For the Fun of it

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For the Fun of it

- **We explore the overlap between intrinsic and immediate incentives.**

Key findings:

- **Intrinsic incentives** matter more **inside than outside pursuit**, when they are immediate (Woolley & Fishbach, 2015).

- Therefore, **intrinsic** incentives increase persistence **in long-term goals** (Woolley & Fishbach, 2016).

- **Immediate** incentives increase **intrinsic** motivation (Woolley & Fishbach, WP).

Definitions

- **Intrinsic incentives:**
  - Benefits that are part of pursuing an activity; the positive experience during pursuit.
    (e.g., a relaxing workout, challenging or interesting job).
  - Some **contents** tend to be intrinsically motivating (e.g., autonomy; Heath, 1999; Lepper, Greene & Nisbett, 1973; Ryan & Deci, 2000).
  - **The means-end fusion model:** Intrinsic motivation occurs when the activity (means) and the outcome (goal) are closely associated.
  - Increasing the goal-means association will increase intrinsic motivation, such that the means become "an end in itself" (Kruglanski et al., 2013).
- **Immediate incentives:**
  - Research on self-control and intertemporal choice distinguishes between delayed and immediate incentives (Ainslie & Haslam, 1992; Hoch & Loewenstein, 1991; Thaler, 1981).

Overlap: Intrinsic and immediate incentives

- ***Insofar as intrinsic incentives are part of the activity, and extrinsic incentives are external outcomes, motivation and self-control concepts overlap: intrinsic incentives are immediate and extrinsic incentives are delayed*** (Woolley & Fishbach, 2016).
- The overlap is partial. Yet, the "gray cell" are less common.

	Intrinsic	**Extrinsic**
Immediate	**Eating food that tastes good**	Eating at a disliked restaurant with friends
Delayed	Eating to acquired taste	**Eating healthy food to lose weight**

Weighting Intrinsic Incentives More Inside Pursuit, When They are Immediate

Weighting intrinsic incentives

- **Intrinsic incentives are immediate, thus they are more valuable inside pursuit** (when they are available) than outside pursuit (from a distance).

- **A shift in the weight of intrinsic incentives**: More weight inside an activity than outside of the activity (before and after pursuing it).

- The consequence of under-predicting the strength of intrinsic incentives is that people may choose the wrong activity, which they will **later regret**.

Findings

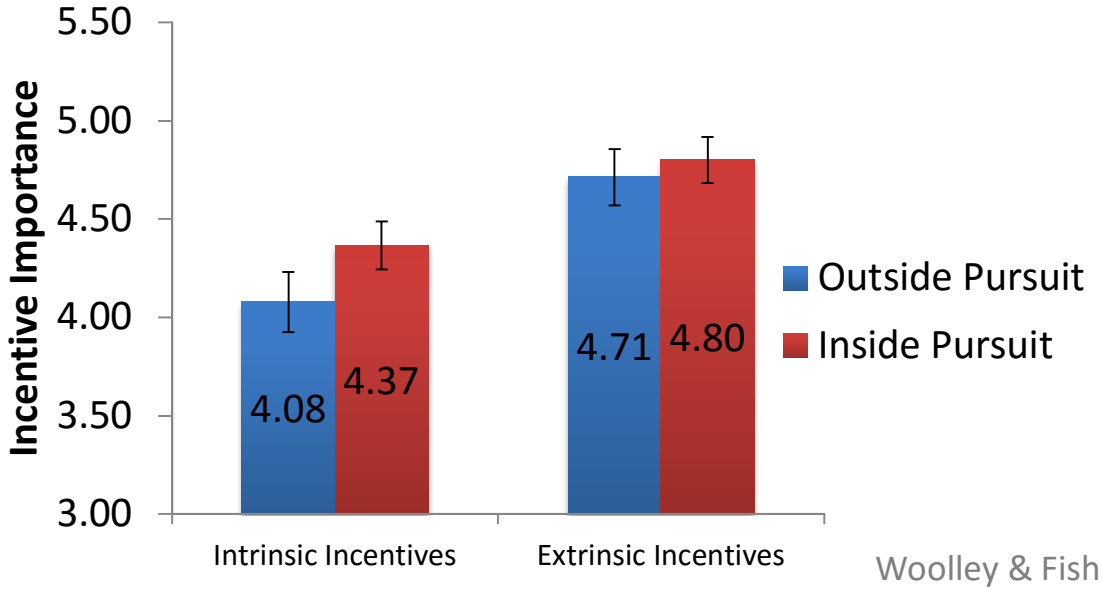
- **Evaluation**: People evaluate intrinsic incentives as more important inside pursuit.
  - We compare intrinsic incentives to extrinsic incentives, which should not matter more inside pursuit.

- **Behavior**: Intrinsic incentives increase persistence more than predictors realize.

- **Regret**: In choice that poses a tradeoff, choosers prefer the task that forgoes intrinsic incentives but pursuers regret choosing the task that forgoes intrinsic incentives.

Study 1: Importance of Intrinsic Incentives in Exercising

- 82 gym-goers rated "How important is each factor to you in deciding how much to exercise right now (inside pursuit condition) vs. later this week, (outside pursuit condition)."
- **Intrinsic incentives**: workout is… enjoyable? feels fun? feels relaxing and stress-relieving? and feels energizing?
- **Extrinsic incentives**: keep in shape? improve your health? become stronger? get energy later in the day to carry out tasks?

