



## Review Article

# Twenty-first-century light over the Indo-European homeland: triangulating language, archaeology and genetics

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KRISTIAN KRISTIANSSEN, GUUS KROONEN & ESKE WILLERSLEV (ed.). 2023. *The Indo-European puzzle revisited: integrating archaeology, genetics, and linguistics*. Cambridge: Cambridge University Press; 978-1-009-26174-6 hardback.

JEAN-PAUL DEMOULE. 2023. *The Indo-Europeans: archaeology, language, race, and the search for the origins of the West* (translated by Rhoda Cronin-Allanic). Oxford: Oxford University Press; 978-0-19-750647-9 hardback £81.

The reviewed volumes represent the past and future of triangulating human prehistory. Both works address the integration of the knowledge embedded in the Indo-European group of languages into the interpretation of archaeological and genetic data, but approach this very differently. By enlisting the expertise of scholars from the three different fields, with 22 contributions from more than 40 scholars from more than 10 different countries, *The Indo-European puzzle revisited* is both a seminal work and a resounding commentary on the, by its very nature, limited perspectives voiced by Jean-Paul Demoule as a sole archaeologist author of his book *The Indo-Europeans*. The title of the former is based on the subtitle of Colin Renfrew's *Archaeology and language: the puzzle of Indo-European origins* (1987), another archaeologist's foray into historical linguistics.

The editors of *The Indo-European puzzle revisited*, Kristian Kristiansen, Guus Kroonen and Eske Willerslev, are all established authorities within European Bronze Age archaeology, Indo-European linguistics and ancient genetics, respectively. The Introduction and concluding remarks frame the volume and serve as a general introduction to interdisciplinary work on human history. The contributors illuminate central themes and time periods for the association of Indo-European with Yamnaya and related cultures, which are divided into five main sections.

The first section presents the linguistic arguments surrounding the dispersal of the Anatolian languages (Kloekhorst, Chapter 4) in a clear manner that is juxtaposed with the archaeological and palaeoenvironmental conditions (Anthony & Shishlina, Chapter 3) that fostered the impactful steppe nomadism associated with early Indo-European societies.

The immediate genetic (Haak *et al.*, Chapter 5) and archaeological (Bourgeois & Kroon, Chapter 6) repercussions of the Yamnaya spread into Europe and the formation of the Corded Ware horizon (third millennium BC) is—somewhat artificially—grouped with the highly informative linguistic record on inherited and primarily borrowed words for metallurgy (Chapters 7 and 8, Olander and Thorsø *et al.*). The north-western extremes of Eurasia receive ample attention in five articles (Chapters 9–13 by Mallory, O’Brien, Koch & Ling, van Sluis *et al.* and Stifter, respectively) outlining both the research history, archaeology, genetics and linguistic perspectives on the role of the Bell Beaker phenomenon and the Celtic branch of Indo-European that convincingly is linked to Iron Age contacts with the Germanic branch on the North Sea coast. The fourth section focuses on the innovation and spread of chariots (Chapter 14, Epimakhov & Chechuschkov) and the identification of the shared history of the Indo-Iranic languages in the Sintashta culture (Chapters 15 and 16, Lubotsky, Epimakhov & Lubotsky). The section concludes with the highly relevant testimony for apparently early use of wool aligning archaeology and linguistics (Chapters 17 and 18, Shishlina *et al.* and Olsen). The final subdivision revolves around the pivotal Indo-European and Yamnaya institutions of kinship, mobility (Chapters 19–21, Pronk, Olsen, and Stockhammer), and, refreshingly, the hitherto largely unexplored role of slavery (Chapter 22, Nielsen Whitehead).

No single data point tells the entire story, but the collection of articles serves as a strong testimony to the exciting state of research in human prehistory. The Yamnaya and Corded Ware complexes and expansions into neighbouring regions both temporally and spatially fit the dispersal of the Indo-European languages, giving rise through Sintashta to the Indo-Iranic languages. Yet questions still remain to be debated, including the prehistory of the Indo-European languages, which is tightly connected with the Anatolian branch that represents the earliest split on the family tree. Despite the presented linguistic and archaeological arguments in favour of a Western entry (Chapters 4 and 2, Kloekhorst and Anthony), this has not yet been settled and other routes remain possible. Interdisciplinary focus can now turn to these questions and finer details in the diversification of the Indo-European branches as they dispersed across Eurasia.

