

Comments after four Decades of Research on the Middle to Upper Paleolithic Transition¹

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Abstract: *This paper discusses different models of the transition from the Middle to the Upper Paleolithic. While most of the current models for the movements of anatomically modern humans 'Out of Africa' are at least partially rejected for different reasons, the author suggests another scenario, according to which a movement out of Africa between 250,000 and 100,000 BP brought advanced but still pre-modern Homo sapiens into the Levant. At that time, people might have also spread beyond the Levant, in an arc north along the Levantine Coast and then eastward across the southern flanks of the Caucasus, as far east as southern Siberia. In this case, these African advanced early Homo sapiens might have continued to evolve on the same trajectory as those who remained in Africa, finally reaching an anatomically modern status about the same time as their African cousins. If so, the immediate origins of the explosion of "modern behavior" seen in Europe, but not in Africa, might be found at the contact between Eastern Europe and Western Asia.*

Keywords: *Middle Paleolithic, Upper Paleolithic, Transition, Africa, Western Asia, Europe, Neanderthals, Anatomically Modern Humans*

Anmerkungen nach vier Jahrzehnten Forschung zum Übergang vom Mittel- zum Jungpaläolithikum

Zusammenfassung: Der Beitrag ist die überarbeitete und erweiterte Textversion eines Vortrages, den der Autor am 13.05.2004 auf Schloss Hohentübingen gehalten hat. Verschiedene Modelle des Übergang vom Mittel- zum Jungpaläolithikum werden genannt, so für Europa der Vorschlag einer schrittweisen Entwicklung vom Moustérien mit Acheuléentradiation (MTA) Typ A über das MTA Typ B hin zum Châtel-perronien durch François Bordes und für die Levante die Definition des Emiréen als Übergangsindustrie zwischen dem späten lokalen Mittelpaläolithikum und einer frühjungpaläolithischen, heute als Ahmarien bezeichneten Industrie durch Dorothy Garrod, wobei Garrod noch einen Parallelverlauf menschlicher und kultureller Evolution annahm.

Wichtig in der Diskussion um den Übergang vom Mittel- zum Jungpaläolithikum ist das Out of Africa-Modell, das eine ausschließliche Entstehung anatomisch moderner Menschen in Afrika vor etwa 150-200.000 Jahren postuliert. Die Neandertaler, die nur außerhalb Afrikas angetroffen werden, spielen demnach keine Rolle in der Entwicklung moderner Menschen, eine Sicht, die durch genetische Untersuchungen scheinbar gestützt wird. Der Autor mahnt jedoch zur Vorsicht vor der allzu unkritischen Übernahme genetischer Daten und plädiert in jedem Falle für eine Gegenkontrolle mittels archäologischer Daten. Gegen eine pauschale Parallelisierung mittelpaläolithischer Industrien mit Neandertalern und jungpaläolithischer Industrien mit anatomisch modernen Menschen sprechen die Funde aus Skhul und Qafzeh in Israel. Hier wurden anatomisch moderne Menschen in eindeutiger Vergesellschaftung mit Moustérienartefakten angetroffen.

Eine andere, immer wieder kontrovers diskutierte Frage ist, ob anatomische Modernität von Anfang an auch kulturelle Modernität und modernes Verhalten impliziert. Damit hängt unmittelbar die Frage zusammen, ob Neandertaler über kulturelle Modernität und modernes Verhalten verfügt haben. Die Befunde für die frühen anatomisch modernen Menschen aus Afrika zeigen, dass anatomische Modernität nicht gleichbedeutend mit kultureller Modernität in vollem Umfang sein muss. Die reichen Zeugnisse kultureller Modernität im europäischen Aurignacien sind dagegen unbestreitbar, jedoch herrscht nach wie vor Unklarheit über die Herkunft seiner Träger. Der Nahe Osten, lange Zeit favorisiert, scheidet inzwischen