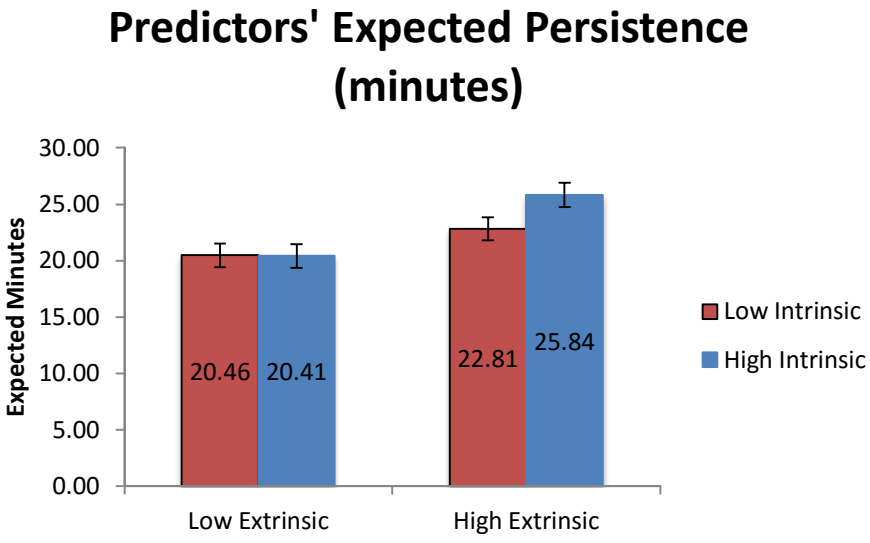


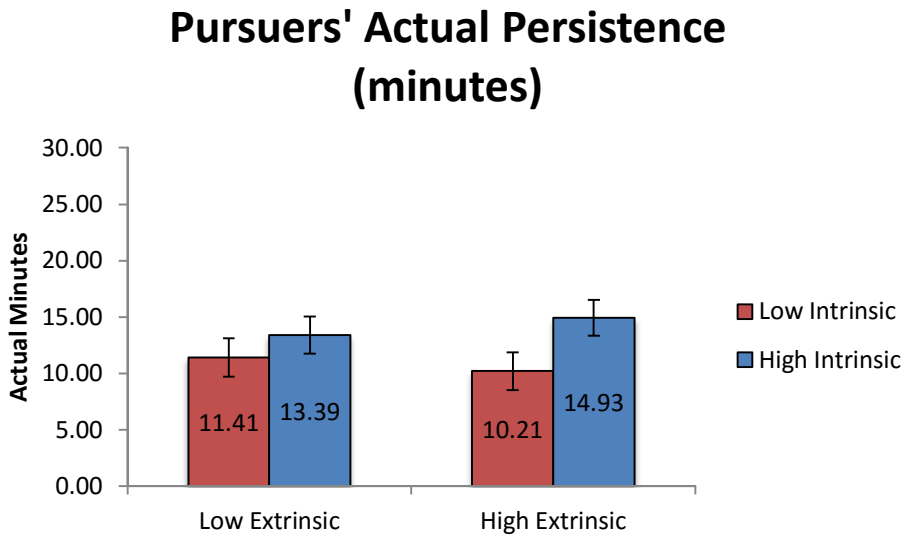
Woolley & Fishbach, JPSP, 2015

- **Replicates for work, museum visits, and for past (vs. present vs. future)**

Study 2: Persistence based on incentives

- Predicting vs. persisting on a task as a function of intrinsic incentives (reading jokes vs. technical details) and extrinsic incentives (high vs. low pay per trial)





