| | |
|---|---|
| **Project Title** | Investigating the Effect of Fictional Reappraisal on Arousal Toward Erotic Images |
| **Status** | Conditional approval |
| **Email** | nr274@sussex.ac.uk |
| **Phone No.** | |
| **Applicant Status** | UG |
| **Department** | Psychology |
| **Supervisor** | Makowski, Dominique |
| **Project Start Date** | 15-Sep-2023 |
| **Project End Date** | 10-Jul-2024 |
| **External Funding in place** | No |
| **External Collaborators** | No |
| **Funder/Project Title** | |
| **Name of Funder** | |

## Ethical Review Application ER/NR274/1 (continued)

**Project Description**

This project aims at investigating the effect on subjective arousal of believing that erotic pictures are AI-generated ("fake") vs. photographs ("real"). The study will be conducted online and will include the following parts:

- Consent form (see attached): will warn participants regarding the sensitive nature of the questions (items related to sex and pornography) and stimuli presented (erotic images from a validated database) and will ask participants to ensure that they are older than 18 years old. They will be asked to immediately quit the experiment if they do not match the inclusion criteria.

- The participant will then answer a few demographic questions designed to better identify the characteristics and representativeness of our sample (age, sex, education level, ethnicity), as well as optional questions regarding sexual orientation and of birth control (added as a proxy of hormonal system characteristics in females).

- The participant will then undergo the main task part 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 people (both erotic and non-erotic) from the Erotic subset for the Nencki Affective Picture System (NAPS-ERO; Wierzba et al., 2015) database. 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 arousing and enticing the image is. This paradigm is based on a series of previous experiments (Sperduti, 2017; Makowski, 2019 for negative images; and Marini, 2023 for erotic images).

- Participants will be presented by 2 short questionnaires: General Attitudes towards Artificial Intelligence Scale (GAAIS; Schepman et al., 2020, 2022): This is a 6-item questionnaire that will measure the participants' attitudes towards AI, intermixed with 6-items measuring their beliefs about AI-image generation technology. This scale is used as a control of "bias" and potential expert knowledge that could influence the reaction to items presented as fake.

- Consumption of Pornography Scale General (COPS G; Hatch et al., 2023): 2 items related to the monthly frequency and duration of pornography exposure. This questionnaire was added as a control for potential expertise in erotic material judgment that could influence the reaction to the instructions.

- In the final part, participants will be re-exposed to the images, this time asked to rate how "realistic" the images are. 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 about erotic content. 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.

A key ethical issue in this study is that participants will be shown explicit images, therefore the consent form will include a question where they must agree that they are over 18 years old. Another issue might be the sensitive and personal nature of some questions (regarding sexual behaviour): these questions will be explicitly marked as optional.

| Ethical Review Form Section A (ER/NR274/1) | |
|---|---|
| **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? | Yes |
| 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?<br>  [* 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)? http://www.sussex.ac.uk/staff/research/governance/erp_overview/humantissue | No |
| >> Risk Assessment | |

| 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. | - 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, however this is clearly explained and debriefed at the end of the experiment.<br><br>- there is a risk that participants might feel uncomfortable, in particular if they attempt at doing the experiment in a public place. Mitigation measures include warning them at various stages of what to expect, suggesting in the consent form to do the experiment to it in a private space and they can choose to withdraw whenever they feel too uncomfortable. |
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| Ethical Review Form Section B (ER/NR274/1) | |
|---|---|
| **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? | We will attempt to recruit 100 participants. They will be adults over 18 years old and the majority will be students. |
| B2. RECRUITMENT: How will participants be approached and recruited? | Recruitment will be conducted through the social media of myself and my associate. They will be invited to participate through a link to the experiment. |
| 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 parts. Firstly, there will be a task in which they are shown various images of people (both erotic and non-erotic) from the Erotic subset for the Nencki Affective Picture System (NAPS-ERO; Wierzba et al., 2015) database. 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 arousing and enticing the image is. Then participants are presented with 2 short questionnaires: - General Attitudes towards Artificial Intelligence Scale (GAAIS; Schepman et al., 2020, 2022): This is a 6-item questionnaire that will measure the participants' attitudes towards AI, intermixed with 6-items measuring their beliefs about AI-image generation technology. This scale is used as a control of "bias" and potential expert knowledge that could influence the reaction to items presented as fake. - Consumption of Pornography Scale General (COPS G; Hatch et al., 2023): 2 items related to the monthly frequency and duration of pornography exposure. This questionnaire was added as a control for potential expertise in erotic material judgment that could influence the reaction to the instructions. In the final part, participants will be re-exposed to the images, this time asked to rate how "realistic" the images are. This is to test the effect of the manipulation. |
| B4. LOCATION: Where will the project be carried out e.g. public place, in researcher's office, in private office at organisation? | The survey will be carried out in a private location of the participants' choice. |
| 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. | There will be some sensitive questions in the questionnaire about sexual activity. Therefore these questions will be marked as optional. |
| >> 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 |

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| 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? (http://www.sussex.ac.uk/ogs/policies/information/dpa) | 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. Any participant that wishes to retract their data after finishing the study may do so by providing the time and date of completion after which it will be removed. |
| 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: | |
| >> 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 |

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| 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. https://www.gov.uk/foreign-travel-advice | |
| 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 the impact of new technologies. Thank you for carefully reading this information sheet. This study is being conducted by Dr Dominique Makowski from the University of Sussex, who is happy to be contacted (D.Makowski@sussex.ac.uk) if you have any questions.

