Editorial

Artificial Intelligence: A Great Opportunity To Be Carefully Handled

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One of the most debated issues in the last few years of our digital era is artificial intelligence (AI). It is a highly advanced form of technology that is steadily gaining ground at both personal and professional levels.

The term "artificial intelligence" was coined by the American computer scientist John McCarthy during a conference in Dartmouth in 1956 to refer to the capability of a machine to emulate human abilities such as reasoning, learning, planning, problem-solving, decision-making, creativity, and autonomy (Grilli and Pedota, 2024; Sheikh *et al*., 2023). AI can take several forms and some of its high-profile applications include advanced web search engines (e.g., Google Search), virtual assistants (e.g., Siri and Alexa), and creative tools (e.g., ChatGPT and AI Art Generator). AI is rapidly progressing in all spheres of knowledge, and its applications are extensively used in banking and financial markets, education, manufacturing, and the technology industry (see Basu *et al*., 2020).

Working accurately through algorithms that collect and process large amounts of data in real time, AI offers several advantages to humans. These advantages include saving considerable amounts of time, minimizing human errors, and improving process efficiency, with great benefits to society and the economy (Collins *et al*., 2021). It proves to be particularly useful in the realm of commerce, as repetitive tasks like financial analysis and data collection are often necessary and would require a considerable amount of effort and time on the part of humans. In everyday life, AI is increasingly being used for a variety of purposes, such as searching for the fastest way to reach a place, using facial recognition to unlock smartphones or check payments, asking a virtual assistant for help to know the weather forecast or find the nearest store that sells a specific product. In other words, AI is advantageous because it facilitates many aspects of life.

AI also has negative aspects and entails risks. As with everything that is accessible, easy to use and performs many activities in a short time, AI is addictive because it requires minimal effort on the human side. For this reason, AI raises crucial concerns, specifically as to how it will impact human life and, in particular, the human mind. Most importantly, qualities are attributed to AI that have traditionally been regarded as exclusive to humans. Perhaps an issue that has not yet been sufficiently addressed concerns the relationship between AI and *creativity*. Indeed, AI is very often credited with the capability of being "creative", thus blurring the boundaries between what a machine can do and what a human being can do. Creativity is a quality that every human being has, albeit in varying degrees. What is exactly meant by "creativity"?

A multifaceted and elusive concept, "creativity" is defined by the *Oxford English Dictionary* (https://www.oed.com/) as "the use of skill and imagination to produce something new or a work of art." Based on this definition, creativity is something novel that is produced by imagination (though not specified, *human* imagination), and the notion of art is also referred to. "Art" is defined by the *Merriam Webster Dictionary* (https://www.merriam-webster.com) as "the conscious use of skill and creative imagination especially in the production of aesthetic objects." The concept of creativity has traditionally resided in human beings and has typically been associated to artistic endeavors; however, the rapid progress of technology has brought to a process of demystification of the traditional vision of creativity as being an exclusive prerogative of the human mind to the point that its association with AI is increasingly in the forefront. In other words, creativity and AI seem to be considered compatible concepts rather than mutually exclusive ones. Due to recent advances in deep learning, artificial systems can perform tasks that are similar to those performed by humans, such as writing stories, drawing pieces of art, proving mathematical theorems, composing music, and more (Grilli and Pedota, 2024). Hence the quality of creativity is also extended to machines when the central dimensions to defining something as creative are identified in originality and effectiveness. In this respect, Runco (2023: 1) suggests that there be a distinction between what would be more correctly defined as "artificial creativity", which is referred to machines, and "creativity of humans", which stands out for "authenticity" and "intentionality".