Study 3: Regretting forgone intrinsic incentives

Intrinsic vs. Extrinsic Task

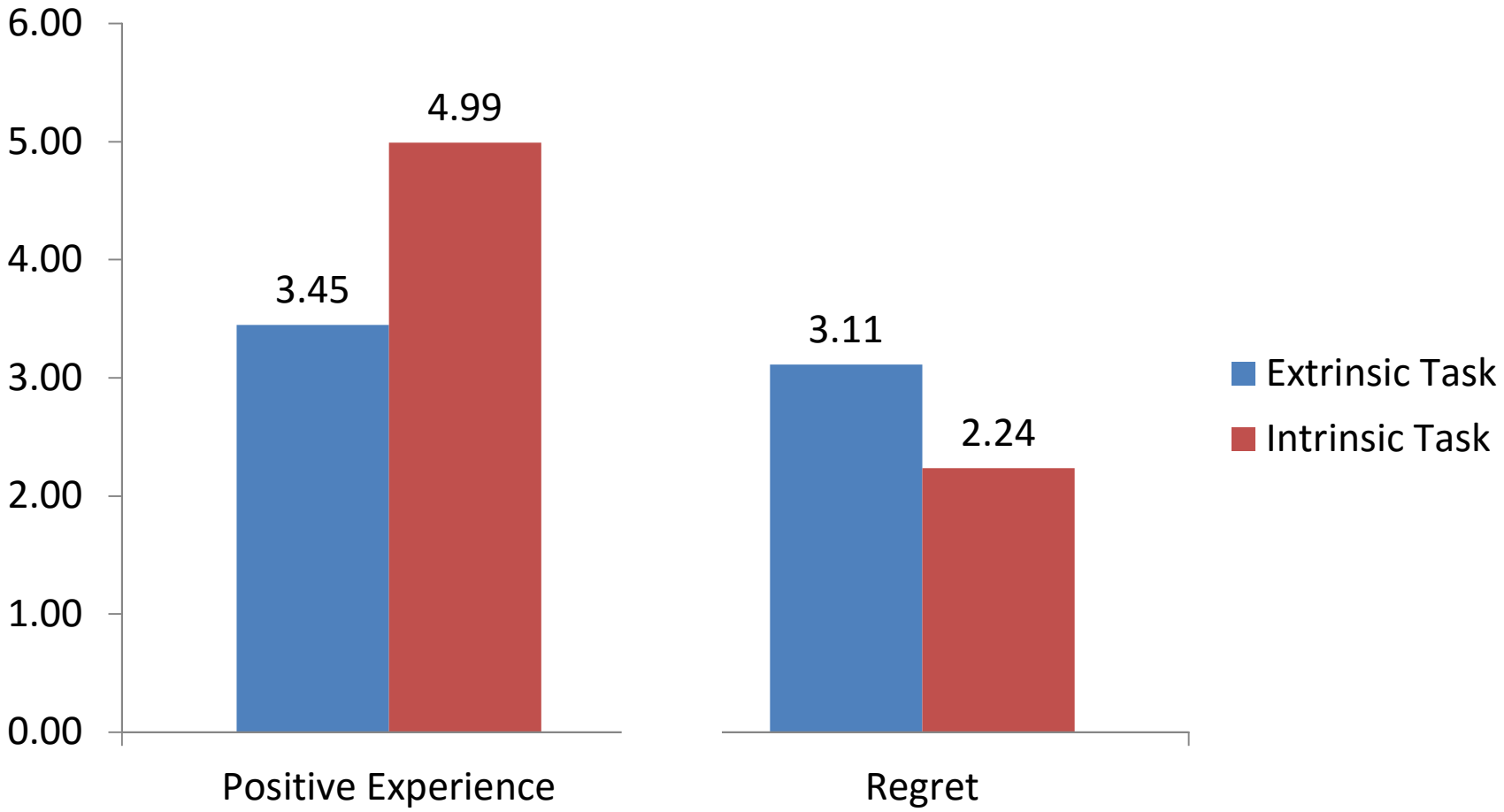
- Listen to 1 minute of an **alarm clock**; $2.25
- Listen to 1 minute of **Hey Jude**; $2.00

118 participants listened to a 5 second sound clip for both tasks.

Choosers vs. Pursuers

- **Choosers**: "free-choice"; measured task choice
  - **73% choose extrinsic task**
- **Pursuers**: "forced-choice" ("if you could choose Task X it would really help us out"); measure choice regret.

Regretting forgone intrinsic incentives (only pursuers)



Woolley & Fishbach, JPSP, 2015

- Intrinsic incentives matter more during than outside pursuit
- Choosers forgo intrinsic incentives, leading to regret and decreased persistence

- How do we use this knowledge to increase persistence?

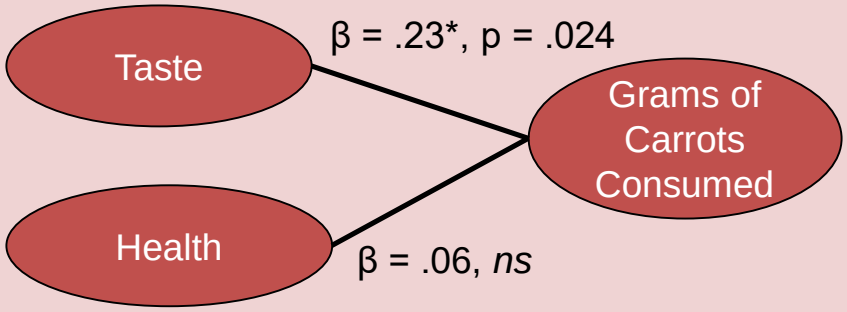
Harnessing Experience to Increase Persistence

