Redundant Temporal Framing and Individual Choice

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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

- Price on a monthly basis (e.g., $30/month) is preferred over price on a yearly basis (e.g., $365/year)(e.g., Pennies-a-day effect) [1][2][3]

H1: Narrow (vs. broad) presentation will increase commitment length

How does providing both frames simultaneously influence 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]

H2a: Redundant information will weaken the temporal presentation effect

2) Reinforcing

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

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

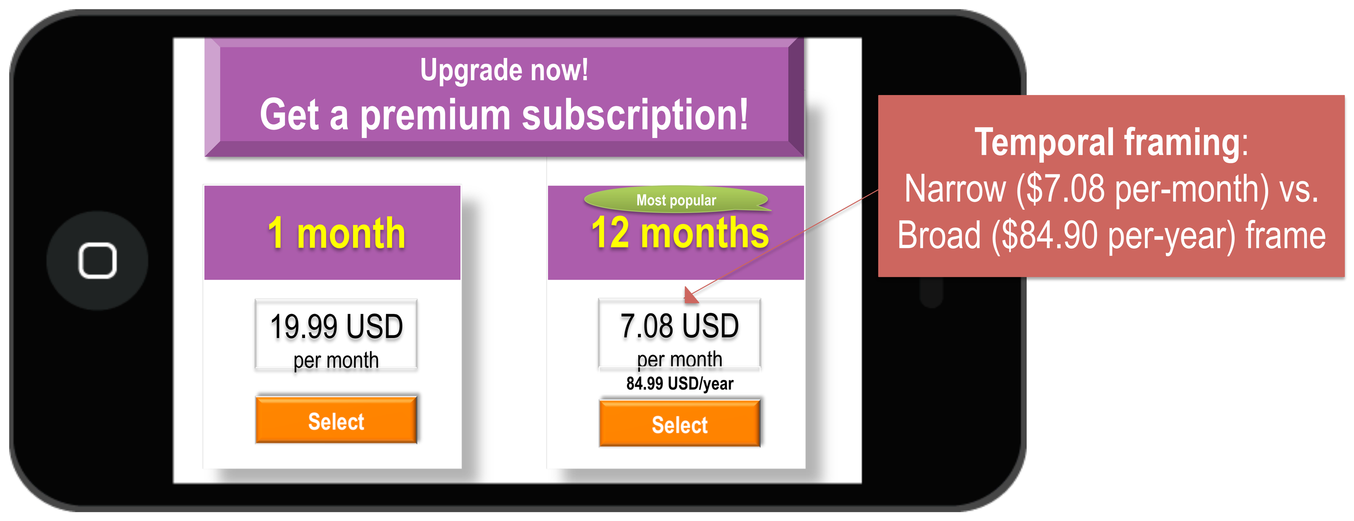
A biased judgment regarding temporal presentation may be adjusted with RI

- 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

Study 1: Field study

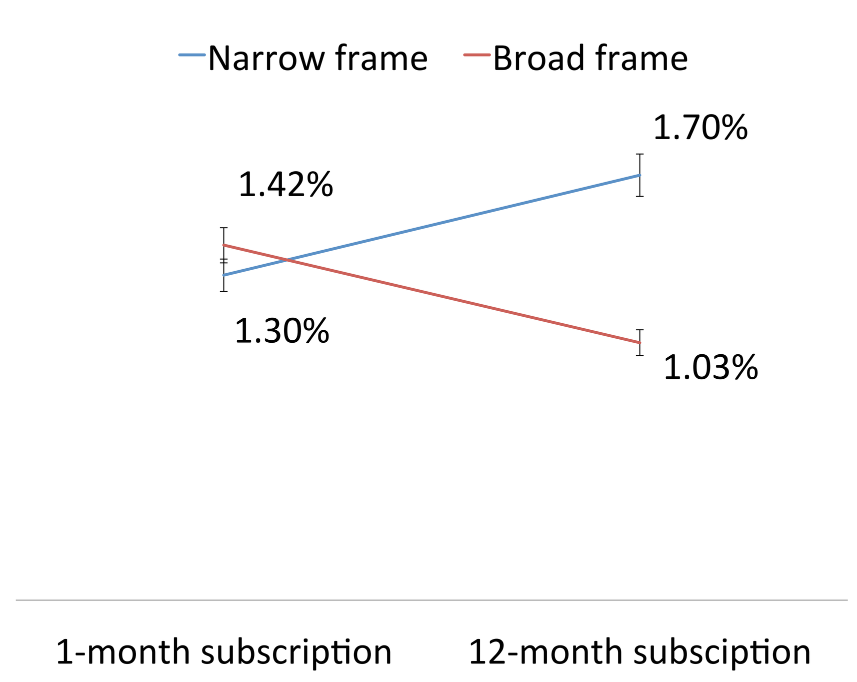
- 16,290 actual users of a popular mobile app
- A two-cell (Temporal framing: Narrow/per-month vs. Broad/per-year) design



