Grahame Clark and World Prehistory: A Personal Perspective

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GRAHAME CLARK WAS SO SUCCESSFUL in providing us with the first masterly and comprehensive synthesis of humankind's biological and cultural evolution because of his great ability to assimilate, order, and understand the nature and direction of the processes that underlie the progress from foraging to civilization. This was indeed a formidable task that few could have been capable of in the years immediately after the Second World War. To understand how this work came about it is necessary to follow Grahame's developing ideology and conception of what archaeological data can tell us about behaviour, economics, and society. Clark's *World Prehistory* stands apart with that other great comprehensive masterpiece H.G. Wells' *The Outline of History* published in 1920. Today this volume makes singular, salutary reading. Fundamentalism was rife, there was no time frame before history other than guesswork, the focus was directed to evolution in Europe with an excursion to south-west Asia and China. Eoliths and Piltdown were in the limelight, the Neandertals were put on the back burner and only the French and northern Spanish caves with their cultural sequence and art provided some solid data for documenting the earlier progressive stages in the evolution of the human lineage. As Wells begins his *Outline of History*, 'The origin of man and his relationship to other animals has been the subject of great controversies during the past one hundred years' (Wells 1920, 62). How very true this still is today, and as Wells goes on to say, 'The task of the historian is to deal, not with what is seemly, but with what is truth'. And still today we might ask with 'jesting Pilate' what *is* 'truth', and some of us also are not prepared to wait for the answer.

This was the milieu in which Grahame grew up and it was most likely that he was influenced by Wells' comprehensive outlook on understanding the causes and effects of change in human societies. He also read Darwin's *On the Origin of Species* (1859) and *The Descent of Man* (1871), Huxley's *Evidence as to Man's Place in Nature* (1863), and Charles Lyell's *The Antiquity of Man* (1873). Indeed, I am the honoured possessor of his copy of *Origin of Species* that he used as an undergraduate. It must have been works such

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as these and the earlier anthropological publications that made a deep impression on Grahame's ideas and turned his interests away from taxonomy, then the normal way of looking at archaeological finds, and focusing them towards understanding what his collections of flints and potsherds might mean in terms of the behavioural traits they might represent about the individuals and groups who made them, especially when examined in the light of the climatic and environmental changes that the glacial/interglacial framework provided. It is likely, also, that he was influenced by Gordon Childe's *The Dawn of European Civilization* (1925), with its 'diffusionist hypothesis'. This was the general way in which change was explained at that time in both the Palaeolithic sequence in the French caves, pioneered by Lartet and Christy (1865–75), and in later cultural contexts. Grahame, however, was looking beyond migration as the explanation for cultural change, and on several occasions in those early years he expressed his belief that such changes could also have come about as a result of the spread of ideas and new technology.

Grahame must have been equally conversant with the precision and advanced methods of excavation that General Pitt-Rivers had introduced to British archaeology in the last 20 years of the nineteenth century, in particular at his estate of Cranborne Chase in Wiltshire. With such a backdrop, Grahame set about developing his own ideas about how technology *in its context* could be used to show something of the behaviour and lifeways of the prehistoric groups that had made and used these artefacts.

Grahame's interest in and excitement with prehistory was all-abiding and his research went ahead with speed and foresight and efficiency within the limited facilities at his disposal. His first piece of research at Cambridge was predominantly taxonomic using typology and patterns of geographical distribution to explain differences and variability in time and region. *The Mesolithic Age in Britain* (Clark 1932) conformed to the ideas and format of the day in which, however, he showed his early appreciation of the value of distribution maps used in environmental contexts. This doctoral dissertation gave him a foot- perhaps one should say a toe-hold at Cambridge, putting him in a position so that he could develop his methodology to document the changes that had taken place since the end of the Last Glacial in terms of climate and environment and the human behavioural changes within a chronological framework. In this he was inspired by the post-glacial varve chronology developed by Baron de Geer in Sweden based on the varve history in receding glacial lakes over the past 12,000 years (de Geer 1910).

