AV Scenarios

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 $0.5 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.

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consent_q Do you consent

○ Yes (1)

○ No (2)

End of Block: informed_consent

Start of Block: attention_checks

`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)

failed_checks You failed one of the attention checks. Thanks for considering the surveys!

av_instruction
In this study, you will evaluate blame and negligence in a traffic accident scenario.

On the next page, you will watch an animated video of a traffic scenario depicted below. The video shows an intersection in which the driver of Vehicle A runs a stop sign and strikes Vehicle B, seriously injuring its occupant. **Vehicle B is a fully autonomous Robocar, which means that it is driven by a computer algorithm.**

Vehicle A is depicted in purple and Vehicle B is depicted in blue.

Page Break

video_av Please watch the following video. As a reminder, the video depicts an intersection in which the driver of Vehicle A runs a stop sign and strikes Vehicle B, seriously injuring its occupant. **Vehicle B is a fully autonomous Robocar, which means that it is driven by a computer algorithm.** After you see the clip once to get a feel for it, you will see it again and answer a few questions about the events that unfolded:

Q88 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break ————————————————————————————————

vid2_av Here is the video one more time:

Q84 Timing
First Click (1)
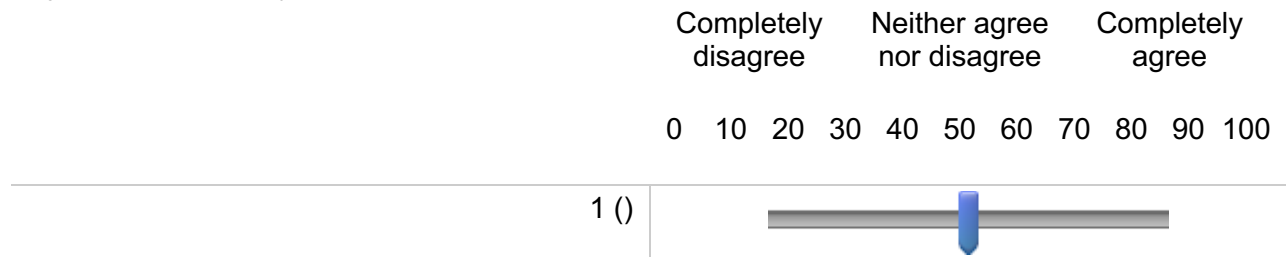Last Click (2)
Page Submit (3)
Click Count (4)

Q116
Now, please answer the questions below about the video you just saw. When answering the questions, please refer to the labels on the image below. **Recall that Vehicle B is a fully autonomous Robocar, which means that it is driven by a computer algorithm.**

Page Break ——

vA_sue_AV

Please rate the extent to which you agree with the following statement (0=completely disagree, 100=completely agree):

How much do you agree: It would be reasonable to sue the **driver of Vehicle A** for the serious injuries sustained by the occupant of Vehicle B.
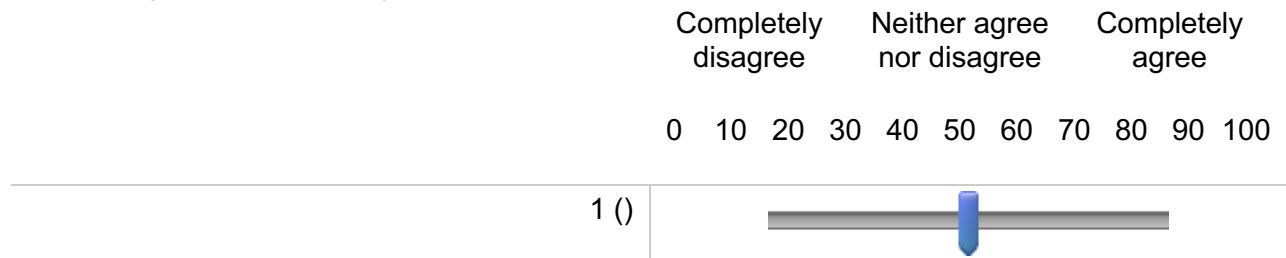
	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

Page Break

vB_sue_AV

Please rate the extent to which you agree with the following statement (0=completely disagree, 100=completely agree):

