ORIGINS OF LANGUAGE INFERRED BY COMPARATIVE (HUMAN VS BABOON) EXPERIMENTS ON SEQUENCE LEARNING

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Sequence learning plays an important role in human language. Therefore, determining how this ability evolved within the primate phylum is important for understanding the evolution of language. Here we present a series of experiments in which the performance of humans (Homo sapiens) and baboons (Papiopapio) were compared in serial response-time tasks involving the learning of various sequence structures on touch screens. This set of experiments tested the ability (1)to learn the transitional probabilities of items occurring in sequences, (2) to learn and process nonadjacentdependencies, and therefore to know that event A is followed by event B with intervening events between them, (3) to abstract different types of the sequence structures of various lengths, beyond the learning of exemplars. Altogether, results demonstrate that many aspects of sequence learning are shared by the two species, including the ability to process non-adjacent dependencies. Results however also highlight critical differences between the species, especially when the task required the learning of long- (up to nine items) sequences which imposed importantworking memory loads.We conclude from these results that more extensive comparative investigations of working memory are needed to complete our understanding of language evolution.