Editorial

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As we review the question of deep time with the assistance of leading scholars in the field, we also consider the question of enduring values. We write while accountants write off short-term expenditure against long-term balance sheets. We write as economic analysts try to assess whether short-term collapses of economic value on the stock exchange represent a long-term trend. And we write as the UK government announces its comprehensive spending review, explicitly advertised as an investment in the long-term values of education. Yet is that same government investing in the material culture of deep time? This is a society where the legs of some British footballers earn more in a week than the British Museum receives in a year to preserve objects of enduring value. The achievements of a footballer — and memories of those achievements — are ephemeral. The working half-life of a footballer's femur, even when expensively calibrated, is only 7·5 years. The football stadium may survive, but it requires a chance graffito at Pompeii to preserve the short-lived fame of a gladiator, the pre-industrial footballer. One can argue that tenuous fame is rewarded by monetary reward, but should the material achievement of humanity be measured in monetary terms ? At the very least, the stadia of human achievement and their associated material culture deserve proper finance for their preservation and understanding, even if the ephemeral actors fade into distant memory in spite of all the best intentions of agency theory.

It is museums that are the guardians of the material culture of deep time. A negative trend appears to be affecting the investment in and integrity of these museums, not just in Britain, but on a wider international stage. Privatization and political manipulation are affecting museums in France, Germany, Italy, Denmark, Spain and the United States. Each of these contexts has a particular history which provides a different nuance, but there is a common tendency to under-value the continuity of the history and encompassing expertise that is intrinsic in each collection. Although we interviewed the strikers on the steps of the Musée de l'Homme in December 2001, we can report with greater knowledge about the situation in the British Museum.

The British Museum has been much in the news of late. We reported optimistically on the opening of the new Great Court in March 2001, and described the plans that the museum was developing for its next phase of developments. These have been all but abandoned in a wave of financial problems, further exacerbated by the foot-and-mouth epidemic and 11 September. The finances were looking poor after the massive fundraising efforts of previous years to complete the impressive structure of the museum's Great Court (£100 million), without additional support of running costs. The present government in Britain have turned their attention away from the core institutions of national museums, major universities, the Royal Opera House, Covent Garden, and the like — in spite of protestations to the contrary — and instead have become blinkered by laudable ideals of only partly financed access and regional regeneration. The core grant to the British Museum has been on the decline for several years now, with the expectation that additional revenue could be raised through increased tourism and clever management. The instant decline in tourism in September must be one factor, but there are of course others that have led a major institution to the brink of despair. Before the removal of the British Library from the core of the British Museum, and in the long-forgotten days of adequate government spending, these in-

One context of deep time experienced by the editors. The red terrace of Ponte d'Assi, Gubbio (Umbria, Italy) where Middle Palaeolithic material was recovered during survey in the middle 1980s.

stitutions were funded directly from the Treasury, and they were run on Civil Service lines, receiving grant, and spending it.

The good old days of the British Museum seem to have been in the late 1960s and 1970s when there was considerable expansion and improvement. At that stage, as the pages of ANTIQUITY record (1954: 132–42; 1962: 248–51), there was sufficient confidence and growth to separate all-embracing departments into smaller, specialized units. This reflected the emerging professionalization of archaeology and allow greater specialization and expansion, as was the case for the former Department of British Antiquities, which was divided into the Department of Prehistoric and Romano-British Antiquities and the Department of Medieval and later Antiquities. The former contained over 3 million items of material spanning from Olduvai to the late Roman Mildenhall treasure, and the latter encompassed Britain and Europe from the end of the Late Antique to the modern period with a smaller, but equally impressive, range of material. And so for 35 years or so the situation has happily continued.

Now, though, the museum is short of money, at least £3 million each year, and must again for the third time in only four years cut out more jobs and specialists in an effort to reduce the size of the budget. The workforce must be reduced by 15%, and whole areas of expertise are to be lost, especially in Scientific Research and Conservation. This now large department has confidently been called the leading laboratory of its kind in the world, and will not again be able to perform the research and work it did in the past. Further economies demand that the history of emerging archaeological identity is reversed and that the Prehistory and Medieval/Modern departments are once again merged, simply to save the cost of a few salaries. Worse still, perhaps, is the collapse of the plans for the 'Study Centre', which was to re-house the homeless departments of Prehistory and Early Europe and Ethnography, as well as a number of others housed in inappropriate buildings. The empty post-office building planned as the Study Centre must now be sold, and all the respective departments, merged or unmerged, must be crammed back into the ever-filling space of the Museum. The staff have been understandably infuriated by these developments, which in part are caused from outside, but also by the last decade of museum management. Fury led to a one-day strike in June, which forced the museum, reaching its 250th anniversary next year, to make an unscheduled closure for the first time in its history! Not all is yet clear on who or what will sort out the museum's profound financial and, indeed, political problems, but the arrival on 1 August of a new Director, Dr Neil MacGregor, formerly Director of the National Gallery in London, offers new hope.

We have been fortunate, as part of our five-year service to ANTIQUITY, to attend regularly a series of international conferences, primarily in the English-speaking world. It is, we think, appropriate to ask in our penultimate editorial what is the nature of the enduring value of such conferences and how their cultures vary.