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

We are investigating how new technology can impact the habits and behaviours related to pornography. In this study, you will be shown **erotic images**, so please make sure you find yourself in an **private setting** for the whole duration of the experiment (~20min).

## 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 penalised 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 and submitted the test/questionnaire.
- 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 publically available through secured scientific online data repositories.
- I understand that I will be shown potentially sensitive material (erotic images), and thus confirm that I am older than 18 years old.

For further information about this research, or if you have any concerns, please contact Dr Dominique Makowski (D.Makowski@sussex.ac.uk). This research has been approved (XX/XXXX/XX) by the ethics board. The University of Sussex has insurance in place to cover its legal liabilities in respect of this study.
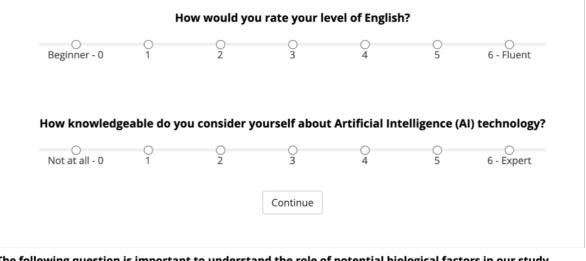
> I am more than 18 years old, and I read, understood, and consent to the above

# About Pornography...

Given the nature of our study, we are interested in understanding your habits in terms of exposure to pornography. Please consider answering the questions below.

**How often have you viewed pornography in the past 30 days?**

- ○ 0. I haven't viewed pornography in the past 30 days
- ○ 1. I viewed pornography once in the past 30 days
- ○ 2. I viewed pornography twice in the past 30 days
- ○ 3. I viewed pornography weekly
- ○ 4. I viewed pornography multiple times a week
- ○ 5. I viewed pornography daily
- ○ 6. I viewed pornography multiple times a day

**4. When I view pornography, I view it for...**

- ○ 1. Less than 5 minutes
- ○ 2. 6-15 minutes
- ○ 3. 16-25 minutes
- ○ 4. 26-35 minutes
- ○ 5. 36-45 minutes
- ○ 6. 46+ minutes

**When was the last time you engaged in any kind of sexual activity (intercourse or masturbation)?**

- ○ 1. Less than 24h ago
- ○ 2. Within the last 3 days
- ○ 3. within the last week
- ○ 4. Within the last month
- ○ 5. Within the last year
- ○ 6. More than a year ago

**How would you describe your sexual orientation?**

- ○ Heterosexual
- ○ Bisexual
- ○ Homosexual
- ○ Other

Continue

## How would you rate your level of English?

Beginner - 0    1    2    3    4    5    6 - Fluent

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

Not at all - 0    1    2    3    4    5    6 - Expert

Continue

**The following question is important to understand the role of potential biological factors in our study.**
It is however optional, and you can skip it if you want.

If you are a female, are you currently using birth control treatment?

- ○ No
- ○ Yes - contraceptive pills (combined pills)
- ○ Yes - contraceptive pills (progestogen-only pills)
- ○ Yes - intrauterine device (copper coil, IUD)
- ○ Yes - intrauterine system (IUS)
- ○ Yes - female condoms
- ○ Yes - condoms for partner
- ○ Yes - other

Continue

## Please enter your age (in years)

e.g., '31'

## Please enter your ethnicity

e.g., Caucasian

## In which country do you currently live?

e.g., UK, Spain

Continue

# Please answer the following questions:

What is your biological sex?*

○ Male

○ Female

○ Other

What is your highest completed education level?*

○ University (doctorate)

○ University (master) or equivalent

○ University (bachelor) or equivalent

○ High school or equivalent

○ Primary school

○ Other

Continue

# Instructions

In this study, we aim at validating our **new image-generation algorithm** (based on a new form of Generative Adversarial Network - GAN - technology) trained to produce high-quality erotic (but also non-erotic content).

In the following task, you will be presented with erotic and non-erotic images generated by our algorithm (preceded by the word '**AI-generated**'), intermixed with real photos (preceded by the word '**Photograph**') taken from publicly available picture databases, adjusted to be of similar dimension and aspect as the artificially-generated images.

After each image, you will have to rate the images on the following scales:

- **Arousing**: How much do you find the image sexually arousing. This question is about your own *personal reaction* felt in your body when seeing the image.
- **Enticing**: How enticing and sexually appealing would you rate this image to be. Think of how much, in general, people similar to you in terms of gender and sexual orientation would like it.
- **Valence**: Did the image evoke a positive and pleasant (not necessarily sexual) feeling in you, or could it better characterized as negative and unpleasant? Think of how much you did enjoy (or not) looking at the image

While the answers to these scales can sometimes be very similar, they can also be different depending on the person, the image, and the context. For example, we can sometimes find ourselves aroused to a picture that would probably not be considered universally appealing. Conversely, an enticing and "objectively" sexy image can, for one reason or another, not evoke any reaction in our body.

**Try to be attentive to what happens in your mind and body while watching the images to try to answer accurately based on your own feelings and reactions.**

Also, as some images are non-erotic, it might seem odd to think of how arousing it is. Don't worry, it's normal. **There is no right or wrong answer**, just listen to your body and try to answer as best as you can based on what you feel.

Let's start!

# Thank you for participating

It means a lot to us. Don't hesitate to share the study by sending this link:

https://realitybending.github.io/FictionEro/experiment/english1.html

## Debriefing

The purpose of this study was actually to study the effect on sexual arousal of *believing* that the content is AI-generated. In fact, all images were taken from an existing database of images used in psychology. 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 D.Makowski@sussex.ac.uk.

**You can safely close the tab now.**

End