The Effects of Nonmonetary and Monetary Incentives on Persistence and Accuracy

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Background: Payment and Motivation

Our economic, political, and educational systems rest on a number of unverified assumptions about the efficacy of incentives. One such assumption often used in behavioral economic research is that giving participants a performance-based payment will universally improve performance on a variety of behavioral tasks, ostensibly by increasing their motivation, (Hertwig & Ortmann, 2001).

Experimental psychologists and economists frequently disagree on the way to increase participants' focus and, thus, optimize responses. Measuring accuracy, number of items completed, and response time on several persistence tasks (e.g., anagrams) as a construct for motivation, we compared four common incentive schemes. For example, monetary incentives included using a lottery, or paying off either a single trial handsomely or every trial nominally. The nonmonetary condition bundles social desirability and the signature effect (Mazar et al., 2008; Kettle & Häubl, 2010). Compared to a baseline no-incentive condition, we report the differential effects of these incentives across measures.

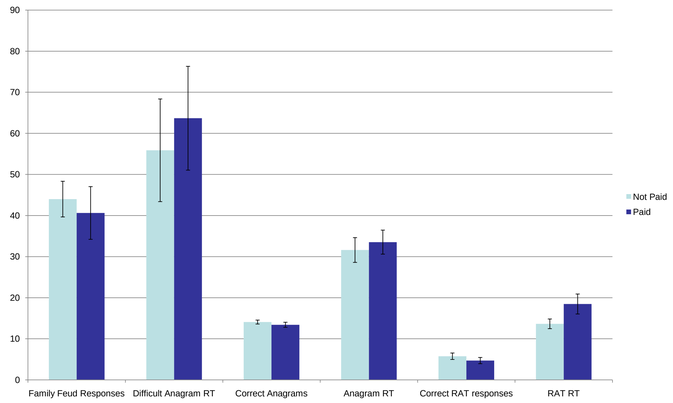
Experimental Design

- Participants were placed in one of five conditions as described above. They would then proceed through the three sequential blocks of the experiment.
- In the first block, they would complete a variety of anagrams (selected for difficulty by frequency of occurrence in the English language). One anagram, the word "abstruse," was selected to be nearly unsolvable.
- Next, participants would respond to a series of prompts from the game show *Family Feud*. The open-ended nature of this task allowed for number of responses to serve as a proxy for persistence.
- Lastly, participants engaged in the Remote Association Task (RAT), which has a long history of important findings and is often used as a representation of divergent thinking invented at Indiana University in 1962.
- Time and accuracy of responses were recorded in all trials.

Preliminary Results

Because of the number of conditions associated with this experiment, a larger sample size is needed before any conclusive statement can be made about the effects (currently, n = 59, spread evenly across the conditions).

Means and Response Times by Stimuli Blocks



Based on previous results in the literature, one can expect that in the divergent thinking tasks (the *Family Feud* stimuli and RAT) should not improve in the case of payment. We expect response time to increase across all tasks.

Should the data continue to be non-significant, then it will support the claim that payment makes no difference in participant persistence or accuracy.

Response times in the "pledge" condition were marginally significant ($p < .077$) which suggests that participants spent more time contemplating the problems presented.

Time spent on solving any problem was correlated ($r = .53$, $p < .043$) with correct answers.

In sum, although findings thus far are statistically insignificant, some results find marginal significance, although more data needs to be collected for any sound conclusion.

Selected Works Cited

•Kettle, K.L. and Häubl , G. (2011). The signature effect: Signing influences consumption-related behavior by priming self-identity. *Journal of Consumer Research*, 38 (*3*), 478-489.
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