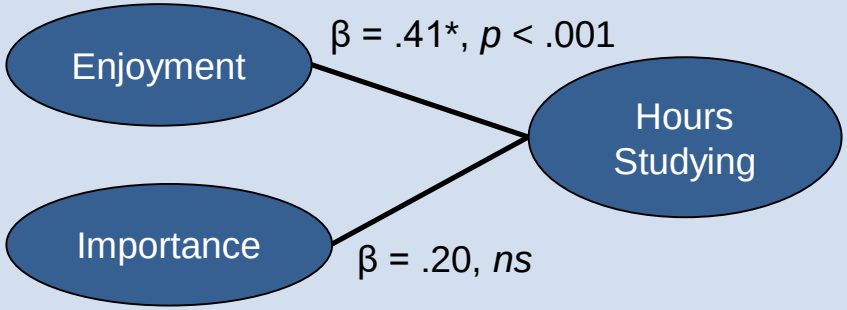
Findings

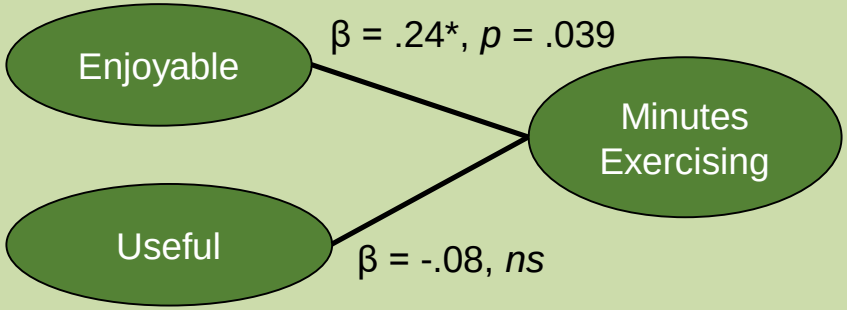
- **Persistence** on extrinsic goals increases when people choose activities based on immediate/intrinsic incentives.

- **Attending** to immediate/intrinsic incentives when pursuing extrinsically-motivated goals improves persistence.

Predicting Persistence

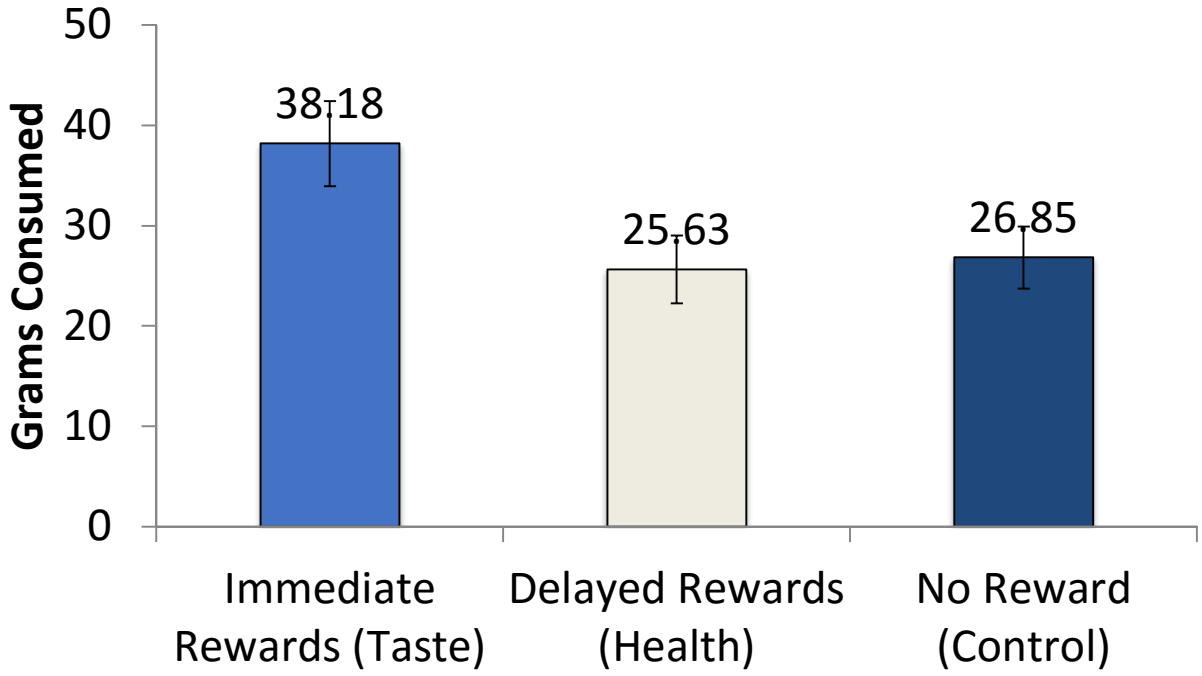






Study 4: Harnessing Intrinsic Motivation to Increase Healthy Food Consumption

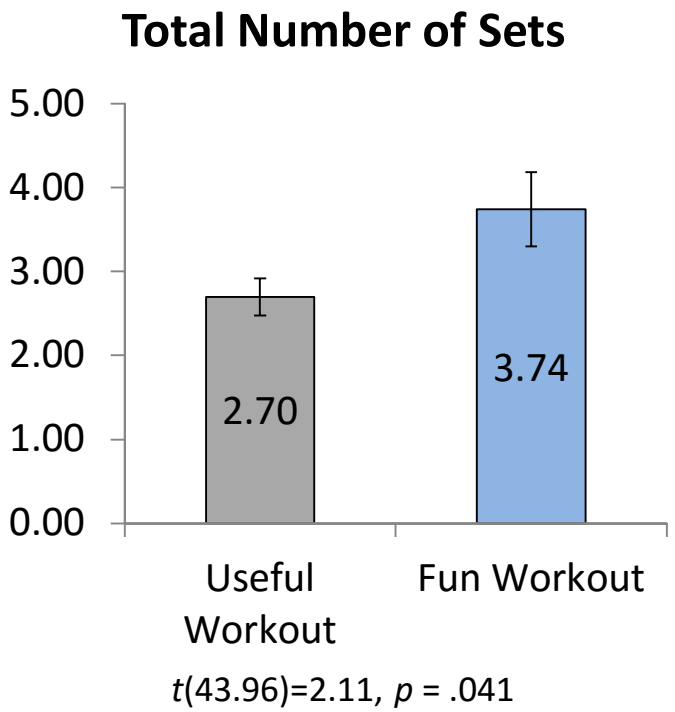
- 120 participants chose between two bags of carrots the bag that is **tastiest**, **healthiest** or most "**orange**"(control).
- Those who chose based on taste ate the most.



