

<b>Project Title</b>	Investigating the effects of Perceived Realness on Facial Attractiveness and Trustworthiness
<b>Status</b>	Approved
<b>Email</b>	S.Turcany-Diaz@sussex.ac.uk
<b>Phone No.</b>	+34 644 229 250
<b>Applicant Status</b>	PG (Taught)
<b>Department</b>	Psychology
<b>Supervisor</b>	Makowski, Dominique
<b>Project Start Date</b>	01-Jun-2024
<b>Project End Date</b>	28-Aug-2024
<b>External Funding in place</b>	No
<b>External Collaborators</b>	No
<b>Funder/Project Title</b>	
<b>Name of Funder</b>	

## Ethical Review Application ER/ST633/1 (continued)

### Project Description

The present study is a follow-up and replication of a previous study (ER/MHHE20/1), with the main change being the stimuli (replacing emotional pictures with neutral faces). It aims to assess the potential modulatory effect of perceived realness of facial stimuli on self-reported attractiveness and trustworthiness.

The study will be conducted online and will include the following parts:

- Consent form (see attached): will explain to participants the nature of the study and the stimuli presented (facial images from a validated database).
- In line with the study that we aim at extending, the participant will then answer a few demographic questions designed to better identify the characteristics and representativeness of the sample (age, sex, education level, ethnicity, sexual orientation). No IP addresses or any other identifiers will be collected.
- In order to explore the differences in gaze patterns between images presented as real and fake, participants will be presented with the option to enable the collection of eye gaze coordinates during the first phase using their webcam. The information page emphasizes that the experiment does not record any actual images from the camera, it only extracts the estimated gaze pattern on the screen using the WebGazer plugin to preserve full anonymity.
- The participant will then undergo facial ratings in stage 1. A cover story stating that we are testing a new AI image generation model will be shown. Participants will then be shown various images of faces from the American Multiracial Face Database (AMFD, J. M. Chen et al., 2021). Before each image a random textual cue will indicate if the image is a photograph, or if it is AI-generated (however, all the images are in fact real). After each image is shown the participant will rate the image on how beautiful, attractive and trustworthy the presented image is. A chance for a short break will be provided mid-experiment.
- Participants will be presented by 2 short questionnaires: HEX-ACO-18 (18 items, Olaru and Jankowsky, 2021) and attitude towards artificial intelligence or AI (Makowski et al., 2023).
- In stage 2, participants will be re-exposed to the same images, this time asked to rate how "realistic" the images are, stating that previous word cues from stage 1 were misleading. This is to test the effect of the manipulation. The participants will then be debriefed, with a paragraph informing them of the true purpose of the study, on the effect of "beliefs" of fakeness on attractiveness. We clarify that we are not actually testing an AI model and that all the images are in fact real, and that we apologize for the necessary deception.
- Before the final debriefing, participants will also have the opportunity to provide feedback on the experiment. The FictionERO paradigm has found that a feedback section engages participants more and help them feel like they have an active impact on the study.
- This online anonymous survey poses no risks to participants. All responses are collected anonymously, and there is no identifiable information linked to the data. The survey has been designed to ensure participant confidentiality and privacy. There are no physical, psychological, or social risks associated with participation (which is entirely voluntary) in the survey. Therefore, no risks are involved.