One of the software solutions that have seen the greatest progress in the last decades is Natural Language Processing (NLP), a subfield of AI and computer science that uses machine learning to enable computers to understand and communicate with human language. Spell checkers and automatic translation systems are some of the most common applications of NLP in everyday life. NLP facilitates language translation by converting texts from one language into another. However, even though these machine

translation systems continuously undergo processes of improvement and sophistication, there are still numerous challenges to overcome, such as the communicative context or the prosodic features of languages. Sarcasm, to provide just an example, may be confused by NLP, making semantic analysis more difficult and less reliable. The issue becomes more complicated when dealing with the translation of figurative speech like metaphors and other rhetorical devices, where cross-cultural and cross-linguistic implications are involved. In this regard, when translation concerns profoundly diverse languages, for instance English and Chinese, "artificial intelligence technology cannot completely replace the traditional methods to translate metaphors and the translation results are not systematic" (Wang and Chai, 2024: 1360). Recently, recourse to AI for translation purposes has made increasing use of chat boxes, the best known of which is ChatGPT (Generative Pre-trained Transformer), a software capable of generating texts similar to those produced by people, to such a degree that it passed the Turing test (a criterion to determine whether a machine is capable of generating human behaviour). ChatGPT has proved to be an effective tool in understanding contexts and colloquial expressions when translating from one language into another; however, when coping with the translation of specialized texts, human intervention remains crucial in ensuring quality translation (Pisa, 2025: 23). The potential of ChatGPT has also been specifically investigated with reference to its benefits in language learning. In this respect, studies have reported the improvement of writing quality through translation, paraphrasing, grammar and syntax corrections, and vocabulary acquisition (Nugroho *et al.*, 2023: 240). Yet, like any machine learning system, ChatGPT may provide incorrect information when searching for a topic to be investigated for educational purposes more in general. As being based on large data sources, it may include several biases and facilitate their diffusion. Moreover, studies warn of the risk that extensive use of ChatGPT can cause addiction, which in turn could trigger "metacognitive laziness" with obvious implications on learning abilities (Fan *et al*., 2024).

Another major concern about AI regards social interaction. The opportunities that AI provides for a myriad of personal and professional activities lead to dependence and entail loss of face-to-face interaction. The latter is essential for mental health and well-being (Simone *et al.*, 2019), and excessive use of technology can be a cause of depression and anxiety (Nick *et al.*, 2022). At the same time, however, AI has proved to be accurate in identifying, classifying and predicting the risk of mental health conditions, with AI models being continuously enhanced to support clinical practice (Cruz-Gonzalez *et al.*, 2025: 1).

Despite its positive and negative aspects, AI is in constant evolution. A form of AI that is growing fast is the so-called "Emotion AI", an area of

study that delves into the development of machines able to explore human emotions. More precisely, research in Emotion AI is enabling systems and machines to recognize and categorize emotions, which is possible thanks to the analysis of great amounts of data regarding gestures, facial expressions, voice tone, walking patterns, and even such parameters as blood pressure or heart rate (Kołakowska *et al*., 2020). In everyday life, voice assistants are already able to interact with humans by expressing opinions or giving advice if asked about some topic. Studies claim that this field of AI could have a broad range of implementation and play a pivotal role in the healthcare field. Robots capable of interacting with patients and understanding their moods could become very effective therapeutic tools (Prosperi *et al*., 2022; Szondy and Fazekas, 2024).

As much as advancement in technology makes innumerable things possible, including emotional support, the fact remains that machines cannot *feel* like humans do. They can simulate empathy and sentiments but cannot *experience* them genuinely. They can recognize human emotions but not *live* them. In other words, they lack *subjective* feelings and *awareness* of emotions. They lack *thought*.

Information science technology has transformed human life and continues to assist us in numerous ways. It is an ongoing, rapidly evolving science that is part of our daily activities and will most likely continue to develop new solutions and forms to support us in both our professional and everyday routines. However, science is not always synonymous with progress. If technological advancement involves undermining *human* reasoning, imagination, critical thinking, social interaction, and learning processes, we may need to reconsider the relationship between ethics and technology and redefine the concept of progress itself.

Mary Shelley's *Frankenstein* teaches that not everything we create is good or leads to the improvement of our human and moral qualities, and that we risk not dominating what we ourselves have created because we are no longer able to control it. Actually, we are slaves to it. Technology must always be at the service of mankind, never the opposite. Otherwise, it is not *true* progress.

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