

# Working Memory and the Evolution of Modern Thinking

Wenner-Gren Symposium Supplement 1

by Leslie C. Aiello

“Working Memory and the Evolution of Modern Thinking” is the 139th numbered Wenner-Gren Symposium and the 168th symposium in the overall Wenner-Gren symposium series.<sup>1</sup> The symposium was organized by anthropologist Thomas Wynn and psychologist Frederick Coolidge and held March 7–14, 2008, at Fortaleza do Guincho, Cascais, Portugal. Its purpose was to investigate the hypothesis that working-memory capacity evolved over the course of human evolution and that its final enhancement in the recent past enabled the rapid expansion of modern humans at the expense of more archaic hominins.

Working memory, the ability to hold information in attention and process it, has been the focus of considerable research in the cognitive sciences but has received relatively little attention among anthropologists. This symposium brought together cognitive scientists involved in the study of working memory with paleoanthropologists studying human evolution to discuss and debate issues around the evolution of working memory and its manifestation in the human evolutionary record. (Participants are shown in fig. 1.)

Although there was no general agreement on the nature of working memory, there was consensus on the importance of an explicit cognitive theory such as working memory to generate appropriate tests of cognitive development. For example, all agreed on the importance of expanding the archaeological evidence of modern human cognition from, say, the presence of blades or personal ornamentation to features such as hafting, complex sequences of tool production, remotely operated traps, and colonization of oceanic islands.

This symposium builds on earlier Wenner-Gren Symposia that have explored human cognitive and behavioral evolution,

including *Tools, Language and Cognition in Human Evolution* (Gibson and Ingold 1993) and *Roots of Human Sociality: Culture, Cognition and Interaction* (Enfield and Levinson 2006). The foundation also has a long history of symposia on various aspects of human and primate evolution including, among many others, *Social Life of Early Man* (Washburn 1961), *Background to Evolution in Africa* (Bishop and Clark 1967), *Earliest Man and Environments in the Lake Rudolf Basin* (Coppens et al. 1976), and *Phylogeny of the Primates: A Multidisciplinary Approach* (Lockett and Szalay 1975).

## References Cited

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1. The numbering system began with the first symposium held at Burg Wartenstein Castle in 1958 (the “International Symposium on Current Anthropology” organized by Sol Tax). During the castle years only those symposia actually held at the castle were numbered. After the sale of the castle in 1980, the symposia held elsewhere continued the numbered sequence. There were 31 nonnumbered symposia held between 1952 and 1986.



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Figure 1. Participants in the “Working Memory and the Evolution of Modern Thinking” symposium. Seated from left: April Nowell, Anna Belfer-Cohen, Alexandra Sumner, Lyn Wadley, Leslie Aiello, Fatima Pinto (Wenner-Gren staff), Miriam Haidle. Standing from left: Francisco Aboitiz, Stanley Ambrose, Rex Welshon, Tom Wynn, Eric Reuland, Matt Rossano, Randall Engle, Fred Coolidge, Iain Davidson, Manuel Martín-Loeches, Philip Barnard. Not pictured: Emiliano Bruner.