

# avNotAtFault - Realistic - Counterfactual Manipulation

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Start of Block: captcha

captcha .

End of Block: captcha

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Start of Block: informed\_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 \$0.50 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](mailto: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](mailto: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

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Start of Block: attention\_checks



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\_checks

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Start of Block: failed\_attention\_check

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

End of Block: failed\_attention\_check

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Start of Block: av\_scenario

av\_instruction You will evaluate blame and negligence in a traffic accident scenario.

On the next page, you will read an excerpt from a news article describing a traffic scenario in which Vehicle A hits a pedestrian, sending the pedestrian into the path of another vehicle, Vehicle B.

In this scenario, **Vehicle B is a fully autonomous self-driving car, which means that it is driven by a computer algorithm. There is no human inside Vehicle B.**

You will next see an excerpt from a news article describing this crash, and then answer some

questions.

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Page Break

JS

scenario1\_av

### Part 1

***Vehicle B is a fully autonomous self-driving car.***

Both **Vehicle A** and **Vehicle B** wait for the green light. The light turns green, and both vehicles advance shortly thereafter.

The pedestrian steps into the crosswalk.

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JS

scenario2\_av **Part 2**

***Vehicle B is a fully autonomous self-driving car.***

**Vehicle A** strikes the pedestrian at a speed of 21.7 mph. **Vehicle A** appears to hit the pedestrian without applying the brakes.

The impact of the crash flings the pedestrian into the path of **Vehicle B**.

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JS

scenario3\_av **Part 3**

***Vehicle B is a fully autonomous self-driving car.***

The pedestrian lands in **Vehicle B**'s travel lane.

**Vehicle B**, which is traveling at 19.1 mph, begins to brake, but still strikes the pedestrian.

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Q219 Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: av\_scenario

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Start of Block: questions\_1\_AV

Q116 Now, please answer the questions below about the scenario you just read. When answering the questions, please refer to the labels on the image below. **Recall that Vehicle B is a fully autonomous self-driving car, which means that it is driven by a computer algorithm. There is no human inside Vehicle B.**

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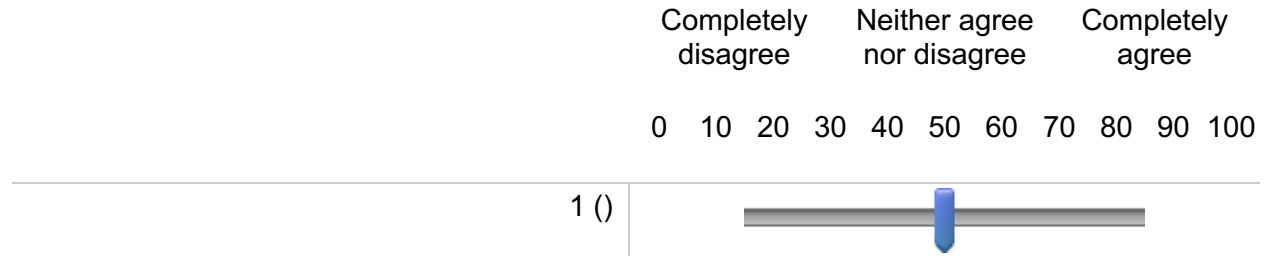
Page Break

vA\_sue\_AV

**Vehicle B is a fully autonomous self-driving car.**

**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** to cover the costs of the serious injuries sustained by the pedestrian.



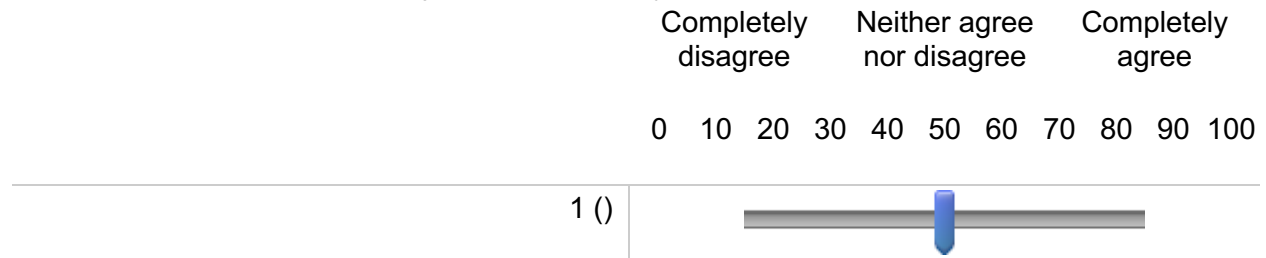
Page Break

vB\_mnfctr\_liab\_1\_AV

**Vehicle B is a fully autonomous self-driving car.**

**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** to cover the costs of the serious injuries sustained by the pedestrian.



