

CHAPTER 14

CONCLUSIONS

Further research should focus on building a coherent picture of lithic economy across space. In this context, inter-regional comparisons should be done to identify the full range of variability in lithic economy in different raw material contexts during a temporally limited period. Focusing on the MP-UP transition and the origins and development of the Early Upper Paleolithic, it would be useful to examine regions where the Aurignacian first developed, most likely eastern Europe, and then trace the development of the Aurignacian as it expanded across continental Europe, thus both across space and through time. Clearly, reliable radiometric dates are required in order to have temporal control over the sequence of change in lithic economy.

The Aurignacian is often seen as a homogeneous industry across Europe and the Near East, based on the ubiquity of prismatic blade technology, the utilization of bone, antler and ivory as raw material for tools and decorative objects (beads, pendants, etc.), and the presence of certain "diagnostic" tool types (Mellars 1989a and b). However, while the industry seems to have spread quickly, it lasted about 10,000 years and change should be observable when examining its lithic economy through time. Several typological phases within the Aurignacian have been identified based on the appearance of different types of diagnostic tools (the early schema of Breuil, Peyrony, de Sonneville-Bordes, and others, with more recent reinterpretation by Kozłowski 1983, Djindian 1985, among others). Such typological changes may be related to changes in human activities: the invention of new tool types to meet different needs. However, these phases also fit into a more general framework of change in lithic economy as a whole, including changes in procurement and reduction strategies. Interesting results should be obtained from comparisons between the earliest Aurignacian, representing a period of invention and experimentation with new reduction techniques and tool types and later developed or established Aurignacian in the same region (i.e., holding physical environment more or less constant), representing a period of adoption of certain techniques and tool types. As Mithen suggests (1996), the onset of the Early Upper Paleolithic may correspond to a fundamental change in the organization of the human mind in comparison that of the Neanderthal mind, in terms of the "fluid integration" of formerly isolated modules in the mind devoted to social, technical, and natural history knowledge. This would be represented by the technical production of ornaments to convey social and/or religious information, and the specialization of tool types for specific activities as opposed to general, multi-purpose tools. If this is the case, then analysis of changes in lithic economy during the MP-UP transition and the Early Upper Paleolithic would help clarify this important development in the organization of the human mind by demonstrating how lithic economy is organized.

While technological and typological features contribute to the general impression of homogeneity during the Aurignacian, variability in raw material context contributes to variability in lithic economy at a regional scale. Hunter-gatherer groups, apart from possible long-distance migration and/or contact with groups in other regions, would have occupied the landscape at a regional scale, moving about the landscape within certain geographic limits. Thus, research designed to address human behavior should be conducted at the regional rather than at the continental scale, where variability is obscured in generalizations. Raw material context impacts questions of procurement and transport, choice of reduction techniques, degree of intensity of reduction, the kinds of tools produced on different materials, intensity of tool use, etc. The issues of 1) having sufficient quantities of material on hand and 2) having material of suitable quality for a) utilizing certain reduction techniques and b) producing effective tools were confronted by each prehistoric human group. It is the particular configuration of solutions, i.e., the particular form of lithic economy under different conditions, that is of interest.