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aus, dagegen tritt der zentralasiatische Raum immer mehr in den Blickpunkt. Offensichtlich kamen die Träger des Aurignacien nicht direkt aus Afrika nach Europa, und wenn man davon ausgeht, dass das Aurignacien zum ersten Mal modernes Verhalten im vollen Umfang repräsentiert, so ist zu fragen, wann und wo die kulturelle Modernität entstand. Da sie offensichtlich nicht vor etwa 50.000 Jahren als Paket aus Afrika mitgebracht wurde, ist die Frage anzuschließen, welche Kultur die afrikanischen Auswanderer mit sich führten und auf welchen Wegen sie vordrangen. Die auf den meisten Karten angegebene Route durch Ägypten in die Levante wird in Frage gestellt, ebenso ein möglicher sogar bis nach Südsibirien. In einem solchen Falle könnte dieser ursprünglich afrikanische, fortgeschrittene frühe *Homo sapiens* sich in gleicher Weise fortentwickelt haben wie sein in Afrika verbliebener Vetter und schließlich etwa gleichzeitig die anatomische Modernität erreicht haben. Der plötzliche Ursprung voll modernen Verhaltens, wie er in Europa fassbar ist, aber nicht in Afrika, könnte dann an der Kontaktstelle zwischen Osteuropa und Westasien gefunden werden. Um dieses Szenario zu verifizieren, bedarf es jedoch noch der richtigen Menschenfossilien, vergesellschaftet mit der passenden materiellen Kultur, die in die richtige Zeit datieren.

Schlagwörter: Mittelpaläolithikum, Jungpaläolithikum, Übergang, Afrika, Westasien, Europa, Neandertaler, Anatomisch Moderne Menschen

Of all archaeological concerns, perhaps the transition from the Middle Paleolithic to the Upper Paleolithic has experienced the most dramatic shift in paradigm. Even more striking is that both the past and the present paradigms derived from non-archaeological perspectives. Both come from human paleontology, with an additional input from genetics for the most recent. Since these paradigms do not derive from archaeology, it might be suggested that archaeology cannot prove or disprove them. While this may well be the case, archaeology can certainly test whether specific implications of these models are reflected in the archaeological record. The problem is that the archaeological record is obtuse, at best, and single data sets are open to different interpretations, depending upon the accepted paradigm. The change in the understanding of the transition from the Middle to the Upper Paleolithic is a case in point.

During the 1950s, the paradigmatic framework for the transition was based on an acceptance of a unilinear evolution of hominids that went from Neanderthals to *Homo sapiens sapiens*, with an intermediate stage of "progressive" Neanderthals. At least two archaeological transitions were postulated and widely accepted. In Europe François Bordes (1958) proposed a developmental transition from the Mousterian of Acheulian Tradition (MTA), Type A, through MTA, Type B, and into the Châtelperronian (or Perigordian I). That is, from a clear Middle Paleolithic to a clear Upper Paleolithic, with its bone tools, ivory personal ornaments, and, of course, blade production. In the Levant, Dorothy Garrod (1951) defined the Emiran Industry that was transitional between the late, local Middle Paleolithic and assemblages that were then called the Levantine Aurignacian (but have since been recognized as Ahmarian). She even wondered in writing whether the people who made the Emiran would be physically transitional between the Skhul fossils and modern people. This idea of a linked transition, archaeological and paleontological, going hand in hand, remained accepted even after the recent radical shift to the "Out of Africa" paradigm.

The essential base of this paradigm is that anatomically modern people evolved in Africa, about 150,000 to 200,000 years ago, and only in Africa (Stringer 1998). Therefore, Neanderthals, now recognized only outside of Africa, played no role in human evolution, negating a crucial link in the old paradigm. While archaeological data cannot challenge genetic data, *per se*, there is sufficient uncertainty in the proposed dating of the genetic changes leading to anatomically modern people that archaeology, indeed, can and must test the often uncritically accepted implications derived from the genetic studies. From my point of view, the assumed exclusive and necessary co-association of modern anatomy and modern behavior is a case in point. This linkage has hardly been shown to be either exclusive or universal within the archaeological record. Thus, how did we, as archaeologists, arrive at such an assumed linkage?

