

Neanderthal Lifeways, Subsistence and Technology: One Hundred Fifty Years of Neanderthal Study

Nicholas J. Conard and Jürgen Richter (eds.)

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The diversity and intricacy of current analyses and the advancement of our understanding of the chronology, paleobiology, and cultural adaptations of the Neanderthals is quite remarkable when we consider that it has been but 150 years since the first Neanderthal fossils were recovered from the now famous Neander Valley outside Düsseldorf in western Germany. Furthermore, our vision of the cultural and cognitive capacities of these Pleistocene human groups has itself evolved with the refinement of our study methods, excavation techniques, and realignment of our epistemological stances. In fact, we have gradually, but not without some resistance, passed from the image of a species whose *lifeways* were commonly viewed as being 'solitary, poor, nasty, brutish and short' to one that has come to appreciate the richness and variability of Neanderthal material culture, social organization, or even symbolic manifestations. As Gamble succinctly resumes (this volume, p. 157), "the Neanderthals of 2006 are very different than those of 1956 and 1906." The papers collected in this volume are the product of an international and multidisciplinary symposium held in Bonn, Germany, during 2006 to commemorate the 150th anniversary of the discoveries from the eponymous valley of Neander. The chapters within coincide with another volume that resulted from the same conference, *Continuity and Discontinuity in the Peopling of Europe*, edited by B. Weniger and S. Condemi, which unites a series of complementary articles treating aspects of Neanderthal genetics and more general paleobiology. This review loosely follows the editor's arrangement of the papers while focusing on the more salient contributions from each of the five sections.

The first set of articles focus on chronological elements of the Neanderthal occupation of Western Europe including a welcomed revision of the chronology of the early German Middle Paleolithic based on a reevaluation of loess sequences, intercalated tephra markers, and new radiometric determinations from a series of open-air sites (J. Richter et al.) together with more site-specific analyses including a series of nearly 50 Middle Paleolithic find localities of different types, some stratified, from an enormous lignite mine north of Cologne (Uthmeier et al.). Interestingly, eight of these sites are associated with fauna typical of mammoth steppe landscapes; although the agent responsible for their accumulation is 'anything but self-evident' the occupations are placed by the authors to MIS 4. Should this indeed prove

to be the case, it would once again highlight the remarkable adaptability of Neanderthal populations who were able to exploit relatively inhospitable northern latitudes during a climatically rigorous period of the last glaciation. This section is rounded out by a short contribution (D. Richter) describing a new thermoluminescence technique (orange-red SAR) requiring a significantly smaller (mg versus grams) sample size. So far tested against just three previously TL-dated sites, this promising development not only alleviates the limitations of appropriate sample size, but presents numerous interesting applications perhaps allowing micro-contexts such as successive hearth features or other burning episodes generally associated with minuscule remains to be reliably dated.

Intimately tied to issues surrounding the chronology of the Middle Paleolithic is the dramatic and often changeable environmental background in which Neanderthal populations evolved, their societies developed, and subsistence practices unfolded. The second, albeit rather short, section focuses on Neanderthal subsistence and raw material procurement, although these two vital elements are touched upon in numerous other contributions throughout the volume. There is now overwhelming evidence that Neanderthals were very capable and occasionally selective hunters focusing, by obligation or not (even specializing?), on single species or mammals of specific sizes (Costamagno et al. 2006; Rendu et al. 2012). The above studies and many more have led to the steady rehabilitation of clumsy Neanderthal scavengers and replaced it with an image of accomplished and flexible hunters. Bocherens reviews the isotopic evidence for Neanderthal paleoecology, much of which has been published elsewhere, and compares it with reconstructions based on zooarcheological analyses, putting discordances between the two down to differences in meat yield or carcass transport. The conclusion that Neanderthals focused on large bodied mammals finds general support in Gaudzinski-Windheuser and Roebrucks' concise synthesis of the subsistence record and environmental backdrop for the Eemian interglacial in Northern Europe. Although still partial, the available information indicates that Neanderthals could free themselves from open environments, expanding their range to take on the "challenge of the forest [environments of northern latitudes]."