The conference is a favourite venue of the archaeologist. From small intimate meetings on familiar themes and exclusive research, to the international jamborees where all are out to perform and be seen, the opportunity to confer and socialize at conferences has become the lifeblood for much of our discipline. It is primarily for the construction, reconstruction and reformulation of networks of knowledge that conferences exist. This is where scholars meet, discuss and generate new ideas and theories. To what extent all archaeological conferences actually fulfil these functions is often a moot point. Some conferences are specialized and loaded in difficult language, so that not all participate as readily as might be hoped. Over recent months we have attended a number of conferences, and are beginning to feel a certain veteran conceit about how and what these events manage to do, and whether or not they succeed. Some mega-jamborees — and here we should mention the national shows such as the Society for American Archaeology — have many values attached. But the overwhelming feeling is that they are out to cover their costs and a great deal more. Even participation in a session can cost $100 before registration, the papers, the coffee, the accommodation, the food or the travel to get there. The quest, indeed the thrust, for money is overwhelming, and there is a definite sense that the enterprise is for no other reason than providing a costly platform for speakers — vain or otherwise — and making a profit, particularly for the convention hotel.

At a lesser extreme, the recent experience of the UISPP conference at Liège, one of a long succession of European-based conferences of world

archaeology, is that host countries and cities aim to promote themselves through a mixture of nationalism and generous social events. Much depends on the host for how much hospitality is offered — in Italy it is sumptuous, with local producers providing tastings and plenty of wine and food. Northern Europe is typically rather less abundant, where one glass of Pomagne must last an evening and the organizers shut up shop early. At these events, much also depends on who is organizing and what their personal interests are. At both the UISPP conferences in recent years — Forlì and Liège — the organizers were unrepentantly pushing their interest, Palaeolithic archaeology, when at least half the participants would be expected to have interests elsewhere in pre- and protohistory. The result in Liège was that there were few sessions on anything later than the Ice Age and these were poorly attended, perhaps because many of the grants to support attendance seemed to have assisted only Palaeolithic archaeologists. Another, more successful European conference is the now annual European Association of Archaeologists which, as its title suggests, promotes the people as much as the discipline. A key strength of this conference is the pursuit of leading cross-cutting themes rather than extensions of the Three Age System and other chronological and regional divides. These are growing events, usually approaching 1000 participants, and have a lively and generally useful programme of sessions, posters and parties. The Theoretical Archaeology Group or TAG is now a vintage affair, moving to a different place in the British Isles, and beyond, on an annual basis. Last year it met in Dublin, where its stoutly youthful participation was again well represented. Pretty well any subject, provided it is *avant garde* and pretends towards the new and probably theoretical is accepted. TAG provides the important stage from which new and youthful performers can be seen and assessed. Fortunately, little that is presented at TAG is published as it stands, and usually only a few sessions get printed as the edited volumes that aspiring thinkers take credit for. The most enjoyable conference we have attended is almost certainly the Cape Town World Archaeological Congress, where the political context of reconciliation was combined with a strongly thematic approach, leading to enthusiasm and innovation in ideas and new networks of knowledge. Such a conference restores faith in value of the large-scale occasion. These are conferences on the global scale of ANTIQUITY.

Yet we are tempted to say that perhaps far more useful are the focused and professional conferences that we are all more familiar with — those organized by period and regional societies, universities and learned associations, that allow updating of views, airing of new data, discussion and debate, and papers are more carefully selected through invitation. From our experience these smaller, shorter events are infinitely more enjoyable where information passes between us, and we update and expand our ideas. However, in some ways the smaller scale of these conferences is also a measure of a trend among archaeologists to be more comfortable with their narrower, dare we say more myopic, interests. The spirit and intention of ANTIQUITY is to lift us above these narrow interests and yet many archaeologists feel more comfortable in zones of detailed knowledge. Last year, an excellent conference was hosted by the Prehistoric Society in Belfast on Neolithic settlement, at which all Neolithic specialists gained in their knowledge. There were similar conferences at the British Academy on Mediterranean urbanization and at the University of East Anglia on Celtic art. The intent with these sorts of meetings is that they present new stuff, and plan to disseminate material and ideas properly. They do not simply offer a soapbox for the aspiring and confident, regardless of whether what is said is worth the time and space. As editors we have tried to disguise our narrower academic interests in editing these pages, but like many of our colleagues we reveal these core interests in declaring the conferences we have attended.

Regardless of the event or its theme, archaeological conferences offer a range of species in terms of personalities and presentations. Like Glyn Daniel in an Editorial in 1962 on the Rome UISPP, we too feel that many lessons of presentation are still not learnt by would-be speakers. Glyn commented on 'the bad standard of lecturing by the congressistes' and noted the simple rules as 'audibility, brevity, economy, control and modesty' for which he gave some helpful advice. Forty years on, many still need to heed it, although perhaps it should be said that some of our number are wonderful communicators who can capture in a few sentences complex and evocative ideas. For most, though, the performance at a conference demands the rapid reading of a long, detailed,

Excavations by Dr Peter Schmidt at Chichen Itza.

and utterly lifeless text, full of references to the 'statement above' etc., with incomprehensible and over-numerous diagrams and photographs. Many such lecturers read their paper, often at break-neck speed — some Latins are renowned for this — and eye-contact, humour and humanity are frequently lacking. For so many, the brief 15 minutes on the stage, paid for by hard-earned grants, the long-distance travel, the unfamiliar language and the overwhelming sense of importance at the occasion too often ends in a total flop. But curiously, the speakers seem unabashed by this, and continue long after the end of their allotted time, making sure that they make a mark on their audience somehow or other.