When faced with such archaeological questions of how and when anatomically modern people got out of Africa, we have tended to accept the truth of the paradigm and fall back upon implicit assumptions that might help to "prove" its truth in archaeological, as well as in genetic, terms. Among the implicit assumptions we have used are 1) the long standing belief that culture type and physical type are directly linked – e.g., that Mousterian is the material culture of Neanderthals or that the Aurignacian was made by Cro-Magnons. We know better from Skhul and Qafzeh about the Mousterian (Vandermeersch 1992), while Cro-Magnon is only associated with late Aurignacian, but it is a hard assumption to fully abandon; and, 2) the generalized and marked differences between the Middle and Upper Paleolithic in one region (Southwestern France) are valid for all regions – in short, that a regional pattern can be, *a priori*, a universal pattern (Mellars 1996).

A third assumption, representing a socially responsible approach to viewing modern groups, first appeared as a reaction to Carleton Coon's (1962) 'Origin of the Races'. Essentially, it holds that as anatomical modernity is associated with modern, symbolically driven behavior today and symbolic behavior can be implied from early Upper Paleolithic European art, presumably made by anatomical moderns, then it is taken that all anatomically modern people have and had the same capacity for modern behavior, when ever and where ever they existed. While this point of view is probably necessary in this day and age, it does impose a very heavy burden on archaeologists to validate it with hard evidence. This position leads directly to the opposite understanding for people who were not anatomically modern – none ever had the capacity for modern behavior.

How have we, as archaeologists, responded to the African Genesis model of modern people and their uniquely modern behavior? Africanists began frantically to look for evidence of modern behavior that would pre-date comparable behavior in Europe, but with only unimpressive success (McBrearty and Brooks 2000; Ambrose 2002). Europeanists, on the other hand, began to argue against any archaeological sign of modern behavior in Middle Paleolithic context, even when the same signs in Upper Paleolithic contexts were enthusiastically accepted as proof of modern behavior (e.g. burials, ivory carving, even blade production that means next to nothing in either context) (Bar-Yosef and Kuhn 1999). In addition, we have looked around and found little evidence for any movement out of Africa at the crucial time (50,000/40,000 BP) (Marks 1992) but, in spite of this, have enthusiastically covered maps of the Mediterranean region with arrows showing routes out of Africa (e.g. Derevianko 2005). Our single minded determination to link symbolically driven behavior with only anatomically modern people, and with all anatomically modern people, has led to some strange interpretations.

Although there are many examples of negating a symbolic meaning to Neanderthal associated elements that would be fully acceptable if found with modern people, perhaps the least convincing is the widely known "explanation" of why the typically Upper Paleolithic (read "modern") elements in the Châtelperronian do not indicate modern symbolic behavior but only meaningless imitation.

The problem in Africa is even greater. With anatomical moderns there for a good 100,000 years prior to any evidence for behavior different from non-moderns, it seems to undercut the notion that *all* anatomically modern people had the same capacity for modern behavior. This resulted in the idea that the capacity for modern behavior was not linked to anatomical modernity, *per se*, but to a change within the already modern anatomy that made modern behavior possible at about 50,000 BP (Klein 1998). Unfortunately, to date, Africanists have not found any "explosion" of modern behavior at 50,000 BP (McBrearty and Brooks 2000), comparable to that seen some 15,000 years later in Europe, with the posited arrival of the Aurignacians.

While there is no question about the symbolically rich material culture of the European Aurignacians, their origin is far from clear. The Near East has been suggested (Mellars 1996) but the related industries there are later than those in Europe. Others (Otte and Kozłowski 2001) have suggested an Asian origin, which certainly has more potential of being correct than does a Near Eastern one. Certainly, the arrows notwithstanding, Aurignacians did not come directly from Africa where there is no hint of anything resembling the Aurignacian, at any time. Thus, if the Aurignacian represents the first "modern behavior," from where did it come and when did it arise? If they did come out of Africa around 50,000 BP, what was their "archaeological culture" and what route did they take?