How much do you agree: It would be reasonable to sue the **manufacturer of Vehicle B** for the serious injuries sustained by the occupant of Vehicle B.
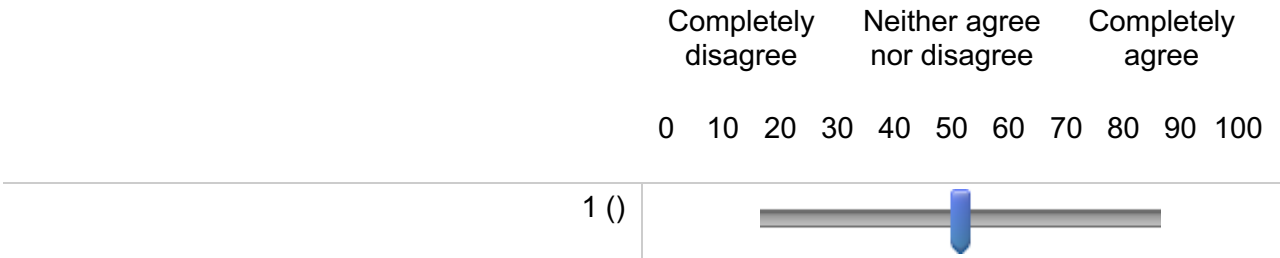
	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

Page Break

defective_AV

Please rate the extent to which you agree with the following statement (0=completely disagree, 100=completely agree):

How much do you agree: **Vehicle B** is defective.

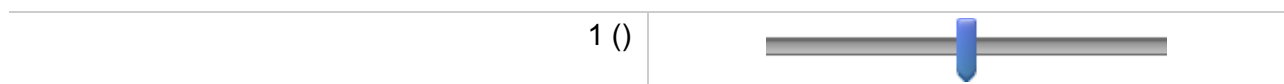|	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

Page Break

negligence_AV

Please rate the extent to which you agree with the following statement (0=completely disagree, 100=completely agree):

How much do you agree: The behavior of **Vehicle B** was negligent.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

End of Block: questions_1_AV

Start of Block: questions_2_AV

Q122
Please answer one more set of questions about the video below. Again, please refer to the following image when answering the questions. **Recall that Vehicle B is a fully autonomous Robocar, which means that it is driven by a computer algorithm.**
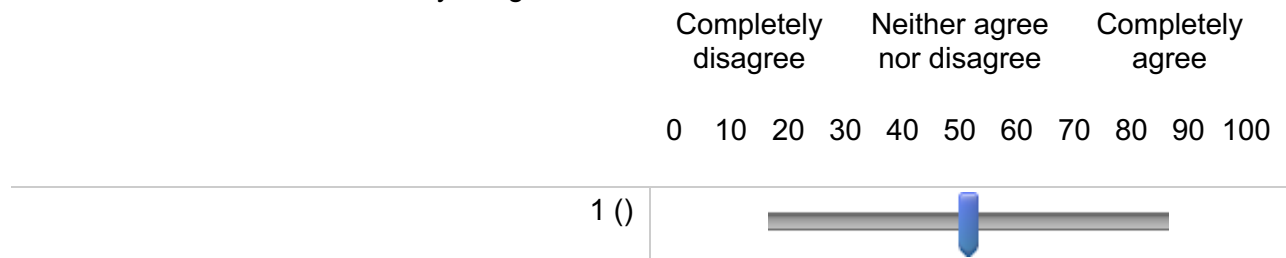
Page Break

counterfactual_AV

Now, please imagine that two people, Sam and Alex, are having the following discussion concerning what just happened:

Alex: "I wonder how things could have gone differently."
Sam: "Well, I really wonder what would've happened if the occupant of **Vehicle B** had more control of the vehicle.”
Alex: "Really? Of all the ways things could have gone differently, that doesn't seem like the one that's worth thinking about."

Please rate the extent to which you agree with **Sam** below:

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

- -

Page Break ——————————————————————————————————————

capability_AV

How much do you agree: **Vehicle B** should have been able to avoid this accident.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100

| 1 () | |

Page Break ―――――――――――――――――――――

fault_AV

How much do you agree: **Vehicle B** should avoid accidents when it is not necessarily at fault.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()	━━━━━━━━━━━━━▉━━━━━━━━		

hdv_instruction
In this study, you will evaluate blame and negligence in a traffic accident scenario.