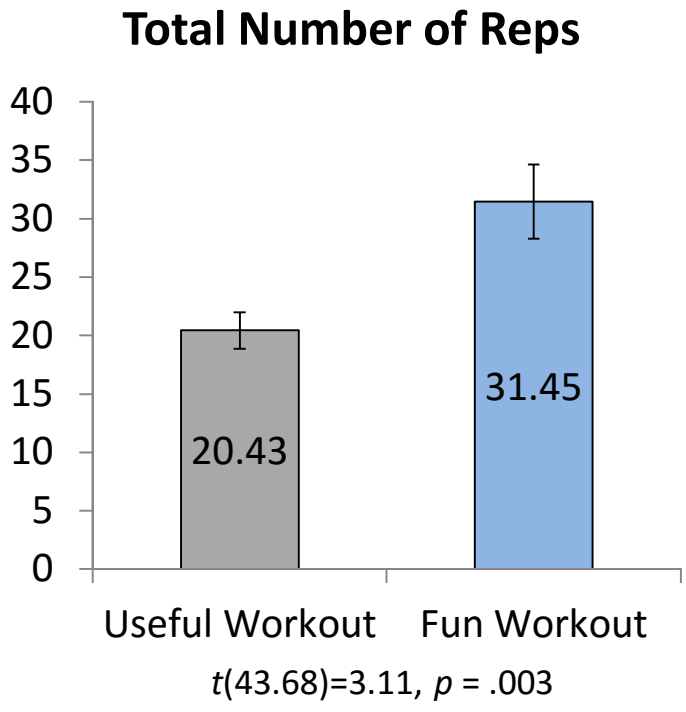
Woolley & Fishbach, JCR 2016

Study 5: Factoring in experience increases persistence on fitness goals

- 61 gym-goers selected a workout they **"enjoy doing"** or that is **"useful for your health goals."**



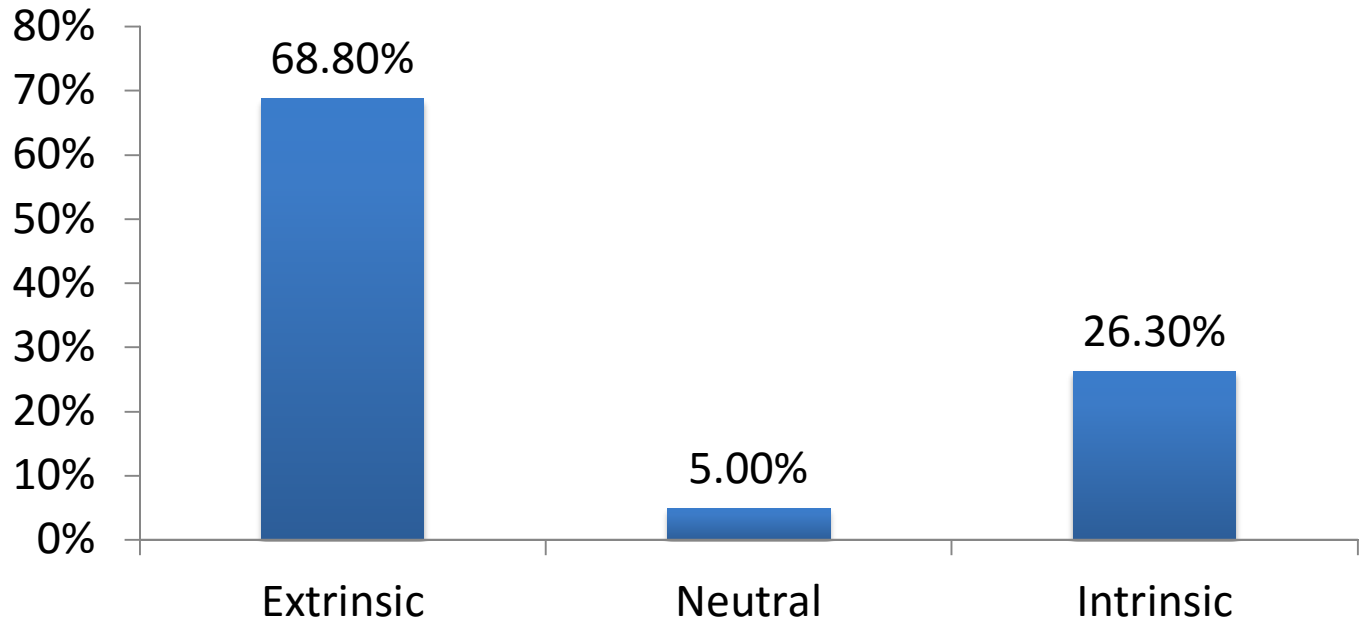
t(43.96)=2.11, *p* = .041



t(43.68)=3.11, *p* = .003

But people plan to use extrinsic incentives as motivators

- 80 Mturk workers provided a short description of how they plan to motivate themselves the next time they exercise



$X^2(2, N=80) = 50.58, p < .001$

- Attending to intrinsic incentives when choosing among extrinsically-motivated behaviors increases persistence
  - This is because intrinsic/immediate incentives matters to people during pursuit
  - Only for positive activities.

