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Perseverance in risky goal-pursuit

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Abstract

From founding a new start-up to applying for a big grant, many activities involve pursuing risky goals with stark all-or-nothing outcomes and high uncertainty about the chances of succeeding in ones goal. These endeavors require patient perseverance, where time invested towards achieving a rewarding risky goal also implies the opportunity cost of forgoing safer alternatives, such as working for a reliable wage with immediate rewards. How do people behave when choosing between such risky endeavors and safe alternatives, where the dynamic nature of the task has implications beyond expected utility maximization? We present a new experimental paradigm, where by manipulating the relative rewards, task uncertainty, and the success threshold for achieving the risky goal, we are able to identify the environmental factors influencing perseverance. We then compare human behavior to the optimal strategy, along with a variety of boundedly rational policies and heuristics that trade-off efficiently between complexity and performance.