Page Break

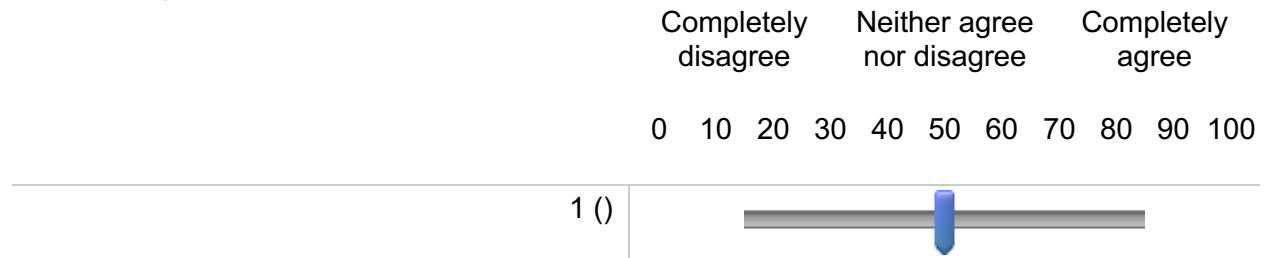


vB\_mnfctr\_liab\_2\_AV

**Vehicle B is a fully autonomous self-driving car.**

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

How much do you agree: The **manufacturer of vehicle B** is liable for the serious injuries sustained by the pedestrian.



End of Block: questions\_1\_AV

Start of Block: questions\_2\_AV

Q122

Please answer one more set of questions about the scenario below. Again, please refer to the following image when answering the questions. **Recall that Vehicle B is a fully autonomous self-driving car, which means that it is driven by a computer algorithm. There is no human inside Vehicle B.**

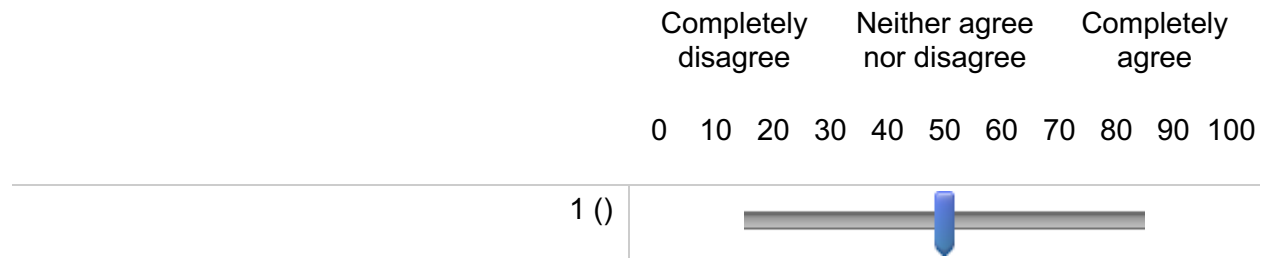
Page Break

vA\_cntrfctl\_AV

**Vehicle B is a fully autonomous self-driving car.**

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

How much do you agree: It's important to consider whether **Vehicle A** could have acted differently when thinking about how the injury could have been prevented.



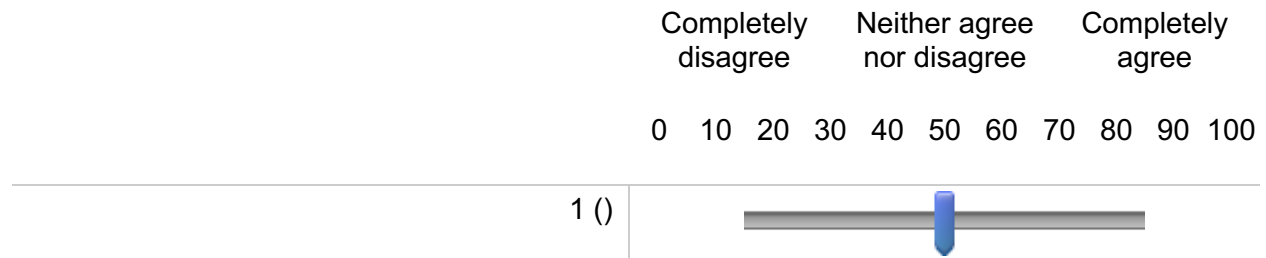
Page Break

vB\_cntrfctl\_AV\_1

**Vehicle B is a fully autonomous self-driving car.**

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

How much do you agree: It's important to consider whether **Vehicle B** could have acted differently when thinking about how the injury could have been prevented.