Ethical Review Form Section A (ER/ST633/1)	
Question	Response
>> Checklist	
A1. Will your study involve participants who are currently or potentially vulnerable or unable to give informed consent or in a dependent position (e.g. people under 18, people with learning difficulties, over-researched groups or people in care facilities)?	No
A2. Will participants be required to take part in the study without their consent or knowledge at the time (e.g. covert observation of people in non-public places), and / or will deception of any sort be used? Please refer to the British Psychological Society Code of Ethics and Conduct (or similar guidelines) for further information.	Yes
A3. Unless specifically and clearly consented (e.g. a media release form), will it be possible, through a research output, to identify participants in any way? (This does not include taking email details for participant prize draws or identifying participants from signed consent forms or holding identity encryption spreadsheets that are stored securely separate from the research data).	No
A4. Might the study induce psychological stress or anxiety, or produce humiliation or cause harm or negative consequences beyond the risks likely to be encountered in the everyday life of the participants?	No
A5. Is there a risk that the research topic might lead to disclosures from the participant concerning their beliefs, involvement in illegal actions or any other activities that may represent a threat to themselves or others?	No
A6. Will the study involve collecting any personal special category information* in a form that could allow the participant/ participants to be identified?  [* identifiers relating to race, ethnic origin, politics, religion, trade union membership, philosophical beliefs, genetics, biometrics, health, sex life or sexual orientation]	No
A7. Will any drugs, placebos or other substances (such as food substances or vitamins) be administered as part of this study and will any invasive or potentially harmful procedures of any kind will be used?	No
A8. Will your project involve working with any substances and / or equipment which may be considered hazardous?	No
A9. Will your study involve the taking and/or storage of human tissue that falls under the Human Tissue Act (HTA)? <a href="http://www.sussex.ac.uk/staff/research/governance/erp_overview/humantissue">http://www.sussex.ac.uk/staff/research/governance/erp_overview/humantissue</a>	No
>> Risk Assessment	

<p>A10. If you have answered Yes to ANY of the above questions, your application may be considered as HIGH risk. If, however you wish to make a case that your application should be considered as LOW risk please enter the reasons here. Researchers should note that SREOs or C-RECs may decide NOT to agree with the case that you have made.</p>	<p>Experimental manipulation is in place. Deception is used through the cover study presenting a different aim and misrepresenting the nature of the stimuli (presented as AI-generated instead of real pictures).  Nonetheless, this is clearly explained and debriefed at the end of the experiment.</p>
---	--

Ethical Review Form Section B (ER/ST633/1)	
Question	Response
>> Data Collection and Analysis (Please provide full details)	
B1. PARTICIPANTS: How many people do you envisage will participate, who are they, and how will they be selected?	Study will attempt to recruit a minimum of 100 participants (based on typical samples of similar studies), with no exclusion criteria.
B2. RECRUITMENT: How will participants be approached and recruited?	Participants will be recruited via convenience sampling (e.g., via social media), or via other recruitment platforms if available (e.g., SONA, Prolific). The samples from different methods of recruitment will be collected separately in case they are different (the incentive type - e.g., student credits - and amount - or lack thereof - will thus be known to mitigate its potential effect).
B3. METHOD: What research method(s) do you plan to use; e.g. interview, questionnaire/self-completion questionnaire, field observation, audio/audio-visual recording?	The survey will be completed online and involves two stages.
B4. LOCATION: Where will the project be carried out e.g. public place, in researcher's office, in private office at organisation?	Online survey
B5. PARTICIPANT WELLBEING: Will the study involve engaging participants in the discussion of potentially distressing or sensitive topics? (e.g. sexual activity, drug use, ethnicity, political behaviour, potentially illegal activities). If so, please set out how you will manage the well-being of participants.	No
>> Confidentiality and Anonymity	
B6. Will questionnaires be completed anonymously and returned indirectly?	Yes
B7. Will research data only be identifiable by a unique identifier (e.g. code/pseudonym)? If Yes, please explain how this will be attributed in B11a below.	Yes
B8. Will lists of identity numbers or pseudonyms linked to names and/or addresses be stored securely and separately from the research data? If Yes, explain how this will occur in B11a below.	N/A
B9. Will all place names and institutions which could lead to the identification of individuals or organisations be changed unless this is consented to explicitly in the consent form?	Yes
B10. Will all personal information gathered be treated in strict confidence and never disclosed to any third parties?	Yes
B11. Can you confirm that your research records will be held in accordance with data protection regulations? ( <a href="http://www.sussex.ac.uk/ogs/policies/information/dpa">http://www.sussex.ac.uk/ogs/policies/information/dpa</a> )	Yes
B11a. Please explain how ANY identifiable personal and/or research data will be managed and securely stored ensuring that participants have given appropriate informed consent for this.	The survey is anonymous so name will not be collected.
B12. Do you intend to use the research data for any purpose other than that for which consent is explicitly given? If so, please explain below	No