The new research Grahame initiated was based on interdisciplinary team coordination in which various natural scientists brought their expertise and support to identify the contextual habitats, so enabling the archaeologist to begin to understand the economic base of the prehistoric population whose archaeological residues were associated in time and space. So was formed the Fenland Research Committee, the history of which has been well documented recently by Pamela Smith (1997). This was the beginning of a new focus and dimension in prehistoric archaeology in Britain. It also was the beginning of the input from the natural sciences working in close collaboration with archaeologists that, over the years, has become all important and continues today to expand methodology and provide

new meaning to behavioural models in prehistory. The initiative and organization for maintaining the impetus of the 'new archaeology', as it has rightly been called by Smith, came from Grahame and his close association with the Godwins and the small group of like-minded young archaeologists he had recruited to the Committee: C.W. Phillips, Stuart Piggott, Christopher Hawkes, 'Oggs' Crawford, and others, some of whom I had the privilege of listening to over tea with Grahame in his office or house. Plantation and Peacock's Farms excavations demonstrated for the first time the nature of the post-glacial/early Holocene changes in environment and those in technical and organizational adaptations in the human societies with which these climatic changes were associated. Stratigraphic methods and archaeological excavation were rigorous and meticulous. Everything was collected and the full range of technology, as shown by the artefact assemblages, was analysed, illustrated, and proportionally examined. The results and analyses that followed also made possible a comparative study of the record from Scandinavia due to Grahame's knowledge of the sites, artefacts, and literature there. The relative chronology that these Fenland excavations established was the best available before radiometric dating methods were developed, by which also it stands confirmed today.

The success of the Fenland Research Committee led to Grahame's giving a course on Mesolithic European Prehistory in 1934 that started his long association with the Cambridge Faculty. The course was so successful in attracting new students to the Department of Archaeology and Anthropology that he was appointed as an Assistant Lecturer in the Faculty in 1935. This, and his continued close association with the Fenland Research Committee, now enabled him and his associates on the Committee to vote on a change in the name and objectives of the Prehistoric Society of East Anglia, and to rename it The Prehistoric Society. The Society's *Proceedings* were the major influence in broadening horizons and introducing new perspectives to British prehistory. Under Grahame, as the Honorary Editor, the *Proceedings* became international and interdisciplinary in their contents. This was, indeed, the beginning of the new archaeology, but it took the discipline more generally some 15 to 20 more years to rethink and reorganize, no doubt in no small part due to the intervention of the Second World War.

My own association with Grahame began in the summer of 1935 and at the end of the year that followed I took Part One of the Archaeology and Anthropology Tripos. *The Mesolithic Settlement of Northern Europe* (Clark 1936) was a revelation for a would-be prehistorian after having previously read History for two years. This book and, of course, his lectures introduced *people*, their socio-economic organization and material culture, all within a relative chronological time frame, and post-glacial environmental changes based on sound excavated data. The book was a superb piece of scholarship that made a deep impression on me and the other some half-dozen students taking Part One that year. It dictated for me the pattern of my African research from 1938 onwards. Two other books at that time were equally important for my African work: Louis Leakey's *Adam's Ancestors* (1934), and his Munro Lectures *Stone Age Africa* (1936). Louis and Grahame were near contemporaries at Cambridge but they mostly went their respective ways, the one in the

Holocene and the other in the Pleistocene. Both, however, insisted on the recovery of the 'hard data'—the archaeological residues in their contexts, and the interdisciplinary input from science as the essential basis on which to attempt to identify any behavioural traits of the prehistoric population that had made and used them. The success of reconstructing prehistoric lifeways depends on the amount of reliable data on which the scenario is based, and, to this end, they both stressed the need for precision in excavation and recording and, also, the importance of a sound knowledge of lithic technology based on experiment.

Grahame was well versed in lithics, and he took his undergraduate students to study the Brandon flint-knappers during excursions to archaeological sites in East Anglia. This inevitably led to experimentation on my part.

