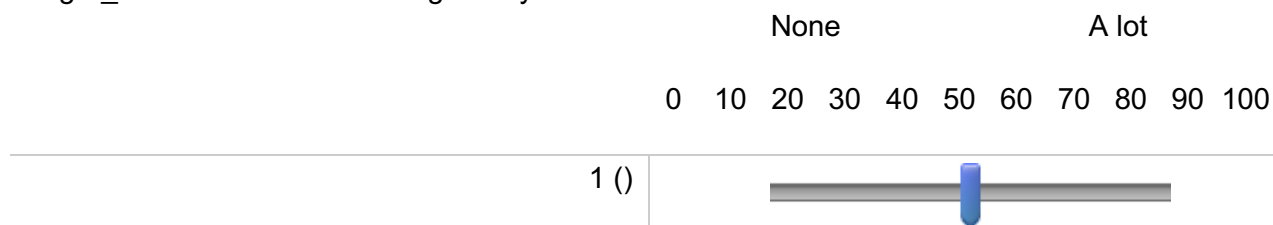
End of Block: Page 1: Blameworthiness Questions

Start of Block: Page 2: Moral Outrage Questions

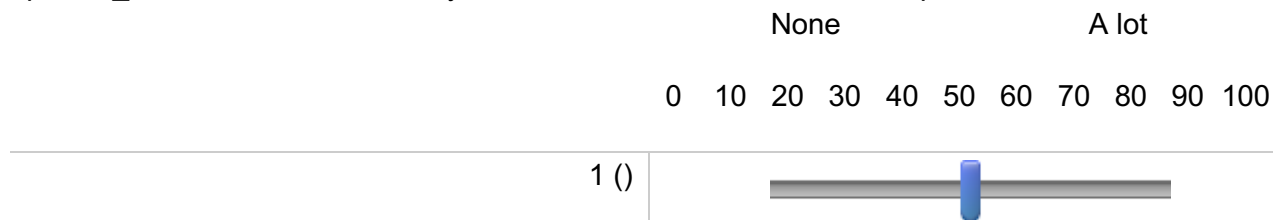
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**Please answer the following questions about the car manufacturer, called RoboDrive.**

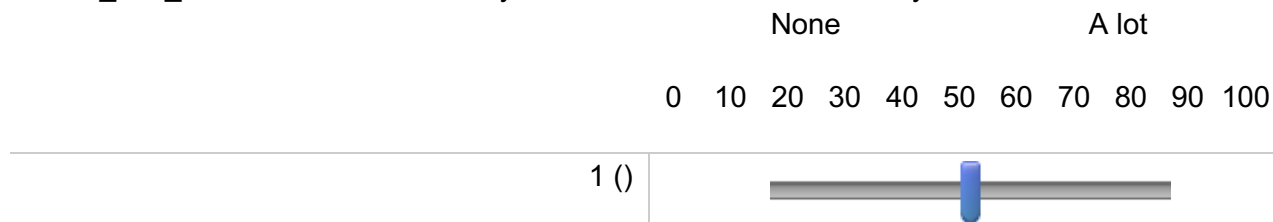
anger\_robodrive How much anger do you feel toward RoboDrive?



punish\_robodrive How much do you think RoboDrive deserves to be punished?



moral\_bad\_robodrive How much do you think RoboDrive was morally bad?



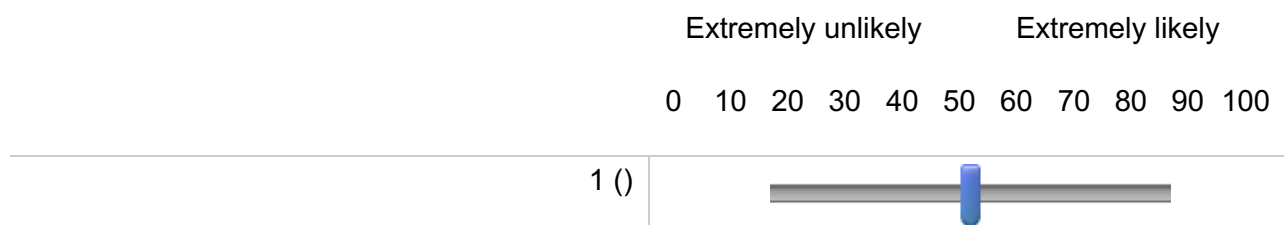
End of Block: Page 2: Moral Outrage Questions

Start of Block: Page 3: Collective Action Questions

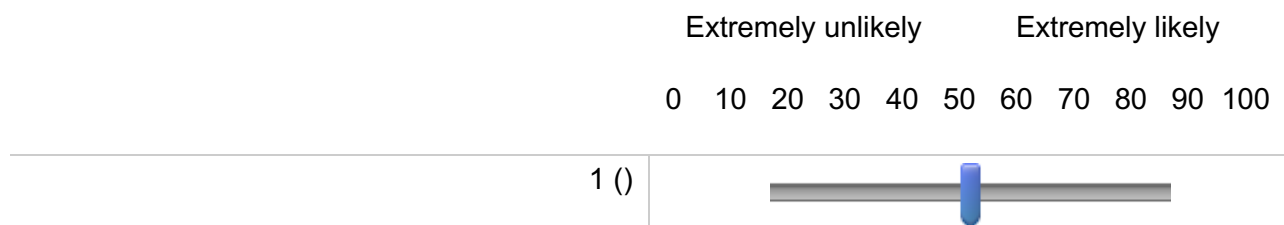
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**Please answer the following questions about the car manufacturer, called RoboDrive.**