In these days of improving computer graphics, digital presentations and projectors, presentations may be worlds away from the old slides and screens and failing microphones. Indeed, there is no excuse now for sloppy material or poor presentation, especially as more and more research students gain immense experience during their graduate seminars.

How can we best categorize the presenters? As a visual introduction, we recommend the cartoons of Bill Tidy, the ANTIQUITY cartoonist, which illustrate the CBA practical handbook *Talking archaeology* (Adkins & Adkins 1990). We offer our less visual typology:

1 The Conference Clown — cracking jokes, funny photographs, clever asides, possibly rather superficial, but a vital light spot in the programme.
2 The new Einstein — who very seriously presents his/her extremely important ideas by saying they are 'important'. The audience are privileged to hear it. Sometime, the self-'importance' is effective, and Einstein deceives the audience.
3 The Serious — nervous presenter reads rapidly from the overlong text, never looking up to check if the slides are in sequence or the audience is asleep. Often presenting as a foreign language, so incomprehensible to audience.
4 The Very Important Speaker who expects to impress — uses a very long clever title, and a style of deliberate, patronizing, pompous delivery — very often using rather old, unoriginal data from their original thesis!
5 The Enthusiast — rattles off the discovery — ideas — captivates and often loses the audience but is forgiven. Usually overruns and has too many illustrations.
6 The Professional — gauges the audience, and presents accordingly, eye-contact, humour, and interest, on time and to theme!
And of course there are more, but these are the ones that stick in our mind.

Oh, so often the irritating characteristics of too much, too long, too dull and too self-important are repeated at every conference we attend. As we demand in ANTIQUITY of our writers, so too should speakers take note — space (or time) is precious and good ideas and wonderful material should be packaged accordingly, so that everyone can benefit from them.

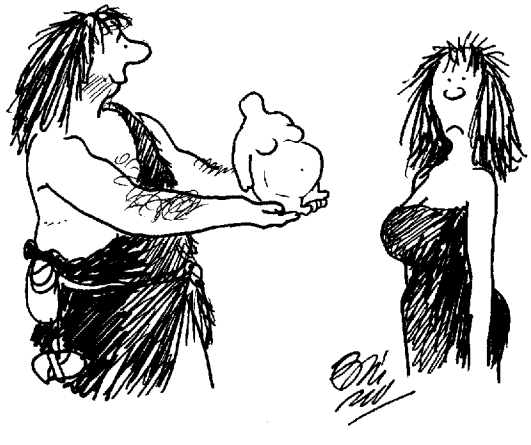
One aspect of the conference circuit is the attached travel plan, allowing us to maintain the broad cultural knowledge required of an editor of ANTIQUITY. We confess that our visit to Cape Town led us as much to the wine farms of Stellenbosch as to more ancient archaeological exhibits. We have, though, reached the Far East, the Middle East, the Americas and continental Europe. Our recent visit to the Denver SAA took us on to the Maya Lowlands where Dr Peter Schmidt gave us a detailed tour of his excavations of Chichen Itza and Prof. Maureen Carpenter was equally generous with her time at Palenque (http://www.mesoweb.com/palenque/dig/update.html). At the Esslingen EAA we revisited the Heuneburg, now partly reconstructed, albeit shrouded in thick mist, and examined the Hochdorf, both through its finds, its location and, only from the outside, its post-modern museum. Much to our regret and no doubt to the disgust of the previous editor we never ventured into Oceania, in spite of the attraction of deep dream time and more than one archaeologist who values the spirit of Celticity. In spite of the evident gaps, these occasions have combined the best of archaeology: networking and enhanced knowledge of the landscapes, sites and material culture, guided by experts and viewed at first hand.

In some cases, the best museum for material culture is the ground itself. An unusual case has arisen in the proposed re-excavation of the Villa of the Papyri in Herculaneum. Archaeologists are arguing that conservation is key and that an unprincipled search for lost literary works should not be the primary aim of archaeological research, in much the same way as classical topography is no substitute for landscape archaeology. In spite of archaeological objections it appears that excavation will go ahead, at a cost of £3 million and over two years, using tunnelling techniques to get round the problem that more recent buildings overlie this site, including Herculaneum's modern town hall. An even more unusual example of unusual preservation is the recently discovered prehistoric village near Nola, not far from Pompeii. The need for excavation here is, though, uncontroversial, in advance of the construction of a supermarket. The village was preserved by an eruption in the early 2nd millennium BC, encompassing details such as animal footprints, aborted human foetuses and an enclosure of pregnant goats. We hope to report on this site, in one of our final colour notes in December.

