PAUL MELLARS

Paul Anthony Mellars

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elected Fellow of the British Academy 1990

by

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Summary. Paul Anthony Mellars was one of the major figures in Palaeolithic archaeology of the last fifty years. While at the outset of his career he fitted well into the orthodox picture of an archaeologist of the deep past, with a focus on the stone tools of south-west France – the capital of prehistory to some – by the end of his career his research was fully integrated into the broader and global world of palaeoanthropology, with important papers drawing on genetics, palaeoenvironments, hominin fossils, as well as the lithics of the period. Both in print and in person, he was characteristically direct, seldom shying away from controversy. Although he always remained firmly grounded in his archaeological speciality, his intellectual journey took him from typology to demography, from cave sequences to continental dispersals, and from stratigraphic minutiae to the grand narratives of human evolution.

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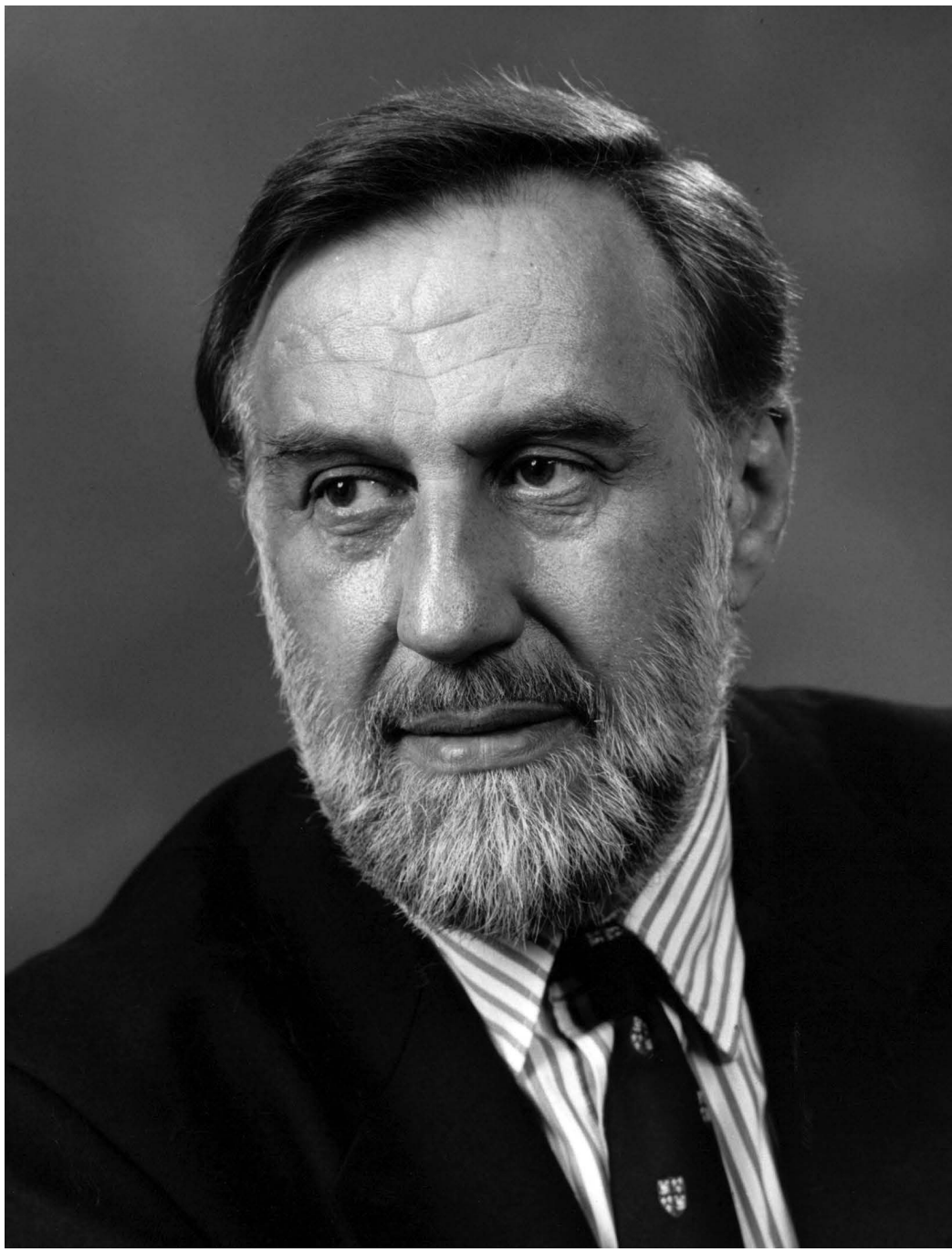

Paul Mellon

A life from Yorkshire to Cambridge

Paul Anthony Mellars, was born in the village of Swallownest in Yorkshire on 29 October 1939, shortly after the outbreak of the Second World War. He was the only son of Herbert Mellars and Elaine (née Batty). Herbert was a coal miner, and Paul attended the local primary school in Swallownest, until passing his 'eleven plus' and moving on to the Woodhouse West Riding County Grammar School.[1]