B12a. If you answered NO to any of the above in this section (or think more information could be useful to the reviewer) please explain here:	
>> Informed Consent and Recruitment of Participants	
B13. Will all respondents be given an Information Sheet and be given adequate time to read it before being asked to agree to participate?	Yes
B14. Will all participants taking part in an interview, focus group, observation (or other activity which is not questionnaire based) be asked to sign a consent form? If you are obtaining consent another way (such as verbally), please explain under B17 below.	N/A
B15. Will all participants self-completing a questionnaire be asked to show consent to participate by a specific and identifiable action? (Give details in B17 below)	Yes
B16. Will all participants be told that they can withdraw their participation at any time during the research and can ask for their data to be destroyed and/or removed from the project until it is no longer practical to do so?	Yes
B17. If you answered NO to any of the above in this section (or think more information will be useful to the reviewer) please explain here:	Participants will be asked to click a box informing consent for the study.
>> Context	
B18. Is DBS (Disclosure and Barring Service) clearance necessary for this project? If yes, please ensure you complete the next question.	No
B19. Are any other ethical clearances or permissions (internal or external) required? Please see the help text (i) for further details.	No
B19a. If yes, please give further details including the name and address of the organisation. If other ethical approval has already been received please attach evidence of approval, otherwise you will need to supply it when ready. (You do not need to provide evidence of a current DBS check at this point).	
B20. Does the research involve any fieldwork - Overseas or in the UK?	No
B20a. If yes, where will the fieldwork take place? If undertaken overseas you must attach an OTSSRA form. In the event that the Foreign and Commonwealth Office has specific travel warnings in place for the country (ies) to be visited you will also need to provide a detailed risk assessment. <a href="https://www.gov.uk/foreign-travel-advice">https://www.gov.uk/foreign-travel-advice</a>	
B21. Will any researchers be in a lone working situation?	No
B21a. If yes, briefly describe the location, time of day and duration of the lone working. What precautionary measures will be taken to ensure safety of the researcher(s)?	
>> Any further concerns	
B22. Are there any other ethical considerations relating to your project which have not been covered above?	No

B22a. If yes, please explain:	
-------------------------------	--

# Informed Consent

## Invitation to Take Part

You are being invited to take part in a research study to further our understanding of human perception. Thank you for carefully reading this information sheet. This study is being conducted by Sofia Turcany Diaz and Dr Dominique Makowski from the School of Psychology, University of Sussex, who are happy to be contacted ([st633@sussex.ac.uk](mailto:st633@sussex.ac.uk) and [D.Makowski@sussex.ac.uk](mailto:D.Makowski@sussex.ac.uk)) if you have any questions.

## Why have I been invited and what will I do?

The goal is to study how new technology can impact **human perception**. In this study, you will be shown facial images and asked to complete a few questionnaires and perform some tasks. The whole experiment will take you **about 35 min** to complete.

Please make you sure that you are **attentive and in a quiet environment**, and that you have time to complete it in one go.

## What will happen to the results and my personal information?

The results of this research may be written into a scientific publication. Your anonymity will be ensured in the way described in the consent information below. **Please read this information carefully** and then, if you wish to take part, please acknowledge that you have fully understood this sheet, and that you consent to take part in the study as it is described here.

## Consent

- I understand that by signing below I am agreeing to take part in the University of Sussex research described here, and that I have read and understood this information sheet
- I understand that my participation is entirely voluntary, that I can choose not to participate in part or all of the study, and that I can withdraw at any stage without having to give a reason and without being penalized in any way (e.g., if I am a student, my decision whether or not to take part will not affect my grades).
- I understand that since the study is anonymous, it will be impossible to withdraw my data once I have completed it.
- I understand that my personal data will be used for the purposes of this research study and will be handled in accordance with Data Protection legislation. I understand that the University's Privacy Notice provides further information on how the University uses personal data in its research.
- I understand that my collected data will be stored in a de-identified way. De-identified data may be made publicly available through secured scientific online data repositories.
- Please note that various checks will be performed to ensure the validity of the data. We reserve the right to withhold credit awards or reimbursement should we detect non-valid responses (e.g., random patterns of answers, instructions not read, ...).
- By participating, you agree to follow the instructions and provide honest answers. If you do not wish to participate, simply close your browser.