Another illustration of threat to enduring values is the decision by the new government of Portugal on 6 May to merge the administration of the archaeological heritage back under centralized control of a mega-institute. Some measure of the value of the independent administration of the heritage can be see through the Institute's web site (http://www.ipa.min-cultura.pt/). During a mere five years of energetic existence, the institute has pushed forward work on many themes including underwater archaeology, rock art (including the Coa Valley park) and has/had plans for scientific research. Dynamic changes in legislation had been based on a group of young archaeologists radically enhancing approaches to archaeology in Portugal. We urge the new government of Portugal to maintain the momentum of archaeological research by retaining the independence of the institute.

In the current issue we have, as usual, a rich range of geographically and chronologically diverse articles. We would, though, like to draw attention to the enduring value of even the most recent archaeological material, as represented by articles on military aircraft crashes by VINCE HOLYOAK and the Cold War (linked to a review of John Schofield's book on 20th-century war in the review section) by NICHOLAS JAMES. The special section on Scotland demonstrates the vibrancy of cultural research in a country given greater independence by devolution. We would equally like to point to the enduring value of the Reviews Section under a Reviews Editor whose period of office will continue one year longer than ourselves. ANTIQUITY reviews have a reputation of controversy, maintaining an independence that even allows the current editor to be criticised!

In the third of our invited analyses of key thresholds in human development we present three opinions by leading scholars. It is a tribute to the scholars of the deep time of humanity that its artistic merit has even reached the pages of the art magazine *Apollo*, albeit placed there by a classical archaeologist (Spivey 2001). We claim no specialist knowledge of this period, even if we have recovered the odd handaxe on our projects, but respect its globality, the deep ancestry that it represents and the paradox that 10 minutes of action can be refitted whilst remaining vague about the bracket of 10,000 years BP in which that action belongs. We are thus typical of the archaeologists characterized by the first contribution printed here. That first opinion is by CLIVE GAMBLE (Centre for the Archaeology of Human Origins, Southampton University, csg@soton.ac.uk) whose career has combined some of the leading scholarly syntheses of the Palaeolithic with intelligent, informed and interesting popular presentations. His presentation of *Where we come from* on UK television's Channel 5 is one of the best renditions of deep time (and the ethnographic present) that we have seen. Clive has entitled his



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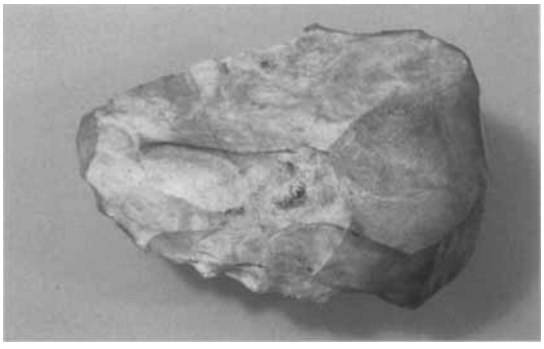

Hand axe found in the Gubbio valley.

essay, which covers the changes over the last 75 years, 'Unwrapping the Palaeolithic'.

'Can I recognise the Palaeolithic of 75 years ago? Barely, even though the name is the same. At a field level excavations were very small and conducted with a shovel, while many finds depended on the sharp eyes of gravel diggers. Caves were emptied by the cubic metre in short seasons and their contents scattered around the museums of the world. Nothing was plotted; fauna provided a date not a diet; quantification barely existed and taphonomy wasn't even a gleam in the eye of a hyena. At a regional level it is difficult to find distribution maps which show the cultural geography of the Palaeolithic. The idea that sites were linked in a settlement system wouldn't have impressed anyone just as lithic raw materials remained un-sourced. Globally, and the Palaeolithic is the only global archaeological period, there were more blanks, such as Australia, than dots, such as Europe. In southern Africa the first Australopithecine had been named at Taung but sidelined by Sussex's joker at Piltdown. Louis Leakey had yet to visit Olduvai let alone find anything significant. Asia, thanks to Davidson Black's advocacy of Tibet as a centre of speciation, was the front-runner for the human origins cradle. In Europe, the gamekeeper of the Mesolithic, Grahame Clark, had yet to shoot his first stag. More positively, Dorothy Garrod was about to commence work at Mount Carmel. At the same time, the discovery at Folsom in New Mexico of bison bones and a fluted point ended one controversy, but started another over the true age of human settlement in the Western Hemisphere. A hare which once started has proved to have more legs than a centipede. But, to cap it all, 1927 saw the re-issue in his collected short stories of H.G. Wells' classic, *The Grisly Folk*; the ultimate downer on any Palaeolithic aspirations to be treated as human.

'What has survived from this barely recognizable time are de Mortillet's units of European culture history, which include the Magdalenian, Solutrean, and Mousterian, and the stone age cultures named in 1929 by Goodwin and van Riet Lowe for South Africa. Fieldwork in France fleshed out the older European names, as with Capitan & Peyrony's monograph in 1928 on La Madeleine, while the indefatigable Abbé Breuil, having won the battle of the Aurignacian, continued to add to the corpus of cave art. Les Combarelles was published in 1924.

'Sound stratigraphy, as exemplified by Peyrony and Garrod, and Breuil's drawings of now-sadly-faded art are, at this remove, the best we can recover from the Palaeolithic of 75 years ago. It was another world, its difference worded by James Joyce in *Finnegans Wake* where an "accessit of Aurignacian" with a "wherry whiggy maudelenian woice" made "robenhauses quail to hear his tardeynois".