- Implications for motivating people pursuing extrinsic goals.

Immediate Incentives Increase Intrinsic Motivation

Immediate incentives increase intrinsic motivation

- Intrinsic motivation is a function of means-goal association (Kruglanski et al., 2013; Shah & Kruglanski, 2000).
- Temporal association between an activity and its reward should increase intrinsic motivation.

- **Findings**
  - **Immediate rewards render an activity more intrinsically motiving.**

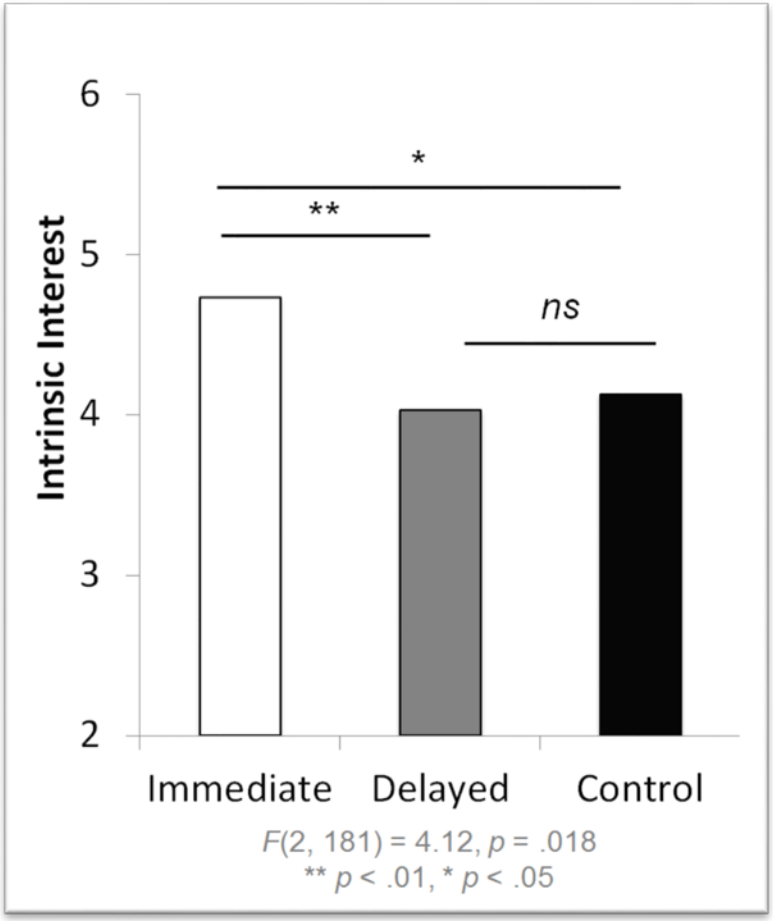
Study 6: Immediate rewards increase intrinsic motivation

Manipulate timing of a $1 bonus:

- **Immediate**
- **Delayed** (a month after the task).
- **No bonus**

Measured:

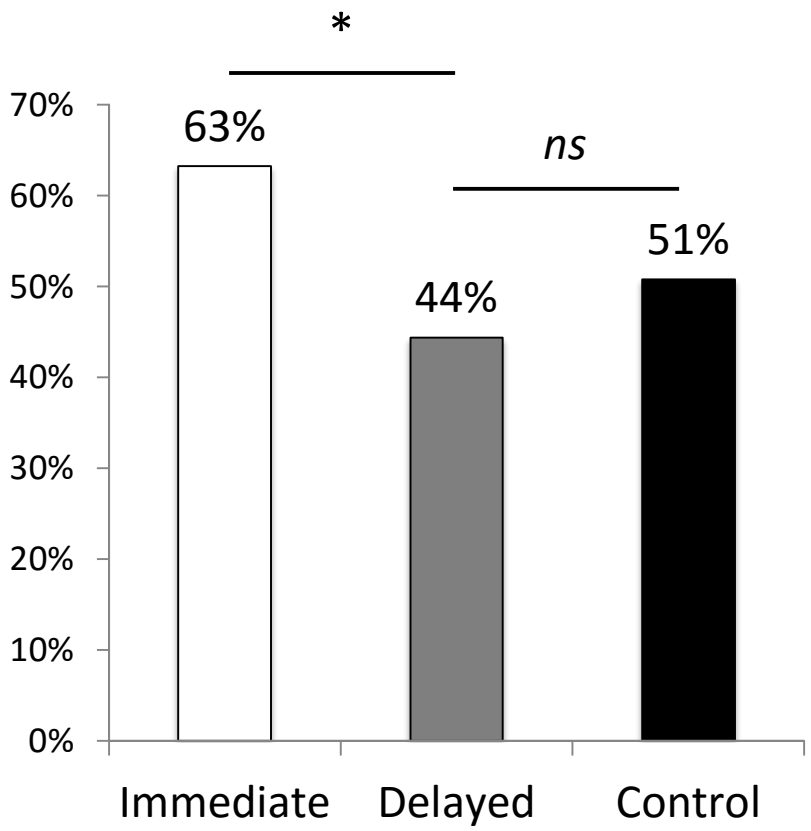
- Intrinsic interest (α = .92): enjoy, dull (reverse coded), interesting, have to do vs. want to do
- Percentage choosing the task in free-choice.



