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## Guest post: The dangers of subliminal AI manipulation

[Latest News](#) / By [Ashley Cornell](#), email: [ashley.cornell@spamchronicles.com](mailto:ashley.cornell@spamchronicles.com) /  
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On a global level, in November 2021, UNESCO's 193 member states adopted a recommendation on the ethics of artificial intelligence. The AI Recommendation explicitly recognizes the "profound and dynamic positive and negative impacts of artificial intelligence (AI) on societies, the environment, ecosystems and human lives, including the human mind." The emphasis on effects on the human mind is particularly noteworthy, as the use of AI not only affects the environment, but also human thinking, interaction, and decision-making.

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## About the author:

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The European Commission's proposal for a law on artificial intelligence (AI), published in April 2021, draws even more attention to the serious dangers that AI systems pose to human thoughts and behavior. The proposal generally aims to ensure the reliability and security of AI systems.

Specifically, according to Article 5, the proposal provides for a ban on particularly harmful AI practices that violate Union values. This category of malicious AI systems includes those that 1) exploit a weakness of a certain group of people, 2) are used to assess the trustworthiness of individuals (social scoring systems), 3) are used for remote identification real-time biometrics and 4) AI systems used to subliminally influence outside a person's consciousness.

## Combination with brain-computer interfaces

The last category of "subliminal AI systems", in particular, should play a key role in this legislative proposal. The main reason for this is that AI, in combination with an increasing number of other advanced technologies such as brain-computer interfaces (BCI), functional magnetic resonance, big data, Internet of Things, blockchain, robotics or Eye technologies tracking and much more, is capable of not only manipulating users' minds, but also significantly influencing their behavior. These real possibilities of manipulating thoughts and behaviors will only increase in the future. Computer programming has already been expanded linguistically and technically to include programming people.

# Manipulation techniques known for 100 years

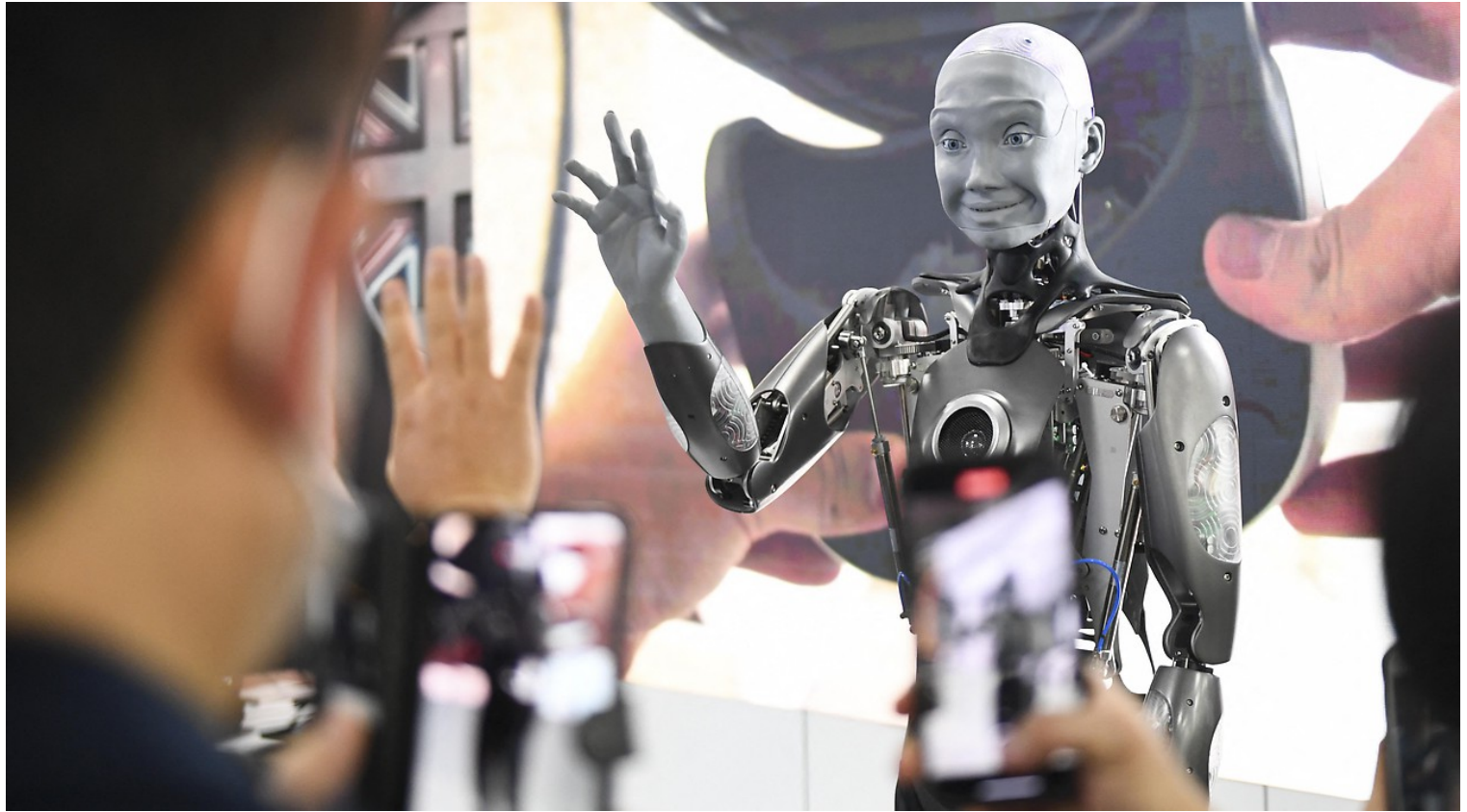
That the dangers of subliminal manipulation are real has already been proven by studies carried out before 1917 by the Austrian neurologist and psychiatrist Otto Pötzl. Later, the same techniques were used in the US to increase advertising effectiveness, such as using subliminal imagery to sell popcorn and certain soft drinks. In a 1957 book ("Hidden Persuaders"), author Vance Packard warned that the use of subliminal techniques is and will be useful not only for commercial advertising, but also for manipulating political processes such as elections.