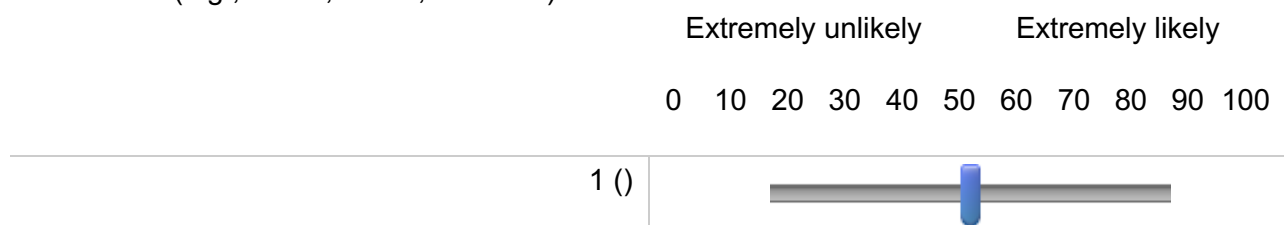
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volunteer\_robodrive How likely do you think it is that you would volunteer time to organizations or causes that accuse RoboDrive?



protest\_robodrive How likely do you think it is that you would engage in protest activities against RoboDrive (e.g., rallies, sit-ins, marches)?

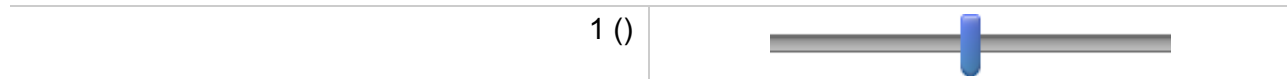


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soc\_media\_robodrive How likely do you think it is that you would express your anger toward RoboDrive on social media?

Extremely unlikely      Extremely likely

0 10 20 30 40 50 60 70 80 90 100

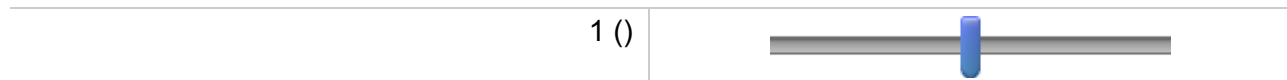


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likeminded\_robodrive How likely do you think it is that you would have conversations about RoboDrive with like-minded people (in person, on the phone, via the internet)?

Extremely unlikely      Extremely likely

0 10 20 30 40 50 60 70 80 90 100

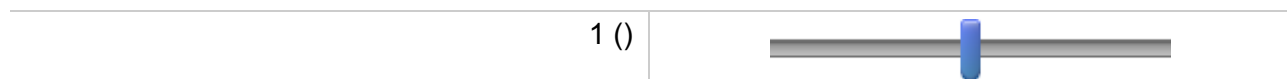


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nonlike\_robodrive How likely do you think it is that you would have conversations about RoboDrive with NON-like-minded people (in person, on the phone, via the internet)?

Extremely unlikely      Extremely likely

0 10 20 30 40 50 60 70 80 90 100



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End of Block: Page 3: Collective Action Questions

Start of Block: Attention Check #2

AC\_3\_random\_driver **Did the Robocar kill a person deliberately, randomly, or neither?**

- ☐ Deliberately (1)
  - ☐ Randomly (2)
  - ☐ Neither (3)
- 

AC\_4\_random\_driver **Did the robocar kill the driver, a pedestrian, or neither?**

- ☐ The driver (1)
- ☐ A pedestrian (2)
- ☐ Neither (3)

**End of Block: Attention Check #2**

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**Start of Block: Demographics**

gender What is your **gender**?

- ☐ Male (1)
  - ☐ Female (2)
  - ☐ Prefer not to disclose (3)
  - ☐ Other (4) \_\_\_\_\_
-

ethnicity

**What is your ethnicity?**

- ☐ White (1)
  - ☐ Black (2)
  - ☐ Asian (3)
  - ☐ Mixed (4)
  - ☐ Other (5) \_\_\_\_\_
- 

age **What is your age (in years)?**

\_\_\_\_\_

---

education **Please indicate the highest level of education completed.**

- ☐ Grammar School (1)
  - ☐ High School or Equivalent (2)
  - ☐ Vocational/Technical School (2 year) (3)
  - ☐ Some College (4)
  - ☐ College Graduate (4 year) (5)
  - ☐ Masters Degree (MS) (6)
  - ☐ Doctoral Degree (PhD) (7)
  - ☐ Professional Degree (MD, JD, etc.) (8)
  - ☐ Other (9) \_\_\_\_\_
-

comments **Any comments on the survey?**

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End of Block: Demographics

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