Mellars' family background was humble, and also stringently religious. His parents were Plymouth Brethren, a protestant sect with strongly held views, strict rules and an emphasis on community and family. Whether it was the broader Yorkshire upbringing or the orthodoxy of the Plymouth Brethren that left its mark, Paul was throughout his life direct, forthright and often uncompromising in his approach to situations and people. While this brought him conflict, it also brought him great friends and admirers. As the archaeologist James Sackett said, 'He's the kind of guy I would want standing next to me in an Anglo-Saxon shield wall.'[2]

Mellars' interest in archaeology started from a young age. At Woodhouse he studied the subject – self-taught – as an A-level and founded an Archaeological Society. Obviously a serious and mature schoolboy – Head Boy at Woodhouse – he was already committed to archaeology by the time he left.[3]

However, the path did not run straight. As with many first-generation university students, he was drawn to a degree with a more conventional and secure career. He was admitted to UCL to study Engineering, but was clearly not sufficiently engaged or motivated, and left after a few weeks. He then spent an enforced gap year as a primary school teacher, during which he also worked as an assistant at the Sheffield Museum, before being encouraged to apply to Cambridge to study Archaeology and Anthropology. Despite the fact that he only applied in the summer of 1959, he was offered a place at Fitzwilliam House for that October, later to become Fitzwilliam College.[4]

The cohort that graduated in 1962 was known as the *annus mirabalis* for Cambridge Archaeology. In that year, five first class degrees were awarded in Archaeology, Mellars being one of them. The others included men destined for distinguished careers in Archaeology – Barry Cunliffe, who became the Professor of Archaeology at Oxford, Colin Renfrew, who became the Disney Professor of Archaeology at Cambridge, and Charles Higham, who became the foremost archaeologist of Southeast Asia while holding a chair at the University of Otago. All four of them were duly elected Fellows of the British Academy.

[1] Smith (2010).
[2] Smith (2010).
[3] Smith (2010).
[4] Smith (2010).

In her extensive biographical interview with Mellars,[5] Pamela Smith highlighted a number of aspects of his time as an undergraduate and the early part of his PhD research. Combining archaeology with anthropology, as was then the case at Cambridge (the classic 'Arch & Anth' course) meant that he engaged with ethnographic studies, which gave him an interest in the lives of hunter-gatherers as important for understanding prehistory, and an interest in how technology reflected ecology and society as much as culture history, something that was a departure from earlier generations of Palaeolithic archaeologists. He also had the opportunity to work with some of the leaders in the field – not just Charles McBurney in Cambridge, but also Hallam Movius and Clark Howell in France and Spain.

Mellars stayed on at Cambridge for his PhD under the supervision of Grahame Clark. As an undergraduate he was already deeply interested in and had visited the caves of the Dordogne, and he chose to develop his doctoral research on the Middle Palaeolithic of south-west France. He became conversant with the work and the archaeologists of France, including François Bordes, and this familiarity aligned his work more closely with the continental tradition than was usual for British archaeologists of the time. He was examined for his PhD in 1967 by John Coles and Roy Hodson.[6]

By that time he already held a research fellowship at the University of Sheffield and was subsequently awarded the Sir James Knott Research Fellowship at the University of Newcastle. In 1970 he was appointed to a lectureship at the University of Sheffield, where he remained until 1980. There, along with Warwick Bray, Colin and Jane Renfrew, John Collis, Graeme Barker and Andrew Fleming, he was pivotal in turning the Archaeology Department into a world-leading institution. From his undergraduate teaching and graduate supervision, Sheffield soon became a major centre for Palaeolithic research, strengthened when Robin Dennell joined the Department in 1973. This was also the period when he made major commitments to field research, setting up excavations on the Inner Hebrides Island of Oronsay, where he excavated the very substantial Mesolithic shell-middens.

While a PhD student working in France, Mellars met Anny Chanaut. She eventually followed him to Cambridge, and they married in 1969. With a preference for rural life, they lived in the village of Eyam in Derbyshire while they were in Sheffield, and in Elsworth once they had moved to Cambridge. They were a devoted couple, Paul with his laconic northern bluffness, and Anny ever exuberant and Paul's firmest supporter. Their houses, filled with the furniture they spent their weekends tracking down in antique shops, was always welcoming to generations of colleagues, friends and students.

[5] Smith (2010).
[6] Smith (2010).

Despite already being a Reader at Sheffield, in 1980 Paul applied for and was appointed to a lectureship in his old department at Cambridge. He succeeded his teacher, Charles McBurney, who had died the previous year.[7] He represented a strong continuation of the traditions of McBurney, with a focus on the later Palaeolithic periods and the importance of the study of stone tools. However, Paul also brought to Cambridge a broader interest in the role of the environment and a respect for the importance of scientific approaches to the past.

