

EDITORIAL REFLECTIONS ON THE EVOLUTION OF SCIENCE AND THE CONTRIBUTION OF CHATGPT.

José Edson Lara, PhD –
<http://orcid.org/0000-0001-6120-075X>

How to cite:

Lara, Jose Edson. (2023). Editorial reflections on the evolution of science and the contribution of ChatGPT. *Revista Gestão & Tecnologia (Journal of Management & Technology)*. v. 23. nº 1. p. 1-3. Editorial.

As the American physicist and philosopher Thomas Kuhn has already established in his famous and classic “The Structure of Scientific Revolutions”, science evolves from revolutions in intuitive propositions, models and methodologies of knowledge production, creating the conditions for the advancement of the status quo of a field of knowledge. Thus, progress, or evolution, is determined by the structure and intensity of the revolution.

That's how science goes...

However, the author makes it clear that other fields of knowledge evolve in the same order, characterizing the “Paradigms” of knowledge. After all, “Successive paradigms teach us different things about the population of the universe and about the behavior of this population” (Kuhn, 1998, p. 137). In the same sense, Greiner (1972) postulates that organizations evolve in a trajectory of evolutions and revolutions, corroborating the mode of knowledge production.

Currently, the instrument that presents conditions to determine a new paradigm in the modus operandi of knowledge production, it seems to me preliminarily, is the ChatGPT, one of the operators of Artificial Intelligence. ChatGPT was developed using a neural network and machine learning system, intended to produce virtual dialogues, improving other virtual assistants. It was created in 2015 by OpenAI, which is a non-profit society. This “model” feeds on information collected on the internet, providing answers with some degree of creativity. Its full name is Chat GPT (Generative Pre-Trained Transformer).

Already being called a model, this resource, or instrument, establishes conditions for the construction of dialogues between people and a machine, in the context of questions and answers (Budzianowski, & Vulić, 2022). Therefore, a dialogue of a positivist nature takes place, based on deductive logics originating from “direct reasoning”. The individual is free to ask, but

the machine, or computer, answers what is possible, even placing limitations on the content it can answer. Technological evolution and its practical implications are in a stage of high turbulence, allowing for the prediction of significant advances in the short term.

But, ... and ChatGPT contributions to science?

Scientists around the world are already starting to use this model to develop their knowledge bases (Haque et al., 2022). Some results are already very promising, such as the precise review of documents, data and information, and even the debate of ideas. At the same time, texts with the most diverse characteristics are already being produced.

However, with so many optimistic possibilities, the procedure also presents limitations and risks to the veracity and ethics of research. The literature relevant to this topic is already beginning to express some warnings about caution regarding risks and improprieties in the use of this model (Nature Machine Intelligence – Editorial of January 2023). Another caution to be highlighted refers to the properties regarding the posting of quotations on the language and its use. In this case, with the exception of articles whose analytical unit of research is the ChatGPT itself, in which the citation has relevance in the theoretical references, the references of the model as a method of obtaining data and information must be presented in the chapters of the methodology, or methodological procedures, or even materials and methods.

In this context, ChatGPT is effectively characterized as a revolution, or disruptive evolution, in the way of obtaining and disseminating data and information for analysis in scientific and technological research. Is it a paradigm?

In this Edition, Volume 23, Number 1, January/March 2023, this Journal of Management & Technology, or Revista Gestão & Tecnologia presents thirteen articles to its reader community, one from India, one from the Russian Federation and eleven from authors working in various institutions Brazilian. As for the theme addressed, three are in the field of Technologies, five in Finance in various projects, three in Strategic and Project Management, one in Environmental Management and one in People Management.

Reaffirming its purposes, the Revista Gestão & Tecnologia, through this Editorial, expresses its satisfaction and honor in presenting these contributions to the scientific communities of the most diverse parts of the world. It offers, in line with the state of the art in this field, substantial, robust, consistent, important and timely content, provided by researchers,

aiming at contributing to the evolution of knowledge in critical fundamentals of management science. These are articles that effectively challenge the status quo of each frontier addressed, in the dimensions of theories and methodologies. We thank the authors who believed in the purposes of this journal, submitting their articles in accordance with the criteria and publication processes. Awaiting contributions in the form of article submissions, serious evaluations consistent with the purposes of this journal, indications of it to its students and friends, as well as contributory criticism, I renew my wishes for good reading and excellent reflections.

Keywords: ChatGPT, Technology, Editorial, Artificial Intelligence.

References

- Budzianowski, P., & Vulić, I. (2019). Hello, it's GPT-2--how can I help you? towards the use of pretrained language models for task-oriented dialogue systems. arXiv. Computer Science.
- Greiner, Larry E. (1972). Evolution and Revolution as Organizations Grow. Harvard. Business Review, July-August. <https://doi.org/10.1111/j.1741-6248.1997.00397.x>.
- Haque, M. U., Dharmadasa, I., Sworna, Z. T., Rajapakse, R. N., & Ahmad, H. (2022). " I thinkthis is the most disruptive technology": Exploring Sentiments of ChatGPT Early Adopters usingTwitter Data. arXiv. <https://doi.org/10.48550/arXiv.2212.05856>
- Kuhn, Thomas S. (1998). A estrutura das revoluções científicas. 5. ed. São Paulo: Editora Perspectiva S.A. pp. 125-257
- Lund, Brady D. (2023). A Brief Review of ChatGPT: Its Value and the Underlying GPT Technology. Preprint. University of North Texas. Project: ChatGPT and Its Impact on Academia. Doi: 10.13140/RG.2.2.28474.06087
- Nature Machine Intelligence (2023). The AI writing on the wall. 5, 1, (2023). Editorial. <https://doi.org/10.1038/s42256-023-00613-9>