- Too Beautiful to be Fake: Attractive Faces are Less Likely to be Judged as
- 2 Artificially Generated
- Dominique Makowski¹, An Shu Te¹, Stephanie Kirk¹, Ngoi Zi Liang¹, & S.H. Annabel
- Chen^{1, 2, 3, 4}
- ¹ School of Social Sciences, Nanyang Technological University, Singapore
- ² LKC Medicine, Nanyang Technological University, Singapore
 - ³ National Institute of Education, Singapore
- ⁴ Centre for Research and Development in Learning, Nanyang Technological University,
- 9 Singapore

- 11 Correspondence concerning this article should be addressed to Dominique Makowski, 12 HSS 04-18, 48 Nanyang Avenue, Singapore (dom.makowski@gmail.com).
- The authors made the following contributions. Dominique Makowski:
- ¹⁴ Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation,
- 15 Methodology, Project administration, Resources, Software, Supervision, Validation,
- Visualization, Writing original draft; An Shu Te: Project administration, Resources,
- 17 Investigation, Writing original draft; Stephanie Kirk: Project administration, Resources,
- Writing original draft; Ngoi Zi Liang: Project administration, Resources, Writing –
- review & editing; S.H. Annabel Chen: Project administration, Supervision, Writing –
- 20 review & editing.
- 21 Correspondence concerning this article should be addressed to Dominique Makowski,
- 22 HSS 04-18, 48 Nanyang Avenue, Singapore. E-mail: dom.makowski@gmail.com

23 Abstract

- Abstract abstract abstract.
- 25 Keywords: visual illusions, illusion game, Pyllusion, personality, general factor
- Word count: 5114

Too Beautiful to be Fake: Attractive Faces are Less Likely to be Judged as Artificially Generated

For the first time in Humanity's history, technology has enabled the creation of 29 near-perfect simulations indistinguishable from reality. These artificial yet realistic 30 constructs permeate all areas of life through immersive works of fiction, deep fakes 31 (real-like images and videos generated by deep learning algorithms), virtual and augmented 32 reality, artificial beings (artificial intelligence "bots" with or without a physical form), fake 33 news and skewed narratives which ground truth is often hard to access. They carry important consequences for the technological and entertainment sector, but also for security and politics, for instance if used for propaganda and disinformation, recruitment into malevolent organizations, or religious indoctrination. This challenge is central to what has been coined as the "post-truth era" (REF Lewandowsky et al., 2017), in which the distinction (and lack thereof) between authentic and simulated objects will play a critical role.

While there are still some fields in which simulations are not perfectly realistic (e.g.,
Computer Generated Images - CGI in movies often lack the details and appearance of
reality), it is fair to assume that these technical limitations will become negligible in the
near future. This fact, however, leads to a new issue: if real and fake stimuli cannot be
distinguished based on their objective characteristics, how can we make judgments
regarding their nature?

Literature shows that context surrounding stimuli plays an important role in the
assessment of its reality (a process henceforth referred to as simulation monitoring, REF
makowski2019phenomenal and makowski 2018 thesis). Blabla some literature and
references on how we use the context (source of information, author of information,
knowledge about credibility and things like that). What drives the beliefs of reality in the
absence of contextual cues (Figure 1).

53

« Real » = genuine, authentic

Determinants of Simulation Monitoring

« Is this information real or fake? »

« Fake » = artifical, simulated, deceptive

Individual-related characteristics

• Dispositional traits (personality, beliefs, ...)

• Cognitive abilities & styles (analytic, ...)

• Knowledge about the information (origin, ...)

Stimulus-related characteristics

• Contextual information (author, presentation, ...)

Figure 1. The decision to believe that an imbiguous stimulus (of any form, e.g., images, text, videos, environments, ...) is real or fake depends of individual characteristics (e.g., personality and cognitive styles), stimulus-related features (context, emotionality), and their interaction, which can manifest for instance in our bodily reaction.

Stimulus features (emotionality, familiarity, ...)

Psychological factors. Stable dispositional traits. Cognitive styles and the like

Aside from stimulus- and individual-realted characteristics, it is possible that simulation monitoring is driven by the interaction between the two, i.e., by the reaction associated with the experience of a given stimulus. For instance, emotions. Lines of evidence found in the link between presence and emotion (see *makowski2017avengers* and more) and fiction and emotion regulation (fictional reappraisal papers from makowski and more). Other include familiarity and self-relevance (can cite sperduti fiction 1 here).

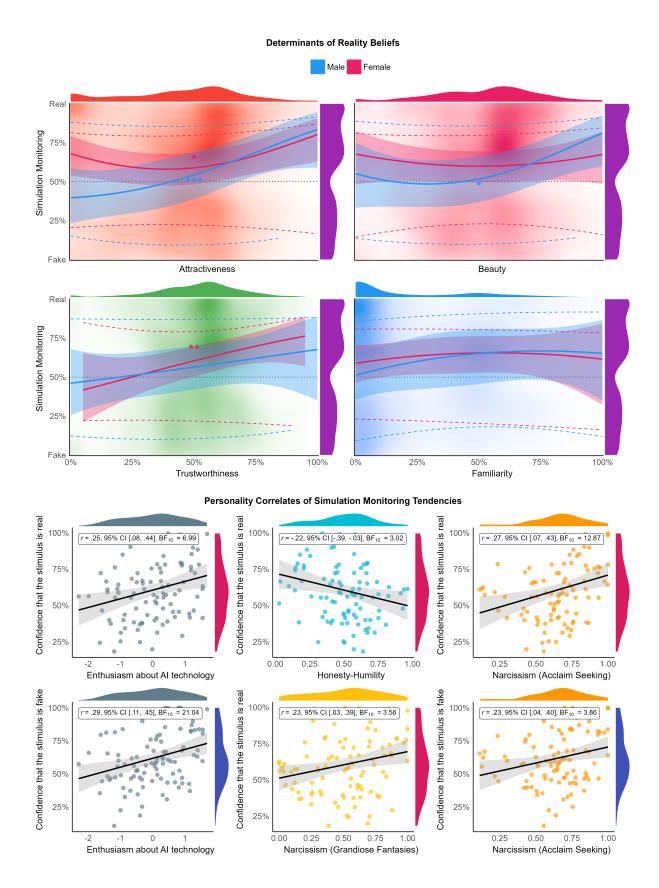
- Images of faces, one of the most comon artificial inteligence (AI) target, integrate components of emotional reaction, saliency, self-relevance via attractiveness (REF). Talk
- $_{62}$ about possible links between attractiveness and simulation monitoring
- 63 Methods
- Procedure.
- Participants.
- 66 Results

68

67 Discussion

Acknowledgments

We would like to thank STUDENT NAME for his contribution.



 $Figure\ 2.$ Top part shows blabla.

70 References