Session 6: Consumer behavior theory (framing, schemata, BDT)

- **Customer analysis from other sessions**
  - customer lifetime value (analytics)
  - voice of the customer (product development)
  - pricing (in H2)
    - EVIU (expected value in use),
    - EVC (expected value to channel)
    - conjoint analysis
Session 6: Consumer behavior theory (framing, schemata, BDT)

• Customer analysis from earlier sessions
  – customer lifetime value (analytics)
  – voice of the customer (product development)
  – pricing
    • EVIU (expected value in use),
    • EVC (expected value to channel)
    • conjoint analysis

• Today: consumer behavior theory (sampling)
  – framing
  – memory schemata
  – behavioral decision theory
Brita Hints

1. The Brita case explores both qualitative insights and marketing analytics.

2. Use strategic positioning to understand the qualitative insights. For example, use the case descriptions to decide what various segments (if there are more than one segment) of customers want? Think carefully about the strategic (long-run) implications.

3. The case contains data from a laboratory test market. Analyzing these data help you to determine whether to launch a faucet filter and, if it is launched, what marketing tactics to use during launch.
Blackberries

100 lbs

?? lbs

99% water

98% water

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Nails puzzle

• Take six ordinary nails and balance them on the head of a seventh nail. No strings, clue, magnetism, etc. allowed. Just the nails.

• Reframing next period.
Simple example of framing

1% Distortion
$1,000

5% Distortion
$800

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Framing example

A

• $3.60 per gallon
• 10¢ a gallon **surcharge** for using a credit card

B

• $3.70 per gallon
• 10¢ a gallon **discount** for using cash.

Images of Shell gas station © unknown. All rights reserved. This content is excluded from our Creative Commons license. For more information, see [http://ocw.mit.edu/help/faq-fair-use/](http://ocw.mit.edu/help/faq-fair-use/).
Framing (classic example)

• Selective influence over the consumer's perception of the meanings attributed to words, images, and products. Limiting mental representations, interpretations, and simplifications of focus. Equivalence frames represent logically equivalent alternatives portrayed in different ways. Emphasis frames focus on a subset of relevant perspectives.

• Prototypical Example (from Tversky and Kahneman, Science, 1981)
  – Between groups
    • Outbreak of an unusual flu this season. Expected that 600 people will die if untreated.
      – A: 200 people will be saved
      – B: 1/3 probability that 600 are saved, 2/3 that no one is saved
      – vs.
      – C: 400 people will die.
      – D: 1/3 probability that no one will die, 2/3 that 600 will die.

    – A > B by 72%, but D > C by 78%

  – Within group?
Framing through context
(perceptual map now in perceptual dimensions)

Clarity

Richness

A 50% → 20%

B 50% → 60%

C 0% → 20%
Framing example

<table>
<thead>
<tr>
<th>Grade</th>
<th>Octane</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular</td>
<td>87</td>
<td>$3.55</td>
</tr>
<tr>
<td>Mid-grade</td>
<td>89</td>
<td>$3.89</td>
</tr>
<tr>
<td>Super</td>
<td>93</td>
<td>$3.99</td>
</tr>
</tbody>
</table>
Another framing example

Cup sizes at Starbucks © unknown. All rights reserved. This content is excluded from our Creative Commons license. For more information, see [http://ocw.mit.edu/help/faq-fair-use/](http://ocw.mit.edu/help/faq-fair-use/).
Framing by paradigms

• We see the world through accepted “paradigms.”

• We all have “referent bins” in memory.

• Fracture the paradigm
  – Buy music in albums on hard media (records, tapes, CDs)
  – The web is all about information.
  – Cellphone service providers need contracts to get a return on upfront subsidies.
Cadillac

- Perceived as luxury
- Your parents’ car
- Loyal customers are literally dying off
- How do you reframe the referent bin?
Framing household robots

• Huge demand for household robots
  – more two-income families
  – heavy demand on time for many families
  – ($10,000/robot) x 100 million families = $1 trillion market in US alone

• But
  – failed introduction could set everything back
  – AI is not ready, works only some of the time
  – potential catastrophic failures in the household
  – Terminator paradigm (in US)

Honda’s frame

- **Goal: get R&D experience and consumer feedback**
  - What size robot do you make?
  - How do you control the image?
  - What tasks do you assign to the robot?
Alibaba Taobao