He also amassed a fan club. He was a superb lecturer, able to explain complex things clearly, and skilled at getting across the excitement of the deep past despite his dry style. As he explained to Graeme Barker, 'I always lecture at the speed of the slowest writer'. To students of the 1980s and 1990s he must have seemed a completely different generation, someone who wore smart blue blazers and ties, smoked cigars, yet he was admired and loved by generations of students. Few, if any, academics have a Facebook site devoted to them with the name The Professor Paul Mellars Big Love Society.[8]

Paul's time at Cambridge in the 1980s and 1990s was marked by enormous contributions to research, but also enhanced his reputation as someone not easily overwhelmed or cowed, and certainly not someone who shirked from confrontation. The Cambridge Department of Archaeology in the 1980s was the epicentre of post-processual archaeology, led in particular by his colleague Ian Hodder. Post-processualism, with its focus on the fluid and social or political contextualisation of the past, challenged the scientific archaeology that had taken root in the 1970s. Paul refused to concede to this movement, and continued to argue strenuously for a scientific, especially ecological, approach to prehistory.

This intellectual movement coincided with a more overt expression of post-processual archaeology, namely the organisation of the World Archaeological Congress in Southampton by Peter Ucko in 1986.[9] Emerging as an alternative to the staid and established International Union of Prehistoric and Protohistoric Sciences, WAC set out to diversify, politicise and globalise archaeology. In 1986, the decision was made to disinvite South Africans to WAC due to the continuation of the apartheid state. This divided the archaeological world, and Paul, originally an organiser of the Congress, withdrew in protest.

He remained committed to what he had hoped to achieve at Southampton, namely a symposium on the archaeology of the origins of modern humans, which he organised jointly with Chris Stringer in Cambridge instead the following year. This coincided with the first publication of the mitochondrial evidence for the African origin of modern

[7] Clark (1982).
[8] Smith (2010).
[9] Ucko (1987).

humans (or *Homo sapiens*) in the last 200,000 years, much more recent than conventional ideas of the time. The conference, held in Cambridge in March 1987, rode the crest of interest in this emerging model, and set the framework for what was to be the major debate – confrontations even – between supporters and critics of the model. Mellars was a happy combatant in these debates, and the book *The Human Revolution* became the foundational text for the field for more than two decades.[10] The volume gathered geneticists, palaeoanthropologists and archaeologists; at 800 pages it set the template for Mellars' later synthesis volumes – and crucially, the book stitched the brand new mitochondrial DNA story into the archaeological record in a way few had attempted before. Mellars was an excellent organiser and editor, bringing together many researchers working in his field. In addition to *The Human Revolution*, he also edited a companion archaeological volume *The Emergence of Modern Humans: An Archaeological Perspective*,[11] as well as co-editing with Harold Dibble *The Middle Paleolithic: Adaptation, Behavior, and Variability*.[12] In 1992, he organised a conference at the Royal Society on the emerging chronology of human origins, later published as *The Origin of Modern Humans and the Impact of Chronometric Dating*.[13] With Chris Stringer, Ofer Bar-Yosef and Katherine Boyle, he also organised a conference and edited a volume celebrating the twentieth anniversary of the 1987 meeting – *Rethinking the Human Revolution*.[14]

Although he was a good lecturer, he showed little if any interest in administration or the overall running of the Department and managed to dodge the bullet of becoming Head of Department. He was single-minded, and reluctant to take on anything that diverted him from his research. Ironically, he was also reluctant to retire at the statutory age of 67 at Cambridge even though it would give him more time for his research, and he managed to stay on for another three years. Even then, he was determined to keep going and took a part-time and largely remote position at the University of Edinburgh for a couple of years. In retirement he remained as productive as ever.

Long before he retired, Mellars was a major figure in the archaeology of early humans, together with Richard Klein probably the most influential. He became a travelling professor, taking up visiting positions in the USA and other places, and attending conferences, where his deep rich voice could be heard booming out questions to often nervous younger researchers. Mellars was always determined to keep abreast of the subject – he was avowedly empirical and searched for the most recent developments, and he welcomed and embraced the contributions of genetics to his field. At conferences he

[10] Mellars & Stringer (1989).
[11] Mellars (1990).
[12] Dibble & Mellars (1992).
[13] Aitken *et al.* (1993).
[14] Mellars *et al.* (2007).

would often be seen lunching a geneticist with notebook open, interrogating him or her on their latest findings. He would add all this information to the syntheses that characterised his later writings.

He was also showered with honours. The one that must have delighted both him and Anny the most – as well as his father, who lived to see the honour –was his knighthood in 2010. His cousin Rachel Screaton said that the family delighted in teasing 'Sir Paul' at gatherings in Yorkshire. He was elected to the British Academy in 1990, gave its Albert Reckitt Archaeological Lecture in 1991,[15] and was awarded its Grahame Clark Medal in 2008. He was also appointed an *Officier* of the *Ordre des Palmes académiques* by the French Government in 2004.

Mellars was a Fellow of Corpus Christi College throughout his time at Cambridge, and was President of the College for many years. For one year, he was Acting Master and was disappointed not to be elected as Master in 2007. He was a devoted and valued member of the College, where he directed generations of students in their studies, as well as supervising numerous graduate students. An inveterate cigar smoker, he eventually elected to give up his College room in exchange for a shed in the Corpus gardens where he could continue to smoke. Many remember him as a much-loved figure, sitting over his after-lunch coffee with a cigar on the pavement outside the Copper Kettle in King's Parade.