For further information about this research, or if you have any concerns, please contact Sofia Turcany Diaz ([st633@sussex.ac.uk](mailto:st633@sussex.ac.uk)) or Dr Dominique Makowski ([D.Makowski@sussex.ac.uk](mailto:D.Makowski@sussex.ac.uk)).

This research has been approved (ER/HER27/1) by the ethics board of the School of Psychology. The University of Sussex has insurance in place to cover its legal liabilities in respect of this study.

## About yourself

What is your gender? \*

Male  Female  Other

Please enter your age (in years) \*

e.g., 21

Next

## About yourself

What is your highest completed education level? \*

- University (doctorate)
- University (master)
- University (bachelor)
- High school
- Elementary school
- Other

Are you currently a student? \*

Yes      No

Previous

Next

## About yourself

How would you describe your ethnicity?

- White
- Black
- Hispanic/Latino
- Middle Eastern/North African
- South Asian
- East Asian
- Southeast Asian
- Mixed
- Prefer not to say
- Other

In which country are you currently living?

e.g., France ▾

Previous

Next

## About yourself

**What sexual orientation do you identify with? \***

These questions are important to understand the results in the latter part of the experiment.

- Heterosexual
- Homosexual
- Bisexual
- Other

**I am currently... \***

- Single and not open to dating
- Single and open to dating
- In a relationship and not open to dating
- In a relationship and open to dating
- Other

[Previous](#)[Continue](#)

## About your personality

Please answer the following questions based on how accurately each statement describes you in general.



I wouldn't pretend to like someone just to get that person to do favors for me. \*

Disagree

0    1    2    3    4    5    6

Agree

I would like to be seen driving around in a very expensive car. \*

Disagree

0    1    2    3    4    5    6

Agree

I want people to know that I am an important person of high status. \*

Disagree

0    1    2    3    4    5    6

Agree

Next

## About your personality

Please answer the following questions based on how accurately each statement describes you in general.



Page 2 of 6

**Even in an emergency I wouldn't feel like panicking.\***

Disagree  0  1  2  3  4  5  6 Agree

**When I suffer from a painful experience, I need someone to make me feel comfortable.\***

Disagree  0  1  2  3  4  5  6 Agree

**I sometimes can't help worrying about little things.\***

Disagree  0  1  2  3  4  5  6 Agree

[Previous](#)

[Next](#)

## About your personality

Please answer the following questions based on how accurately each statement describes you in general.



I feel that I am an unpopular person. \*

Disagree  0  1  2  3  4  5  6 Agree

I rarely express my opinions in group meetings. \*

Disagree  0  1  2  3  4  5  6 Agree

Most people are more upbeat and dynamic than I generally am. \*

Disagree  0  1  2  3  4  5  6 Agree

[Previous](#)

[Next](#)

## About your personality

Please answer the following questions based on how accurately each statement describes you in general.



I rarely hold a grudge, even against people who have badly wronged me. \*

Disagree  0  1  2  3  4  5  6 Agree

I generally accept people's faults without complaining about them. \*

Disagree  0  1  2  3  4  5  6 Agree

I find it hard to keep my temper when people insult me. \*

Disagree  0  1  2  3  4  5  6 Agree

[Previous](#)

[Next](#)

## About your personality

Please answer the following questions based on how accurately each statement describes you in general.



Often when I set a goal, I end up quitting without having reached it. \*

Disagree  0  1  2  3  4  5  6 Agree

I make a lot of mistakes because I don't think before I act. \*

Disagree  0  1  2  3  4  5  6 Agree

When working, I sometimes have difficulties due to being disorganized. \*

Disagree  0  1  2  3  4  5  6 Agree

Previous

Next

## About your personality

Please answer the following questions based on how accurately each statement describes you in general.



