

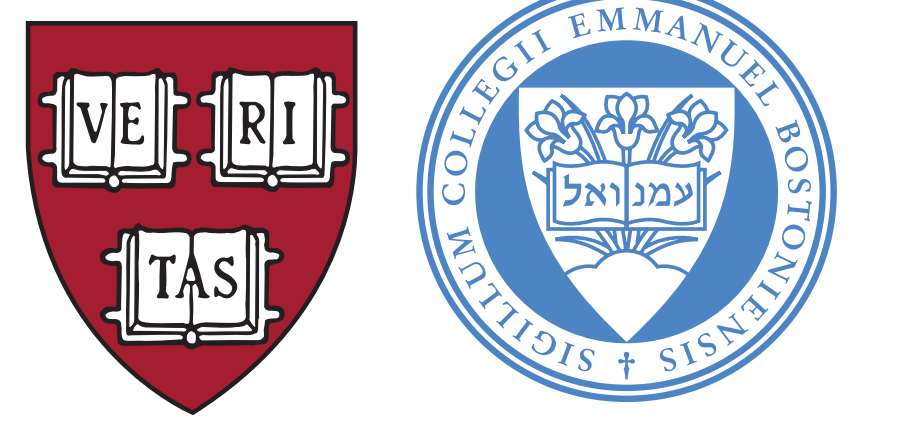
Evolutionary dynamics of visual memory

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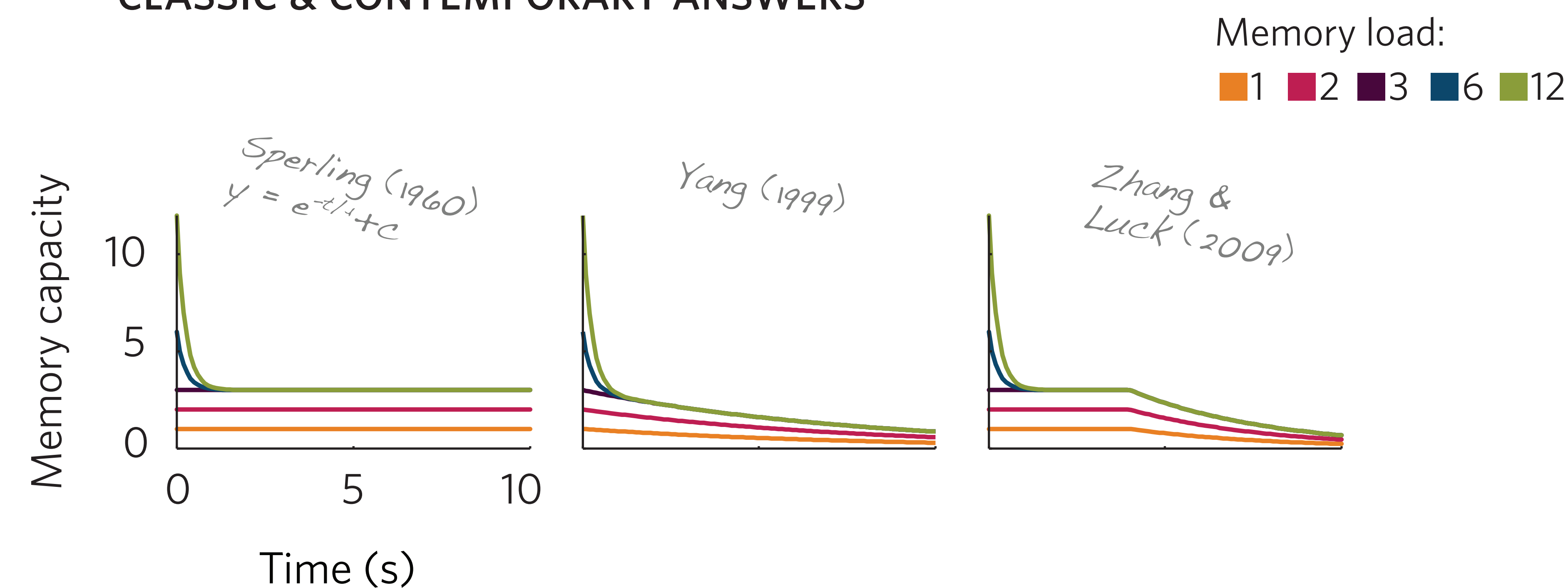


We build a process model of the timecourse of visual memory using evolutionary dynamics, a mathematical framework for describing how information is reproduced in noisy environments such as the brain.