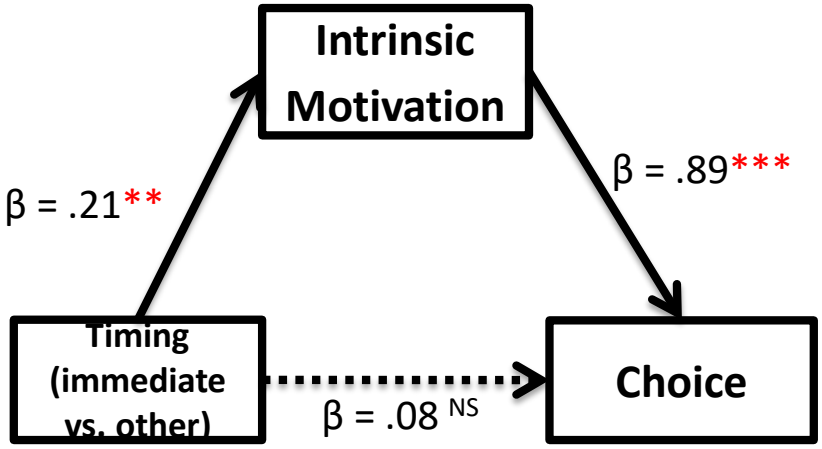
Woolley & Fishbach, WP

Study 6: Immediate rewards increase intrinsic motivation

Free Choice: Continue the Task



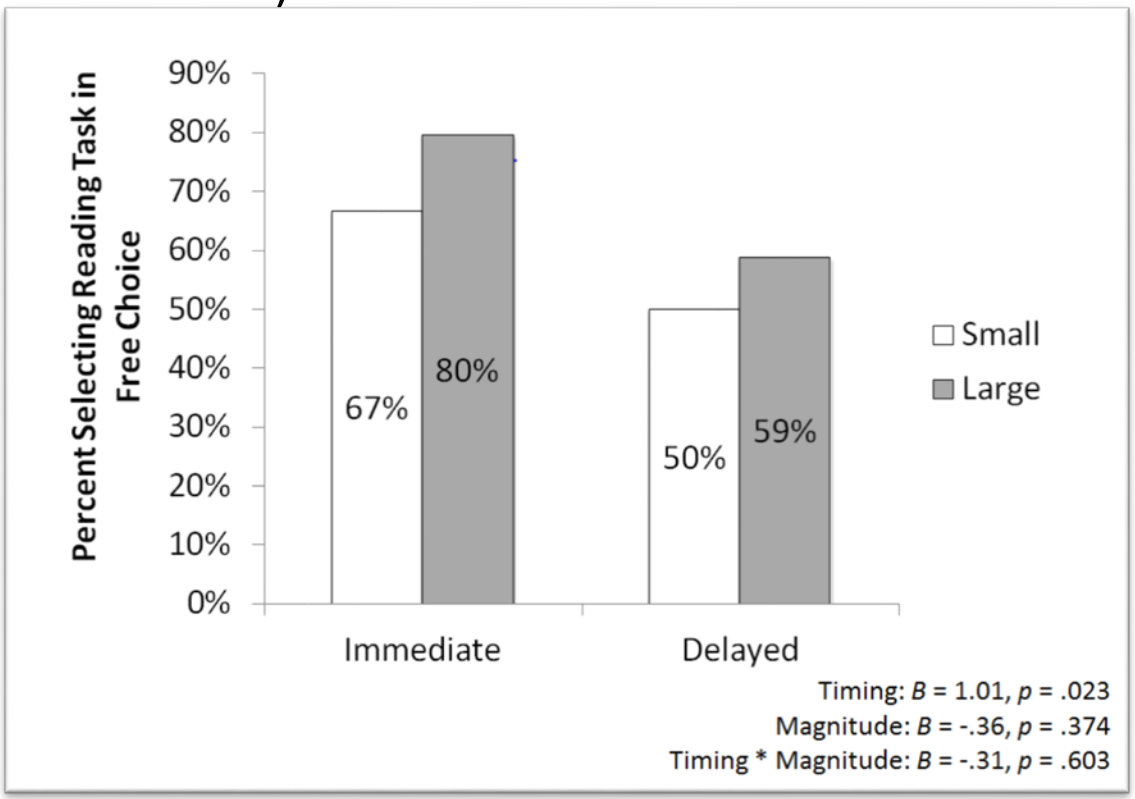
β = 0.21, SE = 0.11, *p* = 0.046



$\beta_{indirect}$ = .19, SE = .08, 95% CI [.07, .37]

Study 7: Closer (not larger) rewards increase intrinsic motivation

- To rule out **time discounting** we had ps' complete a reading task and manipulated reward timing (one hour vs. one month) × magnitude ($0.50 vs. $1.50 bonus).
- Measured intrinsic motivation: Choice to continue reading vs. do another task (absent reward).