I think that paying attention to radical ideas is a waste of time. \*

Disagree

0    1    2    3    4    5    6

Agree

If I had the opportunity, I would like to attend a classical music concert. \*

Disagree

0    1    2    3    4    5    6

Agree

I would enjoy creating a work of art, such as a novel, a song, or a painting. \*

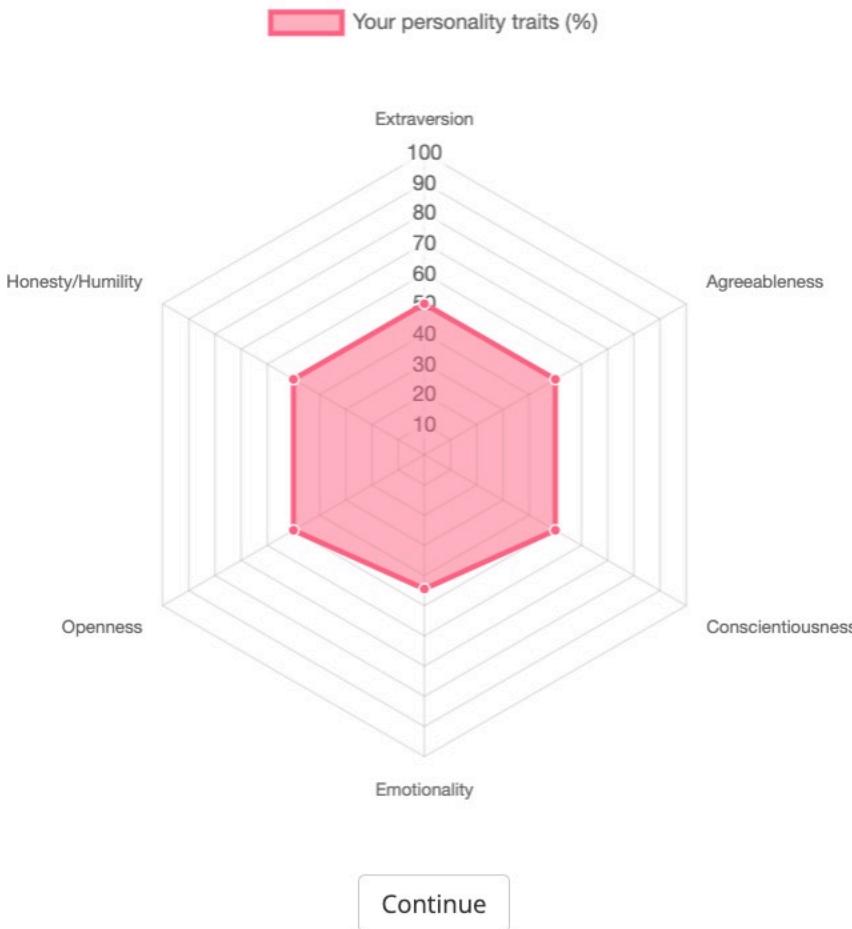
Disagree

0    1    2    3    4    5    6

Agree

[Previous](#)

[Complete](#)



This chart represents how much you score on various personality traits. Remember that there are no good or bad trait, and that there is no 'normal'. Everybody is different!

# Artificial Intelligence

How knowledgeable do you consider yourself about Artificial Intelligence (AI) technology? \*

Not at all

0    1    2    3    4    5    6

Expert

Next

# Artificial Intelligence

We are interested in your thoughts about Artificial Intelligence (AI). Please read the statements below carefully and indicate the extent to which you agree with each statement.

**Current AI algorithms can generate very realistic videos \***

Disagree



**Computer-Generated Images (CGI) are capable of perfectly imitating reality \***

Disagree



**I am worried about future uses of AI \***

Disagree



**AI assistants can write texts that are indistinguishable from those written by humans \***

Disagree



**Videos generated by AI have obvious problems that make them easy to spot as fake \***

Disagree



**AI is dangerous \***

Disagree



Images of faces or people generated by AI always contain errors and artifacts \*

Disagree  0  1  2  3  4  5  6 Agree

AI is exciting \*

Disagree  0  1  2  3  4  5  6 Agree

Technology allows the creation of environments that seem just as real as reality \*

Disagree  0  1  2  3  4  5  6 Agree

Much of society will benefit from a future full of AI \*

Disagree  0  1  2  3  4  5  6 Agree

Current AI algorithms can generate very realistic images \*

Disagree  0  1  2  3  4  5  6 Agree

Documents and paragraphs written by AI usually read differently compared to Human productions \*