A life of research from the Dordogne to the world

Mellars' research can be divided into three phases and three issues – the Mousterian and Châtelperronian of south-west France, which was his doctoral research and subsequent additions, the Mesolithic of the UK, with excavations at Oronsay and Star Carr, and the origins of modern humans and relationships to Neanderthals. Two more theoretical and methodological themes run through this work – a focus on chronology and new methods of dating, and the primacy of ecological determinants of the patterns seen in the archaeological record.

The Mousterian debate

Paul was lucky in his choice of PhD dissertation. His topic was the Mousterian succession in south-west France. In other circumstances, this very conventional topic might have joined the shelves of unread stone tool theses in university libraries, but it coincided with one of the most critical and influential controversies in Palaeolithic archaeology – the so-called 'Mousterian debate'.

[15] Mellars (1993).

The Mousterian is the term given to the Middle Palaeolithic industries of Europe (~350,000 to ~40,000 years ago), now strongly associated with Neanderthals. Characterised by prepared core and specifically Levallois technologies, it encompasses a series of industries that occurred between the hand-axe dominated assemblages of the Lower Palaeolithic and the blade industries of the Upper Palaeolithic. In the late 1960s and early 1970s, the Mousterian – or more specifically, the Mousterian of south-west France – was a problem, both in terms of its role in prehistory and as a case study in the battle between conventional and newer archaeology. François Bordes, doyen of European Palaeolithic archaeology, had developed new and semi-quantified methods for analysing lithics and so provided the framework for describing Mousterian variability in south-west France. The types of Mousterian, seldom loved by students trying to memorise them – La Quina, La Ferrassie, Typical, Denticulate, Mousterian of Acheulean Tradition (MTA) – were characterised by different frequencies of particular types of tools; La Quina, for example, by a distinctive style of scraper with steep retouch, the MTA by a high frequency of bifaces.

In Bordes view, these different types of assemblages represented different groups of Neanderthals. His model was a traditional archaeological one, where material culture types represented different cultural or ethnic groups, rather like the different tribes seen in ethnographic research.[16]

This view was strongly challenged by Lewis and Sally Binford. Lewis Binford, the leading figure in the 'New' or 'Processual' archaeology, argued that the variability in Mousterian traditions represented different functional activities, or different seasons of such activities. Binford's model reflected a growing interest among archaeologists in functional and environmental explanations for technological variation, as well as a more scientific archaeology, rather than the culture history approaches of most archaeologists of the time.[17] The debate was the battle of giants, as Bordes was without doubt the leading Palaeolithic archaeologist of his generation, and Binford the up-and-coming champion of 'New Archaeology'. It was fascinating to onlookers, as well as a test-bed for alternative models. Even looking back more than fifty years later, it is still considered to be one of the pivotal moments in the development of modern Palaeolithic archaeology.

While most were happy to watch from the sidelines, Mellars, at a very early stage of his career, and with his typical courage and directness, was prepared to wade in. In his PhD dissertation and in papers published at the time, he had noticed that the different types showed a chronological pattern, with the MTA being the youngest, and normally overlying La Quina. Chronology explained part of the pattern, although of course it would have been other factors such as culture or function that led to that change through time.

[16] Bordes & de Sonneville Bordes (1970).
[17] Binford (1973).

Largely ignored by the duelling Bordes and Binford, Mellars proved to be correct. This contribution, however, both marked his entry into the premier league of Palaeolithic archaeologists, and also signalled his willingness to address empirically major issues in the field. He returned repeatedly to the Mousterian in his later work, which can be said to lie at the core of his interests, publishing on Mousterian chronology in south-west France and defending that chronological signal against critics. Much later he brought together his thinking and data on the subject in his magisterial *The Neanderthal Legacy: An Archaeological Perspective from Western Europe*.[18]

However, throughout his career, Mellars always thought that knowing the chronology was the first and most important step in any archaeological analysis.[19]

The Mesolithic – Oronsay and Star Carr

Mellars' time at Sheffield coincided with his only major excavations. Interested in both the archaeology of the post-glacial Mesolithic populations in Britain (~12,000 to ~6000 years ago) and the challenges of shell middens, he embarked on nearly a decade of field-work on the Inner Hebrides island of Oronsay. The results appeared in a substantial monograph, *Excavations on Oronsay: Prehistoric Human Ecology on a Small Island*,[20] which established a new benchmark for integrating palaeoenvironmental work with coastal huntergatherer subsistence, and remains a key reference for Scottish Mesolithic studies. He followed this with *Star Carr in Context* (with Petra Dark),[21] which used modern coring, fine sieving, and accelerator radiocarbon dating to reframe Grahame Clark's classic site – arguing for repeated occupations over centuries, reedswamp burning as landscape management, and even a timber trackway that they identified as the earliest evidence for systematic carpentry yet documented in Europe. The Star Carr volume illustrated well Mellars's style as a field synthesiser: pull together specialist contributions and then, in the closing chapters, make the larger argument about technology, seasonality and settlement.