Woolley & Fishbach, WP

Summary

- **A shift in the weight people give to intrinsic benefits**:
  - Intrinsic incentives are more important inside than outside pursuit.
  - Therefore, people choose to pursue goals using means they are less likely to persist on and are more likely to later regret.

- **Therefore, harnessing experience to increase persistence:**
  - attention to immediate rewards in planning extrinsically-motivated goals improves persistence.

- **Immediate incentives increase intrinsic motivation.**

Final word: Selection bias in online panels

- The problem: Mturk studies violate the assumption of random assignment because participant attrition—quitting a study before completing it and getting paid— is not only prevalent, but also varies systemically across experimental conditions (Zhou & Fishbach, JPSP in press).

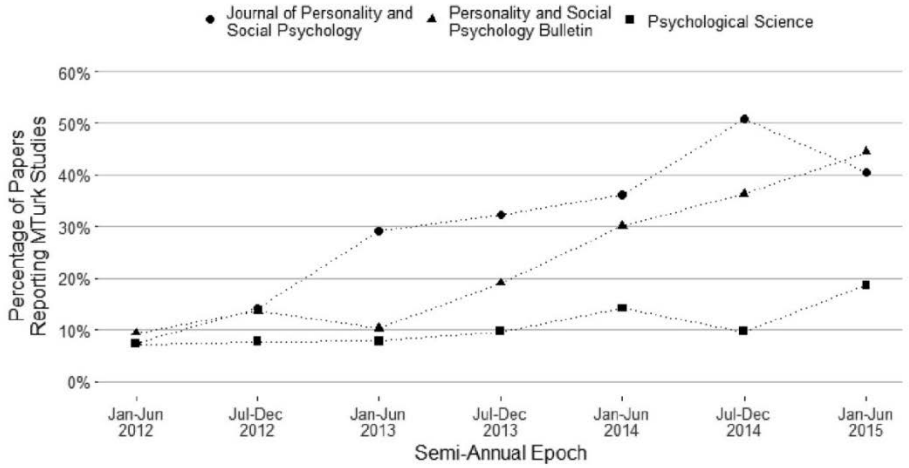


Figure 1. The percentage of empirical papers that reported at least one MTurk study during each semi-annual epoch over an extended period of time for *Journal of Personality and Social Psychology*, *Personality and Social Psychology Bulletin*, and *Psychological Science*.

The percentage of empirical papers that reported at least one MTurk study during each semi-annual epoch over the run from January 2010 to June 2015 for three leading behavioral science journals.

Quitters' paradise

- Quitting a study is easy.
  - **Low sunk cost:** To try out an MTurk study, all it takes is just a reliable Internet connection and a few clicks of the mouse.
  - **Low social cost**: The highly impersonal and anonymous nature of cyberspace greatly attenuates the awkwardness participants might experience when backing out of a study to which they have consented to participate.

Table 1
Condition-Wise Dropout Rates of the Six Replication Experiments in Study 1, as Well as Their Sources and Manipulation Tasks

Replication experiment	Condition	Dropout rates
A. Terror management (Study 2 in Wisman, Heflick, & Goldenberg, 2015)	*Mortality salience*: Writing down thoughts and feelings about one's own death	30.7%
	Control: Writing down thoughts and feelings about physical pain	34.6%
B. Construal Level (Experiment 2 in Henderson, 2013)	*Abstract construal*: Describing why one wants to accomplish three goals in one's life	44.0%
	Concrete construal: Describing how one is to accomplish three goals in one's life	38.2%
C. Power (Study 5 in May & Monga, 2014)	*Powerful*: Recalling a past episode where one was in a powerful position	34.1%
	Powerless: Recalling a past episode where one was in a powerless position	33.8%
D. Regulatory focus (Study 4 in Woltin & Yzerbyt, 2015)	*Promotion-focus*: Writing about one's aspirations	29.9%
	Prevention-focus: Writing about one's obligations	34.3%
E. Ego depletion (Study 1 in Yam, Chen, & Reynolds, 2014)	*Ego-depletion*: Writing a 100-word paragraph without using letters A and N	77.6%
	No-depletion: Writing a 100-word paragraph without using letters X and Y	22.8%
F. Elaboration mode (Experiment 2 in Fernbach, Rogers, Fox, & Sloman, 2013)	*Reason*: Enumerating reasons for one's attitude toward certain public policies	33.7%
	Mechanism: Explaining the mechanisms by which the same public policies work	58.8%

(Almost) no one reports attrition

- in 2014, JPSP reported a total of 145 mturk studies. 3 studies reported attrition. In 2015, 7 out of 139 mturk studies reported attrition. In all 10 of these studies, reported attrition wasn't per condition and tended to be extremely low (i.e. 5-6 participants).

What can go wrong?

Table 3

Summary of the Results of Study 3: Can Deliberation Increase Support for Restriction on Gun Ownership?

Condition	Dropout rates	Main result
Writing: Explaining the reasons for one's position on gun-restriction	36.0%	Agreement with the anti-restriction (i.e., pro-guns) statement: $M = 2.52$, $SD = 1.65$
Control: Doing nothing	0%	Agreement with the anti-restriction (i.e., pro-guns) statement: $M = 3.46$, $SD = 2.04$

Thank you!