

Group 1: Project 4

1) Implement the cortico-hippocampal model of Gluck & Myers (1993) and show how it accounts for the effects of sensory preconditioning on learning (Figure 15) and discrimination (Figure 16).

2) Simulate the immediate shock deficit (treating it as a form of sensory preconditioning) and the effect of hippocampal lesions (Rudy et al., 2002).

3) Discuss the limitations of this theory in light of recent data (reviewed by Fanselow, 2010).

References:

Fanselow MS. (2010). From contextual fear to a dynamic view of memory systems. *Trends in Cognitive Sciences*, 14, 7–15.

Gluck, M.A. & Myers, C. (1993). Hippocampal mediation of stimulus representation: A computational theory. *Hippocampus*, 3, 491-516.

Rudy, J.W., Barrientos, R.M., & O'Reilly, R.C. (2002). Hippocampal formation supports conditioning to memory of a context. *Behavioral Neuroscience*, 116, 530–538.