

EDITORIAL

Archaeology is probably the most dynamic field of research on the human past. It has been particularly the third science revolution, which has shaped archaeology since the first decade of the new millennium, that has opened the floodgates to an unprecedented influx of new data. For instance, the number of genome-wide sampled ancient individuals skyrocketed from just a few in 2010 to the more than 10 000 available today. With such an onrush, interpretations must inevitably be reconsidered. Remember what we thought about the interactions between Neanderthals and *Homo sapiens* some twenty or even ten years ago and what is our common understanding today. How much has the view of the first farmers or Indo-European migration changed during that time? The pace of progress often does not allow time to contemplate things properly and embed new data in a solid theoretical framework.

More than conciliation and answers, research might then engender more questions and despair, since every new approach must inevitably go through the trajectory of the Gartner Hype Cycle. After its trigger point, the approach implementation quickly reaches the peak of inflated expectations being propelled by initial enthusiasm flooding the research community. However, a crucial glitch is usually discovered at this point leading to the refutation of previous results and a steep decrease in confidence. When the disillusionment is overcome and the approach reassessed, it reaches the plateau of productivity, where results become much more reliable. Researchers finally have the necessary insight to recognise and avoid the pitfalls of the approach. Only one crucial question will still torment their minds: are we really at the equilibrium plateau or is it just the stupor of the early phase of the hype cycle?

Obviously, we are still unable to fully process the data influx caused by the third science revolution in archaeology and yet a new, fourth, revolution is upon us. Artificial intelligence has entered the scene. Although experts say it is just a very sophisticated and complex statistic model rather than a truly intelligent entity, it has already had a significant impact on science and the humanities. In archaeology, AI and machine learning help, for example, to identify new sites and monuments on remote survey images. Of course, since we are undoubtedly at the beginning of the Gartner Hype Cycle, archaeologists might often find themselves in the position of uncritical ‘black box’ consumers of AI.

Besides being helpful, AI has also initiated a great deal of controversy, since it strikes at the very core of academic work – the writing of papers. Based on a few brief commands (prompts), the algorithm can produce academic texts that are difficult to distinguish from those penned by a scholar of flesh, blood, and organic brain cells. Interestingly, it recently came to light that AI is not flawless, because it simply makes up some information and thus cannot be trusted blindly. Or is it just a cunning way to imitate humans even more closely?

Academic journals have to react to the new AI reality, and our journal is no exception. I do not expect that a paper suitable for *Archeologické rozhledy* could be completely written by AI just on the basis of several prompts, as our research field and regional scope are too specific for that. Nevertheless, AI writing can be employed for some parts, for instance the Introduction or Conclusion. After a discussion with the editorial board, we thus adopted a new AI policy (see the last page in this issue or the Journal Policies section on our website). In a nutshell, its usage is not prohibited but must follow certain rules and be acknowledged.

When AI is employed extensively for writing (typically ChatGPT), this must be stated in the Acknowledgement section of the paper. Production or modification of graphic content with AI software is allowed for illustrative figures only; it is prohibited for data-presenting figures (graphs, maps, analysis results, and others). The usage must be clearly stated in the figure caption. When AI-powered

software is used for language or stylistic refinement of an already written text (e.g. DeepL), literature research (e.g. sciteAI, ResearchRabbit) or in other ways that did not directly and significantly formulate the content of the paper, the AI acknowledgement is not mandatory. We are aware that currently there are no reliable tools to check the AI origin of a text and the whole regulation relies on the honesty of authors.

I argue that papers in this issue were most probably not written by AI but are largely following the trend set by the third science revolution, as they confront long-standing interpretations and beliefs with new scientific data. The paper by Sylva Drtikolová Kaupová and colleagues examines the diet of inhabitants of the medieval town of Kutná Hora, which was famous for its silver mines. Stable isotope values of the local population were analysed in comparison with rural individuals and domestic animals. The results indicate a surprisingly good diet with sufficient animal protein and a change in medieval cultivation practices. The authors thus demonstrate the main contribution of archaeology and its methods to the research of the historical era – to shed light on aspects that escape the written sources or that could be recorded very tententially.

The paper by Pavel Burgert and colleagues also engages a dialogue with previous hypotheses. It represents the next output from their research project re-examining the production and distribution of Neolithic white marble bracelets. Since the 1930s, it was believed that the material was quarried exclusively at the site of Bílý Kámen in Central Bohemia, but this was rebutted by the team. In the current paper, they used modern petrographic methods to study the raw material spectrum in the enormous collection of ground tools from Bílý Kámen assembled by Karel Žebera in the 1930s and 1940s.

New scientific data for an old find is also the leitmotif in the paper delivered by János Gábor Tarbay and colleagues. They employed particle-induced X-ray emission analysis to study the alloy composition of Hajdúböszörmény-type situlae produced in the northeast part of the Carpathian Basin during the Late Bronze Age. Analysing two old but iconic finds from museum collections, the paper presents the first archaeometallurgical examination of classic Hajdúböszörmény-type situlae from the core area of their distribution and contributes significantly to the understanding of their production and meaning.

The last paper in this issue also deals with bronze objects of art, even though they are much smaller than in the previous case. Jan Kysela and Jana Čižmářová present a formal and stylistic assessment of a remarkable new collection of La Tène figurines from Moravia. Most of them come from the Němčice nad Hanou site, one of the central agglomerations that emerged in the Middle Danube area towards the end of the La Tène period. Besides coinage and glass production, the authors contemplate the bronze figurines as another key (though not so obvious) attribute of these centres.

I hope you will enjoy reading this diverse set of papers. Incidentally, this editorial is not a product of AI but was written by the editor himself. The English was reviewed by David Gaul, to whom I am obliged for his service to *Archeologické rozhledy*. Apparently, AI cannot outdo the human contribution to our journal, at least for now.

Václav Vondrovský