

# Preface

Archaeology is an undisciplined empirical discipline. A discipline lacking a scheme of systematic and ordered study based upon declared and clearly defined models and rules of procedure. It further lacks a body of central theory capable of synthesizing the general regularities within its data in such a way that the unique residuals distinguishing each particular case might be quickly isolated and easily assessed. Archaeologists do not agree upon central theory, although, regardless of place, period, and culture, they employ similar tacit models and procedures based upon similar and distinctive entities – the attributes, artefacts, types, assemblages, cultures and culture groups. Lacking an explicit theory defining these entities and their relationships and transformations in a viable form, archaeology has remained an intuitive skill – an inexplicit manipulative dexterity learned by rote.

It seems likely, however, that the second half of the twentieth century will retrospectively be seen to mark an important threshold in the development of archaeology – a phase of transition towards a new disciplinary configuration. Since the 1950s archaeologists have been made increasingly aware of the inadequacies of their own archaic formulations by the disjunctive comments of a whole new generation of techniques and procedures now widely used in the fields of inter-jacent social sciences. The adaptive repatterning of archaeology has been set in motion by the discipline's coupling with the study of systems, games theory, set and group theory, topology, information and communication theory, cultural ecology, locational analysis and analytical and inductive statistics powered by those key innovations – the digital and analogue computers. A whole array of new studies has developed whose implications have diffused piecemeal into archaeology and which increasingly permeate its fabric in a somewhat

disconnected fashion. One response to these new developments has been to avoid them by a nostalgic retreat into historiography, another response has faced these innovations and initiated a period of groping experiment, inevitable error, and constructive feedback, whilst yet a third response awaits the outcome, inert within carefully encysted reputations – all of these reactions are concurrently in full development.

However, merely to add these new techniques to the existing structure of archaeology, like so many lean-to extensions of a shabby and already rambling edifice, is no solution to archaeological amorphism. The implications of these developments must be integrated within a fully congruent and re-designed discipline – the feedback in these new couplings is such that not only must these techniques be selectively modified to match archaeological dimensions but archaeology must itself adapt and change to gain the best advantage of this freshly emergent potential.

This book therefore follows Bacon's conception of the necessary development of scientific theory by 'anticipations, rash and premature' (*Novum Organum*, 1620). This book is a personal attempt towards the integration demanded by the events sketched above – it is a synthesis of many analyses in an attempt to trace system regularities. Above all else, this work is a temporary and tentative assessment of a complex theoretical development that must inevitably take one or two more generations to mature as a reasonably comprehensive and fairly viable set of disciplined procedure. The increasingly mathematical, statistical and computerized analysis of archaeological data will certainly ensure that the hitherto tacit and naive archaeological models will be made viable and explicit, or abandoned and replaced. These models will themselves escalate from iconic to analogue and then symbolic models of many kinds – ensuring an increasingly direct liaison with computer studies and a more powerful and general development of synthesizing axioms and principles within the discipline itself.

It is perhaps necessary to relate analytical archaeology to archaeological central theory and to other archaeological approaches. The contemporary study of sociocultural systems has emphasized that the analysis of ancient or modern human units and their products cannot be satisfactorily accomplished in terms of information from single network aspects of these complex systems. The social, psychological, linguistic, religious, economic and material attributes of hominid communities cannot be realistically studied if isolated from

the integral context of the sociocultural and environmental system precipitating them in that particular mutually adjusted configuration. It may not be possible for the archaeologist to specify the exact values of these former factors but his analyses must at least take into account their interdependence, the probable range of their limited tolerance, and the compounded constraint imposed by such limitations.

It follows that since one may selectively trace an infinity of particular networks through sociocultural systems and their fossil remains, no single approach can have the sole prerogative of accuracy and informative utility. Consequently, there are as many competing opinions about the proper orientation and dimensions of archaeological analysis as there are archaeologists – thus even the domain of archaeology is partitioned into the overlapping fields of vigorous rival archaeologies (Chang 1967, p. 137) or 'paradigms' (Clarke 1972) upon which the progressive development of archaeology depends. Nevertheless, there is one critical subsystem within archaeological studies which may not claim pre-eminence in virtue but which may claim *droit de seigneur* in the whole domain – and that is archaeological central theory, the largely tacit procedures common to archaeology everywhere.

Almost every kind and class of archaeological study contributes something to our understanding of the domain of archaeology but all such studies, in their turn, depend upon the adequacy of the general theory which frames their analyses and which should unite studies within the discipline regardless of area, period, and culture. The introductory polemic of chapter 1 must be understood in this context as intended merely to redress the balance in which central theory has been neglected in the pursuit of narrative history and particularist analyses. There is certainly a valuable role for all the rival archaeologies but the central theory uniting analytical archaeology will remain central – however weak and inadequate its contemporary manifestations may be. Analytical archaeology is therefore primarily a syntactical approach to synthesis and central theory, a changing corpus of conceptual frameworks which emphasize that no archaeological study can be better than the ideological assumptions which underlie the development of its arguments.

It is with deep gratitude that I acknowledge the assistance and support which has been afforded me by colleagues in Europe, Africa and America. In particular I would mention the extensive and stimulating support of Professor J. G. D. Clark of Cambridge, at whose

## xviii Preface

original request the course of lectures was written that have been recast in this volume. At the same time it is a great pleasure to acknowledge the impetus and direction imparted to this work by the friendship and kindness of Dr P. H. A. Sneath, a small side-effect of his dynamic impact upon British studies in numerical taxonomy. To my College, Peterhouse, I owe the academic frame which has enabled me to live in and exploit the atmosphere of opportunities which circulate in a great University; perhaps the most fundamental gift that I can acknowledge.

I would also like to mention the debts that I owe to certain contemporaries and colleagues, especially Glynn Isaac and David Pilbeam, Mike Jarman and Paul Wilkinson – a stimulating reservoir of provocative comment.

For invaluable help with all my work I would like to thank my wife, to whom this book is dedicated – Stella Clarke.

*Peterhouse  
January 1968*

D.L.C.