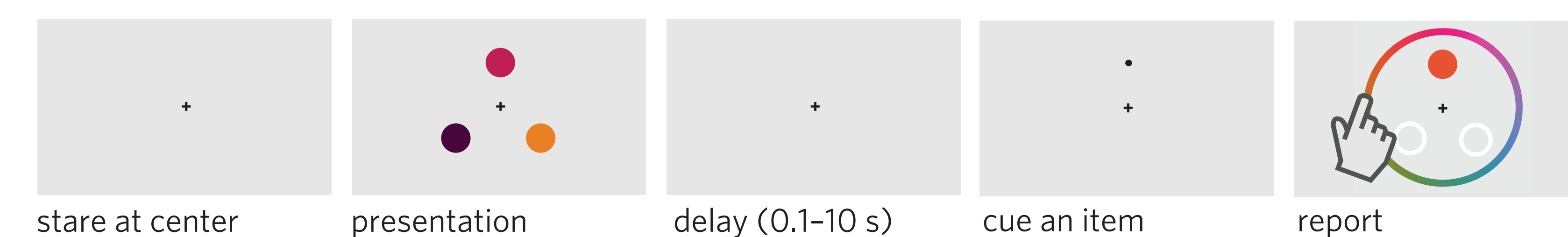
THE QUESTION

What is the timecourse of visual memory?

