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Dealing with AI-generated synthetic media: Young Finns' understandings, experiences and competencies regarding deepfakes

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Rationale

The advancement of artificial intelligence (AI) and deep neural networks has driven the emergence of synthetic media (Whittaker et al., 2020, 90). The term "synthetic media" refers to hyper-realistic media that are automatically and artificially generated (Bonfanti, 2020, 1; Whittaker et al., 2020, 91). Technologies applied in digital products have experienced evolutionary shifts and now we are confronting a world filled with "the autonomous edit-ting or generation of content by means of AI algo-rithms" (Campbell et al., 2021, 3). These AI-powered contents, presented in diverse forms, are pervasive in people's everyday lives.

In the scope of AI-generated synthetic media (AGSM), so-called deepfake content is a prominent type of content that is widely explored and discussed by both scholars and practitioners. In 2017, the term "deepfake", as a combination of "deep learning" and "fake", was initially coined by a Reddit user named "deepfakes", who utilized AI-powered tools to "paste celebrities' faces onto pornographic video clips" (Vincent, 2018). Now, deepfake content has been a burgeoning digital creation that is diffusing on social media platforms. Due to the improved quality, deepfakes have brought challenges to our society. By using biometric information of human faces, these AI-generated artifacts can arouse issues related to privacy, fraud, and disinformation, which is regarded as a threat to society (Woollacott, 2021).

It is essential to research AGSM content, since it is possibly accessed by more consumers through fast "growing online services" (Zhou et al., 2021, 1079) and might bring both positive and negative impacts on people's everyday lives. Nowadays, young people have been the prominent consumer group of social media. In this sense, young people might encounter deepfake videos in these experiences. However, by looking at the previous research, we can see that the topic related to deepfake has been rarely explored in the field of social science. Thus, to fill this gap, we should concentrate more on their practice while confronting AGSM, which is helpful for us to recognize the contemporary information environment surrounding them and the challenges they might face.

Aims

The aim of this study is to increase understanding on AI-generated synthetic media as a new type of information powered by AI technology and knowledge on young people's understanding, experiences and competencies regarding

AGSM. More specifically, the purpose of the study is to investigate how young Finns deal with deepfakes in their everyday lives, focusing on their information literacy practices regarding deepfakes. This aim will be accomplished four objectives:

a. Reviewing current research related to AGSM (Sub-study 1).
b. Examining young Finns' understandings of deepfakes, primarily involving their definition and views towards deepfakes (Sub-study 2).
c. Exploring young Finns' experiences with deepfakes in their everyday lives, including their agency of consumption, their engagement, and negotiation with deepfakes. The sub-study will also examine the features of the specific context where those young people deal with deepfakes (Sub-study 3).
d. Studying young Finns' competencies of identifying and evaluating the authenticity of deepfake content (Sub-study 4).

Research methods and data collection

Qualitative analysis is applied as an approach to examine young Finns' understandings and experiences. 4 sub-studies will be conducted in these ways:

Sub-study 1:

A traditional or narrative literature review will be conducted to analyse the current research related to AGSM and its definitions. As AGSM is an emerging phenomenon, the selected research will be peer-reviewed articles primarily published in the field of social science between 2020 to 2022, offered by the databases, such as Scopus, ProQuest and EBSCO, accessible via the University of Oulu library.

Sub-studies 2, 3, and 4:

I primarily used in-depth interview with media go-along (Jørgensen, 2016), scroll-back (Robards and Lincoln, 2017), and experiment methods to collect empirical data. The interview was planned to be conducted in English and last for around 30–40 minutes. 20 Finnish 9th grade pupils were recruited from the Oulu International School to attend TET week in 2021 and participate in tasks involving technology development and use. The whole dataset was proposed to be divided for Sub-studies 2, 3, and 4.

For sub-studies 2 and 3, I used semi-structured interviews with open-ended questions to encourage informants to provide richer information. Besides, media go-along (Jørgensen, 2016) and scroll-back (Robards and Lincoln, 2017) methods allow participants to use the mobile applications in their smartphones, which is helpful to recall their memories about AGSM.

For Sub-study 4, an experiment was conducted with in-depth interview to examine how young Finns identify and evaluate deepfakes. Two selected deepfake videos were provided to the participants to watch. The participants were allowed to share their thoughts while watching videos. After watching the videos, they were asked to clarify the process of deepfake content identification and evaluation.

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