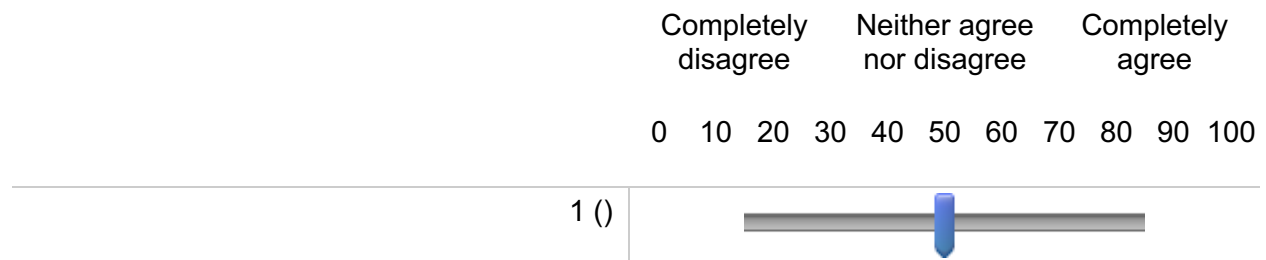
Page Break

vB\_cntrfctl\_AV\_2

**Vehicle B is a fully autonomous self-driving car.**

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

How much do you agree: When it comes to thinking about how the injury could have been avoided, it is relevant to consider what **Vehicle B** could have done differently.



End of Block: questions\_2\_AV

Start of Block: hdv\_scenario

Q231 You will evaluate blame and negligence in a traffic accident scenario.

On the next page, you will read an excerpt from a news article describing a traffic scenario in which Vehicle A hits a pedestrian, sending the pedestrian into the path of another vehicle, Vehicle B. **Both cars are fully driven by humans.**

You will next see an excerpt from a news article describing this crash, and then answer some questions.

Page Break

JS

Q233

**Part 1**

Both **Vehicle A** and **Vehicle B** wait for the green light. The light turns green, and both vehicles advance shortly thereafter.

The pedestrian steps into the crosswalk.

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JS

Q234

**Part 2**

**Vehicle A** strikes the pedestrian at a speed of 21.7 mph. **Vehicle A** appears to hit the pedestrian without applying the brakes.

The impact of the crash flings the pedestrian into the path of **Vehicle B**.

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JS

Q235

**Part 3**

The pedestrian lands in **Vehicle B's** travel lane.

**Vehicle B**, which is traveling at 19.1 mph, begins to brake, but still strikes the pedestrian.

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Q220 Timing  
First Click (1)  
Last Click (2)  
Page Submit (3)  
Click Count (4)

End of Block: hdv\_scenario

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Start of Block: questions\_1\_HDV

Q90

Now, please answer the questions below about the scenario you just read. When answering the questions, please refer to the labels on the image below:

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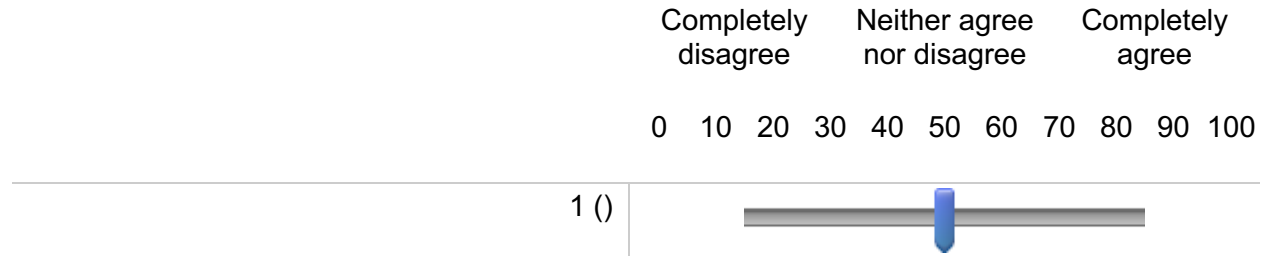
Page Break

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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** to cover the costs of the serious injuries sustained by the pedestrian.

