

## DATA AND THEORY: THE CONSTRUCTION OF PREHISTORIC DISCOURSE

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Epistemologists, sociologists and historians of scientific knowledge have investigated the ways in which disciplines emerge and establish their institutional territories. The social construction of scientific paradigms has been the object of heated debates ever since Ludwig Fleck (1934) foregrounded the sociological dimensions of scientific discoveries. Thomas Kuhn (1962) articulated the issue with renewed acumen and generated an enduring controversy ultimately bearing upon the epistemological status of scientific knowledge (e.g. Lakatos and Musgrave, 1971). The current decade has witnessed a forceful resurging of the radical questioning of science as a cumulative process. The view of science as discourse and cultural construct, which tends to replace the notion of scientific truth by the relativism attached to varying sociocultural conventions, has triggered strong rebuttal on the part of scientists (e.g. Barnes, Bloor and Henry, 1996 v. Gottfried and Wilson, 1997). It is in the context of this fundamental debate that I propose to examine, from a balanced perspective, the development of Prehistory as a scientific discipline and a discourse.

The recent account by Marc Groenen (1994) of the historical development of "Prehistory" since the mid-Nineteenth century, provides a much needed "vue d'ensemble" and a wealth of references. Eventhough Groenen presents his work as only a first step, it offers a unique opportunity to follow the progressive construction of a global scientific discourse, and to study the ways in which data and theories interact in such a construction. The purpose of this paper is to further analyse the formation of the mainstream discourse of prehistory in relation to the ideologies of its sociocultural context, and, by contrast, to divergent or deviant approaches which coexisted with this emerging paradigm. According to scientific commonsense, theories are supposed to be created in order to explain data, but the process of collecting, describing and classifying data is more complex and ambiguous than it may be thought from a theoretically naive perspective. Data are actually theory-dependent and theories are, to some degree, conditioned by ideologies and myths.

As a first step, two general points will be made in relation to prehistory as a discipline: (i) information must be distinguished from data. The former, usually defined as a measure of uncertainty, introduces novelty in the lifeworld. The latter consists of processed or structured information and requires some preliminary constraints on interpretation, a semioticization of information. Let us think, as an example, of the odd discovery, at the beginning of the XIXth century, of elephant bones buried in various parts of Europe. This unexpected find was construed as biblical data with reference to the Great Flood or as historical data by relating it to Hannibal's invasion or more generally to the expansion of the Roman Empire. Then, transformism and evolutionism have appropriated this information for the construction of palaeontological data. (ii) Theory always takes ultimately the form of a narrative. But the rhetoric of scientific discourse, using descriptive and interpretative modes, foregrounds stylistic devices which deflect the reader's attention from the underlying narrative. Semio-linguistics and discourse analysis provide means of showing how scientific texts derive their meaning from the pervasive implicit narratives in which they are rooted. Examples will be taken among contemporary rock art scientific literature.

It will be underlined however that this approach does not necessarily lead to absolute scepticism and epistemological nihilism. Information is irreducible to discourse and narratives are not irremediably fictitious. As models of processes, they are susceptible of continuous corrections. But this approach brings a measure of healthy criticism in scientific paradigms, such as prehistory, which tend to fossilize and impose constraints upon receivable hypotheses and inquiries, and it affords some theoretical breathing space. As a conclusion, it will be suggested that the difficulties encountered by rock art specialists in establishing a global database – a task which is generally felt as a precondition for further advances in this field of inquiry – may come from insufficient conceptualizing of the relationship of data to theory. It will also be suggested that the relative circularity of theory and data should be kept in mind when the architecture of such databases is considered. Indeed, a database runs the risk of being nothing more than a tautological monument if it is not ensured that it can produce information by revealing unexpected patterns and connections.