



## Seewiesen Colloquia

Speaker invited by: Simone Pika

Thursday, October 04, 2012, 13h, House 4, Lecture Room

## Associative Learning and Animal Cognition

Prof. Anthony Dickinson  
University of Cambridge

Associative learning plays a variety of roles in the study of animal cognition from a core theoretical component to a null hypothesis against which the contribution of cognitive processes is assessed. Two developments in contemporary associative learning have enhanced its relevance to animal cognition. The first concerns the role of associatively activated representations, whereas the second is the development of hybrid theories in which learning is determined by prediction errors, both directly and indirectly through associability processes. However, it remains unclear whether these developments allow associative theory to capture the psychological rationality of cognition. I argue that embodying associative processes within specific processing architectures provides mechanisms that can mediate psychological rationality and illustrate such embodiment by discussing the relationship between practical reasoning and the associative-cybernetic model of goal-directed action.

### Who is Anthony Dickinson?

1971 University of Sussex. D.Phil.

1971 Postdoctoral Research Fellow, Department of Experimental Psychology, University of Sussex.

1977 University Demonstrator, University of Cambridge.

1978 University Lecturer, University of Cambridge.

1994 University Reader in Comparative Psychology, University of Cambridge.

1999 Professor of Comparative Psychology, University of Cambridge.

### Selected publications:

- A. Dickinson. Associative learning and animal cognition. *Philosophical Transactions of the Royal Society B*, 2012, 367, 2733-2742.
- A. Dickinson. Goal-directed behavior and future planning in animals. In R. Menzel and J. Fischer (Eds.) *Animal Thinking: Contemporary Issues in Comparative Cognition*, Strüngmann Forum Report, vol. 8, pp. 79-91, 2011, J. Lupp, series ed. Cambridge, MA: MIT Press.
- S. de Wit & A. Dickinson. Associative theories of goal-directed behaviour: a case for animal-human translational models. *Psychological Research*, 2009, 73, 463-476.
- A. Dickinson. Why a rat is not a beast machine. In L. Weiskrantz & M. Davies (Eds), *Frontiers of consciousness*. Ch 10. pp 275-288. 2008 Oxford: Oxford University Press.