It was nine years between 1937, when I went down, and 1946 before I met up again with Grahame, though by means of his books that filtered through to central Africa, I was able to keep up to some extent with the expansion of his ideology. Back in Cambridge in that cruel winter of 1946 and most of 1947 I wrote my thesis for the Ph.D.; Miles Burkitt was my Supervisor and Dorothy Garrod the Disney Professor. On this and subsequent long vacations from Northern Rhodesia every two-and-a-half to three years, we would rent a cottage in a village outside Cambridge to catch up with the changing ideas and methodology that were being developed during the times that we were back in Africa. Those vacations in Cambridge were enormously stimulating, exciting, and enjoyable; and it was possible to renew old friendships and make new ones with the excellent new archaeology faculty that Grahame was developing there. In particular, it was a great joy to be again with Charles McBurney and discuss his research in North Africa and mine in south-central Africa. We had been contemporaries taking the Tripos together in 1936–7 and we were both, during the quieter times of military service, able to continue our interest in prehistory, and the sites that we discovered and the artefacts that we were able to collect provided much important new evidence. The appointment of Charles McBurney to the Faculty is an indication of Grahame Clark's acumen in appointing the right person and Charles' influence on those specializing in the Palaeolithic was outstanding. He went on to excavate the great cave of Haua Fteah in Cyrenaica, Libya, which is the most complete sequence of upper Pleistocene and Holocene cultural assemblages yet known from any single site in north Africa. As my war service took me also north to the Horn of Africa, we had much in common to discuss; and, as it now turns out, both our areas are crucial for understanding the origins and spread of modern humans.

One book that perhaps sets out best the way Grahame's ideas of prehistoric archaeology and where its focus should be in the immediately pre-war years is his *Archaeology and Society* (Clark 1939). It shows the move away from the study of material antiquities to their behavioural implications; the changed focus from *things* to *people*. It was written for both the prehistorian and the interested layperson and it was aimed at making prehistory a popular science which it had never been before. The book shows the methodology of discovery, preservation, and excavation, and goes on to explain how the surviving residues, though always circumstantial, can be used to construct a temporal sequence for

the economies and social behaviour of those who once camped or settled there. The scientific method is clearly demonstrated here: the recovery of the data, the formation of premises, and by testing and the elimination of alternatives the adoption of the most probable model for the behavioural implications. Grahame's belief in the need for an influential public is stated here. 'If we are ever to recover the story of a common past, it can only be through the pressure of an informed public opinion' (Clark op. cit., viii). The last chapter of the book, entitled 'Archaeology and Society', shows the extent of Grahame's reading and archaeological knowledge at this time. Though the emphasis is still on Europe it is, indeed, now global in its approach and coverage though, as the maps show, there are many blank regions. His ideology of a world prehistory was clearly about to take off. In his own words, 'To see big things whole they must be seen from a distance, and that is what archaeology enables one to do. The history of mankind, when any phase of it is studied at close quarters, appears to be a maze of inconsequences; it is only when viewed from the perspective of prehistory that the broad sweeps become easily appreicated and the history of men gives place to the history of man' (Clark op. cit., 212).

It was not until 1946 that prehistoric research became possible once more. *From Savagery to Civilization* (Clark 1946) pays attention to the Palaeolithic including the Chinese and Torralba finds, and emphasizes the need to examine the effects of climate change, but adds little that is new. From the war years Grahame gained experience with and recognized the significance of using aerial photography for archaeology.

The 1950s and 1960s were times of intense activity for prehistorians, and, in particular, the evidence now coming from Africa showed that the continent was not the backwater that prehistorians had thought it to be. The fossil hominid remains it was yielding and the excavation of land surfaces with assemblages of artefacts and faunal remains in near primary contexts made possible, not only a better understanding of the immensity of the timescale of hominid evolution, both biological and cultural, but also showed the ways in which climate was a major factor in bringing about change and variability in the Pleistocene. The Australopithecines became respectable due in large part to Sir Wilfred LeGros Clark's study and interpretation of Raymond Dart's and Robert Broom's discoveries in the South African limestone caves. Louis and Mary Leakey's work at Olorgesailie and Olduvai Gorge revitalized methodology for the investigation of Pleistocene sites throughout the world. Chronologies became more precise and reliable in terms of years before the present by the radiocarbon method (1950) and potassium–argon (K/Ar) dating (1960) in conjunction with the palaeomagnetic reversal chronology. Studies of what primates might tell us about how ancestral hominids might have behaved, especially the pioneer studies of Sherwood Washburn and Irven DeVore on the social organization and diet of *Papio*, and, in particular, the studies of the African and Asian great apes were rich sources of behavioural information. Though, as far as I know, Grahame never set foot in Africa, he was fully conversant with the progress of these new discoveries and the new methodology adopted from science the better to understand these beginning grades in the human lineage. In this, his close association and friendship with Kenneth Oakley at the