Disagree  0  1  2  3  4  5  6 Agree

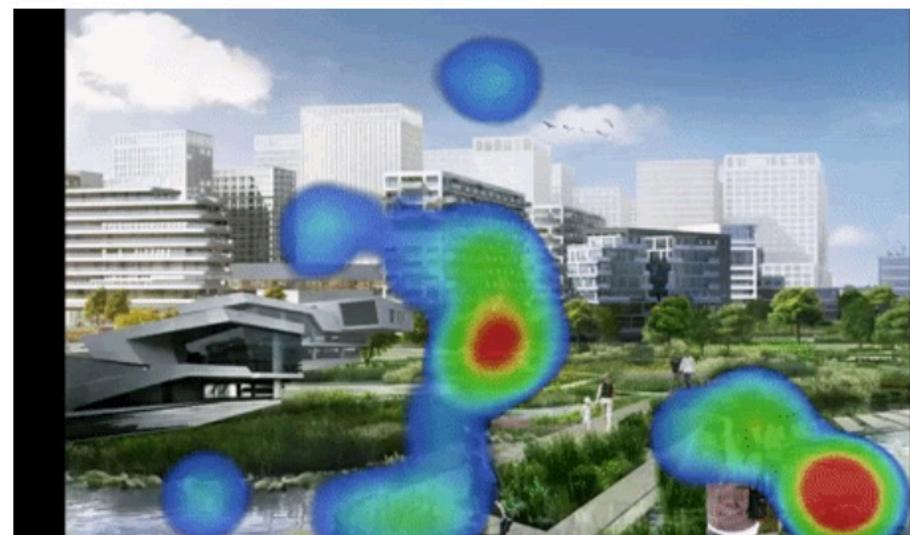
Previous

Complete

## Eye movements

As the next phase of the experiment involves the presentation of visual stimuli, we are interested in what parts of the image people look at, and we would like to use your webcam to record your gaze.

**Important: The experiment does not record your face or any images from the camera.** It only extracts the estimated gaze pattern on the screen. **Your participation remains completely anonymous.**



After you pressed '**I agree**', a pop-up will appear asking you to enable your webcam. It may take a couple of seconds for the camera to initialize.

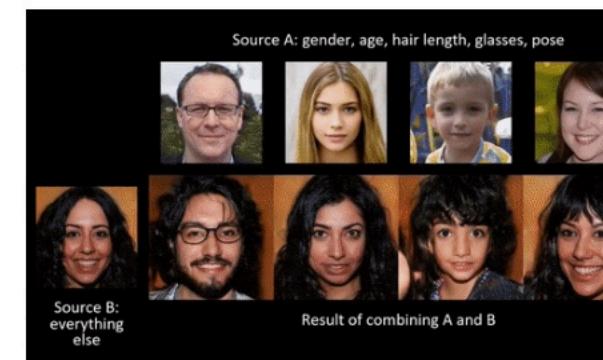
I agree

I don't have a webcam

## Part 3/4

This study stems out of an exciting new partnership between researchers from the **University of Sussex** and a young **AI startup** based in Brighton, UK, that specializes in making AI technology more ethical.

Our goal is to better understand how various people react to different faces. For this, we will be using a new **image-generation algorithm** (based on a modified *Generative Adversarial Network*) trained on a carefully refined material to produce realistic high-quality images. This allows us to manipulate the generation parameters and understand how they impact face perception.



In the next part, you will be presented with faces generated by our algorithm (preceded by the word '**AI-generated**'), intermixed with real photos (preceded by the word '**Photograph**') taken from public picture databases, adjusted to be of similar dimension and aspect as the artificially-generated images.

The faces will be **briefly flashed on the screen**. Imagine that they belong to a real person (for example, it is the **profile picture** on someone's social media). After each image, you will be asked a series of questions:

- **Beauty:** To what extent do you think the face is "objectively" **good-looking** (the degree to which the face is aesthetically appealing).
- **Attractiveness:** To what extent do **you personally** find the person **attractive** (how drawn are you to this person). While this dimension can often be aligned with the previous ones, we can also sometimes a face not necessarily "conventionally" beautiful and yet very attractive (and vice versa).
- **Trustworthiness:** To what extent do you find this person **trustworthy** (reliable, honest, responsible, etc.).