For all the justified praise the volume has received (including the Society of American Archaeology’s award for best scholarly book 2023), it would be unfair to the intent of the volume not to also critically engage with various shortcomings that readers should look at as questions begging to be addressed. The volume does not cover the entire spectrum of Indo-European branches or their respective impacts on the homeland question. There are no perspectives on the Tocharian branch associated with the Afanasievo culture which in many respects is a continuation of Yamnaya culture into Central Asia. Just like Armenian, another omitted branch, the Tocharian languages is particularly enriched by clear contact phenomena that could have served as a strong proof of the importance of contacts to triangulate the Indo-European dispersals (e.g. Bjørn 2022). Instead, the reader can find enticing breadcrumbs, especially in the contributions regarding metallurgy, where data from non-Indo-European languages are listed, but not fully contextualised. Similarly, in the otherwise informative discussion about the Indo-European word for wool, the clearly related forms from Northeast Caucasian, Akkadian and Sumerian are not even mentioned. Although prehistoric language contacts lack a strict methodology, it is clear that such instances of cultural

diffusion might be the admission sceptical archaeologists are looking for: thus recognising that Proto-Indo-European and its daughter branches formed, spread, diversified and succumbed as macro-cultural means of communication in a highly dynamic Bronze Age. None of this detracts from the value of the edited volume but rather leaves the interested scholar excited for the next instalment.

Jean-Paul Demoule's *The Indo-Europeans* is a markedly different work. Bearing the idiosyncrasies of its single author, the historical and contemporary tensions in the archaeological reception of historical linguistics are on full display. It should immediately be stated for any reader that is similarly suspicious of the statements made regarding the validity of the comparative method in linguistics, that the representations by Demoule are naïve and selectively framed. The book is nonetheless a well-written and—with important limitations—erudite exposition of the uses and abuses of the prehistoric sciences for political purposes. Valuable insights can be gained into how prehistoric sciences (and pseudo-sciences) developed and were employed during the nineteenth and twentieth centuries to explore and explain perceived and real similarities and differences between people and nations. With his impressive knowledge of European archaeology, Demoule naturally contributes to the composite evidence and interpretations of the dynamics of the Bronze Age; the most informative section is “what archaeology tells us today” (pp.238–56), although it is still interwoven with misrepresentations.

The work is littered with clear attempts to entangle linguistic phenomena with political sentiments—for example, stating that the “binary *satem-centum* division split, which is typical of the period [the first half of the twentieth century], is considered obsolete today” (p.158), while, on the contrary, it is a likely Indo-Armenian isogloss affecting the branches still contiguous around 2500 BC. Another curious attempt to politicise standard linguistic terminology is his disdain for *substrates*: while devoid of a comparative linguist background to perform the necessary analyses, Demoule nonetheless pronounces that “[i]n fact, most ‘substrates’ remain hypothetical, and there are very few full-scale contemporary observations of the substrate phenomenon” (p.439). This is an absurd claim, one only has to trace the colonial languages in their adoption across the globe to understand the importance of the substrates. In fact, both the aforementioned Armenian and Tocharian, which moved into areas with known non-Indo-European languages (Uralic and Caucasian, respectively), attest to the veracity of substrate interference from known languages. The pre-Indo-European languages of most of Europe are completely lost to us except in the substrates. Concluding that the “question of ‘substrates’ [...], above all, is a symptom of the difficulties involved in constructing a coherent *Stammbaum* of the Indo-European languages” (p.439) is consequently more perplexing than informative. Demoule's preferred and less concise term “mixing” has no analytical weight, and no linguist would object to trivialities such as “no language is totally pure” (p.434). The ways in which languages influence each other through various dynamics constitute one of the primary means by which comparative linguists can triangulate the prehistoric dynamics of speech communities. Constantly framing the interdisciplinary work on the origin of the Indo-European language family in terms of “conquerors” (three times on p.414) and “genius and superior weapons” (p.415), Demoule maintains layered strawman arguments that are meant to support his claim that the Steppe origins of the Indo-European languages remain a racist or superiority hypothesis. The above examples should suffice to

warn the non-linguist reader; a complete refutation of all the erroneous statements regarding historical linguistics forwarded by Demoule would be a book in itself. *The Indo-European puzzle revisited* serves as a considerable antidote for these views, as does one of several easily accessible books on the science (e.g. Campbell 2013). There is, after all, a reason why scholars in both archaeology and historical linguistics spend years familiarising themselves with the respective methodologies.

