

SUPPLEMENTARY MATERIAL

Error Rates Over Time

Error rates remained stable over time. Figure S1 depicts average individual reinforcement error rates for each block of 15 trials, distinguishing high and low incentives in each study. Throughout, error rates remained much lower in Study 2 than in study 1. However, it must be noted that the first 30 trials included forced first draws, while the first draws in the last 30 trials were free. If offered the possibility to choose, the normatively rational behavior is to start always with a right draw. A fraction of participants behaved in this way, 11 in the third block (7 under low incentives, 4 under high incentives) and 14 in the fourth (8 under low incentives, 6 under high incentives). For those participants, no reinforcement errors were possible at all, and no reinforcement error rate can be computed. Hence, the data points for the third and fourth block trials average over participants which started with a left draw in at least some trial.

Regression Analysis

The regression analysis in the main text aims to show the link between FRN and reinforcement error rates while controlling for individual differences. Since, contrary to incentives, the control variables (e.g. age, gender) were not experimentally manipulated, and we had no prior hypotheses on their effects, their inclusion is strictly as controls. However, some of the significant coefficients identified in the regressions might be of independent interest. Self-reported effort exerted in the task, self-reported knowledge of probabilities, and age (possibly proxying experience or education) significantly reduce errors. Surprisingly, self-reported mastery of difficult problems significantly increases errors, which might indicate that this variable is linked to overconfidence. Other effects might be sample-specific, as e.g. a gender effect present only for low incentives. An interesting effect arises for the variable SVD, which is the difference

between the self-reported valence of the winning and losing colors, measured at the end of the experiment. A higher valence difference led to less errors under high incentives and to more errors under low incentives, although the interaction missed significance in the joint regression. A possible interpretation is that the valence difference within each incentive condition is the result of different attentional processes. For high incentives, where monetary gains and losses were more serious, the SVD might be construed as an indicator of how seriously participants took the monetary gain or loss, hence leading to reduced errors. For low incentives, where the actual monetary consequences were less serious, the SVD might capture above all how focused participants were on the win/loss outcome, hence leading to win-shift, lose-stay behavior, i.e. more reinforcement errors.

FIGURE LEGENDS

Fig. S1. Reinforcement error rates over time in both studies.

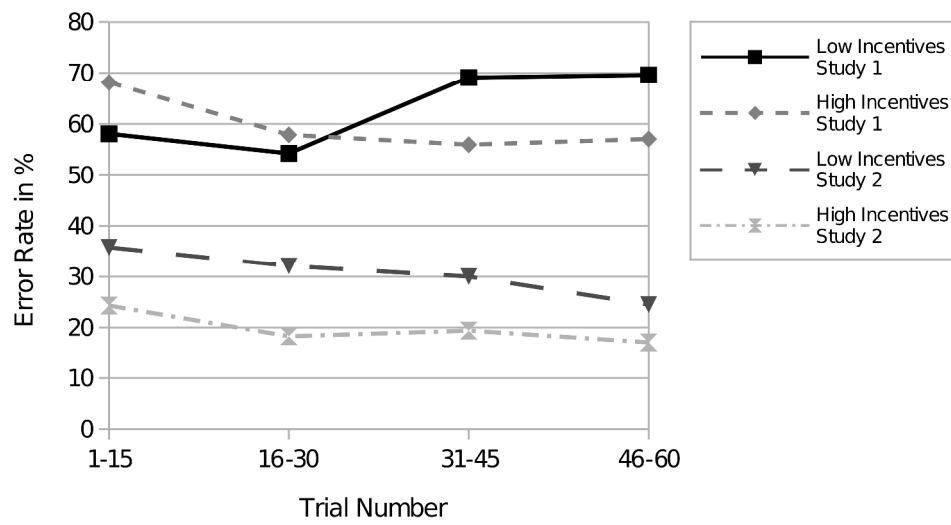


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