Although Mellars was first and foremost a Palaeolithic archaeologist, his contributions to the Mesolithic of Britain were not insubstantial. Star Carr remains an iconic site for the Magelemosian, and has been a focus for research for over sixty years, from Grahame Clark's original excavations in the 1950s, through to Mellars' and those of Milner and colleagues in this century.[22] In this research timeline from Clark to Nicky Milner, Chantal Coneller and colleagues, Mellars very much continued the palaeoecological approach of

[18] Mellars (1995).
[19] Mellars (1965); Mellars (1970).
[20] Mellars (1987).
[21] Mellars & Dark (1998).
[22] Milner *et al.* (2011).

Clark, adding new scientific techniques and enhancing chronological precision.[23] The work in Oronsay was more sustained and substantial, with a focus on a particular palaeoeconomic issue, namely the use of shell middens in prehistory. Despite his publications on the site, in the end it became a burden to him, as the sheer quantity of material and information was vast (three and a half tons of shells remain stored and largely unanalysed in the basement of the McDonald Institute for Archaeological Research in Cambridge), and his sense of duty in finishing the work he had started in the 1970s took up a considerable amount of his time and energy in the last few years of his life. Unfortunately, he did not finish the final monograph on Oronsay on which he was working at the time of his death.

The Châtelperronian and the 'impossible coincidence'

As the Mousterian debate faded, Mellars' attention turned to the transition from the Middle to Upper Palaeolithic. As Pamela Smith reports in her interview, Mellars had believed since he was an undergraduate that the Châtelperronian, an anomalous assemblage on the boundaries between the Middle and Upper Palaeolithic in France, was a continuity from the Mousterian, not part of the Upper Palaeolithic. He returned to this theme in the 1990s and early 2000s, and published a series of articles on the Châtelperronian.[24] The papers had a specific and a general point. The specific one was that the Châtelperronian, despite its superficial resemblance to some aspect of the early Upper Palaeolithic industries of south-west France, was technologically, stratigraphically and culturally associated with the Mousterian industries that preceded it, and thus with the Neanderthals rather than modern humans. This was a view that French prehistorians such as Bordes had proposed, but went against the ideas of his former teacher, Charles McBurney. To Mellars, the contiguity in distribution of the Châtelperronian and the latest Mousterian (the Mousterian of Acheulean tradition), and the nature of the mode of production of the blades, indicated continuity with the Mousterian. The discovery in 1979 of a Neanderthal skull associated with a Châtelperronian industry at the cave of Saint Césaire would seem to clinch the case, although others remained unconvinced.

The more general argument concerned what the Châtelperronian might indicate about the relationships between Neanderthals and modern humans, and the nature of each species. For Mellars it seemed most probable that, while the Châtelperronian was made by Neanderthals, it was unlikely that they could have developed the technology in isolation. Mellars proposed it was a case of 'acculturation' – the Neanderthals learnt

[23] Mellars (1999); Mellars (2004); Gravina *et al.* (2005); Mellars (2005); Mellars (2006a); Milner *et al.* (2011).
[24] Mellars (1999); Mellars (2004); Gravina *et al.* (2005); Mellars (2005); Mellars (2006a).

blade manufacture from modern humans, or perhaps competition from modern humans changed their adaptations and led them to develop new tools. For others, such as João Zilhão, Francesco D'Errico and colleagues,[25] the Châtelperronian was an *in situ* and convergent development of the Neanderthals, independent of anything to do with modern humans. Mellars considered this to be an 'impossible coincidence', but it also reflected his view that there was a substantial cognitive gap between the two species. In contrast, others felt that there was much more overlap in cognitive and technological skills, and no bar to Neanderthals producing the Châtelperronian entirely independently. Nearly thirty years on, the nature of the Châtelperronian continues to raise controversy.

A 'human revolution'

The context for Mellars' ideas about the Châtelperronian was the sweeping changes in ideas about the origins of modern humans that occurred in the 1980s and 1990s. In 1987, Allan Wilson and colleagues published the first analysis of the diversity of human mitochondrial DNA.[26] MtDNA is a uniparental genetic system inherited only through the maternal line and so provides a record of ancestry through a coalescence process. These data showed that human mitochondrial diversity was limited, suggesting a recent common ancestry for all living humans; it also showed that most of that diversity was found among Africans, indicating an African origin. The mtDNA implied a model of a recent origin for modern humans in Africa (a date of around 200,000 years ago), with dispersals to the rest of the world. Most importantly, it would exclude Neanderthals from human ancestry.

