### Abstract

This research explores when narrow framing encourages longer commitments. A controlled field study was conducted with 16,290 registered users of a popular mobile app. We find that users are more likely to upgrade to 12-month subscriptions when its price is presented in narrow framing in the presence of redundant information. In a follow-up lab experiment (N=214), we find that narrow framing is more effective than broad framing at increasing consumer choice particularly in the presence of redundant information.

### Theoretical Background

Temporal representation affects preferences:

1. **Debiasing**
   - Redundant information (RI) is unnecessary rescaled information to help not only evaluate but adjust decision making [9]
   - RI as restated information may offset the original information [6][7]

2. **Reinforcing**
   - RI for selective attention and inference may reduce a feeling of misled and situational skepticism [1]

H2a: Redundant information will weaken the temporal presentation effect

H2b: Redundant information will strengthen the temporal presentation effect

3. **No impact**
   - Neither narrow framing nor broad framing may influence preference (preference invariance) because available information was fully integrated in consumer choice

A biased judgment regarding temporal presentation may be adjusted with RI:

- Increased evaluability from RI may mediate the adjustment process from initially anchored information (e.g., debiasing or reinforcing temporal framing effect) [6] [7] [9]

H3: Evaluability will mediate the adjustment process

### Results

- **Study 1: Field study**
  - Only 3% of users purchased subscriptions
  - Narrow framing Increased 12-month prescriptions (vs. 1-month subscription) by 41%
  - 21% increase in per-user conversion value (bottom-line effect)
  - H1 was supported

- **Study 2: Controlled lab study**
  - A 2 (Frame: Narrow vs. broad) x 2 (Redundant information: Presence vs. absence) between-subjects lab experiment with 214 participants from Amazon MTurk

  
<table>
<thead>
<tr>
<th>Treatment</th>
<th>Conversion rate</th>
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<tbody>
<tr>
<td>Narrow</td>
<td>1.42%</td>
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<tr>
<td>Broad</td>
<td>1.70%</td>
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  - **Results**
    - Temporal framing:
      - Narrow ($7.08 per-month) vs. Broad ($84.90 per-year)

- **Moderated mediation analysis (Model 7, Hayes 2012)**
  - Redundant information increased evaluability (“In the earlier advertisement, I used math to make it easier to evaluate the alternatives” in a 7 point-scale, anchored by disagree/agree)
  - Enhanced evaluability increased consumer choice
  - H2b and H3 were supported

### Discussion

- Redundant information influences the underlying mechanism of processing initially anchored information and adjustment
- Narrow temporal framing increases contract commitment length in the field
- Adding the rescaled alternate temporal frame widens this gap
- Evaluability enhances ease of processing and adjustment process
- Effective intervention on a biased judgment
- Consumer well-being (e.g., decision comfort and confidence) and other downstream outcomes may be researched for the future research

### References