'But should we be that surprised? Was Gordon Childe offering much more for later prehistory in his classics of the 1920s *The Dawn* and *The Danube*? The Great Depression of 1929 started early in archaeology, but with one hopeful sign for the future; Lewis Binford was born the same year that the bear entered its long economic hibernation.

'Against this background, today's Palaeolithic of extensive area excavations with piece plotted artefacts, absolute dates, deep sea and ice cores, ancient DNA from Neanderthals, GIS rock art studies, accurate raw material provenancing, microscopic analysis of engraved bones, *chaînes opératoires* and the taphonomy of everything from dinoflagellates to Dinotherium seems like the boom years of a never-ending bull market.

'But while we never want to return to the four ice ages and a Palaeolithic world without Modified General Utility Indices, what *are* the significant achievements of the past 75 years?

'I think there are two. In the first place the Palaeolithic has truly become a global rather than European archaeological period. The growth of the subject combined with the opportunities for research, scientific analysis and international travel, undreamed of in 1927, has filled some of those blanks; Australia and Near Oceania being the most spectacular. And secondly, by realizing its potential as the comparative study of prehis-

toric hunters and gatherers across diverse and changing habitats at different times and at all the scales of human action from the flint nodule to the region and continent, Palaeolithic archaeologists also made an important discovery about their object of study — how we came to be who we are. We discovered that by becoming a global species we simultaneously became the only concurrent hominid species. The Out of Africa model for the origins of people with our genetic and biological character, as well as our unbridled capacity for cultural variation, has swept all before it leaving self-defined humans in possession of the planet. But in the excitement we sometimes forget that this was achieved at the expense of Old World hominid diversity. Some three-quarters of the earth has been settled by our oddly singular human species in only one per cent of the time since hominids and chimps split, and continued spitting, about five million years ago.

'Which raises important issues for the future of the Palaeolithic. Viewed as a species our global dominance and the subsequent social, cultural and biological diversity — the stuff of later prehistory and historic archaeology — are still in their original wrapper from 75 years ago. A wrapper we now need to remove because it presents the Palaeolithic as an origin myth for all subsequent archaeology. A disciplinary myth proposing a fundamental difference to everything *human* such as agriculture and cities which comes later. This origin myth supports the intellectual rightness of investigating recent human diversity, complexity, change and sophistication precisely because for five million years not much seems to happen, apart from regular makeovers in the hominid cranial department. If archaeologists decide that this origin story is all they want from the Palaeolithic then they will never be able to understand its structure, its lack of data compared to later periods and its apparent reluctance for change over hundreds of thousands of years. In short, the Palaeolithic will never be demystified for other archaeologists but instead left to Quaternary Scientists and Evolutionary Biologists to investigate.

'This delegation of responsibilities will only perpetuate the current disciplinary structure of archaeology which needs an origins myth, namely the Palaeolithic, to power its agendas. A requirement moreover which crosscuts theoretical persuasions and period specialisms. Archaeologists, whether they are culture historians, processualists,

Middle Palaeolithic flints found in the Gubbio valley.

Marxists, post-processualists or Darwinians all show, by their written treatment of the Palaeolithic, that a myth is all they want so that they can address issues of style, adaptation, praxis, inhabitation and selection in more civilized surroundings and with larger and more varied data sets. Therefore, the prospect for the Palaeolithic is to redefine its bedrock position in the structure of archaeology and in so doing change the next 75 years of what we all understand by the past. Would I recognize that Palaeolithic? Barely, and not by that name.'

In the second contribution, OFER BAR YOSEF (Harvard University) reviews recent achievements and looks forward to further achievements in a contribution which he entitles: 'The raw or the cooked: aspects of early human evolution'.

'The attraction of the early phases of human evolution never ceases. The discovery of new fossils, their stratigraphic position, and accurate dating draw the attention of palaeo-anthropologists, geologists, archaeologists and, no less the public and the media.

'African landscapes have produced a series of striking revelations concerning the number of hominin taxa from the period of 4·5 to 1·0 million years ago, as well as the early manifestations of stone tool making. Recent discoveries at Dmanisi (Republic of Georgia) have begun to indicate the first entry of humans into Eurasia some 1·7 million years ago. Uncovering additional fossils in these continents would permit us to evaluate the number of competing species, their geographic distribution and apparent diversified adaptations. Such discoveries will also ease future interpretations of the changes among the different morphotypes and the rate at which these changes occurred — gradual and continuous, emerging through rapid

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transitions (as punctuated equilibria), or through a mix of both.

'Further fieldwork and publications will indicate whether the flimsy evidence for cultural manifestations, such as core and flake industries (i.e. the Oldowan) or bifaces (i.e. the Acheulian), were invented independently in more locations than the African core area. We will definitely enjoy the advancements in secure dating, so that the rendering of the complex story of human evolution will be a sound tale. Hence, few will deny the need for more basic data while examining what we call the Lower Palaeolithic. However, there are several aspects of studying this period that are far from reflecting the achievements of later archaeological time spans, and the lack of well-tested information hampers the reconstruction of a more conclusive, dynamic story of early prehistoric life ways.