An important paper by Chris Stringer and Peter Andrews in 1988[27] drew together the genetic, fossil and archaeological evidence for the evolution of modern humans in terms of what became known as the 'out of Africa' or 'recent origin' model. Mellars was an immediate convert, as it coincided with his views that there was a strong contrast between the behaviour of Neanderthals and that of modern humans or *Homo sapiens*. In 1989, he published – in addition to his paper in *The Human Revolution* – a major article outlining the case for a 'human revolution'.[28] Building on the emerging genetic and fossil evidence, he discussed in great detail the archaeological evidence for a major contrast between the archaeology of modern humans and Neanderthals, emphasising demographic, foraging, and technological differences. He was cautious about the extent to which these were biologically based – Mellars remained a fairly traditional archaeologist

[25] d'Errico (2003); d'Errico et al. (1998).
[26] Cann *et al.* (1987).
[27] Stringer & Andrews (1988).
[28] Mellars (1989).

of his time in this respect, not wanting to consider in any great depth fundamental species differences as being important, and preferring to draw on cultural models of adaptive needs. However, his conclusion lies firmly in the line of there being a major difference between humans and Neanderthals, and that this difference resulted in the ultimate extinction of the Neanderthals.

In a second paper, Mellars focused on cognition.[29] He thought it likely that the real difference between the two species lay in the way they thought, and posed the question of whether this might arise due to differences in language capacity and symbolic thought. He examined the issue in terms of the archaeological contrasts between the Middle and Upper Palaeolithic records of Europe, very much his comfort zone, and highlighted the differences. These he attributed to a greater emphasis on 'design' to be found in the technology of modern humans, rather than simply function, which he ascribed to a difference in cognition. While not ruling out a deeper biological basis, he suggested that some of this capacity could be achieved by Neanderthals through cultural assimilation, such as seen in the Châtelperronian and other transitional industries. While language may lay at the root of this, it was the capacity for symbolic thought that was the key for Mellars.

The 1990s was the high tide of the 'human revolution' models, and Mellars shared with Richard Klein the position as its main proponents (although Klein placed much more emphasis on fundamental neurobiological differences than Mellars[30]). However, although Klein did pay much more attention to the African record, the irony is that although the out of Africa model was exactly that – Afrocentric – Mellars' approach remained firmly rooted in the archaeology of Western Europe,[31] and his methods the traditional descriptive comparison of archaeological objects. His monumental book, *The Neanderthal Legacy*,[32] published in 1995, not only brings all this work together, but also links back to his earlier work on the problem of Mousterian variability.

Going global

While the work Mellars did in the 1980s and 1990s was primarily concerned with the western European Middle to Upper Palaeolithic transition, his work from the 2000s took a much more global direction.[33] It was as if the publication of *The Neanderthal Legacy* released him from the constraints of his own history. Instead, during an immensely productive period he produced a number of major synthesis papers on the dispersals of modern humans. Although an avid follower of the emerging genetics data which he used

[29] Mellars (1991).
[30] Klein (1992); Klein (1995).
[31] Mellars (1996).
[32] Mellars (1995).
[33] Mellars (2002).

as a basis for much of his later work, Mellars remained solidly archaeological in his approach.[34] At the time, the genomic evidence was predominantly based on mitochondrial DNA, and this seemed to show a single dispersal out of Africa, with a predominantly southern signal – in other words, one dispersal out of Africa, and by a southern route (across the Red Sea) rather than the northern one via the Sinai and Levant.

Mellars took this as the basis for his examination of the archaeological record of Asia and Australia. In the Palaeolithic of India, Sri Lanka and Australia he found similarities in the lithic and material culture record of parts of Africa and Asia to support the view of a primary Asian colonisation by modern humans, suggesting that the occupation of western Eurasia was a later event, derived as a branch from these Asian dispersals. Although the evidence today does no longer support this single dispersal view, the paper was influential in its synthesis of a wide range of archaeological material, and for drawing attention to the Asian rather than European record. He and colleagues produced a follow-up paper in 2013 that re-emphasised the coastal nature of the dispersal across Asia, emphasised the microlithic component (in contrast to the European blade industries of the Upper Palaeolithic), and suggested a similar replacement demographic process as was seen in Europe with the Neanderthals.[35]

Finally, this later more global Mellars contributed to a paper by Rito and colleagues that completed the link in this microlithic-based model by suggesting that population dispersals from southern Africa to eastern Africa took the microlithic Howiesons Poort industry across the continent, and that his was a precursor to the out of Africa dispersals into Asia.[36] This built on an earlier article which posited a major demographic expansion in Africa between 80,000 and 60,000 years ago in response to environmental changes, with a subsequent expansion out of Africa.[37] In other words, true to his earlier ideas about the role of environment, he was proposing that the shift to modern human behaviour was ecological, and that dispersals were the response to a successful adaptation.

While these later models have not stood the test of time, rooted as they are in the African Later Stone Age microlithic industries rather than the industries of the Middle Stone Age, and emphasising a single dispersal, they remain important. Mellars was very clear that, while the genetics may provide a framework, and the hominin fossils a few sparse points of data, the archaeological record was the true signal of the expansion of modern humans, a view that continues to be valid today.

[34] Mellars (2006b).
[35] Mellars *et al.* (2013).
[36] Rito *et al.* (2019).
[37] Mellars (2006c).