On the next page, you will watch an animated video of a traffic scenario, depicted below. The video shows an intersection in which the driver of Vehicle A runs a stop sign and strikes Vehicle B, seriously injuring its occupant.

Vehicle A is depicted in purple and Vehicle B is depicted in blue.

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Page Break ───

JS

video_hdv Please watch the following video. As a reminder, the video depicts an intersection in which the driver of Vehicle A runs a stop sign and strikes Vehicle B, seriously injuring its occupant.
After you see the clip once to get a feel for it, you will see it again and answer a few questions about the events that unfolded:

Q87 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Page Break ———————————————————————————————

JS

vid2_hdv Here is the video one more time:

- -

Q82 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q90
Now, please answer the questions below about the video you just saw. When answering the questions, please refer to the labels on the image below:

- -

vA_sue

Please rate the extent to which you agree with the following statement (0=completely disagree, 100=completely agree):
  How much do you agree: It would be reasonable to sue the **driver of Vehicle A** for the serious injuries sustained by the occupant of Vehicle B.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

vB_sue

Please rate the extent to which you agree with the following statement (0=completely disagree, 100=completely agree):

How much do you agree: It would be reasonable to sue the **manufacturer of Vehicle B** for the serious injuries sustained by the occupant of Vehicle B.
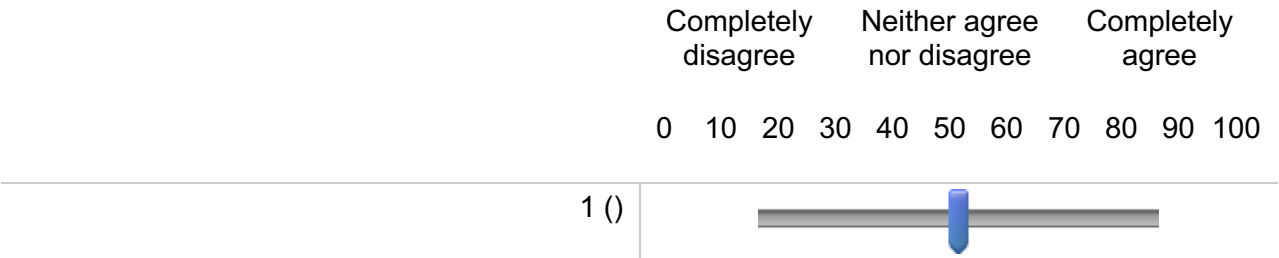
	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

Page Break

defective

Please rate the extent to which you agree with the following statement (0=completely disagree, 100=completely agree):

How much do you agree: **Vehicle B** is defective.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

- -

Page Break ————————————————————————————————

negligence

Please rate the extent to which you agree with the following statement (0=completely disagree, 100=completely agree):

How much do you agree: The behavior of **Vehicle B** was negligent.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

Q71

Please answer one more set of questions about the video below. Again, please refer to the following image when answering the questions.

- -

Page Break ————————————————————————————————————
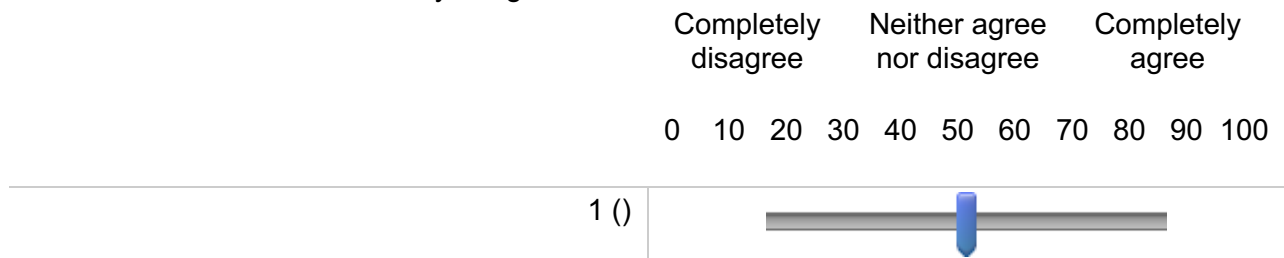
counterfactual

