Spending Responses to Income vs. Balance Information

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Research Questions

How do consumers assess their available funds when equivalent financial information can be presented in terms of income *(a flow)* or balance (*a stock*)?

1. Does attending to income or balance increase the likelihood of using that specific amount as the limit of available funds?

2. Does attending to income vs. balance affect how much consumers spend over time?

Summary of Findings

1. Attending relatively more to either income or balance increases the likelihood of using that specific amount as the limit of available funds; this is indicated by the spending discontinuities where people underspend the amount they attend to (see **Fig. 2a, 2b**).

Why? People are insufficiently sensitive to stock-flow distinctions (Sweeney and Sterman, 2000). Though both income and balance can be calculated from the other, participants appear to take this information as given, treating the attended-to amount as a spending limit to avoid psychologically aversive debt (Prelec and Loewenstein, 1998).

2. Attending relatively more to income decreases spending due to the mechanics of accumulation (see **Fig. 3**).

Why? Income information is "memoryless". Any prior underspending—whether deliberate or inadvertent—is not incorporated into future flows of income. Balance "remembers" past accumulation by integrating previous underspending into the current amount. If people are insufficiently sensitive to this dynamic of stock-flow accumulation, they may systematically perceive fewer funds when attending to income or more funds when attending to balance. This leads to different patterns of spending.

Discussion

We contribute to the consumer literature by investigating how attention to income vs. balance impacts the assessment of available funds and subsequent spending. We also contribute to the accumulation (stock-flow) literature by exploring the role of attention in stock-flow reasoning and decision-making.

Though consumers in the real-world face different goals and incentives, **our results suggest their spending patterns may depend on whether they attend to income** (*a flow*) **or balance** (*a stock*). This has potential implications for how banks and fintech apps provide information and notifications to their customers.

Method

- ✓ Developed an **incentivized 20-period spending game** (see **Fig. 1**)
- ✓ **Manipulated** and **measured** attention to income vs. balance (separate studies)
- ✓ Gameplay: Random draws of daily income could be spent on various products to earn points (incentivized). Access to free credit allowed for debt *during* the game without penalty; however, there was a penalty to *ending* the game in debt.

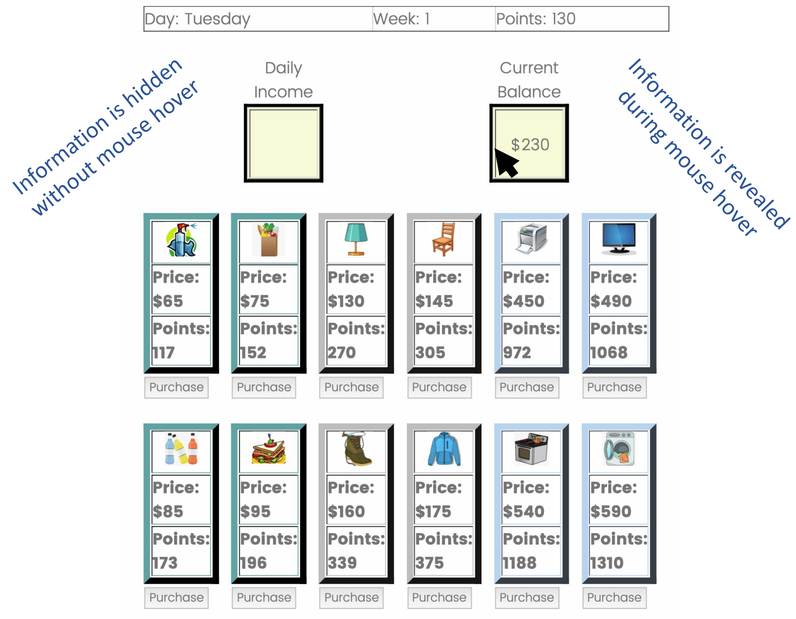


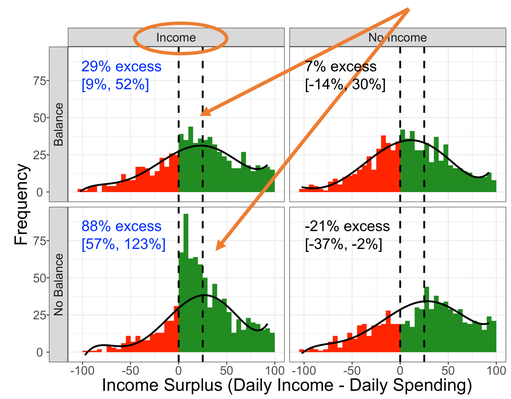
Figure 1—Spending game interface. In the **measured** attention study, participants hovered their mouse over boxes to check their income or balance (*shown above*). In the **manipulated** attention study, the availability of financial information (thus attention) was randomly assigned between subjects.

Study	Key Dependent Variables	Key Independent Variable
Manipulated Attention (N = 425)	• **Income Surplus** (did daily income exceed daily spending? "*Was income a spending limit?*" See **Fig. 2a**) • **Balance Surplus** (did daily balance exceed daily spending? "*Was balance a spending limit?*" See **Fig. 2b**) • **Daily Spending** • **Aggregate Spending** (entire game)	**Condition Assignment** 2 (Income Information: Available, Absent) *x* 2 (Balance Information: Available, Absent)
Measured Attention (N = 350)		**Proportional Attention to Income** $\frac{seconds_{income}}{(seconds_{income} + seconds_{balance})}$

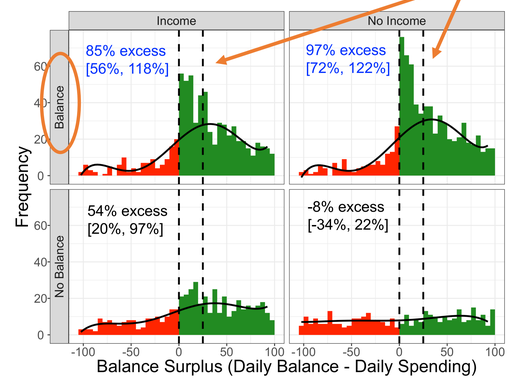
Want to learn more, get in touch, or try the spending game? SCAN ME

Key Results

When attending to income, people underspend income



When attending to balance, people underspend balance



Figures 2a, 2b—Daily income and balance surpluses across all four conditions of the **manipulated attention study**. Percentages and 95% CIs refer to the the excess mass above zero using a bunching analysis (Allen et al., 2007).

Greater attention to income is associated with less spending

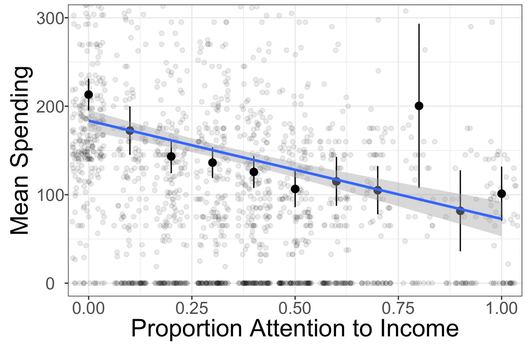


Figure 3—**Measured attention study**. Error bars are standard errors. The negative relationship between attention to income and spending is significant across a variety of specifications including daily fixed effects, clustered ses, and aggregating (all *p*s < .001).

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