British Museum must have been important for Oakley had visited many of these sites and studied the fossils and artefacts.

Grahame's own research in the 1950s was primarily concerned with Europe, and perhaps the most important of his books for the impact it had on prehistorians throughout the world at this time was *Prehistoric Europe: The Economic Basis* (Clark 1952). This is a major erudite piece of scholarship that showed as never before on this scale the way archaeological data can be used to reveal the economy of foraging and farming communities, the strategies, diet and nutrition, settlement patterning, and social organization. 'This book', he says, 'is concerned with the ways in which early man, in competition with other forms of life, maintained himself on European soil since the end of the Pleistocene Ice Age, and with how he managed not merely to survive, but to raise his standards from those of savages to those of peasants ready to support the full weight of civilization' (Clark op. cit., vii). The volume is full of verified archaeological data, and exhaustive knowledge of material culture and art used to amplify and clarify the buried cultural residues. It firmly established Grahame's international reputation wherever prehistorians were at work. This reputation was confirmed even more by the site report on his excavations at the early Mesolithic site of Star Carr in Yorkshire (Clark 1954). This was one of the finest site reports that had ever been written for the meticulous methods of excavation, preservation, and recording, for the detailed documentation of the ecological context, and the interdisciplinary collaboration of botanists and palaeontologists which, with the skilful use of evidence for seasonal availability of animals and plants provided the means for reconstructing the way of life, the technology, and group identity of the human inhabitants. For its clarity, completeness, and great deductive interpretation, this book was a landmark publication.

In the 1950s and 1960s, the 'new archaeology' began to get underway, especially in the Americas, stimulated by, on the one hand, the Wenner-Gren Conference of anthropologists and archaeologists that gave us *Anthropology Today* (Kroeber 1953), and, on the other, Gordon Willey's and Philip Phillips' *Method and Theory in American Archaeology* (1958). This was an impressive synthesis of North American archaeology, and for clarifying developmental interpretation within a new evolutionary framework. Grahame must have read and been impressed by these works as he was a Visiting Lecturer at Harvard in 1957, and he and Gordon Willey became close friends. This 'new archaeology' has been explicitly described and documented by David Clarke's *Models in Archaeology* (1972).

With his established institutional base at Cambridge, Grahame was able to travel and thereby extend his knowledge of other preliterate societies in continents beyond Europe and western Asia. He visited New Zealand in 1964, and the same year he was also in Australia. These visits gave him the opportunity that he needed to visit sites, study technology, and have discussions with local archaeologists, ethnographers, linguists, and demographers. In particular, he now had a much better opportunity of understanding aborigines in their own habitat, enriching his ideas on the course of cultural evolution and the ability and ingenuity of so-called simple foragers, and the time depth of their lifeways.

The excavations at Devon Downs and Fromm's Landing particularly impressed him by the skill with which they were undertaken, and the long close association of Australian and Cambridge archaeology dates from this time.