  Now, please imagine that two people, Sam and Alex, are having the following discussion concerning what just happened:

Alex: "I wonder how things could have gone differently."
Sam: "Well, I really wonder what would've happened if the occupant of **Vehicle B** had more control of the vehicle."
Alex: "Really? Of all the ways things could have gone differently, that doesn't seem like the one that's worth thinking about."
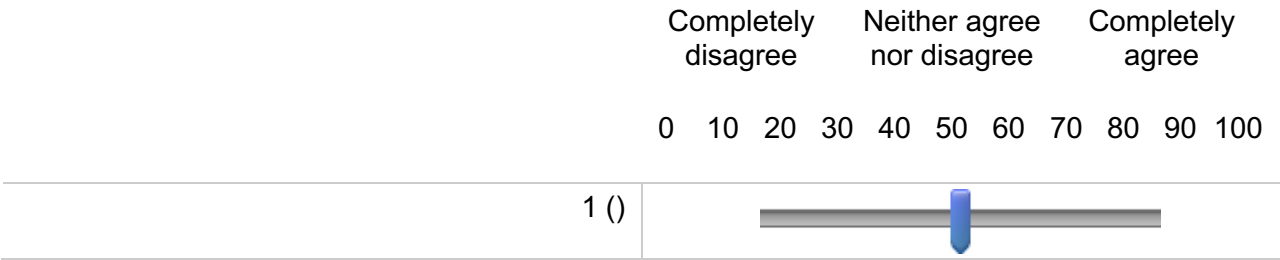
Please rate the extent to which you agree with **Sam** below:

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

Page Break

capability

How much do you agree: **Vehicle B** should have been able to avoid this accident.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		

1 ()

Page Break

fault

How much do you agree: **Vehicle B** should avoid accidents when it is not necessarily at fault.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

superhuman Please rate the extent to which you agree with the following statement: Autonomous robocars should be more aware, more attentive and more reactive than human drivers.

	Completely disagree	Neither agree nor disagree	Completely agree
	0 10 20 30 40 50 60 70 80 90 100		
1 ()			

comp1 **Which of the following was true about Vehicle B?**

○ Vehicle B was a Robocar, which means that it was driven by a computer algorithm rather than a human being. (1)

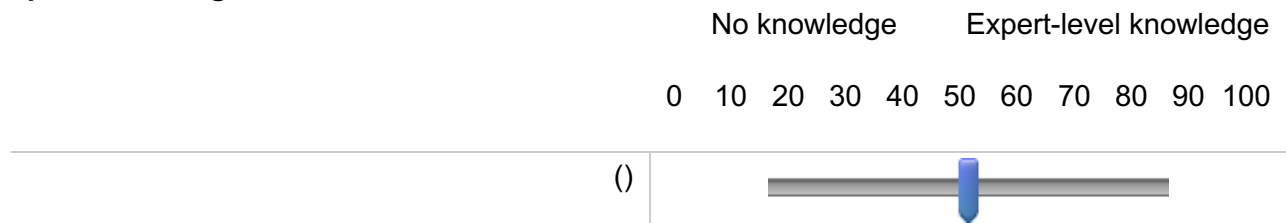○ Vehicle B was a large truck (2)

○ None of the above (3)

comp_accident **Which of the following was true about the video?**

○ Vehicle A ran a stop sign (1)

○ Vehicle B ran a stop sign (2)

End of Block: comprehension

Start of Block: demographics

ai_familiarity **Before this survey, how familiar were you with autonomous vehicle accident prevention algorithms?**

	No knowledge	Expert-level knowledge
	0 10 20 30 40 50 60 70 80 90 100	
()		

gender What is your gender?

○ Male (1)

○ Female (2)

○ Prefer not to disclose (3)

○ Other (please specify) (4) _____

age What is your age (in years)?

_____

edu What is the highest level of education you have completed?

○ High School or Equivalent (1)

○ Vocational/Technical School (2 year) (2)

○ Some College (3)

○ College Graduate (4 year) (4)

○ Masters Degree (MS) (5)

○ Doctoral Degree (PhD) (6)

○ Professional Degree (MD, JD, etc.) (7)

○ Other (please specify) (8) _____

End of Block: demographics