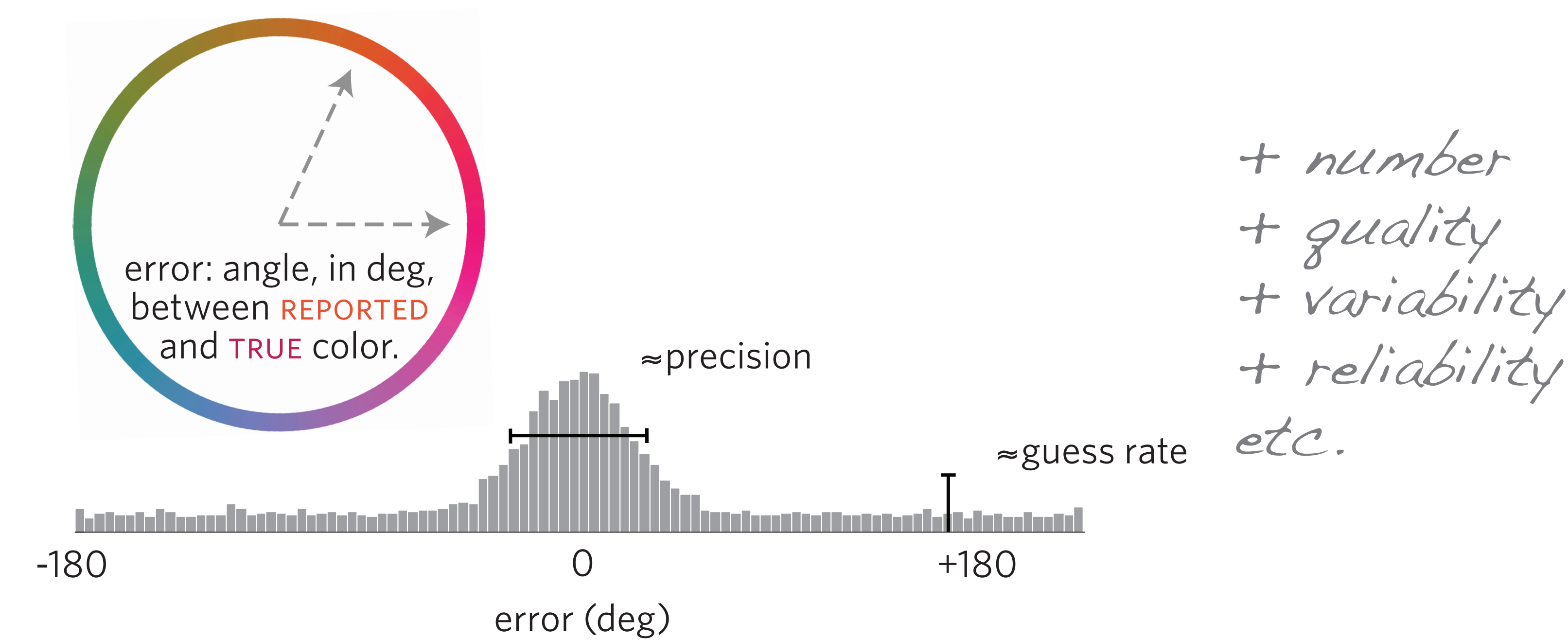
CLASSIC & CONTEMPORARY ANSWERS



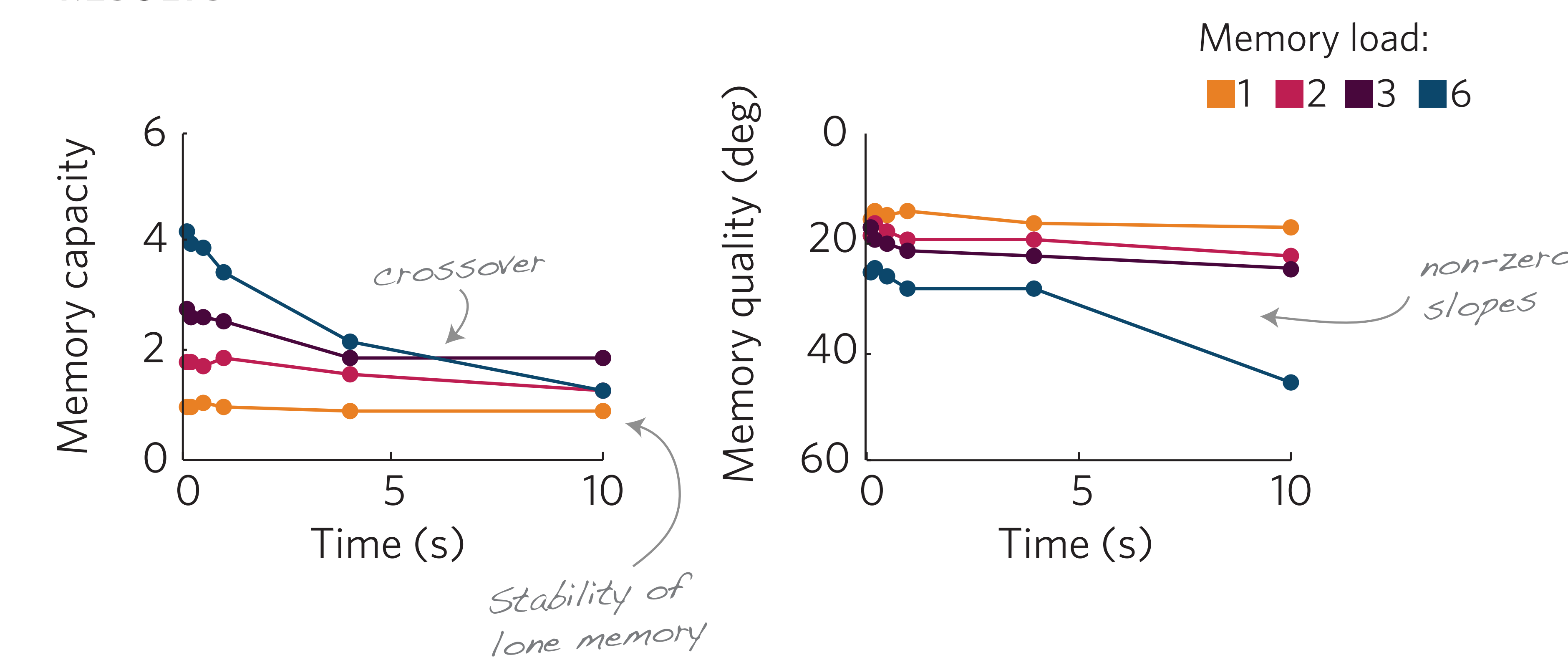
THE TASK



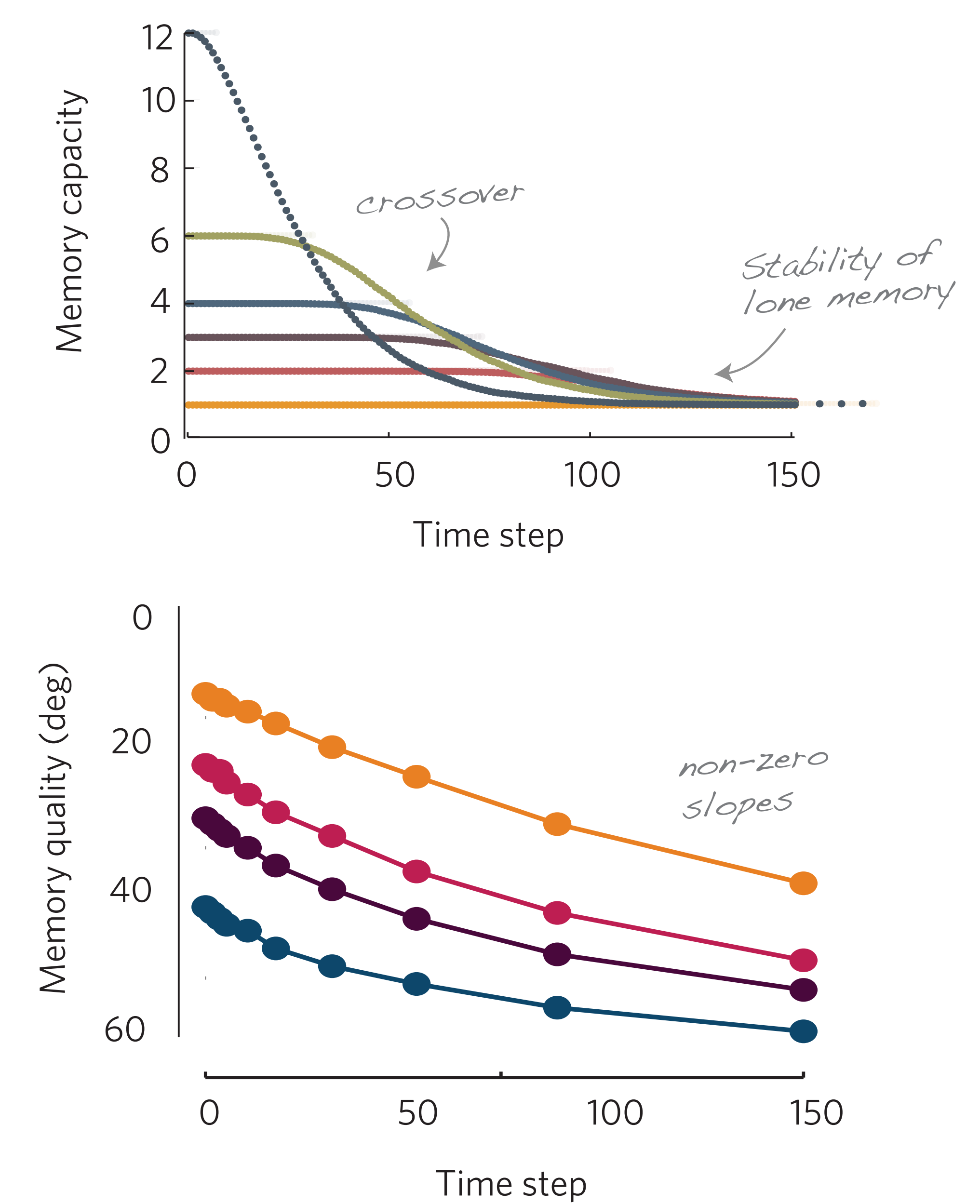