Results

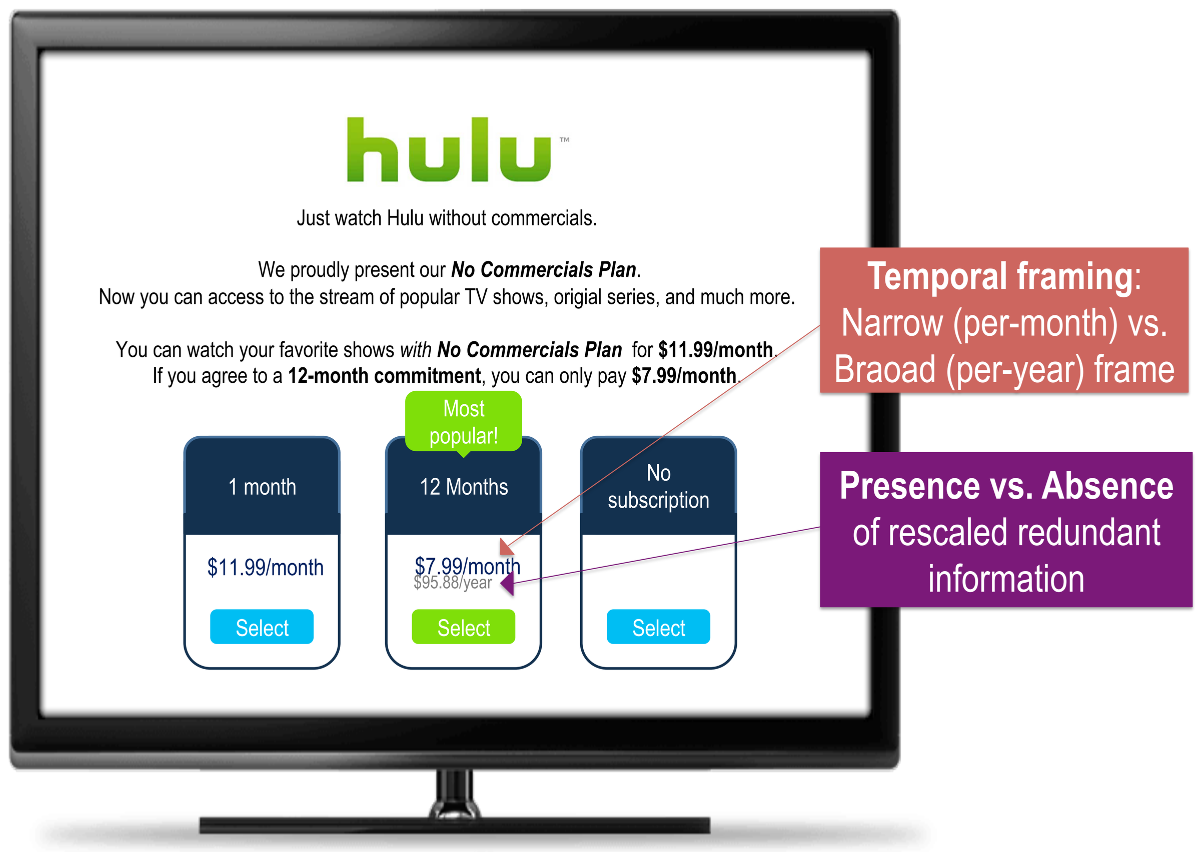
- Only 3% of users purchased subscriptions
- Narrow framing Increased 12-month prescriptions (vs. 1-month subscription) by 41%
- 21% increase in per-user conversion value (bottom-line effect)
- H1 was supported

