## Vorgeschichte

Hartmann Knorr, **Rekonstruktion von Ausbreitungsvorgängen in der Urgeschichte.** Norderstedt, Books on Demand 2014. 527 Seiten mit 5 Abbildungen.

Spatio-temporal analyses of prehistoric phenomena, such as typified artefacts and features or archaeobiological traits, often reveal changes of their distribution with time. Although shrinking processes are known, they usually happen for the benefit of another expanding phenomenon. Hence, moving or expansive spatio-temporal patterning receives much more attention in archaeology. Usually termed spreads, such a patterning is interpreted along a continuum of explanations ranging from migration and demic diffusion to cultural diffusion and revolution. The epistemological study published by Hartmann Knorr discusses patterns of reasoning underlying these interpretations, focussing on discourses of the first decade of the twenty-first century and prominent spreads within, towards and from Europe dating from about 40 000 to 2000 B.C.

The book, available as a print-on-demand, leaves a lot to be desired in terms of craftsmanship. A layout is entirely missing, and formal copy-editing appears fragmentary. Also copy-editing in terms of content would have been beneficial to the more than four hundred solid pages of text (plus more text in appendices) in which the author often loses the line of thought in associated topics, and which is structured in a way that either requires linear reading in absolute concentration or frequent cyclical re-reading. While more figures and diagrams would have certainly been helpful to make the issues dealt with, as well as the conclusions drawn, more comprehensible, the few existing graphs are not listed separately and have no captions (e.g. p. 93; 135). Moreover, some of them lack essential elements such as axis labels and scales (e.g. p. 135; 137). Unverifiable university lectures, unpublished conference talks and other forms of grey literature are frequently quoted (e.g. »Doppler et al. 2006« on p. 266). Citation format is frequently non-standard, as the author uses unusual abbrevations (e.g. »SGUF 1999«, p. 123. Also, there are several instances where co-authors in multi-authored papers are omitted (e.g. »Abi-Rached et al. 2011«, p. 478). All in all, the book gives the impression of a collection of bits and pieces of notes loosely compiled into a manuscript rather than a reader-oriented account. This review tries to concentrate on what can be seen as Knorr's line of thought.

In any attempt to analyse existing archaeological debates on the interpretation of an expansion process, it is crucial to distinguish between arguments about the inventory of relevant phenomena on the one hand and arguments concerning their interpretation on the other. Concluding from his application of the term "Basis-aussagen" (basic statements, p. 63–80) for the former and from his discussion of different philosophies of science (p. 38–57), the author subscribes to logical positivism or critical rationalism. Archaeological basic statements pertaining to the topic would be, for example, "a feature of type Y is located at X and dates to Z". If such basic statements are phase-mapped, spreads, shifts or shrinkages in distribution become apparent, leading to what he calls "Bewegungsaussagen" (motion statements, p. 11).

By concentrating on the most recent debates prior to about 2007, the year which the latest of the titles he quotes date, the author aims to rule out that major new findings completely change the framework of basic statements. While the circumstance that even the simplest basic statements are in themselves results of interpretation – as attributing objects to types is not at all a matter of course - should not go unmentioned, taking them for granted is certainly necessary in order for Knorr to answer his question »how historical processes can be inferred from basic statements« (my translation, p. 12). Given the background debate in German archaeology on whether narratives in archaeology are at all possible, methodologically sound or even desirable (e.g. U. Veit in: H.-P. Wotzka [Hrsg.], Grundlegungen. Beiträge zur europäischen und afrikanischen Archäologie für Manfred K. H. Eggert [Tübingen 2006] 201–213), it is noteworthy that, according to the author, historical processes are more than motion statements, that is to say the particular stories lined up along the migration-diffusion-continuum of possible explanations (p. 132-153). He uses the term »Story« purposefully, leaving »Narrativ« (narrative) to the grand narratives. Somewhat reminiscent of Peirce's semiotics, the author isolates the relevant key sentences connecting these two levels - such as »the archaeological circumstances X indicate that story Y took place« - as »Indexalische Aussagen« (indexal statements, p. 80–106).

Knorr goes to great lengths to define what he calls the »Ausbreitungsidentität« (literally »expansion identity«, although »expansion entity« might appear more plausible both in German and English), i.e. the »something« that spread, which is neither the archaeological record nor the cultural behaviour that led to the archaeological

record, but the link between the two (p. 22; 106–132). Human genotypes – and their possible reflection in phenotypically justified »races« as attempted in metrics-based anthropology (p. 153–190) – and languages (p. 190–210) as other spreadable traits are also scrutinized for their internal validity, necessarily largely drawing on standard textbooks on human evolutionary genetics and historical linguistics. Discussion on whether evidence from these disciplines should be used in integrative argumentations or rather kept strictly apart until final syntheses are compiled, touches upon basic questions of interdisciplinary research already found in the work of Hans Jürgen Eggers (Einführung in die Vorgeschichte [3rd ed., Stuttgart 1986] 251).

The chapter that isolates current patterns of argumentation (p. 228-284) and the two chapters that present recent examples in both general approaches across space and time (p. 284-299) and specific spread processes spanning from the Early Upper Paleolithic and the first anatomically modern humans to Neolithization, to wheel and wagon and to the Bell Beaker phenomenon (p. 299-406) uncover pitfalls in the current argumentation. By casting the often obfuscated phrasings of the original texts into pointed sentences like in section K22 »the faster a spread, the more likely migration was the cause« (p. 271) or by identifying argument K16 (»the greater the discontinuity in the archaeological records, the more likely foreign immigrants are the cause«, p. 261) and its exact contrary K16\* (p. 263), Knorr's study can be used as a reference for further studies into the topic. But archaeological interpretation is – as he rightly points out – always based on analogical reasoning, that is, a tool that can at best achieve some degree of plausibility by using statistical arguments, but never a falsification of a hypothesis in Popper's sense. With that in mind, it is no surprise that this study reveals that there are »no justifiable cultural-historical indications for the selection of a specific story for the reconstruction of an archaeological spread process« (p. 406).

In this light, it is regrettable that the book falls short of the potential it could have deployed by rigorously treating archaeological texts on spread processes as data. A sound sampling strategy on the one hand would have prevented Knorr from overlooking titles like the article by Geoffrey A. Clark, Migration as an explanatory concept in paleolithic archaeology (Journal Arch. Method and Theory 1/4, 1994, 305-343), a key publication pertaining not only to his two Palaeolithic case studies (p. 301-324) but also to the topic in general. On the other hand, applying a concise methodology in dealing with the selected texts, such as content analysis - already successfully employed in archaeology (e.g. R. Rosenswig, Canadian Journal Arch. / Journal Canadien d'Arch. 21/2, 1997, 99-114) - would not only have enabled him to reach more verifiable and significant results than the present more anecdotal outcome, but could, moreover, have helped to contextualise the identified lines of argumentation in their respective intellectual milieu, thus helping to provide the - in the author's

words – »orientation the current argumentations are missing« (p. 407).

Being difficult to follow even for native speakers, this book will probably not become widely received among German, let alone international readers; but despite these gnarls (I apologize for this unavoidable pun with the literal translation of the author's surname), it is a mixed bonanza of truisms and insights – sometimes in aphoristic phrasing – that mirrors a general trend of increasing reflexivity in German archaeological reasoning. Ultimately, the author's intention of finding ways to »formalise« (pp. 10 s.) the interpretation of observed expansions of archaeological phenomena represents a laudable approach to an important issue in archaeological theory and contains some valid statements, while, regrettably, being too convoluted, incoherent and in places questionable to be much more than an – albeit interesting – side note.

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