

From the Paleolithic to artificial intelligence: reading the future through the past

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The debate on the opportunities and risks associated with the advent of artificial intelligence (AI) has taken center stage in contemporary public discourse, spanning politics, economics, and virtually every field of knowledge. The complexity of the challenges posed by this technology calls for an interdisciplinary dialogue capable of more consciously and thoroughly assessing the impact that AI is destined to have on human societies.

Within this broader perspective, the Istituto Italiano di Antropologia, together with the Istituto Italiano di Paleontologia umana, convened the conference *From the Paleolithic to Artificial Intelligence: Reading the Future Through the Past* (Rome, Sapienza University, December 6th–7th 2024), as part of its annual scientific series *New Perspectives in Anthropology and Evolution*. The title of the conference was not intended merely to juxtapose the past and the future of human cognition, but rather to delineate the scope of a discussion on AI capable of introducing elements of novelty into the current debate. “Reading the future through the past” was thus more than a suggestive expression; it sought to emphasize the necessity of looking backward in order to fully grasp the challenges and opportunities that lie ahead in the age of artificial intelligence.

This new JASS forum brings together a series of short essays that both report on the discussions held during the meeting and include invited contributions independent of the conference. The authors were asked to engage with four key questions:

- 1) How does the current ‘transition’ to artificial intelligence, in terms of its environmental, social, and cognitive impacts, compare in scale and nature to previous epoch-defining technological shifts in human history, such as the advent of material culture in the Paleolithic or the agricultural revolution in the Neolithic?
- 2) What are the fundamental continuities and discontinuities between artificial and human intelligence, particularly regarding their underlying mechanisms, learning processes, and emergent properties?
- 3) Can our relationship with intelligent machines influence the deepest processes of human cognition and redefine the meaning of ‘being human’?
- 4) How is AI transforming anthropological research within both its biological and cultural sub-fields?

As readers will see, the contributions gathered in this forum situate artificial intelligence within the deep time of human evolution, while also addressing its profound cognitive, social, ethical, and political implications, and its impact on contemporary anthropological research. Together, they foster a broad and critical reflection on our technological present and the possible trajectories of our shared future.

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