EXAMINING EFFECTS OF NUMERIC CUES ON CONSUMER BEHAVIOR

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Brief Overview

• Organizations present people with numbers all the time…

• How are those numbers processed, and how does this change behavior

• Context we’ll examine in detail:
  • Repayment of consumer debt

• Other contexts for which this is relevant: Any that involve costly long-term goal-striving
  • Other kinds of loan repayment
  • Allocations to savings
  • Trying to get people to live more healthfully
  • Various attempts to increase demand, loyalty, etc.
Numeric Cues for Consumers

Free Beauty Bag with 9 Fragrance Samples
Online only. Use code SCENTME
See all offers

3 FREE SAMPLES
WITH ANY PURCHASE

3-DAY SHIPPING
FREE OVER $50

Choose a Free Fragrance Set
Explore 9 samples to find one true to you and receive a beauty bag
See details

BEAUTY INSIDERS: Use code SCENTME
While supplies last.
Anchoring Effects (Example)

- How much should I buy?

Explore 9 samples to find one true to you and receive a beauty bag.

I should buy around 9 beauty products.
Anchoring Effects

Is the Mississippi River longer or shorter than [70/ 2,000] miles?

What is the length of the Mississippi River (in miles)?

Jacowitz and Kahneman, 1995
Goal Effects (Example)

• How much should I buy?

I should spend at least $50…
Goal Effects
Distribution of Marathon Finishing Times

Figure 2: Distribution of marathon finishing times \((n = 9,524,071)\)

NOTE: The dark bars highlight the density in the minute bin just prior to each 30 minute threshold.

Allen, Dechow, Pope, and Wu, 2014
Values as Anchors

Expect symmetric shift in distribution towards anchor
Values as Goals

Expect asymmetric shift with mass just above goal
Properties of Goals (vs. Anchors)

Factors increasing consumer effort
- Financial benefits: Free shipping, gifts, rewards
- Psychological benefits: Motivational importance, satisfaction from goal achievement

Factors decreasing consumer effort
- Goals too high: Why bother? Backfire
- Goals too low: Lack of motivation after goal achievement
Often we don’t know if a value is a goal or an anchor!
Research on Credit Card Statements

- Minimum payment: Acts as anchor - removing this value increases payment amount (Stewart, 2009)

*The Cost of Anchoring on Credit-Card Minimum Repayments*

Neil Stewart
*University of Warwick*

- How do the numbers a person sees on her credit card statement affect repayment decisions?
- Do they act as anchors or target values?
Possible Predictions

Additional values are ignored

Additional values act as anchors

Additional values act as goals*
*(if achievable)
Kerry and Mary both have the credit card described above. Each of them has a total account balance of $5,596.12.

This month, Kerry’s suggested payment is $335.77, and she is able to pay $671.54. This month, Mary’s suggested payment is $1,007.30, and she is able to pay $671.54.

Kerry = 5.00  Mary = 2.59

**DV**: How do you think each of these cardholders feels about her payment? (1 = very disappointed; 6 = very happy)

paired-$t(45) = 11.90$, $p < .001$, $\eta^2_p = .76$  
41 of 46 participants express this difference
Practical Consequences

- Introducing additional values could encourage consumers to pay more each month
Key Questions

For people who are motivated to repay (i.e., opt in), who set their own goals…

• Can values alter the distribution of payments?
• Are people able to meet the targets they set for themselves?
• Does success vary as a function of the their target?
  • Short answer: Not in our data… but likely a restriction of range effect—people probably aren’t setting astronomically high targets for themselves
Each consumer sees, on her statement:

1. Her total outstanding balance
2. Her minimum payment due
3. A “goal” amount, based on enrollment in one of these two programs

1. Debt Decumulation (“Finish It”)
   - Set an amount you wish to pay and a time period over which you wish to pay it off
   - Goal amount ≈ \( f \) (remaining amount ÷ remaining time)

2. Spending Categories (“Full Pay”)
   - Pick categories for which you never want to pay revolving interest
   - Goal amount ≈ \( f \) (spending categories + min payment)
## Data Overview

<table>
<thead>
<tr>
<th></th>
<th>Debt Decumulation</th>
<th>Spending Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique accounts</td>
<td>2,041</td>
<td>1,595</td>
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<tr>
<td>Mean Balance</td>
<td>$3,250</td>
<td>$2,510</td>
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<tr>
<td>Mean Target Amount</td>
<td>$202</td>
<td>$155</td>
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<tr>
<td>Mean Age</td>
<td>44</td>
<td>53</td>
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<tr>
<td>Mean Income</td>
<td>$52,201</td>
<td>$51,749</td>
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<tr>
<td>Mean Credit score</td>
<td>703</td>
<td>738</td>
</tr>
<tr>
<td>Percent Male</td>
<td>39%</td>
<td>41%</td>
</tr>
</tbody>
</table>
Does payment behavior change with introduction of suggested payment?

Debt Decumulation


Spending Categories


Pre-Enrollment

Post-Enrollment
Does payment behavior change with introduction of suggested payment?

Debt Decumulation


Spending Categories


Pre-Enrollment

Post-Enrollment
Anchor or Goal? Consequences?

Payment Amount Relative to Goal
(Individual Transactions)

**PreEnrollment**
Proportion > Goal: 0.30

**PostEnrollment**
Proportion > Goal: 0.45

Look at that! Multiples of goal

Excluding transactions of exactly the goal amount
Does the Ambition of the Goal Amount Matter?

Goal “ambition”: The ratio of an account’s average goal amount to the account holder’s monthly income
Goal Amount as a Function of Monthly Income (by decile)
Conclusions

• Anchor vs. goal: People treat suggested values on statements as goals, and these goals alter payment amounts

• Self-selected goals:
  • People are successful at achieving goals they set for themselves
  • No evidence that high goals backfire and demotivate action
  • Evidence that motivated consumers can leverage low goals to encourage themselves to make higher payments

• Consideration of self-selected goals in other contexts
  • E.g., loyalty programs with different levels of rewards at different levels of achievement
THANK YOU

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