



SCIENCE

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CHILDREN AND ARTIFICIAL INTELLIGENCE



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Urgency to Regulate Artificial Intelligence (AI) and Child Protection

The Italian Data Protection Agency's decision to block Chat GPT on March 31st stresses the importance of considering the protection of minors in the midst of the AI revolution in a particular way. The

times we are living in will radically change society. The economic, scientific, cultural and public security sectors will undoubtedly reap many advantages, but we must keep in mind that new responsibilities arise each

time a new technology is introduced into the market. This must be considered from the very beginning of any such process by regulators and society alike.

The race for technology should take into account that human physiology evolves and adapts at its own pace and technological innovations must respect this timing. The deployment of AI in every sector of society is happening too quickly and extensively, without a trial period. Parents and educators don't have the time to fully understand the effects on the cognitive and behavioral development of young children and pre-teens. By five years of age a child's brain is formed for 90% of its development. However, it is around the age of eight that the brain becomes most vulnerable to the input of information, and is thus shaped by it. Many studies show the increased production of the hormones cortisol and dopamine caused by an excessive use of social media. This effect has been described as "digital crack and cocaine" by sociologist Julie Albright of USC-Dornsife in Los Angeles, California.

Toys and games are already being developed with the integration of AI, interacting with children by registering their voice, facial expressions, reactions and emotions. The gathering of biometric data, which children are not aware of and families are not sufficiently informed about, makes it possible to produce content that "hooks" young users beyond healthy levels, turning them into addicted consumers. We already know how social networking - promoted as a system to connect people, share photographs and information, assist small businesses find new clients or debate and defend the freedom of speech - has had social, moral and legal consequences that no one could

have imagined.

Just in the sector of the now "traditional" social media, the absence of clear regulations and laws stemming from a truly public debate between legislators, bioethicists, scientists and intellectuals has allowed harmful outcomes and a polarization of politics that are actually weakening the foundations of democracy in many parts of the world.

Today the guidelines offered by society are more fragile and inadequate than ever before. With the advent on the market of software producing images and content that offer believable alternatives to reality, we must ask ourselves how we can protect childhood from violent or sexual images that can generate trauma when experienced at an early age. There are already, for example, software programs capable of creating goodnight stories for children tailored to the emotions that the developers want to solicit at any given moment, which could replace books by seeming to offer greater practical advantages and variety.

In a world in which suicide is the second leading cause of death amongst teen-agers, this new phase must be thoroughly researched and understood by regulators, who are largely responsible for avoiding a further wave of social and mental health issues. These outcomes could soon engulf young people, with the diffusion of antisocial behaviors, anxiety, isolation, depression, cyberbullying, eating disorders and online grooming, as decryed by the Italian Pediatrics Association.

The research, "Ethics of the Attention Economy: The Problem of Social Media Addiction" (Bhargava and Velasquez, 2020), found that if a digital technology is offered to users for free or at low cost, the profits derive from the user's "engagement", which

becomes then itself a commodity. This business model, centered around a user's digital dependency, is promoted by technology companies, facilitating a serious moral and ethical problem which is seldom debated as much as drug, alcohol and tobacco addictions are. The researchers explain how technology platforms are designed with the objective of keeping users in front of the screen as long as possible, constantly escalating their use. In the era of AI this is even more significant because the more time is spent online, the more data is gathered, and the process becomes a vicious cycle to the advantage of AI providers.

In this "Attention Economy" the first victims of the absence of regulation are children and young people who are not always under strict parental control, and lack the tools to discern between responsible or harmful use of content. For these reasons, it is crucial to decide if we really are ready to regulate this new technology while still using our current, outdated tools before greenlighting AI for children and teens. Rigorous scientific studies are needed to legislate correctly. Failing to regulate the "online landscape", the protection of this fragile category of citizen's biometric data, ignoring what the behavioral sciences teach us about the development of children's and minor's physiology and social interactions, would be a terrible mistake.

A country's biggest asset is its younger generation. As responsible adults, we must find solutions so that children and teen-agers can become healthy individuals and attentive citizens, the international community must discern critically and scientifically to prevent new types of addictions and it must act swiftly. ❖

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