

Telmo Pievani, *Homo sapiens e altre catastrofi: per un'archeologia della globalizzazione*, Meltemi, Milan 2018, pp. 352.

Telmo Pievani's *Homo sapiens e altre catastrofi: per un'archeologia della globalizzazione* first appeared in 2002. We now have a new, thoroughly revised edition of what the book's back cover aptly describes as an "adventurous novel of human evolution." With a light touch and an engaging style, Pievani's survey of human evolution is as gripping as the most thrilling detective story yet it does not sacrifice scientific rigor. The author recreates this history with the complexity it deserves, encouraging us to ponder more carefully our current condition as human beings in a complex world.

But it would not be wrong to regard this book as a novel in the light of the story it tells: an unpredictable plot with continual twists and turns. Pievani in fact departs from the classic linear view of human evolution as a march toward perfection, in favor of a more contingent and intricate version that brooks no finalism. Early Neo-Darwinism's understanding of evolution, known as phyletic gradualism, died hard, but it has now been supplanted by the idea of *punctuated equilibria*: there is no such thing as cumulative, ongoing progress in evolution; rather, science now connects evolution to a notion of enduring morphological stability punctuated by sudden events, due to very different reasons, that can determine the birth, death and evolution of species. Hence, species can go on living unchanged for millions of years and then suddenly undergo a rapid and decisive alteration. Randomness and fortuity determine who dies and who survives. In this sense, climate and environmental changes are the gods of life on earth. Pievani reiterates that, since we exist thanks to these changes, they can also destroy us, reminding that we are part of this intricate system. If nothing else, this should serve to warn us of the dangers inherent in our Western-anthropocentric arrogance, seeing that nowadays we are provoking our own extinction.

We are the result of glaciation, thanks to a particular ability to adapt to

different climates, and of the mobility that let the human species spread all over the world. Climate, environment and migrations: these are three pillars of our evolution. In any event, there is no reason to consider human evolution as an exception. Contrary to all presumptions of human superiority, our biological history has been following the same steps as that of other species and the same evolutive patterns. As the author makes clear, it is the outcome of multiple possibilities, collisions and important but still random transitions. It is unique but not an exception. Human evolution is not an incredible event produced by the emergence of specific characteristics (complex language, prehensile ability, erect stance). Many of these characteristics are actually the results of accidental *exaptations*: erect stance, for instance, was first developed for reasons of thermoregulation and only later ended up as a very important evolutionary advance. There is no such thing as the missing link. Above all, there is no such thing as gradation in human evolution: the idea that humans, unlike all other species, evolved one species at time.

Actually, many hominine species and, among these, many human species coexisted for longer periods of time, spreading all over the world (so Westerners are not the first colonizers). Our evolution resembles not so much a tree as a bush or, even better, a tangled complex of bushes. The anthropocentric presumption that we have our own specific and exceptional history collapses when we consider that some of these coexisting species were actually not so different from us and developed many of the traits we tend to think are distinctive of *homo sapiens*. It is simply a coincidence that our species is endowed with them all; it is not a merit but only the result of the fortuity of adaptation. After all, this world is only one of the multiple possible worlds: if only one specific change had been different, we might now be extinct or the world might still be populated by more than one human species. *Homo sapiens* and *Homo neanderthalensis* lived together for thousands of years and in some cases they also slept together (as DNA tests show). As Pievani puts it, "There are so many

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ways to be human.” We are not the predictable and perfect result of human evolution but just one of its possible outcomes, and it is surprising that we are now the only one to last.

Homo sapiens e altre catastrofi should be read by everyone who wishes to understand the immensely important changes that lie in store for us in the near future. It equips the reader with better tools to interpret the complexity of our present and to reflect on the ideology underlying the progressive, anthropocentric (or even, *homosapiens-centric*) and *West-centric* way of considering human history. Telmo Pievani’s intricate history of exaptations, colonizations, cohabitations, ecological instabilities, prompts us to consider that our existence, while the outcome of a unique, incredible chain of events, is still a mere coincidence: we are not the invincible lords of the earth. His book stimulates us to reflect on our current condition and better understand the phenomena of globalization, migrations and environmental change that are the most imminent challenges now facing us.

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