Several decades of theoretical development, particularly *chaîne opératoire* and 'organization of technology' ap-

proaches to lithic technology have significantly enhanced our understanding of Neanderthal technological capacities and organization. Kuhn's contribution, which functions somewhat as an introduction to the third section of the volume focused on 'Neanderthal Cognition and Technological Knowledge,' presents an excellent and cogent review of the economic dimensions of tool production and use with particular focus on raw material economics. The conclusion that in order to move beyond single assemblage/site scale analyses it is necessary "to develop models of internally differentiated forager groups" (p. 102), citing agentive or social theory based approaches as possible means for investigating intra-assemblage variability, links up nicely with Gamble's (Chapter 15) discussion of 'Neanderthal society'. Although, it must be said that despite variable success (see for example articles in Gamble and Porr 2005; Dobres 2001), the applicability of these types of approaches, however stimulating, still requires further elaboration concerning their heuristic potential and verifiability. The oft-cited and occasionally over-emphasized epistemological divide between *chaîne opératoire* and those that stress issues surrounding artifact economy and complexity (see Tostevin 2011 for an excellent examination of this issue) has, however, never been more clear than it is in the three following chapters dedicated to site specific case studies of Neanderthal technological expressions in Western Europe. Finally, Uomini's (Chapter 14) discussion and review of the material culture and skeletal evidence for handedness in Neanderthals, while interesting, seems slightly out of place in this particular volume and may have been better placed in the complementary edition.

Of course no volume concerning Neanderthals is complete without a discussion of their demise and ultimate replacement by anatomically modern human populations. Conard (Chapter 19) employs a form of 'eco-cultural niche' perspective, an approach that is growing in popularity (e.g., Banks et al. 2011), using the archaeological record from the Swabian Jura in Southwestern Germany as a proxy for evaluating behavioral differences between these two populations in Southwestern Germany. Despite the new approach and cogent exposé of the relevant material, as well as the careful avoidance of the terms 'superiority' or 'behavioral capacity,' the reader is left somewhat with the impression of 'a rose by any other name.' As the debate continues concerning the catalysts and demographic or cultural processes underlying the emergence of the Upper Paleolithic and the timing and significance of the so-called 'transitional' industries found across Western and Central Europe (e.g., Châtelperronian, Uluzzian, Bohunician, etc.), the preceding Middle Paleolithic techno-complexes or 'traditions' from which these industries may or may not have emerged remain somewhat neglected. Peresani (Chapter 21) presents a well-elaborated synthesis of the Late Middle Paleolithic record in the Italian Alps and the ways in which Pleistocene populations responded to particular ecological conditions and resources distributions, while Moncel's (Chapter 22) more long-term perspective into changing technological behavior in the archeological record of the

Middle Rhône Valley traces a regional overview of the Middle Paleolithic across MIS stages 9 through 3. Finally, Cortés Sanchez et al.'s (Chapter 20) unfortunately very brief presentation of the archeological sequence from Bajondillo Cave seems to lend still further support for the very late survival of Neanderthal populations in Southern Iberia. This final collection of papers once again highlights the absolute necessity of refocusing attention on technological and cultural patterns of the 'Late' or 'Final' Middle Paleolithic in order to add more depth to our models concerning the complicated matter of the 'transition' and eventual disappearance of Neanderthals.

In editorial terms, several chapters could have benefited from a much more thorough editing of the English which at times hinders the reader's ability to fully appreciate the material discussed and the conclusions drawn. Furthermore, a fair number of illustrations lack a certain refinement or clearly ought to have been printed at a higher resolution, somewhat tarnishing the overall high-quality production, especially in view of the volume's price (over \$100). Nonetheless, what emerges from this volume incorporating different regions and scales of analysis is quite simply that in order to comprehend and properly conceive of Neanderthal material and behavioral variability we require equally wide ranging perspectives that approach these subjects at different temporal, geographic, and material scales—in other words—we need both the trees and the forest. The interest of this volume lies in its combination and juxtaposition of site specific and regional analysis whose occasional brevity or lacunae appear simultaneously as both drawbacks and future research perspectives.

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