Note that we are interested in your **first impression**, so please respond according to your gut feelings.

Below is an example of how the questions will appear after each image:

This face is beautiful \*

Disagree  0  1  2  3  4  5  6 Agree

I found this person attractive \*

Disagree  0  1  2  3  4  5  6 Agree

I found this person trustworthy \*

Disagree  0  1  2  3  4  5  6 Agree

## Rating - 1%

Think of the person that you just saw.

---

This face is beautiful \*

Disagree

0 1 2 3 4 5 6

Agree

I found this person attractive \*

Disagree

0 1 2 3 4 5 6

Agree

I found this person trustworthy \*

Disagree

0 1 2 3 4 5 6

Agree

## Break Time

We know these types of experiment can feel a bit repetitive and tedious, but it is important for us that you stay focus until the end. Please take this opportunity to **take a break and relax your neck and eyes**.

Ready to continue!

# Thank you!

Before we start the second phase, we wanted to know your thoughts.

## Face Attractiveness

Please select all that apply

- Some faces were really attractive
- No face was particularly attractive
- AI-generated images were more attractive than the photos
- AI-generated images were less attractive than the photos
- Other (describe)

## AI-Generation Algorithm

Please select all that apply

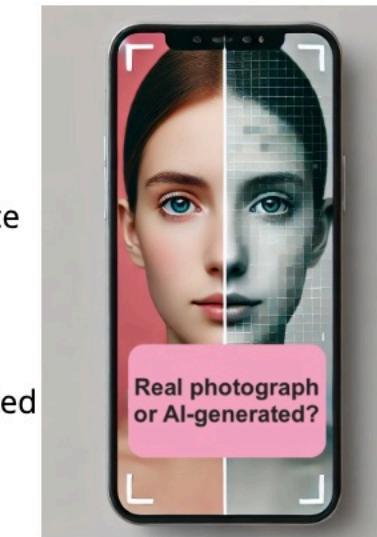
- The difference between the photos and the AI-generated images was obvious
- The difference between the photos and the AI-generated images was subtle
- I didn't see any difference between photos and AI-generated images
- I felt like the labels ('Photograph' and 'AI-Generated') were not always correct
- I felt like the labels were reversed (e.g., 'Photograph' for AI-generated images and vice versa)
- I feel like all the images were photos
- I feel like all the images were AI-generated
- Other (describe)

Complete

Thank you! In this final phase, we would like to see if you found our **image generation algorithm convincing** and error-free.

But there is **something important** we need to tell you... In the previous phase, some images were **intentionally mislabelled** (we told you it was a photograph when it was actually AI-generated and vice versa).

In this phase, we want you to tell us for each image **what you think is the true category!** We will briefly present all the images once more, and your task is to tell us if you think the image is AI-generated or a photograph. Indicate your degree of **confidence** and certainty by selecting larger numbers.



I think this face is... \*

Indicate your confidence that the image is fake or real

AI-Generated    -3    -2    -1    0    1    2    3   Photograph

Press start once you are ready.

Start

## Rating - 5%

I think this face is... \*

Indicate your confidence that the image is fake or real

AI-Generated

-3

-2

-1

0

1

2

3

Photograph

## Feedback

It is the end of the experiment! Don't hesitate to leave us a feedback. After clicking 'Complete', your data will be saved on our secure servers, after what we will provide you with more information about the study.

Did you enjoy doing this experiment?



Anything else you would like to share with us?

[Complete the experiment](#)

