Transitions in Prehistory: Essays in Honor of Ofer Bar-Yosef

John J. Shea and Daniel E. Lieberman (eds.)
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John Shea and Daniel Lieberman brought this landmark volume together to celebrate the lifework of Ofer Bar-Yosef. It reflects his wide range of research interests, and his career as archaeologist that spanned several decades, and continents. Yet, the editors are correct in their claim that there is little in the volume that can be considered a eulogy for a still active career. *'Transitions in prehistory'* is a recurring theme in Ofer Bar-Yosef's body of work. For this reason, the contributions from collaborators and students focus mainly on differences between chronologically sequential archaeological and/or paleontological assemblages. The 22 papers are assembled in three, loosely related and sometimes overlapping, thematic groups: 1) transitions in the Pleistocene, 2) transitions in the Holocene, and 3) methodological and theoretical transitions.

In the first paper Daniel Lieberman, David Pilbeam, and Richard Wrangham tackle the transition from *Australopithecus* to *Homo* in the typical 'Harvard-dogma.' They attempt to integrate the fossil and archaeological evidence, combining it with what they call 'reasonable conjectures,' to consider selective processes that might have favored the transition. In short, they assume the transition depended on a new strategy for acquiring and using energy in open habitats. Mindful of the lack of data available to test their model, they hope it to be a catalyst for further speculation. Leaving the expansive African landscape, we are introduced to the Hula Basin in northern Israel. Craig Fibel, Naama Goren-Inbar, and Mitia Frumin present historical records on long-term landscape evolution in this region—known for its hominin occupations during the Acheulean, Mousterian, Upper Paleolithic, and Epipaleolithic. Their approach allows further understanding of landscape diversity and dynamics. It demonstrates how the Hula landscape responded to natural environmental dynamics, and small changes introduced by humans, and suggests that the historical approach can be useful for reconstructing aspects of the paleoenvironment relating to prehistoric occupations. In her paper, '*The wisdom of the aged and Out of Africa 1*', Martha Tappen considers a series of hypotheses that hinge on the evidence preserved and identified at Dmanisi, Georgia. She remains unconvinced of climatic explanations for the northward spread of African biomes, and does not consider the brain or body size of the Dmanisi specimens a stepwise change. Rather, she suggests that they had primary/early access to animal carcasses, and more individuals survived into old age, increasing population growth, group cohesion, and knowledge accumulation.

Steven Kuhn explores the widespread and long-lasting complex adaptive systems represented by the archaeological record of the Middle Paleolithic. He envisages that Middle Paleolithic hominins responded to the demands of 'large-animal-focused economies' through social means and adjusting patterns of cooperation, instead of through technological change. This interpretation, and his rejection of the 'gradual accretion of technological knowledge' model, may have implications for how we view differential technological elaboration amongst contemporary Middle Stone Age populations in Africa or later Upper Paleolithic groups. In a logical follow-up, John Shea 'bridges the gap' by examining behavioral changes among *Homo sapiens* populations across the Middle-Upper Paleolithic transition in the east Mediterranean Levant. He proposes a new hypothesis where differences in settlement, subsistence, technological organization, and sociality originated in intensified, intra-specific competition among African *Homo sapiens* populations after ~75 ka. According to him, these populations spread into the Levant after ~45 ka, bringing with them essential, species-specific adaptive strategies. Boldly, he provides ways to prove him wrong—stimulating further research. Mary Stiner uses evidence from faunal mortality patterns to investigate the antiquity of large-game hunting in the Mediterranean Paleolithic. She focuses on prey age selection, suggesting it lends credence to the idea of radical shifts in human ecology during the late Epipaleolithic, perhaps resulting in the demise of Paleolithic hunting and gathering lifeways in some areas.