'Firstly, crucial in my view, as a field archaeologist, is more sound observations concerning the intentional use of fire by early hominins during the first million and half years, and unbiased information concerning the social organization of the period. While the first may require only improved field and laboratory techniques, for the second we require the construction of testable models built upon acquired terms of reference.

'It has been suggested, since the onset of prehistoric research in Europe, and more recently from a viewpoint that combines brain structure, social organization and nutrition, that fires played a major role in human evolution. Fire, whether lit accidentally or intentionally, but controlled by humans, provided warmth, protection against carnivores, and perhaps more importantly, the daily home base and perhaps the basis for male–female bonding and the success of *Homo erectus* in colonizing Eurasia (e.g. Sollas 1915; Perlès 1977; Wrangham *et al.* 1999).

'Hence, the early excavations at Zhoukoudian in the 1920s and, more recently, the presence of burned clay in an open-air site in Koobi Fora, as well as a few other localities, once seemed good indicators for the use of fire. Unfortunately, the latter cases were not demonstrated to have been the result of an intentional fire in a sufficiently sound manner, and in the Chinese site, the presence of burned bones and lack of ashes (in the remaining section of the site) may only indicate indirect burning (Weiner *et al.* 1998; Goldberg *et al.* 2001).

'It is time to employ systematically (and eventually improve) the technique which combines micromorphology (the study of thin sections of sediments) and mineralogy in excavations of open-air and cave sites where human presence is dated to earlier than 500,000 years. By obtaining direct evidence for the use of fire, testable hypotheses as to its role in improving nutritional values and amending social relationships, will become feasible.

'The alternative, if no positive indicators are found, is to advance interpretations suggesting that the early phases of social evolution took place among hominids that enjoyed the diet of raw meat and vegetal components, and tools for butchering animal carcasses were not the first step for producing grilled meat.

'Secondly, another aspect that requires building testable models concerns social structure, and is definitely more complex than a simple search for physical evidence. It involves numerous issues such as the evolution of cognition, language, sharing, pair bonding, group size, parental caring and so on. Primate studies brought a major impetus to this field. Since early proposals by Washburn & De Vore (1961), and later by Tooby & De Vore (1987), various researchers made fruitful efforts in this direction (e.g. Hawkes *et al.* 2001; O'Connell *et al.* 1999; O'Connell *et al.* in press; Gamble 1999) through combining the results of archaeological studies with observation on modern foragers' behaviour.

'Primatologists who study primate societies and, in particular, chimpanzees as the ultimate model for early hominin society have directed our attention to the bonobos (de Waal 2001 and papers therein). However, each researcher who views his or her studies as applicable to understanding the processes of social evolution stresses a different aspect such as: meat eating, sharing, male and/or pair bonding, male protection of females, the social demands on the group's life, the evolution of language, the technical challenges, and the use of objects as tools. While each proposal is justified on the basis of analogy, the lingering question is: how do we go about testing this model or any model against the archaeological evidence at hand?

'Archaeological assemblages, when analysed, have produced two types of interpretations: 1) The accumulations of animal bones and artefacts were evidence for a "central foraging place" (e.g. Isaac 1984); and 2) the sites were "opportunistic

near kill accumulations" (e.g. Binford 1981; Blumenschine 1991).

'Trying to decipher how hominin lifeways and the role of human agency can be discerned in the archaeological record are still the main challenges. Gaining the cooperation of scholars in recognizing that well preserved sites must be excavated using the maximal modern scientific techniques would probably bring us closer to identifying less ambiguous evidence that could reflect some social aspects of the Lower Palaeolithic.

'Concentrating on digging only particular sites will limit hopes for tracking traces of past forays for food (whether hunting, scavenging or gathering) on a Pliocene–Lower and Middle Pleistocene landscape which is now either largely eroded or covered by later deposits.

'We learn more about group size from localities which have been exposed in large scale excavations, and gain insight into social hierarchy from the spatial arrangements, short or long term activities, skills of individuals of undisclosed gender, nutritional residues, and so on. When one considers how ethnographic analogy impacted the excavation techniques of Upper Palaeolithic sites and the ability of researchers to obtain social interpretations, it is high time to apply similar approaches to data gathering in Lower Palaeolithic sites.

'Hence, the alternative models developed for the early phase of human evolution could be tested by combining the information on the nature of how hominins acquired animal tissues with the new data to be obtained by techniques which address a suite of additional anthropogenic contributions.'

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In the third and final contribution JILL COOK (British Museum) discusses the importance of discovery in changing ideas on the Palaeolithic:

'As the seven-million-year-old face of an early human ancestor gazes at me from the page of a tabloid newspaper, I am reminded that discovery is still the key to advance in palaeoanthropology, as in all branches of archaeology. The new fossils from Toumaï in Chad (Brunet *et al.* 2002) remind us just how quickly theories can be called into question. Where one might have been writing about the impact of genetic research in understanding our phylogeny, here is physical evidence which challenges the molecular clock and suggests a new model of evolution, in a geographical region previously outside our thinking, at a time earlier than existing models had predicted (Wood 2002).