## Debriefing

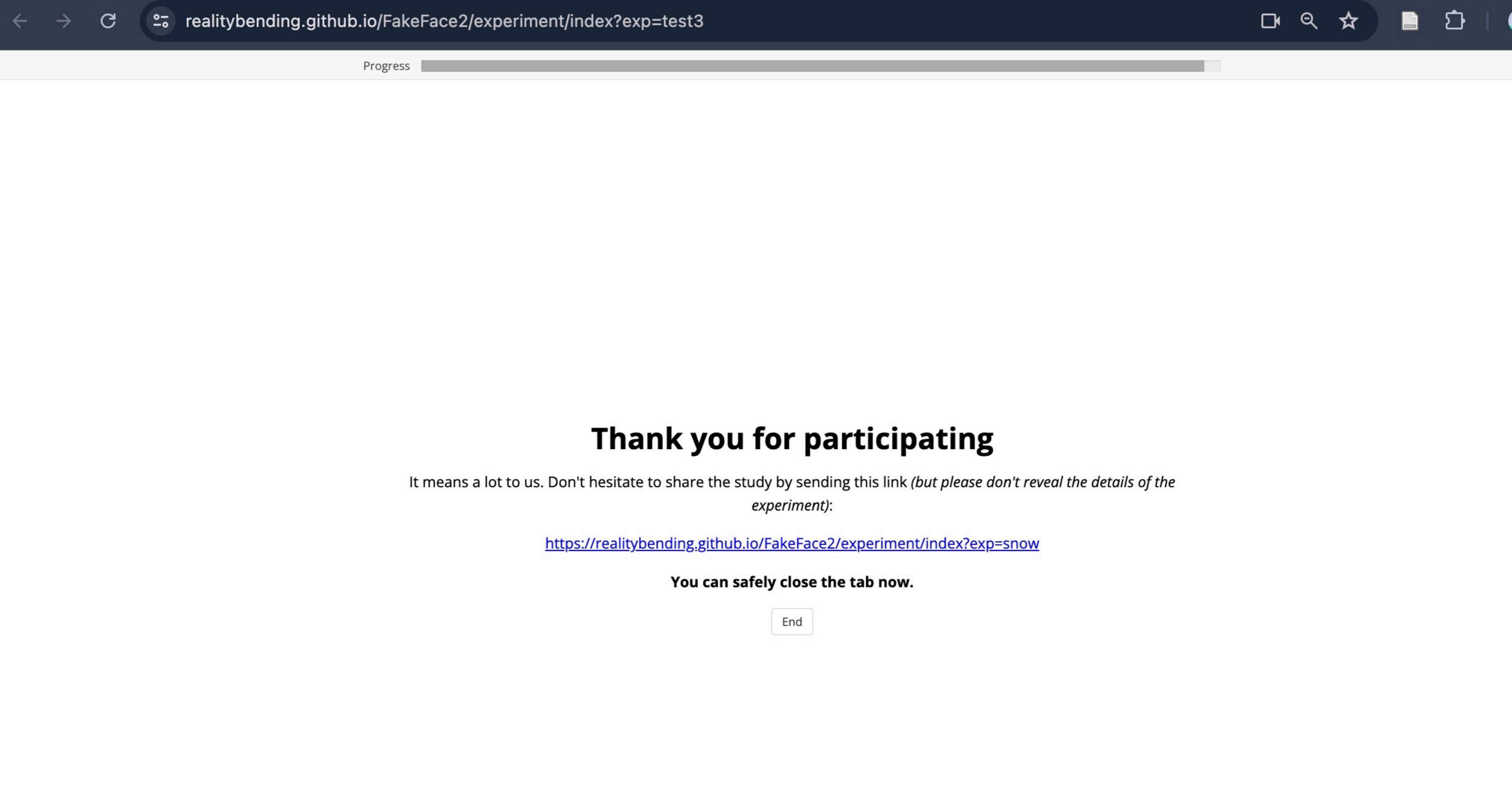
The purpose of this study was actually to study the effect on attraction of *believing* that the content is AI-generated. Indeed, we want to test the hypothesis that believing that facial images are fake would lead to lower attraction levels. As we are primarily interested in your *beliefs* about reality, all images were in fact taken from an existing database of real faces used in psychology research to study emotions. We apologize for the necessary deception used in the instructions, and we hope that you understand its role in ensuring the validity of our experiment.

**Thank you again!** Your participation in this study will be kept completely confidential. If you have any questions or concerns about the project, please contact [st633@sussex.ac.uk](mailto:st633@sussex.ac.uk) or [D.Makowski@sussex.ac.uk](mailto:D.Makowski@sussex.ac.uk).

To complete your participation in this study, click on 'Continue' and **wait until your responses have been successfully saved** before closing the tab.

Continue





Progress