The Stone Age Hunters (Clark 1967) reflects his impression that Australian aborigine culture and technology, as well as those of other foragers, can enrich the models for much older prehistoric societies. Voyages of discovery from the late fifteenth century onwards produced a voluminous literature about the peoples encountered in various different parts of the world, and this was later used, not only to demonstrate the progress of humanity into the civilized western world, but also to suggest that other social and economic systems were living survivals of these earlier stages of evolution. As a result of these too literal attempts to identify various extant foragers with different stages in prehistoric cultural evolution, such as can be seen in Sollas' *Ancient Hunters* (1924), archaeologists became disenchanted with using ethnography to help reconstruct past socio-economic behaviour. Now, however, new studies by anthropologists and archaeologists in Australia, Africa, and the New World, particularly in the Amazonian forests as well as in the Pacific, reflect a more critical examination of ethnographic sources from which certain generalizations on lifeways can be identified and may be equally applicable to the prehistoric record. The book shows that Grahame was quick to appreciate this especially if continuity within the region can be established. His first global synthesis, *World Prehistory: An Outline* (Clark 1961), was worldwide in its outlook so far as this was possible at the time. The volume is still essentially processual in its treatment, and the emphasis is still on Europe though this is understandable because of the inadequate nature of the data coming from other parts of the world, with the exception of the early civilizations of Asia, Egypt, and the New World. A new edition, *World Prehistory: A New Outline* appeared in 1969. This new volume takes full advantage of his journeys outside Europe, and includes the long biological and cultural evolutionary evidence coming from the new African discoveries that enables him, also, to set out his views on the evolution of lithic technology as a succession of 'Modes', numbered from 1 to 6. Modes represented a technological progress, the first appearance of each being temporally, loosely defined, and each Mode being typologically more advanced than that which went before. The degree of temporal and spatial overlap, Grahame considered, showed that it was ideas within a cultural tradition that were the main cause of change, not migration of a population. At the same time, regional variability could be explained in response to adaptations as to how best to exploit the resources of a new habitat. Grahame further expanded on his definition of Modes in his Hitchcock Professor Lectures at the University of California, Berkeley, also in 1969. Here he associated with Sherwood Washburn, Glynn Isaac, and myself and we had long discussions on human origins and how to reconstruct the behaviour of the earliest toolmakers in the Lower Palaeolithic. The concept of technical Modes is still useful, bearing in mind Grahame's caveat that no close relationship with hominid grades is recognized. These three lectures were published in *Aspects of Prehistory* (1970), and he also included distribution maps of the earlier Modes which he was able to use in later editions. When this second edition of *World Prehistory* appeared in 1969 it was offered as, I quote, 'virtually a new book'.

> This is even truer of the 1977 edition *World Prehistory in New Perspective*. It is substantially longer and is much more fully illustrated. It has benefited from another decade of research and it has been written in a world in which some of the trends noted in the last edition have become more pronounced. It is now even more apparent that we should view the archaeology, that is the material embodiment of the culture of each territory, as something worthy of study on its own merits.
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> The notion of a single and implicitly western stereotype no longer survives in any conscious sense. Interest is focussed on adaptive capacity and inventiveness of men and every pattern of culture is assumed to have its own validity. Diffusion and migration can hardly be ignored, but can no longer be accepted as explanations of change. Where they can be proved to have operated, they are seen not as replacing so much as enriching the endowments of societies whose main characteristic has been their capacity to survive. [...] It is essential to appreciate that the value of any attempt to describe, let alone to account for, what happened in prehistory must depend for its success on the quality of the data themselves and on the insight brought to bear on them.
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> (Clark 1977, xv–xx)

And again, concerning chronology, 'The enterprise of world prehistory is founded on the availability of a system of world-wide validity'. The depth of the coverage shows the immensity of Grahame's ability to absorb, digest, and comprehend the huge volume of data now available from primate societies, behavioural studies of foragers and farmers, fossil hominid morphology, climatic and environmental changes in the Quaternary, and the reliability of the chronology. The breadth of this volume is immense: from the Palaeolithic through Neolithic farming to urbanization, the population of the Pacific, occupation of the Arctic, of Tierra del Fuego and Tasmania, through prehistory, proto-history to historic archaeology. It is very, very impressive: the volume is a turning point in changing prehistorians from focusing on a national past to thinking internationally and realizing that modern humans are not only unique in the speed with which they spread to colonize the world in some 40 thousand years or so, but in the close genetic relationships and the range of shared behaviour to be seen in the different ethnic populations in the world today. Now that genetics has entered the field, this can be seen even more clearly. This was, I think, the essential message Grahame intended to convey in his 1977 *World Prehistory*. We have a common ancestry which we need to be aware of, to know what is the nature of this inheritance, and, where necessary, how to control it since we share with the animals and other organisms of our planet the need to conserve, not to continue to destroy, our common environmental resources. At one time, perhaps in the Lower Palaeolithic, sources were seemingly limitless, but now, due to the density of humanity today and with the technological advances of this century, and particularly of the last 30 years, we now have the ability to destroy not only most other sources of life on this planet but ourselves as well. The knowledge of our biological and cultural past, its lessons as well as those of more recent history if we but understand and learn from them, can help to stimulate global collaboration for controlling our destiny.