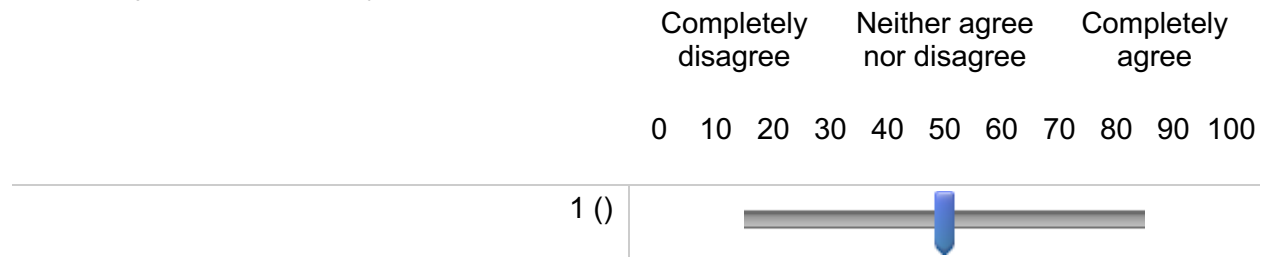


Page Break

vB\_mnfctr\_liab\_1

**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 pedestrian.



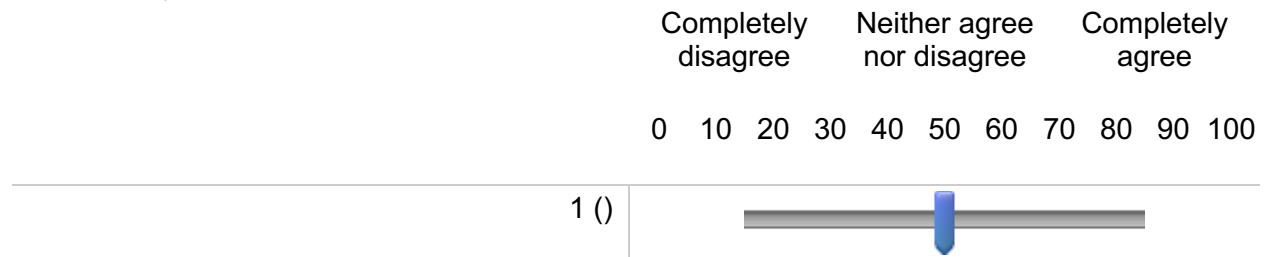
Page Break



vB\_mnfctr\_liab\_2

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

How much do you agree: The **manufacturer of vehicle B** is liable for the serious injuries sustained by the pedestrian.



End of Block: questions\_1\_HDV

Start of Block: questions\_2\_HDV

Q71

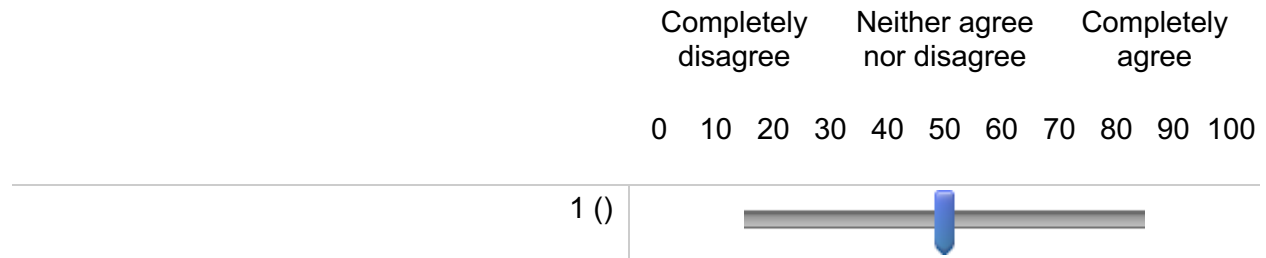
Please answer one more set of questions about the scenario below. Again, please refer to the following image when answering the questions.

Page Break

vA\_cntrfctI

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

How much do you agree: It's important to consider whether **Vehicle A** could have acted differently when thinking about how the injury could have been prevented.