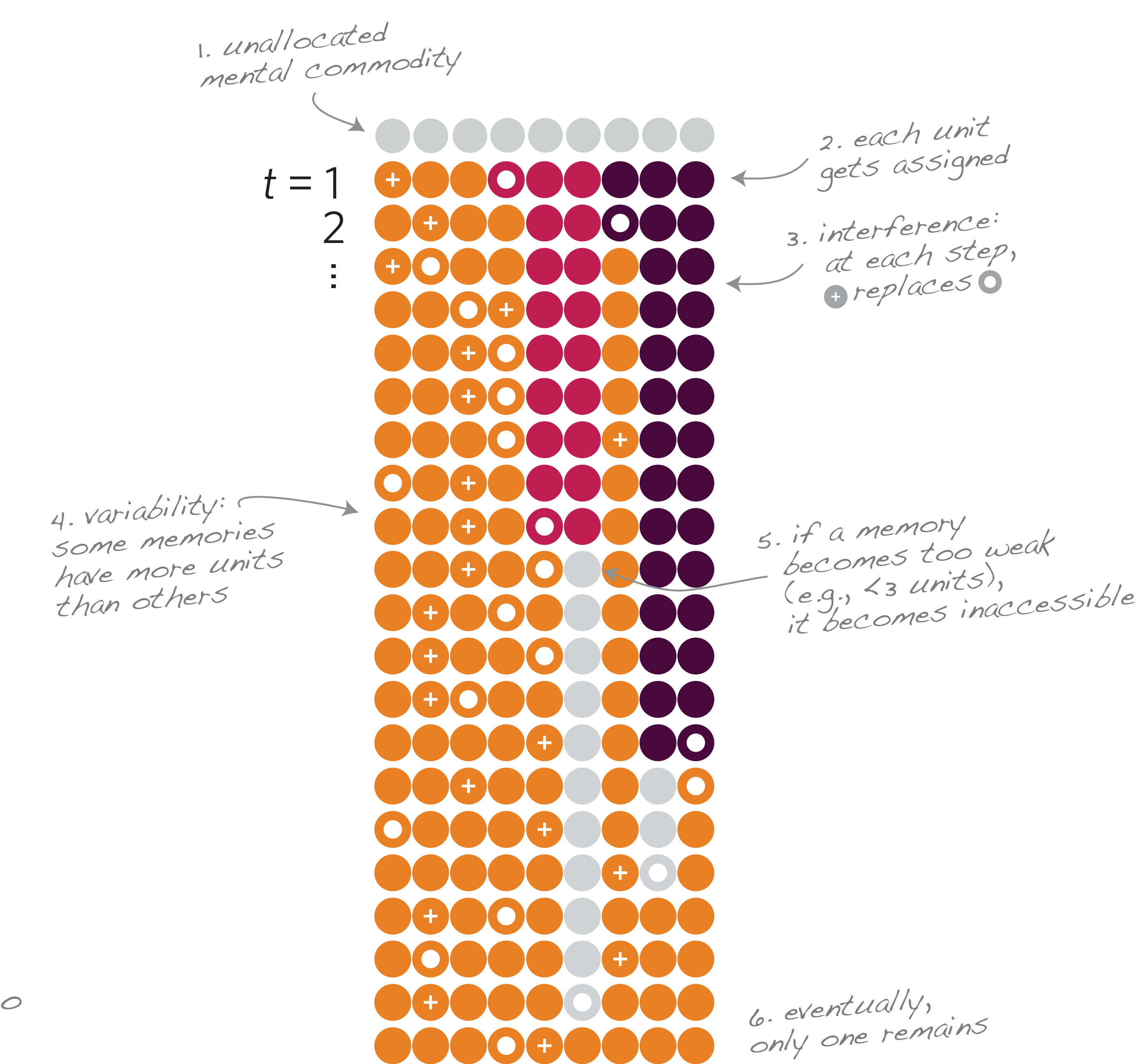
ANALYSIS



RESULTS



EVOLUTIONARY MODEL



CONCLUSIONS: Only a lone memory is stable. There are crossovers in the forgetting function. Quality declines over time. These facts fall out of an evolutionary process where memories interfere with each other and are lost when their quality falls beneath some threshold.