Conversion rate



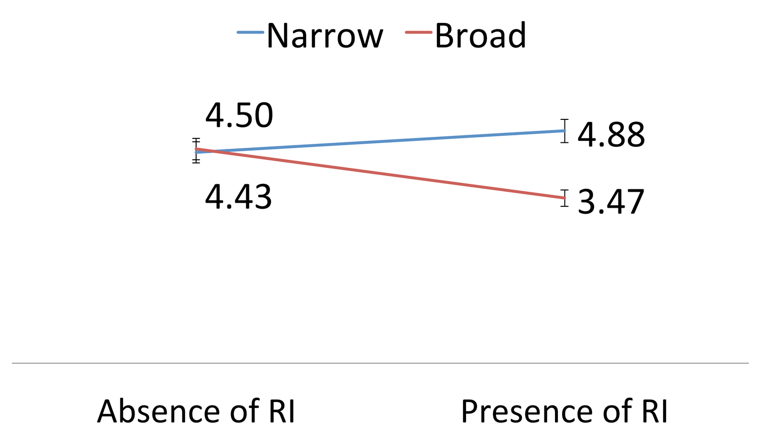
Study 2: Controlled lab study

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

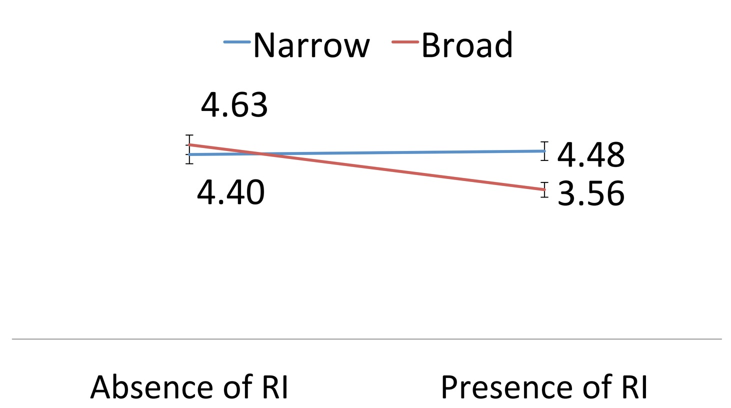


Results

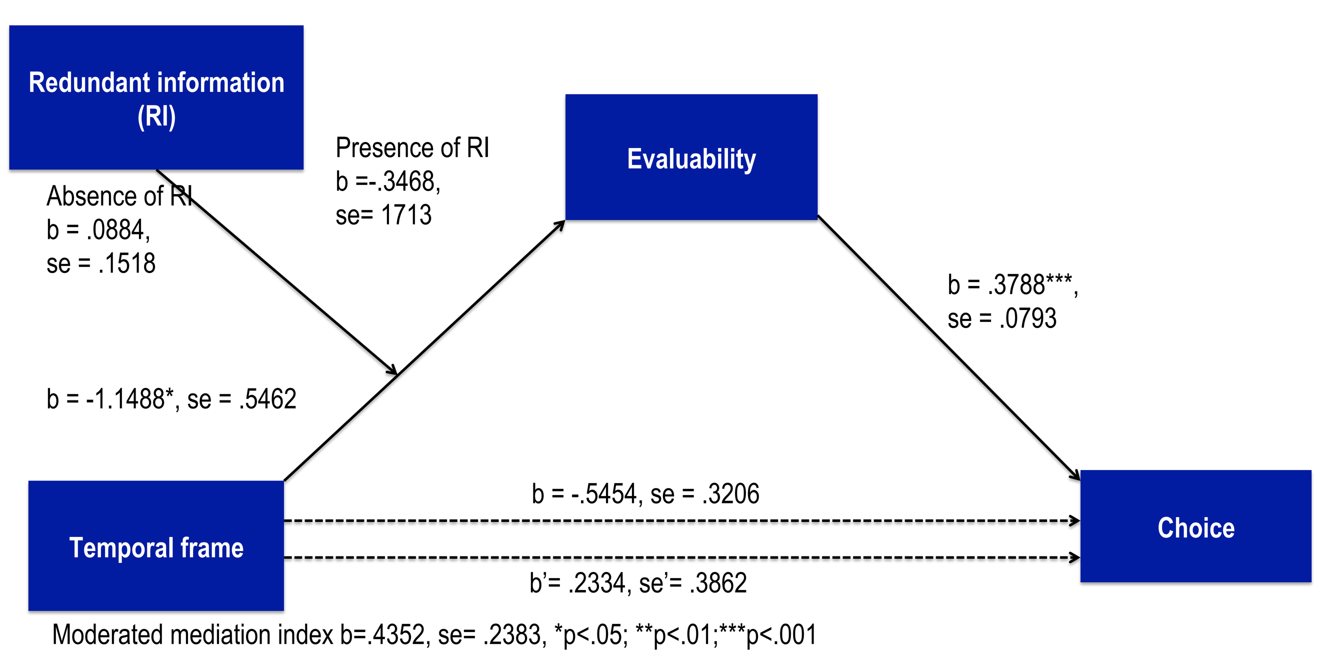
Evaluability



Consumer choice



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 adjustement 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

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