Archaeology as science

Across a career of more than fifty years, Paul Mellars was one of the most influential Palaeolithic archaeologists of its global scholarly community. While rooted in a traditional framework of lithics as a signal for prehistoric human populations, he engaged more than most with the evidence emerging from new scientific techniques. While genomics was the primary one, providing a solid foundation for his models of the behaviour and dispersals of modern humans, it was not the only one. In the early part of his career, when he was working on the Mousterian of south-west France, he emphasised the importance of chronological context, and used this to define the nature of Mousterian variability. This focus on chronology remained with him throughout his life. He embraced new chronometric methods enthusiastically – such as the application of thermoluminescence dating to the early modern humans in the Levant or ultrafiltration methods of radiocarbon dating[38] – and used them to build stronger and stronger models and, in particular, his forte, new syntheses. A tidy and consistent chronology remained for him the central component of archaeological analysis.

But not the only one. His research into the British Mesolithic was driven by a strong interest in how hunter-gatherers adapted to wet and aquatic environments, and he pioneered methods for obtaining evidence of seasonality from fish otoliths and stable isotopes.[39] He recognised the importance of fire as an ecological tool for hunter-gatherers,[40] and, with his PhD student Jenny French, brought an empirical approach to the demography of modern humans and Neanderthals.[41] Although noted mostly for his magisterial syntheses of Palaeolithic archaeological evidence, the Mesolithic research perhaps embodies well his fundamental belief that what prehistoric humans did, and what led them to evolve and change, were the demands of the environment and the ways in which they acquired resources. For Mellars, archaeology was a science, one that needed scientific methods to maximise the information, and ideas drawn from ecology to provide the understanding. It also needed what he brought to the subject more than most, an ability to pull together the evidence in convincing and empirically-sound syntheses, and so a deeper knowledge of the human deep past.

Paul Mellars died after a short illness on 7 May 2022, and is survived by Anny. A memorial service was held in the chapel of Corpus Christi College, Cambridge, on 1 July 2023. He is buried in the churchyard at Elsworth, where he and Anny lived for many years.

[38] Mellars (2006a).
[39] Mellars *et al.* (1980); Richards & Mellars (1998).
[40] Mellars (1976).
[41] Mellars & French (2011).

References

Aitken, M.J., Stringer, C.B. & Mellars, P.A., (eds) (1993), *The origin of modern humans and the impact of chronometric dating* (Princeton, Princeton University Press). https://doi.org/10.1515/9781400851553

Binford, L.R. (1973), 'Interassemblage variability – the Mousterian and the functional argument', in Renfrew, A.C. (ed.), *The explanation of culture change* (Pittsburgh, University of Pittsburgh Press), 227–54.

Bordes, F. & de Sonneville Bordes, S. (1970), 'The significance of variability in Palaeolithic assemblages', *World Archaeology*, 2, 61-73. https://doi.org/10.1080/00438243.1970.9979464

Cann, R.L., Stoneking, M. & Wilson, A.C. (1987), 'Mitochondrial DNA and human evolution', *Nature*, 325, 31–5. https://doi.org/10.1038/325031a0

Clark, J.D. (1982), 'Charles Brian Montagu McBurney, 1914-1979', *Proceedings of the British Academy*, 66, 455-61.

d'Errico, F. (2003), 'The invisible frontier. A multiple species model for the origin of behavioral modernity', *Evolutionary Anthropology*, 12, 188–202. https://doi.org/10.1002/evan.10113

d'Errico, F., Zilhao, J., Julien, M., Baffier, D. & Pelegrin, J. (1998), 'Neanderthal acculturation in western Europe? A critical review of the evidence and its interpretation', *Current Anthropology*, 39, S1–S44. https://doi.org/10.1086/204689

Dibble, H.L. & Mellars, P.A. (1992), *The Middle Paleolithic: Adaptation, Behavior, and Variability* (University Museum Seminar Series; Philadelphia, University of Pennsylvania).

Gravina, B., Mellars, P. & Ramsey, C.B. (2005), 'Radiocarbon dating of interstratified Neanderthal and early modern human occupations at the Chatelperronian type-site', *Nature*, 438, 51–6. https://doi.org/10.1038/nature04006

Klein, R.G. (1992), 'The archaeology of modern human origins', *Evolutionary Anthropology*, 1, 5–14. https://doi.org/10.1002/evan.1360010105

Klein, R.G. (1995), 'Anatomy, behavior, and modern human origins', *Journal of World Prehistory*, 9, 167–98. https://doi.org/10.1007/BF02221838

Mellars, P.A. (1965), 'Sequence and development of Mousterian traditions in South-western France', *Nature*, 205, 626-7. https://doi.org/10.1038/205626a0

Mellars, P.A. (1970), 'The Chronology of Mousterian Industries in the Périgord Region of South-West France', *Proceedings of the Prehistoric Society*, 35, 134–71. https://doi.org/10.1017/S0079497X00013438

Mellars, P. (1976), 'Fire Ecology, Animal Populations and Man: a Study of some Ecological Relationships in Prehistory', *Proceedings of the Prehistoric Society*, 42, 15–45. https://doi.org/10.1017/S0079497X00010689

Mellars, P.A. (1987), *Excavations on Oronsay: prehistoric ecology on a small island* (Edinburgh, Edinburgh University Press).

