The role of psychological vs. behavioral approaches to studying the evolution of cognition

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Abstract

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The promise of evolutionary psychology is its being a means to identify and explain the origins of the *computational features* of psychological mechanisms and not merely behavioral dispositions or strategies (as in behavioral ecology). However, independent psychological and behavioral approaches to the evolution of cognition work face difficulties, including that psychological mechanisms cannot be straightforwardly predicted from the EEA, and that behavioral dispositions/strategies need not be adaptations in their own right.
The solution I suggest is to start such work at the behavioral level, and use that work as the basis for discoveries at the psychological level. This requires scientists to identify those behavioral strategies which require traditional adaptationist, cultural evolutionary or individual learning approaches. For various reasons, this choice must be "bootstrapped" during the course of work on those strategies, starting by using some initial clues to make a best guess at the appropriate approach. Should genuine behavioral adaptations be discovered, these can suggest evolutionarily and developmentally independent "chunks" of the mind responsible for them, and partial *computational descriptions* for those "chunks", the first step in describing a psychological mechanism. The evolutionary history of the behavioral adaptation is also *part* of the evolutionary history of the responsible mechanism(s). Socially and individually learnt strategies can help scientists identify the processes (and hence learning mechanisms) that acquired them; the nature of those processes can then help determine how those mechanisms came to evolve. Some important work would still remain, however, to fully describe psychological mechanisms and their evolutionary history.

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