# Exploring Perceived Psychological Certainty And Perceived Psychological Uncertainty

**Instructions ▲**

**You are invited to participate in a research study entitled "Explorating perceived psychological certainty and perceived psychological uncertainty". The purpose of this project is to research "perceived psychological certainty" and "perceived psychological uncertainty".** Eindhoven University of Technology (TU/e) is responsible for processing your personal data within the scope of the research. The study is being conducted by Ir. Mervyn Franssen (m.franssen@tue.nl (mailto:m.franssen@tue.nl)), Prof. Dr. Marieke Martens, and Dr. Pavlo Bazilinskyy of the department of Industrial Design, Eindhoven University of Technology, The Netherlands.

**Please do not use Internet Explorer for this study.**

To participate in this study you must be at least 18 years old. Your participation in this research project does not involve any physical, legal or economic risks. Participation in this research project is based on my own will: the decision to take part is up to you. Before you decide to participate, we would like to ask you to read the following information, so that you know what the research project is about, what we expect from you and how we deal with processing your personal data. You may of course always contact the investigator at the above email address, if you have any questions.

You will be taking part in a research project in which we will gather information via an experiment where you will see multiple pictures and videos. The experiment will take approximately 30 minutes of your time. Before the study starts, the images and videos will be preloaded. This may take a few minutes depending on your internet connection. In case you participated in a previous experiment of one of the present investigators, your responses may be combined with the previous experiment. You may end your participation at any moment you choose. You do not have to explain why you decided to end your participation in the research project. If you would not like to participate, then please close this page.

Within the framework of the research project, we process the following personal data: age, gender, location based on IP address, age of obtaining a driving license, questions about your car usage and daily driving behaviour habits, information on your attitudes and usage towards technology. The legal basis upon which we process your data is your consent. We will do everything we can to protect your privacy as best as possible. The research results that will be published will not in any way contain confidential information or personal data from or about you through which anyone can recognise you. The personal data that was gathered via the online experiment and other documents within the framework of this research project will be stored on secured standardised storage according to TU/e regulation. The data will be anonymised and then shared as supplementary material for a resulting publication, using a Europe-based and GDPR compliant (or TU/e recommended) secure data storage platform such as https://data.4tu.nl. (https://data.4tu.nl) The anonymised data will remain on this platform without an end date.

This research project was assessed and approved by the ethical review committee of TU/e. If you have specific questions about the handling of personal data you can direct these to the data protection officer of TU/e by sending an email to functionarisgegevensbescherming@tue.nl (mailto:functionarisgegevensbescherming@tue.nl). Furthermore, you have the right to file a

complaint with the Dutch data protection authority: the Autoriteit Persoonsgegevens. Finally, you have the right to request access, rectification, erasure or adaptation of your data. Submit your request via privacy@tue.nl (mailto:privacy@tue.nl).

The information collected in the experiment is anonymous. Participants will not be personally identifiable in any research papers arising from this study.

By answering "Yes" to the first question below, you acknowledge the following:

1. I am sufficiently informed about the research project. I have read the information and have had the opportunity to ask questions. These questions have been answered satisfactorily.
2. I participate in this research project based on my will. There is no explicit or implicit pressure for me to take part in this research project. It is clear to me that I can end participation in this research project at any moment, without giving any reason. I do not have to answer a question if I do not wish to do so.
3. I consent for my data to be processed according to the information provided in this information letter.

**General questions**

**Do you consent to participate in this study in the way that is described in the information shown above? (required)**
○ Yes
○ No

**Have you read and understood the above instructions? (required)**
○ Yes
○ No

**What is your gender? (required)**
○ Male
○ Female
○ Other
○ I prefer not to respond

**What is your age? (required)**

[                                    ]

**In which type of place are you located now? (required)**
○ Indoor, dark
○ Indoor, dim light
○ Indoor, bright light
○ Outdoor, dark
○ Outdoor, dim light
○ Outdoor, bright light
○ Other

○ I prefer not to respond

**If you answered 'Other' in the previous question, please describe the place where you are located now below.**

[                                        ]

**Which input device are you using now? (required)**

○ Laptop keyboard
○ Desktop keyboard
○ Tablet on-screen keyboard
○ Mobile phone on-screen keyboard
○ Other
○ I prefer not to respond

**If you answered 'Other' in the previous question, please describe your input device below.**

[                                        ]

**Do you currently have a valid license for driving a car? (required)**

○ Yes
○ No

**At which age did you obtain your first license for driving a car?**

[                                        ]

**What is your primary mode of transportation? (required)**

○ Private vehicle
○ Public transportation
○ Motorcycle
○ Walking/Cycling
○ Other
○ I prefer not to respond

**On average, how often did you drive a vehicle in the last 12 months? (required)**

○ Every day
○ 4 to 6 days a week
○ 1 to 3 days a week
○ Once a month to once a week
○ Less than once a month
○ Never
○ I prefer not to respond

**About how many kilometers (miles) did you drive in the last 12 months? (required)**

○ 0 km / mi
○ 1 - 1,000 km (1 - 621 mi)
○ 1,001 - 5,000 km (622 - 3,107 mi)

○ 5,001 - 15,000 km (3,108 - 9,321 mi)
○ 15,001 - 20,000 km (9,322 - 12,427 mi)
○ 20,001 - 25,000 km (12,428 - 15,534 mi)
○ 25,001 - 35,000 km (15,535 - 21,748 mi)
○ 35,001 - 50,000 km (21,749 - 31,069 mi)
○ 50,001 - 100,000 km (31,070 - 62,137 mi)
○ More than 100,000 km (more than 62,137 mi)
○ I prefer not to respond