'Toumaï is not the only face of 2002. A little younger at *c.* 1.75 million years, the fossils from Dmanisi, Georgia (Vekua *et al.* 2002) suggest an earlier phase of human expansion out of Africa into Eurasia than had previously been expected. In answer to the question of whether the Dmanisi fossils should be assigned to *Homo erectus,* or classified as a separate ancestral species *Homo ergaster,* the characteristics of the skull from Bouri, Ethiopia (Asfaw *et al.* 2002) allow the possibility that the early African and Eurasian fossils are local communities (*demes*) of a widespread palaeospecies, *Homo erectus*, often regarded as the ancestor of *Homo sapiens*. Meanwhile, down under, analysis of mitochondrial DNA from the 60,000-year-old Lake Mungo skeleton found in New South Wales appears to challenge the out-

of-Africa theory arguing for the multi-regional evolution of modern humans (Adcock *et al.* 2001).

'Discoveries provide questions, questions drive research and research brings new questions. The simple ladder of human evolution has long since been left behind. We now know that our origins are complex and probably reflect remarkable diversity but our archaeology is still, in some respects, stuck in a progressivist rut demarcating the old ladder of time in classifications and definitions of periods which have, in most cases, existed ever since Darwin. Archaeology no longer needs to "prove" evolution. The bounty of methods available in modern multi-disciplinary research should be applied to diversity in time rather than change through time. Only this will do if we are to contribute to the understanding of our complex genetic roots and the routes by which they spread (Cann 2002).

'This is not to say that there have been no moves in this direction. Pioneering work on early hominid behaviour in Africa by Glyn Isaac has been continued by his and other students. Taphonomy and micromorphological research on sediments have improved our capacity to differentiate human activity from natural processes. Vast improvements in techniques for obtaining age estimates and distinguishing environments define the nature of sites and their age. Lithic analyses have broken out of the bonds of pure typology to document technology and the sequences of actions which determine not only the character of assemblages but also the decisions and actions required in their production. Yet despite all the diversity that we are capable of identifying, we still have a monotonous view of hunters who hunt or scavenge whatever is in the faunal assemblage. Assemblages from Late Upper Palaeolithic sites containing stone projectile tips, as well as bone, antler and ivory points, weighted and unweighted spear throwers, fish hooks and gouges have been in museum collections for over a hundred years. These are weapons that suggest specialized hunting, fishing and trapping techniques indicative of diverse food procurement patterns and specialist manufacture, but these aspects have yet to be the subject of the detailed research that would emancipate us from the restraints of Magdalenian V. New approaches to the type of landscape study attempted by Jochim (1976; 1998) are also long overdue, so we have little notion of the territories or mobility of Ice Age peoples. The only distinctions we see are those of time and place. We must move on from this unless Palaeolithic archaeology is to become a snapshot appendage to the more dynamic debates of biological evolution.

'Investigating the development of the brain and trying to differentiate the cognitive processes required for technological and cultural activities has opened some new doors in allowing ideas from neurology, psychology, social anthropology, linguistics, philosophy and primate studies to stimulate fresh questions. The significance of art and personal ornaments certainly come to the fore in this approach and here, new discoveries have once again played the key role in taking our ideas forward. Just in the last decade, this journal has reported on major discoveries in Australia, South America and Southern Africa, as well as Cosquer, Chauvet and Cussac Caves in France. The barrage of techniques aimed at investigating these sites is formidable. Age estimates, evidence of repeated visits to painted sites over long periods, pigment analyses and sourcing, as well as the theoretical bases for interpretation are providing new scope for interpreting the intellectual capabilities of our ancestors.

'The discovery of caves such as Chauvet reminds us that there are still wonderful sites to be found even in well researched regions such as western Europe. However, luck and the pressures imposed by commercial land development play the major role here and some deliberate prospecting for research purposes is long overdue. In Britain, this could be aimed at the investigation of the early Upper Palaeolithic and the recognition of a new type of geological context for such sites suggests how this might be done (Colcutt 2001).

'Journals like *Antiquity* contribute enormously to developments in all aspects of archaeology, as well as early human research, simply through disseminating information and knowledge. Similarly, it would also be churlish not to acknowledge the increasing role of electronic communication and resources, but what is lacking is a major permanent exhibition on the archaeology of human origins to inspire both academics and the public. As the curator of one of the world's finest collections of relevant material, I suppose I might be expected to say this, but it actually requires the discipline as whole to advance from the hide-bound monotony of the

progressivist approach still rooted in the observance of technological change, to be successful.'

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☙ It has been pointed out to us that Southampton is another department which only missed top marks in the recent teaching and research assessments by one point. As with Exeter, mentioned in the last editorial, Southampton received full marks on the teaching assessment and only lost one grade on the research assessment. Both these departments, in common with many others who received top marks on the teaching assessment, were assessed at the end of the programme, giving them longer to achieve evolutionary success.

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☙ In recent months two great scholars from Harvard of varying scales of deep time have died and received detailed obituaries elsewhere. Prof. GORDON WILLEY is remembered for his major contribution to New World Archaeology, in particular settlement studies, although covering a necessarily shorter time depth than other scholars writing in this editorial. Prof. S.J. GOULD is remembered for the study of even deeper time, but for an influence that impinged greatly on the timescale of humanity.