In the seventh paper of the volume, Radu Ioviţă re-evaluates connections between the Early Upper Paleolithic of northeast Africa and the Levant. He assesses technological differences between Dabban and Emiran assemblages from Haua Fteah and Ksar 'Akil, posing two questions. First, can either of the two sites be recognized as a source for technological development in the other? Secondly, do similarities warrant assuming a migration from one place to another? In both cases, the evidence does not seem to support the hypotheses. Despite a relative simple picture of population movements, the cultural landscape appears more complex. Moving eastward, Daniel Adler explores cultural, behavioral, and biological discontinuities at the Middle-Upper Paleolithic transition in the southern Caucasus. He shows that, between ~38–34 ka, the region experienced a replacement event in which its traditional inhabitants, the Nean-

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derthals, disappeared in the face of expanding modern human populations. Neanderthal-modern human coexistence was, therefore, short-lived in the region. The major evolutionary edge, allowing modern populations to grow at the expense of Neanderthals, is interpreted as a cultural one—their ability to establish larger extended social networks and to exploit larger territories. Gilbert Tostevin chose to emphasize the importance of process and historical event (as epistemologically valid method suitable to the dataset) in the study of the Middle-Upper Paleolithic transition. He argues that this dual approach can be tapered from a regional scale to that of the smallest units of contextual association—the artifact assemblage. Furthermore, he suggests the approach can help investigate what made modern humans different enough from Neanderthals so that the former survived the Pleistocene while the latter did not.

In a succinct, yet comprehensive overview (with many informative maps) Nigel Goring-Morris, Erella Hovers, and Anna Belfer-Cohen discuss the dynamics of Pleistocene and Early Holocene settlement patterns and human adaptations in the Levant. The emerging picture hints at more complex and dynamic patterns and relationships between dispersing, migrant, and local endemic groups than generally understood. The authors propose that, given the inevitable complexity of human survival and adaptations throughout the Pleistocene, it is not surprising that agriculture first emerged in this region. Shifting our focus from the Old World to Sahul, Nicola Stern explores the potential of the archaeological record of this southern region for decoding behavioral and evolutionary transitions during the Middle-Upper Paleolithic in Eurasia. She sees a misinterpretation of the behavioral information, contained in the Pleistocene record, as explanation for the perceived disparity between the fossil and archaeological records of modern human origins. As possible solution she suggests: a) tracing the development of cognition, b) understanding the relationship between cognition and the material record, and c) understanding how changes in cognition relate to behavioral and anatomical change.

The paper by Cheryl Makarewicz and Noreen Tuross introduces one of the earliest animal management strategies—fodder provision. They examine diachronic changes in goat foddering practices from the Late Pre-Pottery Neolithic B context at Basta, Jordan. Using multiple bone collagen isotopic analysis, including organic oxygen, the study shows that changing environmental conditions were not a contributing factor to shifts in goat bone collagen carbon and nitrogen isotopic values. They go on to suggest that organic oxygen isotopes, obtained from archaeological faunal collagen, may offer a new approach to improve understanding of prehistoric human diets and paleoenvironments. In a speculative paper François Valla looks at the Epipaleolithic and the Early Neolithic assemblages of two Levantine sites, 'Eynan and Netiv Hagdud, ~10 ka. A structuralist approach is used to consider various aspects of the material culture, looking for possible interactions between the villagers and their relationship to the world they live in. The outcome suggests that more modifications occurred in interactions between people and their external world than in inter-personal relations, and that changes appear to favor hierarchical rather than egalitarian interaction. He surmises that this eventually leads to a new system of self-identification based on 'analogism' in the process of elaboration. Yosef Garfinkel provides the reader with a short, but clear, account of the material culture sequence for the transition from the Neolithic to the Chalcolithic in the southern Levant. His periodization table and the provided radiometric dates are useful for situating this transition in time and space. Isaac Gilead follows up with a more detailed presentation, focusing on the culture history of the Late Sixth-Fifth Millennium in the same region using typo-technological observations combined with radiocarbon dates. He suggests that the Chalcolithic is strongly related to the Ghassulian Culture—featuring copper metallurgy as an attribute—and that the transition between the Neolithic and the Chalcolithic took place during one or two centuries before the Ghassulian started.

The Mesolithic of the Aegean Basin is the wide-ranging focus of the paper by Janusz Kozłowski and Małgorzata Kaczanowska. They investigate the Pre-Neolithic settlement of the Aegean Islands and its role in the Neolithization of southern Europe, suggesting that environmental changes and more opportunistic hunting strategies caused diminished mobility of population groups at the Pleistocene/Holocene boundary. This resulted in greater isolation of groups, especially in the Balkans where hermitic communities formed. During the Early Mesolithic these groups did not readily adopt general 'European' cultural and stylistic trends, but preserved Late Paleolithic stone knapping traditions. With Metin Eren, we enter the New World. He discusses Paleoindian stability during the Dryas in the North American Lower Great Lakes, ~11–10 ka. His data-loaded paper (pollen collected from 60 sites and archaeological data from over 30 sites) demonstrates that, even though it may be expected as a result of dramatic climate change during the late Pleistocene, there is a lack of major change in Paleoindian behavioral/technological adaptations.