Mellars, P. (1989), 'Major issues in the emergence of modern humans', *Current Anthropology*, 30, 349–85. https://doi.org/10.1086/203755

Mellars, P.A. (ed.) (1990), *The emergence of modern humans: an archaeological perspective* (Edinburgh, Edinburgh University Press). https://doi.org/10.1515/9781474470957

Mellars, P. (1991), 'Cognitive changes and the emergence of modern humans in Europe', *Cambridge Archaeological Journal*, 1, 63–76. https://doi.org/10.1017/S0959774300000251

Mellars, P.A. (1993), 'Archaeology and modern human origins in Europe', *Proceedings of the British Academy*, 82, 1–35.

Mellars, P.A. (1995), *The Neanderthal Legacy: an archaeological perspective* (Princeton NJ, Princeton University Press). https://doi.org/10.2307/j.ctt16xwbv4

Mellars, P.A. (1996), 'The emergence of biologically modern populations in Europe: a social and cognitive "revolution"?', *Proceedings of the British Academy*, 88, 179-202.
Mellars, P. (1999), 'The Neanderthal problem continued', *Current Anthropology*, 40, 341–64. https://doi.org/10.1086/200024
Mellars, P.A. (2002), 'Archaeology and the origins of modern humans: European and Africa perspectives', *Proceedings of the British Academy*, 106, 31–47.
Mellars, P. (2004), 'Neanderthals and the modern human colonization of Europe', *Nature*. 432, 461–5. https://doi.org/10.1038/nature03103
Mellars, P. (2005), 'The impossible coincidence: A single-species model for the origins of modern human behavior in Europe', *Evolutionary Anthropology*, 14, 12–27. https://doi.org/10.1002/evan.20037
Mellars, P. (2006a), 'A new radiocarbon revolution and the dispersal of modern humans in Eurasia', *Nature*, 439, 931–5. https://doi.org/10.1038/nature04521
Mellars, P. (2006b), 'Going east: new genetic and archaeological perspectives on the modern human colonization of Eurasia', *Science*, 313, 796–800. https://doi.org/10.1126/science.1128402
Mellars, P. (2006c), 'Why did modern human populations disperse from Africa ca. 60,000 years ago? A new model', *Proceedings of the National Academy of Sciences*, 103, 9381–6. https://doi.org/10.1073/pnas.0510792103
Mellars, P.A. & Dark, P. (1998), *Star Carr in context: new archaeological and palaeoecological investigations at the early Mesolithic site* (Cambridge, McDonald Institute of Archaeological Research).
Mellars, P. & French, J.C. (2011), 'Tenfold population increase in Western Europe at the Neandertal-to-modern human transition', *Science*, 333, 623–7. https://doi.org/10.1126/science.1206930
Mellars, P. & Stringer, C. (eds) (1989), *The human revolution: behavioural and biological perspectives on the origins of modern humans* (Edinburgh, Edinburgh University Press).
Mellars, P.A., Wilkinson, M.R. & Fieller, N.R.J. (1980), 'Fish otoliths as indicators of seasonality in prehistoric shell middens: the evidence from Oronsay (Inner Hebrides)', *Proceedings of the Prehistoric Society*, 46, 19–44. https://doi.org/10.1017/S0079497X00009300
Mellars, P.A., Boyle, K., Bar-Yosef, O. & Stringer, C.B. (eds) (2007), *Rethinking the Human Revolution* (Cambridge, McDonald Institute for Archaeological Research).
Mellars, P., Gori, K.C., Carr, M., Soares, P.A. & Richards, M.B. (2013), 'Genetic and archaeological perspectives on the initial modern human colonization of southern Asia', *Proceedings of the National Academy of Sciences*, 110, 10699-704. https://doi.org/10.1073/pnas.1306043110
Milner, N., Lane, P., Taylor, B., Conneller, C. & Schadla-Hall, T. (2011), 'Star Carr in a Postglacial Lakescape: 60 Years of Research', *Journal of Wetland Archaeology*, 11, 1–19. https://doi.org/10.1179/jwa.2011.11.1.1
Richards, M.P. & Mellars, P.A. (1998), 'Stable isotopes and the seasonality of the Oronsay middens', *Antiquity*, 72, 178–84. https://doi.org/10.1017/S0003598X00086373
Rito, T., Vieira, D., Silva, M., Conde-Sousa, E., Pereira, L., Mellars, P., Richards, M.B. & Soares, P. (2019), 'A dispersal of *Homo sapiens* from southern to eastern Africa immediately preceded the out-of-Africa migration', *Scientific Reports*, 9, 4728. https://doi.org/10.1038/s41598-019-41176-3
Smith, P.J. (2010), 'Paul Anthony Mellars, from Swallownest to Cambridge: the Early Years', in *The Upper Palaeolithic in Global Perspective: Essays in Honour of Paul Mellars* (Cambridge, McDonald Institute for Archaeological Research), 9–34.
Stringer, C.B., & Andrews, P. (1988), 'Genetic and fossil evidence for the origin of modern humans', *Science*, 239, 1263–8. https://doi.org/10.1126/science.3125610
Ucko, P.J. (1987), *Academic freedom and apartheid: the story of the World Archaeological Congress* (London, Duckworth).

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