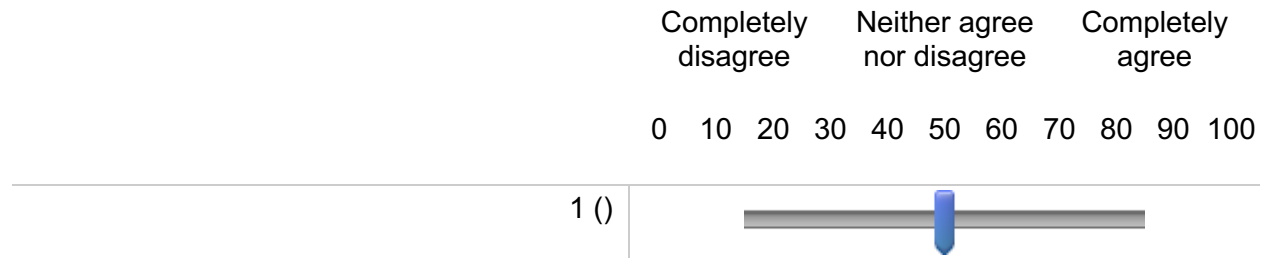


Page Break

vB\_cntrfctl\_1

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

How much do you agree: It's important to consider whether **Vehicle B** could have acted differently when thinking about how the injury could have been prevented.

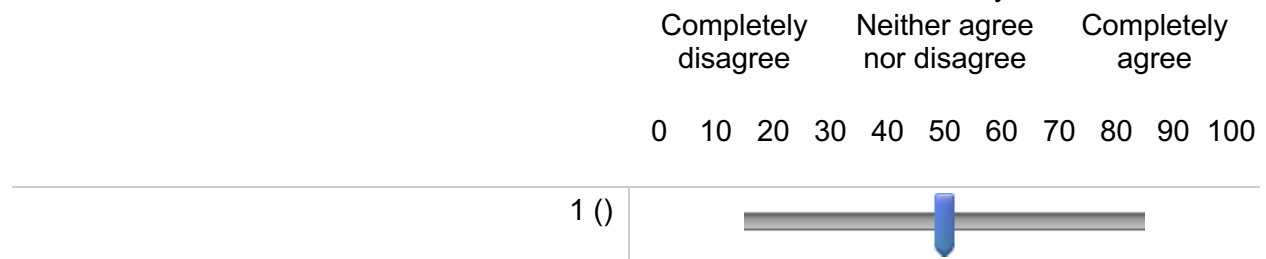


Page Break

vB\_cntrfctl\_2

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

How much do you agree: When it comes to thinking about how the injury could have been avoided, it is relevant to consider what **Vehicle B** could have done differently.



End of Block: questions\_2\_HDV

Start of Block: counterfactual\_HDV

123

Now, please answer the questions below about the scenario you just read. When answering the questions, please refer to the labels on the image below:

Page Break



counterfactual\_HDV

**Please answer the following question:**

As commonly happens in such situations, the family of the pedestrian often thought and often said "If only...", during the days that followed the accident. How did they continue this thought? Please write **two or more** likely completions:

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End of Block: counterfactual\_HDV

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Start of Block: counterfactual\_AV

Q251 Now, please answer the questions below about the scenario you just read. When answering the questions, please refer to the labels on the image below. **Recall that Vehicle B is a fully autonomous self-driving car, which means that it is driven by a computer algorithm. There was no human inside Vehicle B.**

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Page Break

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counterfactual\_AV

**Vehicle B is a fully autonomous self-driving car.**

**Please answer the following question:**

As commonly happens in such situations, the family of the pedestrian often thought and often said "If only...", during the days that followed the accident. How did they continue this thought? Please write **two or more** likely completions:

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End of Block: counterfactual\_AV

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Start of Block: comprehension



comp1 **Which of the following was true about Vehicle B in the collision scenario of Section 2?**

- ☐ Vehicle B was a fully autonomous self-driving car. (1)
- ☐ Vehicle B was a regular vehicle (driven by a human being). (2)

comp\_accident

**Which of the following was true about the scenario?**

- ☐ Vehicle A hit the pedestrian first (1)
- ☐ Vehicle B hit the pedestrian first (2)

End of Block: comprehension

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Start of Block: demographics

cruise\_familiarity **When you read the scenario, did you recognize that it was describing a real incident involving the company Cruise?**

☐ Yes (1)

☐ No (2)

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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

( )



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Page Break

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)?

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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

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Start of Block: completion\_code



**Q243 SECRET COMPLETION CODE: 32525162E0**

Please **ENTER THE COMPLETION CODE** into Connect.

**DO NOT FORGET TO CLICK THE NEXT BUTTON AT THE BOTTOM OF THIS PAGE TO REGISTER YOUR SUBMISSION.**

End of Block: completion\_code

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