In Europe and elsewhere, these concerns eventually led to a blanket ban on subliminal advertising on television beginning in 1989. In the 1990s, issues of subliminal manipulation returned to headlines in the United States in connection with several lawsuits against rock musicians whose songs would have been responsible for the suicide of several young people by masking with subliminal messages.

## From brain spying to deep fakes

Today, scientifically, there are no more doubts about the efficiency and the real effects of subliminal techniques. In the field of neuromarketing, the question is not whether these subliminal methods are, but how effective they are. The current state of the art is best illustrated by so-called brain spyware. Using subliminal techniques and a machine learning model, this allows access to private data such as banking

information, PIN codes, place of residence or date of birth in the brain.



PATRICK T. FALLON / AFP

Furthermore, so-called “dark patterns”, which are used to denote the manipulative design of websites and social media posts, use unrecognizable deceptive elements to manipulate users through various methods such as: B. by veiled advertising, triggering fear or “bait and switch” (bait and switch). Likewise, deep fakes or the combination of targeted advertising with hidden algorithms used by search engines are used not only to determine the success of companies but also the outcome of elections, as the Cambridge Analytica scandal revealed.

## Cumulative damages must also be included in the law

The serious dangers associated with subliminal manipulation of thoughts and behavior require the proposed legislation to expand the legal scope of physical or psychological harm to include other forms, such as financial, economic, cultural and social harm. As these forms of manipulation tend to be subtle and spread across various means, their impact increases over time. Therefore, it is also necessary to

better define the scope of these subliminal techniques so that cumulative damage, that is, damage caused by continued consumption, can also be included.

## No absolute limit to subliminal perception

With regard to the manipulation of thoughts and the mind, it is also necessary to clarify the question of the corresponding sense organs. However, according to psychophysics (that is, the branch of psychology that studies the interrelationships between physical stimuli and the perception of those stimuli), there is no absolute threshold for subliminal perception, because the thresholds for a given stimulus vary both between different people and within a person vary.



At the same time, many AI systems use manipulation techniques that work both below (subliminal) and above (supraliminal) the threshold of consciousness. In this case, the aforementioned ban on AI systems should therefore be extended from "use of subliminal techniques" to "supraliminal techniques", or be replaced by the expression "transliminal techniques". The reason is that manipulative stimuli are dynamic and operate both above and below the threshold of conscious awareness.

### A broader definition of AI techniques is needed

The example of the term "addiction by design" shows that the intensity and quantity of stimuli will continue to increase with the future integration of the senses in the so-called "augmented and virtual reality" (augmented and virtual reality). propagates through the concept of metaverse. For this reason, a broader definition of the manipulative techniques used by AI is also justified and necessary, since the process of perceiving life includes all the senses and, therefore, represents a multisensory experience. For the same reason, the traditional study of the senses, which viewed them in isolation and limited their number to five, is now clearly obsolete.

### Global debate stimulated by UNESCO

Overall, the EU's planned ban on harmful AI practices, which also includes subliminal AI systems, should be welcomed. At the same time, however, several associated scientific issues must be considered more closely and appropriate adjustments must

be made to the final legal text. At the same time, a global debate, such as the one successfully spurred by UNESCO's recommendation on the ethics of artificial intelligence, is also needed in order not only to be able to seize the expected opportunities of AI, but also to strike back. the actual hazards and damages accordingly.

In conclusion, it should be remembered that already in 1948 George Orwell, in his novel 1984, warned that the invention of the press, cinema and radio facilitated the influence of public opinion, putting an end to "private life". Translated for the present and the future, this means that AI and related technologies such as brain spyware already pose a real threat today, due to which "privacy of thought" could end in the future.



3yearold girl survives shooting at Thai daycare after lying still under covers | Stay indoors

Latest News / By Ashley Cornell, email: [ashley.cornell@spamchronicles.com](mailto:ashley.cornell@spamchronicles.com) / October 8, 2022



In the massacre, which killed 24 children and 13 adults, former police officer Panya Khamrab, 34, armed with a gun and a knife, broke into a locked room at a daycare where children were sleeping and attacked the little ones . Of the dozing children in the room, only Nong Am was unharmed. "It is a miracle of God that it saved my niece's life," her uncle Wutthichai Baothong told a local newspaper.

Normally, more than 90 children attend the daycare center, according to Thai media, but just over 20 students were there on Thursday due to bad weather and a temporary disruption to public bus services.

In a statement, police said the gunman broke into the building just after lunchtime and killed a teacher and a mother outside. Witnesses said he first shot staff including a governess who was eight months pregnant before he reached the room where the children were napping. He then stabbed most of his victims before fleeing.

When Panya Khamrab came home, he killed his wife and child and committed suicide. The shooter appeared in court on the morning of the attack on charges related to the use and possible sale of methamphetamine. He would be sentenced this Friday (7).

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