

THE HIPPOCAMPUS IN EVOLUTIONARY PERSPECTIVE

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Recent findings challenge the view that the hippocampal cognitive map is fundamentally spatial. In the first part of this talk I will consider whether the hippocampus is part of a domain general or domain-specific system. Did it, in other words, evolve in response to selective pressures imposed by spatial conditions of the environment, or did the pressure come from the need for "relational" binding in general? In the second part of the talk I will discuss the longitudinal axis of the hippocampus, which supports spatial maps of different "scales". What is the function of this multi-scale system, and did all scales evolve simultaneously? Both of these issues raise questions that can be approached from a comparative perspective, and I will close by suggesting some possibilities.