AV_Culpability_E13_ForceDynamic (#160252)

Author(s)
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1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
We test if the label of an automated vehicle ('Autopilot' vs. 'Copilot') leads to differences its inferred causal role in driving. We predict that 'Autopilot' is associated more with causing driving with a high causal magnitude (relative to humans), whereas 'Copilot' is more associated with 'helping' driving with a lower causal magnitude. We also predict that ratings of causation are correlated with perceptions of the vehicle's automation level.

3) Describe the key dependent variable(s) specifying how they will be measured.
The dependent variables are:
(1) choice of which verb best describes how the automation system relates to driving.
(2) explanation of the choice in (1)
(3) a rating of the percentage magnitude that the automation system, as opposed to the human, causes driving on 100-point scale, with endpoints, 0 – driver is in full control, 50 – equal control between driver and autonomous systems, and 100 – autonomous system is in full control.
(4) perceived automation level of the system on 6-point scale.

4) How many and which conditions will participants be assigned to?
One of two between-subjects conditions: Autopilot or Copilot.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
To test whether 'Autopilot' is associated with 'cause' more than 'Copilot', we will code choices of 'cause' as 1 and the rest as 0, then use chi-squared test to test for an effect of condition. We will take a similar approach for the verbs 'help' and 'prevent'.
We will use a t-test to compare capability, and causal magnitude ratings between conditions. We will also run a pearson correlation between capability and causal magnitude ratings.
As an exploratory analysis, we will analyze if the explanations from the participants invoke more words associated with 'cause' in 'Autopilot' and more words associated with 'help' in 'Copilot'.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will exclude participants who fail any 1 of our 3 comprehension check questions incorrectly.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
We will collect responses from 300 participants.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
Only participants who pass two attention checks at the beginning of the survey will be eligible. We will include some demographic questions but nothing identifiable (age, gender, whether they have a drivers' license). We will also ask participants how familiar they are with AVs on a 100-point scale with endpoints, 0- Very little and 100- A lot.