## How many accidents were you involved in when driving a car in the last 3 years? (please include all accidents, regardless of how they were caused, how slight they were, or where they happened) (required)

○ 0
○ 1
○ 2
○ 3
○ 4
○ 5
○ More than 5
○ I prefer not to respond

## Which option(s) best describe(s) your experience with automated cars? (required)

☐ I have never used or been in automated cars
☐ I have experience with driving a car with automated functions (e.g. adaptive cruise control, lane-keeping system)
☐ I have had a ride in an automated car (e.g. robotaxi) as a passenger
☐ I have encountered automated cars (e.g. robotaxi) while driving
☐ I work in a related field (e.g. automated car development, driver support technology, research on automated car functions or regulation for automated driving technologies)
☐ Other
☐ I prefer not to respond

## If you answered 'Other' in the previous question, please describe your experience(s) below.

[                                        ]

## Please indicate your general attitude towards fully automated cars. (required)

| Very Negative | Negative | Neutral | Positive | Very Positive |
|:---:|:---:|:---:|:---:|:---:|
| ○ | ○ | ○ | ○ | ○ |

## Who do you think is more capable of conducting driving-related tasks? (required)

○ A fully automated car
○ A human driver
○ The fully automated car and the human driver are equally capable
○ I don't know

## How often do you do the following?:

### Becoming angered by a particular type of driver, and indicate your hostility by whatever means you can. (required)

○ 0 times per month
○ 1 to 3 times per month
○ 4 to 6 times per month
○ 7 to 9 times per month
○ 10 or more times per month
○ I prefer not to respond

### Disregarding the speed limit on a motorway. (required)

○ 0 times per month
○ 1 to 3 times per month
○ 4 to 6 times per month
○ 7 to 9 times per month
○ 10 or more times per month
○ I prefer not to respond

### Disregarding the speed limit on a residential road. (required)

○ 0 times per month
○ 1 to 3 times per month
○ 4 to 6 times per month
○ 7 to 9 times per month
○ 10 or more times per month
○ I prefer not to respond

### Driving so close to the car in front that it would be difficult to stop in an emergency. (required)

○ 0 times per month
○ 1 to 3 times per month
○ 4 to 6 times per month
○ 7 to 9 times per month
○ 10 or more times per month
○ I prefer not to respond

### Racing away from traffic lights with the intention of beating the driver next to you. (required)

○ 0 times per month
○ 1 to 3 times per month
○ 4 to 6 times per month
○ 7 to 9 times per month
○ 10 or more times per month
○ I prefer not to respond

### Sounding your horn to indicate your annoyance with another road user. (required)

○ 0 times per month

○ 1 to 3 times per month
○ 4 to 6 times per month
○ 7 to 9 times per month
○ 10 or more times per month
○ I prefer not to respond

## Using a phone in your hands while driving. (required)
○ 0 times per month
○ 1 to 3 times per month
○ 4 to 6 times per month
○ 7 to 9 times per month
○ 10 or more times per month
○ I prefer not to respond

**Please indicate how much you agree with the following statements about uncertainty:**

## In my day-to-day life, I often experience the feeling of uncertainty. (required)

| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

## I often have feelings of uncertainty about myself. (required)

| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

## I often experience the feeling of uncertainty when making decisions. (required)

| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

## During new experiences, I often experience the feeling of uncertainty. (required)

| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

**Please indicate how much you agree with the following statements about certainty:**

## In my day-to-day life, I often experience the feeling of certainty. (required)

| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

## I often have feelings of certainty about myself. (required)

| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ |

## I often experience the feeling of certainty when making decisions. (required)

| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|:---:|:---:|:---:|:---:|:---:|
| ○ | ○ | ○ | ○ | ○ |

## During new experiences, I often experience the feeling of certainty. (required)

| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|:---:|:---:|:---:|:---:|:---:|
| ○ | ○ | ○ | ○ | ○ |

**Experiment to explore "perceived psychological certainty" and "perceived psychological uncertainty".**
In this experiment, you will see multiple images and videos and are asked to answer questions on your "perceived psychological certainty" or "perceived psychological uncertainty". Please pay attention to the videos and images, because they last 10 seconds.

**Important:** During the experiment, the videos will show manually driven cars (cars with human drivers), except for the car that you are a passenger in. The car that you are a passenger in can either be a manually driven car (a car with a human driver) or a fully automated car (a robotaxi that you are a passenger in). The fully automated car controls all driving-related tasks without input from a human driver. A human driver operates the manually driven car. The fully automated car is displayed with a blue overlay on the windows. An example of this will be given in the introduction page of the experiment.

You will be asked to leave Appen to participate in the experiment. You will need to open the link below. Do not close this Appen tab. At the end of the experiment, you will be given a code to input in the next question on this Appen tab. Please take a note of the code. Without the code, you will not be able to receive money for your participation. All images and videos will be downloaded before the start of the experiment. It may take a few minutes. Please do not close your browser during that time.

Open **this link (https://uncertainty-crowdsourced-fc75d40fe544.herokuapp.com)** to start the experiment.

## Type the code that you received at the end of the experiment. (required)

[                                    ]

**Miscellaneous questions**

## In which year do you think that most cars will be able to drive fully automatically in your country of residence? (required)

[                                    ]

## Please provide any suggestions that could help engineers to build safe and enjoyable automated cars.

Test Validators