

Editorial

Artificial Intelligence and Anomalies

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A typical strategy for finding a topic for an editorial is to look at the issue's table of contents. You let yourself be inspired by one or the other article; or you look for a common thread that runs through the issue. Another way is to look for current topics that are dominating the public. Recall, for example, that not long ago hardly an editorial seemed to go without reference to the COVID-19 pandemic. Merging the “inside” look with the “outside” look struck a “spark of thought” on a topic worth pursuing – even if it can only scratch the surface at this point.

A look “inside,” i. e., at this issue of the *Journal of Anomalistics*, reveals a heterogeneous mix of research articles from different disciplines and sources and in different text formats. In addition to three peer-reviewed original articles, two of them in English (Houran, Pallikari) and one in German (Schellinger), we have an extended German translation of an already published English article (Mayer & Fuhrmann) as well as the bilingual reprint of an introductory chapter summarizing the central lines of thought of a newly published monograph (Römer) that is worth pointing out. In addition, the issue contains two contributions that are non-peer-reviewed articles in the section “Miscellaneous” on a cryptozoological topic (Magin, in English) and on field research experiences in West and South Africa (Lademann-Priemer, in German), respectively, as well as an extended acknowledgement of a guest co-editor of the latest publication of this journal, which was the special issue “Women and Parapsychology” (Leverett, in English). The variety of formats and text types from different disciplines and the abandonment of rigid specifications regarding article length and structure, as well as an automated system of article submission, peer review, and communication with the editors, as has become common in mainstream journals, make for more effort, but also more enjoyment. Each individual issue of the journal is thus harder to plan and predict in terms of composition and content. The higher editorial workload is the price one has to pay for the freedom in the design of a “hand-made” scientific journal.

My look “outside” fell on the currently omnipresent topic of “artificial intelligence” (AI). This is where fantasies and hopes, fears and dystopias collide. There is hardly any disagreement

about the potential of AI, but there is disagreement about the extent of positive and negative changes it can bring about in our lives. This starts with obvious problems: Which activities will be made easier, which skills will become redundant, which jobs will be eliminated? The approach to the question of which responsibilities we transfer to AI in order to simplify our lives becomes somewhat more difficult: In what areas of life will decision-making be left to AI? In decisions about research proposals? In hiring employees and staff? In critical situations involving AI-driven vehicles or medical operations? What would the world look like today if on September 26, 1983, the responsibility for monitoring enemy airspace had not rested with Lieutenant Stanislav Petrov (1939–2017) of the Soviet armed forces, but had been assigned to an AI? The launch of a U.S. nuclear missile reported by a false alarm should have led to an immediate counterstrike according to the specifications, i. e., according to the rules. AI reacts according to implemented rules.

Estimating the social consequences of the influence of AI on our perception of reality becomes even more complicated. We will have to come to terms with the fact that there is no such thing as a “fixed” reality to an extent that we have not known before. While the question of the nature of reality is an old philosophical question, the mutability or uncertainty of the concept of reality has not really been relevant to everyday life. With the help of AI, it is now possible to create alternative realities that can hardly or not at all be distinguished from the conventional “fact-based reality”. When we watch a modern movie, we no longer know whether we are looking at real or digitally processed people or their completely digitally generated images.

Leaving the realm of the entertainment industry, the social consequences of the unregulated use of AI can become severe. Whether one thinks of the misuse of the possibility of automated facial recognition in public spaces, the production of fake videos and fake news to influence political elections – there are hardly any limits to the dystopian fantasies here. Some experts even warn of the danger of humanity being wiped out by AI systems: “Leaders from OpenAI, Google DeepMind, Anthropic and other A. I. labs warn that future systems could be as deadly as pandemics and nuclear weapons” (Roose, 2023).¹

In science, AI can be used in many helpful ways. At the Helmholtz Institute in Ulm (HIU), for example, battery development is significantly accelerated by the use of robots and AI that are capable of automatically performing several thousand experiments a day. This approach is called “high-throughput materials research.” HIU’s website states:

1 After all, politicians are reacting faster here than they did to the social problems that have arisen from the Internet and social networks: The European Union recently formulated an AI regulation that creates „a legal framework for the development and use of artificial intelligence“ (<https://www.tagesschau.de/ausland/europa/eu-ki-100.html>; retrieved on 15.06.2023 – translated by G.M.).