"*Diagenetic transformations: deciphering the archaeological record of prehistoric caves*" is a useful method paper by Steve Weiner. He shows that, based on data obtained from sites such as Kebara and Hayonim, diagenetic processes can be highly variable and particularly severe in caves that are occupied by birds, bats, and other animals. Here the main driving force, causing chemical alterations in the archaeological record, is the degradation of guano shortly after burial. Archaeologists are urged to understand site diagenetic transformations in order to assess the completeness of a cave's archaeological record. Staying with the theme of soil science, Paul Goldberg, Liliane Meignen, and Carolina Mallol demonstrate the importance of geoarchaeology and contextual analyses in the study of transitions and site formation processes. Geological analyses allow assessment of whether the context is favorable or not for preserving the integrity of a given assemblage. However, results should ideally be complemented with contextual analyses of lithic

artifacts, such as the vertical distribution of refits. Thought-provokingly, they illustrate that many so-called transitional levels at important archaeological sites are almost certainly the result of post-depositional processes.

Lamberg-Karlovsky turns his critical gaze towards Vere Gordon Childe and the concept of revolution. Readers are provided with a historical and political review of the intellectual framework that Childe promoted to understand the Neolithic and Urban Revolutions. He suggests that central to Childe's framework of historical change were the concepts of 'revolution, progress and rationality,' put forward within a (sometimes skewed) Marxist framework. He also warns of a new scepter haunting eastern Europe in the form of a 'velvet revolution'—striving for a civil society beyond the reach of 'authoritative concepts' that shackles the human spirit. In his exploratory essay, "*Pattern and technology: why the* chaîne opératoire *matters*," Michael Chazan wishes to develop the idea that 'pattern' underlies many aspects of human culture; including language, music, and technology.' He provides anecdotes about modern technology and ritual, and develops an argument for pattern being core to the concept of *chaîne opératoire.* Finally, he expands the focus to show the role of pattern in language and music, and introduces selected cognitive science literature, suggesting potential relevance to the interpretation of archaeologically visible technical actions. Aaron Stutz completes the volume with his comparative approach to the nature of transitions in the Stone Age. For him, transitions are essentially phase changes in the systems according to which societies habitually extract energy from the environment and invest it in reproduction, growth, and maintenance. Thus, the study of prehistoric transitions facilitates a potentially important interdisciplinary meeting between evolutionary ecology and demography. He suggests high-resolution historical data, such as those available for the Industrial Revolution, may be helpful to evaluate models of inter-generational transformation and family formation in some Stone Age populations, e.g., the Natufian. He admits the evaluation of some predictions may be challenging using archaeological analysis, or even impossible to test, and that much work remains.

Reviewing an edited book with such a wide thematic range is always a challenging task. A single review/er can seldom do justice to all the topics or authors represented, thus any omissions or emphases are subjective and do not automatically reflect highlights or shortcomings in the book. I aimed to provide a concise overview of what readers can expect between the sturdy covers, but critical reviews of all the papers were not possible. On the whole, I do not see the book as intended for the casual reader. Rather, it is a decidedly scholarly work that continues Ofer Bar-Yosef's tradition of empirical research and invigorating debate. The geographical regions, forming the various backdrops for the papers, are almost all hotspots for current research and discourse. It provides something of interest and/or value for archaeological theorists, paleoanthropologists, behavioral ecologists, zooarchaeologists, and stone tool specialists, to mention but a few. My main criticism is that, because the book consists of strongly individualistic papers (rather than integrated chapters), written by subject or discipline specialists, there are noticeable differences in quality and quantity of data/image presentation, and in jargon and readability. From a general reader's point of view, it could have benefited from some standardization, more overview maps, and possibly a glossary to clarify jargon and region/phase specific terminology. Refreshingly, and true to the editors' promise (although unintended), there is little or no fashionable postmodernism between the covers of this robust volume. Rather, the book mostly portrays a strong custom of respect for hard-won evidence. Although not an exhaustive survey of important transitions, it provides provocative ideas with current global relevance, for those involved or interested in the research of human prehistory.