Editorial

Editorial

Marco Aurelio de Souza Rodrigues 😥

Dear readers,

John Howkins (2002), in his work *The creative economy: how people make money from ideas*, stated: "We are living in extraordinarily creative and inventive times" (free translation). This book was published in 2001. I wonder what the author would say about our present moment, when machines and systems supposedly capable of creating proliferate — which, therefore, raises questions about the very nature of what is called *creativity*.

After all, according to the aforementioned book of Howkins (2002), creativity can be defined as the ability to create something out of nothing or as the ability to give a new meaning to a preexisting thing. In both situations, creativity is considered a favored process when an individual confronts the familiar with the strange, something the author describes in his book as "leaving the comfort zone to explore other 'places' and establish new relationships" (free translation). Likewise, Margaret Boden (2004), a researcher dedicated to the field of artificial intelligence, defines creativity as the "ability to conceive ideas or artifacts that are (i) valuable, (ii) new, and (ii) surprising" (free translation).

These definitions invite us to reflect on something that, not so long ago, would have sounded absurd: can machines be creative? Although this editorial does not intend to exhaust this subject, it is worth dedicating a moment to ponder, albeit preliminarily, on the ability of machines, such as generative artificial intelligence systems, to be creative seeking to have a better understanding of their impacts on the creative economy.

To this end, it is necessary to understand what a generative artificial intelligence system is, whose variants have been conquering the media for their ability to create texts, images, software codes and, some would say, even poetry. These systems use complex machine learning models to predict the next word based on previous word sequences, or the next image based on words that described previous images.

Considering the growing popularity of these systems, it is assumed that their production is perceived as valuable by their respective users, which would meet the first criterion of what is considered creativity, as proposed by Margaret Boden (2004).

Nevertheless, one should reflect on whether what these systems deliver is, in fact, new — another criterion indicated by Boden (2004) to define creativity. Now, as pointed

out by Franceschelli and Musolesi (2023) in the article "On the creativity of large language models," such systems complete a sentence, for example, by searching for the words that would form a text close to others that were written in the past. The degree of dissimilarity and, therefore, novelty, would be limited by the very nature of the generative artificial intelligence system.

Furthermore, it is worth reflecting on whether what these systems offer their users is surprising — the third and final criterion recommended by Boden (2004) to establish what creativity is. Generative artificial intelligence systems, as argued by Franceschelli and Musolesi (2023), are trained to identify patterns according to large volumes of data. In short, they seek probable relations, whereas surprise and, consequently, creativity emerge from unlikely relations. Could this characteristic limit the ability of these systems "to leave the comfort zone to explore other 'places' and establish new relationships," as characterized by Howkins (2002) as a trait of what is called *creativity*?

Indeed, a skilled user could stimulate the system to produce surprising content with greater *novelty* content by creating unusual prompts (i.e., commands) for such a purpose. In that case, the following discussion would be pertinent: who was creative? The system or the user who designed the prompt capable of inducing the system to produce something? Would this production with a *hint* of novelty be surprising to its creator, given his/her full mastery over the system?

So many unanswered questions indicate that *creativity* is a fluid concept, which impacts the most diverse sectors and technologies and is impacted by them. Hence, more than ever, it is necessary to maintain a frank debate about how creativity manifests itself in the most distinct spheres, to deepen the understanding of how it can be used as an engine of economic and social development in this rapidly approaching future.

In this issue of *Diálogo com a Economia Criativa*, the journal reinforces its commitment to fuel this debate, offering the reader 10 articles whose authors explore manifestations of creativity in different contexts, some of which — the first five of this issue — were papers selected as the best studies of the 14th Brazilian Congress of Research and Development in Design.

"Surface design in the field of health and wellness: a study on the characteristics of three-dimensional textures applied to the myofascial roller product," by Carolina Corrêa Araujo and Cyntia Santos Malaguti de Sousa, presents a study on the use of creativity in the context of health. The authors delineate the elementary characteristics of the three-dimensional textures applied to the surface of the myofascial roller, which are important for the praxis of the surface designer who seeks to work in the health field.

"Design management applied to the assistive technology service provided by occupational therapists: a case study," by Daniela Amaral, Giselle Merino and Ana Karina Cabral, investigates the impact of design management and, therefore, creativity on the provision of assistive technology service performed by occupational therapists.

"A Project Guide as a tool to improve the design process in a metal-mechanic industry in the city of Caruaru-PE," by Aniele Marques and Germannya D'Garcia Silva, proposes a protocol to optimize the execution of product projects through design. This is a research based on practical applications of creativity for process improvement.

"Analysis of the Brazilian academic production on typography: a survey in the Theses and Dissertations Database of the Coordination for the Improvement of Higher Education Personnel," by Maíra Woloszyn and Berenice Santos Gonçalves, investigates the academic production about typography, defined as the creation and use of orthographic and para-orthographic symbols, to indicate incipient topics that can point to potential axes of future research on this field.

"Design teaching in the pandemic of COVID-19: perspective of teachers and students in the city of Rio de Janeiro," by Paola de Lima Vichy and Ligia Maria Sampaio de Medeiros, ponders on future scenarios for the teaching of design, a fundamental activity for disseminating creative thinking, from the perspective of the COVID-19 pandemic.

"Innovation practices based on creative industry: a study in the Paranhana region, Rio Grande do Sul, Brazil," by Eduardo Zilles Borba, Valmir Mateus Portal and Marley Rodrigues, provides a pertinent reflection on innovation and creativity practices and their impacts on regional development in southern Brazil.

"Analysis of the dynamics and specialization of creative activities in Brazilian capitals and Unesco creative cities," by Jonas da Silva Henrique, analyzes the growth of creative activities that interface with tourism in 27 Brazilian capitals and in the creative cities of Santos (state of São Paulo) and Paraty (state of Rio de Janeiro).

"History of psychiatry management at Instituto Municipal Nise da Silveira: creative and cultural actions that impact asylum deconstruction in the Brazilian society," by Ana Cláudia Pinheiro, Fabio Araujo and Miguel Pinheiro, provides a reflection on how creative and cultural actions of this institute impact the deconstruction of the need for clinical hospitalization in closed institutions and on the deinstitutionalization of madness in Brazilian society.

"Live streaming: an analysis of the motivations for subscribing to channels on the Twitch platform in Brazil," by João Renato de Souza Coelho Benazzi and Luiz Felipe Milazzo Barbosa, investigates the factors that stimulate the consumption of a new form of digital entertainment, the live streaming, pondering on the emergence of creative careers.

Finally, "Creative economy in the face of the complexity paradigm," by Romilson Marco dos Santos, investigates the emergence of new creative paradigms, which can destabilize institutionalized creativity.

Enjoy the reading!

REFERENCES

BODEN, M. A. The creative mind: myths and mechanisms. Londres: Psychology Press, 2004.

FRANCESCHELLI, G.; MUSOLESI, M. On the creativity of large language models. arXiv preprint arXiv, 2304.00008, 2023. https://doi.org/10.48550/arXiv.2304.00008

HOWKINS, J. The creative economy: how people make money from ideas. Londres: Penguin, 2002.

About the author

Marco Rodrigues: Professor of the Professional Master's in Creative Economy Management, Escola Superior de Propaganda e Marketing.