Grahame's success is reflected in his ability as Disney Professor (1952–74) to 'pick a

winner' and thereby, through the Faculty he recruited, to produce an erudite, innovative, and progressive group of archaeological colleagues in the Cambridge School. Its success is to be seen also in the number of brilliant students it produced working globally today. Grahame was always accessible to us in my day and after. He has, however, been described as reserved and certainly his personality could not be described as 'macho'. He did not seek the limelight as other more flamboyant prehistorians did and do. He devoted himself to his research and thereby became one of, indeed I believe, the most, influential prehistorian of this century. This was due in very large part to the support he always received from his wife, herself an archaeologist, and his family. Grahame acknowledged this in his books, but it needs stressing that the ability to produce innovative work depends upon the circumstances in which to think and write. I can vouch for this in my own case. In 1977 Grahame says, 'In closing, [his Preface] I wish to acknowledge the immense debt I owe to my wife for enduring and assisting the writing of this book'.

The continued success of interdisciplinary teaching and research at Cambridge, in very large part the result of Grahame's groundwork, can be seen in his 1989 volume *Prehistory at Cambridge and Beyond*. Gordon Willey sums it up well in his review of the book in the *Journal of Field Archaeology* (1991): 'This successful bringing together of prehistorians, anthropologists, Classical and Middle Eastern archeologists, historians, linguists, and people from the natural sciences has been the Cambridge achievement, and I believe that this is the reason why Cambridge, in the scope of the 20th Century, has led the way in making the world conscious of the importance of prehistory'. Cambridge archaeology and the global importance of *World Prehistory* are Grahame's legacy to us all.

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Abstracts

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Grahame Clark and World Prehistory: A Personal Perspective

This paper traces the development of Grahame Clark's concepts of human cultural and biological evolution and identifies some of the factors that enhanced the depth and scope of his horizons from regional and national to international and global prehistory and inter-related behavioural traits of modern human populations of our present world.

BERNARD WOOD and MARK COLLARD

'Is *Homo* Defined by Culture?'

When the genus *Homo* was established by Linnaeus in 1758 it was described as consisting of two species components referred to as 'diurnal' and 'nocturnal'. We know now that 'nocturnal' Man referred to the orang-utan, which is now included in a separate genus, *Pongo*. The description of the second, 'diurnal', species, which Linnaeus called *Homo sapiens*, recognized six subgroups of which four were living, continental-based, geographic variants. It was more than a century later that the first fossil species, *Homo neanderthalensis* King, 1864, was added to *Homo* and since then other species referred to the genus have made it morphologically more inclusive.

Arguably the greatest single step in this process of relaxing the morphological criteria for including fossil species in *Homo* was made exactly a hundred years after the addition of *H. neanderthalensis*, when in 1964 Louis Leakey, Phillip Tobias, and John Napier proposed that gracile hominin remains from Olduvai Gorge, Tanzania, be included in the genus *Homo* as *Homo habilis*. Since then the hypodigm of *H. habilis* has accommodated specimens which have stretched the variability within that species to the point where many believe that the fossils attributed to it sample not one, but two species, *H. habilis sensu stricto* and *Homo rudolfensis*.

In this paper we trace the increasing inclusivity of the genus *Homo* and relate it to the apparently ever greater antiquity of stone tool manufacture. We also review the criteria for recognizing genera and examine whether our present understanding of the genus *Homo* conforms with the two main criteria, namely monophyly and adaptive homogeneity. We review the evidence for monophyly and refer to the results of an examination of a range of functionally-related variables to assess the adaptive levels of early hominin species.