DAVE COOMBS covered a smaller scale of archaeology but provided those detailed building blocks of material culture that are essential for the proper understanding of the broader picture. FRANCIS PRYOR of the Flag Fen Bronze Age Centre, The Droveway, Northey Road, Peterborough, PE6 7QF has kindly written this tribute.

David George Coombs
14 September 1940–13 April 2002

David George Coombs was born in Leicester on 14 September 1940 and died of cancer on 13 April 2002. He went to school in Leicester and then attended St John's College, Cambridge, where he read Archaeology and Anthropology, gaining his Ph.D in 1970. Two years prior to that he became a lecturer in what is now the Department of Archaeology at Manchester University, which was to be where he worked for the rest of his professional life, during which time he was lecturer, Senior Lecturer and Head of Department. Those are the bare facts. But facts, be they bare or richly elaborated, rarely tell the full story when it comes to the assessment of a person's contribution to life. And this most certainly applied to Dave Coombs whose lasting legacy will be the effect he had on his many friends, colleagues and students. As so many people have told me, 'He was a lovely man', and when his name was mentioned everyone smiled. I can think of few university teachers whose students were both so many and so loyal — something that the huge congregation within and outside Manchester Crematorium on 22 April 2002 demonstrated most clearly.

I first met Dave on a morning in early spring, back in 1971. I had arrived in England from Canada two weeks previously to start work at Fengate, which in those days was a pleasant East Anglian landscape of cattle, fields and hedges on the eastern side of Peterborough. Today it's a characterless industrial suburb. Dave had provided me with a select band of his undergraduate and graduate students who saw to it that the dig ran smoothly and well. For some reason I arrived on site late that day, and after I had poured myself a cup of tea I asked Bill Hanson, then a student at Manchester University (and who was supervising for me), if he knew when Dave was planning to turn up. No sooner had I asked the question than a voice came from a figure sitting on an inverted bucket in a dark corner of the site hut. It was Dave, and he had forgotten to announce his presence — which was entirely typical of him. He was a master of amiable forgetfulness and he placed himself very low on his list of priorities, which is doubtless why he was such a good and sym-

Dave Coombs (right) with Derek Simpson and Julia Roussot-Larroque enjoying flowing Bourgogne when the Bronze Age Studies Group were entertained in a cave in eastern France, 1987. (Photo Stuart Needham.)

pathetic listener. Nobody doubted Dave's motives, because he was never selfish nor personally ambitious.

His doctoral research was into Late Bronze Age metalwork of southern Britain, a subject in which he remained a leading authority throughout his life. Sadly his Ph,D thesis was never published, and one day somebody must attempt the task, as it is a work of signal importance. Papers which were based on his thesis include articles on hoards in general, on the Broadward Complex, on barbed spearheads, on hoards of the Carp's Tongue complex and on weapon hoards. Dave also worked on metalwork from a number of significant sites, such as the Dover Harbour wreck site, Flag Fen and a number of important hoards, including the largest of them all from Isleham Fen, plus others from, for example, Greensborough Farm, Staffs.; Stourmouth, Kent; Figheldean Down, Wilts.; Cassiobridge Farm, Herts.; and further afield the Late Bronze Age hoard at Clos de la Blanche Pierre, Jersey and the highly important assemblage from the Breidden hillfort in the Welsh Marches. Of the larger assemblages, he was able to publish Flag Fen and the Breidden fully, the former appearing just six months before his death. But as we will see shortly, there were good, or rather tragic, reasons why latterly progress with some of his bigger projects was difficult to maintain.

His fieldwork research mainly concentrated on Neolithic and Bronze Age sites. Perhaps his best known excavations were of the Neolithic round barrow at Callis Wold, Yorkshire and the spectacularly positioned later Bronze Age hillfort at Mam Tor in the Derbyshire Peak District. Among other projects, he directed excavations at Castercliffe and Portfield hillforts in Lancashire and three Bronze Age round barrows on Etton Wold in the East Riding of Yorkshire. In later years he and his students took part in collaborative projects in Iberia and Ireland.

His energy in pursuit of archaeological knowledge was well known, but Dave was no obsessive. Outside archaeology he had, as the saying goes, 'a life'. He had a wide circle of friends and regularly enjoyed their company; he read widely and had a deep and abiding interest in playing the Flamenco guitar. He had many interests including vintage bicycles, cycling and hill-walking, and rather surprisingly for such a mild-mannered man, he was also proficient in the martial arts. Although half my size, he once playfully bounced me off a brick wall.

In April 1989 his wife Jenny Coombs, who was herself a talented artist and illustrator, was diagnosed with cancer and despite heroic resistance, succumbed to the disease in April 1995. Like that of David, her funeral was in Manchester Crematorium. Jenny's death hit Dave very hard indeed and his life did not begin to regain its previous energy, sparkle and humour until very much later, in 2001, when he married his second wife, Beatrix (or Trixie), who left her native Austria to join David in England. David's cancer was diagnosed very shortly after their marriage, and his loss has been a bitter blow both to her, to her two children who had rapidly grown to love their new step-father, and of course to his own two daughters from his first marriage, Emma and Lisa. He is hugely missed by his many friends.