

# Review of: "One Archaeology of Knowledge Constructs"

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An article on the principles of logicism and the structure of our scientific constructs is particularly welcome at a time when questions of validation of our constructs are no longer, or so rarely, the subject of debate. The main argument according to which any scientific construct is made of a chain of inferences according to the logic of modus ponens (if  $i$ , then  $j$ ) is here essential to understand how a critical examination of our reasonings is first and foremost intended to evaluate the well-foundedness of our constructs, whatever the theses defended. Perhaps it should have been recalled that once the selected archaeological facts have been ordered with regard to the interpretation sought, the inferences enriched with comparative data or reference data, involve, in both cases, reasoning by analogy. The validation of the archaeological interpretation then depends a) on the relevance of the analogy (e.g. are the objects or the contexts of production comparable?), b) on the foundation of the knowledge that has been called upon. The reference knowledge, at the base of interpretations that touch upon the domain of Function in the broad sense given by Gardin (functional, technological, economical, sociological, political, or symbolic), is constituted of regularities that can be presented in different forms: either in the form of a proposition "in Context  $q$ , if  $i$  then  $j$ ", or in the form of mathematical models. The use of these regularities by analogy is valid when it is possible to explain them. The articulation between reference knowledge and interpretation has been remarkably developed by A. Gallay in his book on ethnoarchaeology (2011, *Pour une Ethnoarchéologie théorique*). He proposes a diagram distinguishing scenario/regularity/mechanism, the scenarios belonging to history and cultural particularities, the regularities describing the conditions for the recurrence of anthropological phenomena and their transfer to archaeological data, and, finally, the mechanisms empirically validating these regularities by explaining how they are generated. This master plan articulating past and present, inspired by the natural sciences, illustrates a true theoretical compass whose formidable power is rooted in the operating principles common to any scientific practice concerned with validation. This theoretical compass make it possible, on the one hand, to distinguish between verifiable and non-verifiable interpretations, between "science" and "literature", on the other hand, to recognize the necessary call for reference knowledge located outside of archaeology (mainly in the disciplines of material sciences, anthropology, psychology, sociology and economics), and finally, to envisage a cumulation of knowledge in the field of the human sciences. So why the present-day ignorance of these two major authors, Gardin and Gallay ? It should be recalled that in the present scientific context, logicism is considered as an arduous exercise, not very saleable, and to which few authors are ready to submit themselves. The proof of this is the absence of submissions to *The Arkeotek Journal*, an experimental logicist journal whose ambition, however, was restricted to the sole presentation of experimental results.

