Models of Deferred Decision Making

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Abstract: Deferred decision making (DDM) refers to when an individual collects evidence about two or more risky alternatives and decides when to stop and make a final choice. Real world examples include physicians running tests before diagnosing an illness, or commanders collecting intelligence before taking military action. We conducted a DDM study aimed at investigating how people know when to defer a decision and when to stop sampling and make a choice. Participants could purchase up to ten independent observations about two mutually exclusive hypotheses before making a final choice. Their goal was to make accurate choices, while minimizing sampling costs. We tested several cognitive models and found that a sequential sampling model (SSM) outperformed others build on heuristic or planning frameworks. According to the SSM, individuals make explicit decisions to wait and sample more, and require less evidence to make a final choice over time due to collapsing decision bounds.