Judging by the size of the arrows pointing out of Africa on most maps, a route through Egypt into the Levant would seem to be the expected path of migration. Unfortunately, there is no evidence for Northeast African/Levantine connections at 50,000 BP. The earliest Levantine Upper Paleolithic, the Ahmarian, develops out of a local Initial Upper Paleolithic (IUP), the Emiran, and shows neither African nor Aurignacian traits, although the northern coastal Early Ahmarian does have pierced shells and some simple bone tools (Kuhn et al. 2003). The Aurignacian does appear in the Levant, but only at ca. 32,000 BP and, then, it is intrusive from the north (Bar-Yosef 2000).

Other potential routes out of Africa include one across the Straights of Gibraltar, although there is no evidence for any movements out of Africa that way in the past 500,000 years. Another possible route was from East Africa into the Arabian Peninsula. While possible, there is, as yet, no dated evidence in the Arabian Peninsula for any such movement but both recent genetic studies (Quintana-Murci et al. 1999) and archaeological work (Rose 2006) suggest that such a route was probable. However, if such a movement or movements took place, they are seemingly unrelated to "modern behavior".

So, if there is no evidence for movement out of Africa at the expected 50,000 BP date, when did we leave Africa? First, a focus on trying to find a movement out of Africa at 50,000 BP, while appealing, may be irrelevant to the broader question. There have been many, many movements out of Africa, beginning with the spread of *Homo erectus* into Asia at ca. 1.8 million years (Dmanisi), at 1.4 million years into the Levant ('Ubeidiya), at 500,000 years into the Iberian Peninsula (see Otte 1996), at 350,000 years into the

Levant (Evron quarry), and, again, at 90,000/100,000 BP into the Levant (Qafzeh) (Stringer 1998). The Levant, in fact, saw many movements out of Africa but few can be traced beyond the Levant. Granted, the Levant is not far from Africa but there was no environmental barrier between the Levant and the rest of the Old World that kept people from moving northward. In fact, the most primitive of the folk who left Africa at 1.8 million years kept going, all the way to East Asia.

Given this tendency for movements into the Levant prior to the Last Glacial, as well as the absence of any evidence for such a movement around 50,000 BP, perhaps a different scenario might be considered. In this scenario, a movement out of Africa between 250,000 and 100,000 BP brought advanced but still pre-modern *Homo sapiens* into the Levant. The Zuttiyeh skull might well represent such a form – while Bernard Vandermeersch (1992) considers it early *Homo sapiens*, Chris Stringer (1998) considers it early Neanderthal. One wonders what Stringer and other supporters of an Out of Africa-model would have called it if it had been found a mere 400 km to the southwest, in Egypt. Aside from Zuttiyeh, we have no hominid fossils in the Levant until the moderns at Skhul and Qafzeh dated to ca. 90,000/100,000 BP (Vandermeersch 1992). We simply do not know who made the Early Levantine Mousterian, the Hummalian or, for that matter, the similar blade/elongate point oriented Mousterian found throughout the southern Caucasus and into southern Siberia, not to mention in Russia and the Crimea. While Neanderthals are clearly associated with the Eastern Micoquian (Chabai et al. 2004) and with the flake oriented Middle Paleolithic in the Zagros (Trinkaus 1983), they appear only after ca. 60,000 BP in the Levant (Bar-Yosef 1994), and none has ever been found with the Eastern European Mousterian (Chabai et al. 2004).

Might it have been the case that a movement out of Africa of early *Homo sapiens* between 250,000 and 100,000 BP spread people beyond the Levant, in an arc north along the Levantine Coast and then eastward across the southern flanks of the Caucasus, as far east as southern Siberia? If so, might not these African advanced early *Homo sapiens* have continued to evolve on the same trajectory as those who remained in Africa, finally reaching an anatomically modern status about the same time as their African cousins? If so, the immediate origins of the explosion of "modern behavior" seen in Europe, but not in Africa, might be found at the contact between Eastern Europe and Western Asia. Now all we need is to find the right fossils associated with the right material culture and dating to the right time to make this scenario viable.

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