Regardless of Demoule's musings, historical linguistics represent the study of language relatedness and dynamics in prehistory. Centuries of meticulous study and scrutiny have established a number of immutable language families across the world. Each language family must have been defined by a spatially and temporally delimited homeland, that allows all branches to develop regularly in a tree-like fashion. The very dynamic of language development as a macro-cultural phenomenon places it in a constant interplay between stability and plasticity. This is why non-linguists such as Demoule may be duped into thinking that the significant insights gained from the wave theory (forwarded in the nineteenth century and accepted by all historical linguists to account for the lateral diffusion of linguistic innovations) somehow negates the tree model. Branching requires space and time, and not all language families are afforded this. Uralic, Turkic, Austronesian, Athabascan, Bantu and Indo-European have all undertaken significant dispersals to allow an uncontroversial phylogeny. Their respective proto-languages represent a hitherto largely untapped source of insights into prehistoric cultural dynamics that can be unlocked only through careful analysis of inherited and borrowed elements.

Demoule, and similarly apprehensive archaeologists, will find consolation in the fact that historical linguists, archaeologists and geneticists are exploring the complex ways in which the Indo-European languages came to cover significant parts of Eurasia in the Bronze Age. The linguistic evidence for a hostile takeover is wanting, and it is equally clear that in some places where Indo-European languages are thought to have spread, they eventually became extinct. Language is a complex cultural artefact with different strata that reveal both shared inheritance and unique sociocultural settings. Archaeologists may understandably reel when Demoule claims that linguists see Indo-European as an "autonomous, homogenous, well-defined biological entity" (p.419). It is, fortunately, another of the consistently employed strawmen arguments, and much effort is being made by historical linguists to understand the language system in their diachronic context, where contact linguistics help triangulate the many language families in relation to each other in an increasingly well-studied prehistoric Eurasian landscape (e.g. Bjørn 2022). The early spread of Indo-European languages happened in close proximity to the Caucasian languages, and words for cultural innovations are indeed shared from Northern Africa through Southwest Asia all the way to East Asia already in the interconnected Bronze Age. The contributors and editors of *The Indo-European puzzle revisited* alike explicitly state the parameters delimited by each contributing science. The three editors excel in introducing both theoretical framework, methodology, data and interpretations distinctly, allowing other researchers to replicate the analyses. The 'magic' or mythology, that Demoule suggests permeates the historical linguistic science, is consequently a ghost of his own creation, as carefully weighted linguistic, archaeological and genetic data points and concretely formulated hypotheses directly address previous assumptions and make their own claims available for criticism and revision. A concrete

hypothesis may be usurped by political interests without concern for the scientific process, but it is exactly the concrete hypotheses that allow scientists to identify and test their weaker points. We cannot know what new scientific discovery awaits around the corner, but all scientists with an interest in the dynamics of the human past should be excited that ancient DNA proved the validity of the methodologies of comparative linguistics (*Indo European puzzle revisited* p.330).

Therefore, it is with great hope for future open-minded and critical interdisciplinary collaboration that I recommend Kristiansen, Kroonen, Willerslev and contributors' stupendous work. Anyone interested in the history of the Indo-European question will find Demoule's work of great interest, but the non-linguist reader should be aware of the misrepresentations of the state of historical linguistics in general, and Indo-European studies in particular. There is much to build upon in the continued exploration of prehistoric Eurasia. Alongside Turkic, Uralic, Semitic and several other language families, the Indo-European family of languages reflects many of the dynamics of Western Eurasia. Substrate analysis of the European branches continues to shed light on the non-Indo-European origins of the Western subcontinent, just like early loanwords in Proto-Uralic and Proto-Turkic attest to extinct Indo-European languages of the Altai-Sayan region. With the utmost respect for the scientific process—development and testing of methods within each field and the concrete formulation of hypotheses to be tested—the study of the shared prehistoric human landscape will throw more light on many of the questions that haunted archaeologists and linguistics in the past tumultuous centuries.

## References

- BJØRN, R.G. 2022. Indo-European loanwords and exchange in Central and East Asia. Six new perspectives on prehistoric exchange in the Eastern Steppe Zone. *Evolutionary Human Sciences* 4, E23.
- CAMPBELL, L. 2013. *Historical linguistics, an introduction*, third edition. Edinburgh: Edinburgh University Press.
- RENFREW, C. 1987. *Archaeology and language*. London: Jonathan Cape.