The robots in the HIU laboratories are able to carry out several thousand experiments a day. This corresponds roughly to the average life's work of a researcher and generates an enormous amount of information. With the help of algorithms and artificial intelligence (AI), the quality and information content of the measurements of the robot are evaluated fully automatically. The AI makes predictions and then plans a more precise follow-up experiment. She can plan the follow-up experiments up to 30 times better than the researchers.²

It is clear that the writing of corresponding research reports and technical articles can be automated by AI, since the structure of the experiments and their written presentation are already strongly regulated independently of AI. At least in the realm of those scientists who could also be called “science service providers” – in contrast to the archetype of the inquisitive and knowledge-seeking scientist figure from past centuries – the use of AI and robots seems to represent an efficient research strategy and could significantly reduce the human scientific staff.

AI is also used in parapsychological and anomalistics research. It may not be surprising that, as in other areas of scientific methodology (Hövelmann, 2015), pioneering work had been done here. One of the prominent UFO researchers, Jacques Vallée, conducted research on artificial intelligence as early as the 1960s (e. g., Vallee et al., 1968) and also used it to analyze and process UFO cases in the 1980s.³ Parapsychologist Dean Radin also used an artificial neural network around the same time to analyze data from psi experiments for specific patterns (unique “signatures”) (Radin, 1989). Although the use of AI has so far been mainly related to quantitatively oriented experimental research, one can well imagine that with the rapid development of generative AI, i.e., an AI that generates something new from existing data, one will be able to use this tool meaningfully outside the field of pattern recognition (discriminative AI).

Nevertheless, one should perceive the (current) limits of the possibilities of using AI and not see in it a magical tool that mysteriously delivers meaningful output. In this sense, Jacques Vallée recommends in the *That UFO Podcast* (see FN 3): “We should demystify AI” [1:05:30]. I myself was able to experience such limits of intelligence when using AI-based transcription software when having audio recordings of interviews with practicing magicians transcribed. The software produced surprisingly good results despite difficult recording situations and saved a lot of work time. Nevertheless, the AI produced astonishing errors and sometimes generated sentences in which one could no longer directly comprehend the connection with the acoustic specification, i. e., on the sonic level. The reason was that the software wanted to generate “meaningful” sentence contexts and the specific “occult” technical terms and world models were not present in the AI’s “world view” (i. e., in the training material) or sufficiently clearly

2 <https://hiu-batteries.de/en/the-battery/artificial-intelligence/>

3 https://www.youtube.com/watch?v=5H_O5NzjWgk [from 1:01:30 on]

mapped. Such “large language models”, with which generative AI works, are based on statistical probabilities for word sequences, which in turn depend on the analyzed text sequences of the training material. Thus, the less frequently certain content appears in the training material, the more likely it is that the AI will make mistakes. And: If the AI has been trained that certain phenomena are non-existent and, accordingly, statements about them do not make sense, then this will have a significant impact on the output. The relationship between anomalistics and generative AI can hardly be completely unclouded.

Generative AI is normative. On the one hand, it follows the law of large numbers, and on the other hand, it follows an implemented logic that is not neutral in terms of worldview. The more uniform research is designed and presented, the easier it will be to control for generative AI. What characterizes parapsychology and anomalistics is not the methods, but the objects of research, which resist the classification into models shaped by conventional scientific logic. They could be sand in the gears of a possibly increasingly AI-dominated science, or at least an area that is not so easily captured.

It may be old-fashioned and romantic to imagine that a refusal to conform to the common standardized publication formats of scientific journals, which sacrifice diversity and divergence, could also be a bit of sand in the gears of an egalitarian publication machinery. The *Journal of Anomalistics* thus represents an anomaly in the field of scientific publication organs.

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