- Taobao (eBay folded)
- But, unlike in the US
  - culture of bargaining
  - personal relationships are important to assess trust (affect and cognition)
  - crowded vs. sparse feel
- Designed for cultural frames
  - mimic Chinese department store
  - Taobao sellers register with details
  - separate reputation as seller from reputation as buyer
  - Alipay escrow service to eliminate settlement risk
  - embedded IM service to facilitate bargaining
Memory schemata drive framing

Schema (plural is schemata)
- organized pattern of thought or behavior
- mental structure encapsulates experience and ideas
- system to organize and process new information

Implications
- influence attention and accept new information
- consumers notice features that fit their schemata
- consumers reorganize information to fit schemata

Relationship to Framing
- framing draws on existing schema
- new frames force schemata reorganization
What schemata are consistent with the Lifesavers brand?
Memory schemata

Gatorade

Spokesperson

Past experiences

Memorable Advertisement.

“For those special activities”

Performance colors

Effective for kids game

Need an effective...

Enhance Performance

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Examples of schema explanations

- **Snapple – Wendy**
- **Tylenol – poisoning**
  - Cyanide in capsules
  - But not due to any action by Johnson & Johnson
  - Off the market for a year
- **Audi 5000 – sudden acceleration**
  - Sales dropped 81% after a 60 Minutes’ video aired
  - Subsequently vindicated, but damage was done
  - More recently Toyota had similar issues

Safety seal is now mandated as a response to the incident.
Urban myths can kill sales

• Eating effervescent candy and coke

• Spider eggs at K-mart
P&G Satanism rumor

- Logo, appearance on a major talk show
Rumors affect sales

Rumor: McDonald’s hamburgers are made from worm meat.
Schemata
Framing by cultural norms

• Coca-Cola’s price discrimination
  – at the supermarket
  – at MIT Sloan (machine, 100 Main St.)
  – at the Bayside Expo
  – at an exclusive bar (e.g., Alibi, Grill 23)
  – on the beach at a resort

• Why not change the price automatically based on the outside temperature?
Pricing norms are critical to resource conservation.

- Pay more to use a road during rush hour?
- Pay more for more data?
- Carbon footprint?
More framing examples

- **Luxury boxes**
  - expensive and further from field, but
  - sushi, special meals
  - special elevator

- **You can charge more in a movie theater for popcorn** — economic argument of price discrimination.

- **But why are the sodas and popcorn so large?**
What do you notice about the prices?
A bit more upscale
What is the reference price?
Summary

• **Framing**
  – select mental focus
  – change mental representations
  – switch among equivalence frames
  – context is important

• **Schema**
  – consumer’s mental structure
  – influence attention and emotion
  – reaction to product and communication depends on existing schemata
  – path by which much framing occurs
The tip of the iceberg

- **Formal models of framing**
  - prospect theory – gains vs. loses
  - mental accounting – separate “mental accounts” for gains and losses

- **Ecological rationality affects marketing**
  - free implies low value
  - anchoring and adjustment
  - decoy effect can increase share
  - conjunctive fallacy helps advertising

- **Cognitive simplicity**
  - heuristic decision and search rules
  - primarily in consideration decisions
Behavioral decision theory (cognitive simplicity) examples

• We are unlikely to have time in class to cover all of behavioral decision theory, but if you are interested, many theories are covered in 15.847, Consumer Behavior.

• Framing and schemata are relevant in 15.846, Branding.

• The following marketing examples illustrate some of the established results from behavioral decision theory. I’ve provided them in the handouts for students who are interested.
Paradigm: If it’s free it may not be high quality.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Conversion Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trial</td>
<td></td>
</tr>
<tr>
<td>Reg. Price</td>
<td>28.1%</td>
</tr>
<tr>
<td>50% discount</td>
<td>29.3%</td>
</tr>
<tr>
<td>Free trial</td>
<td>70.6%</td>
</tr>
<tr>
<td>Free + coupon</td>
<td>76.2%</td>
</tr>
<tr>
<td>Control</td>
<td></td>
</tr>
</tbody>
</table>
Free trial lowers repeat purchase

<table>
<thead>
<tr>
<th></th>
<th>Trial</th>
<th>Repeat</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reg. Price</td>
<td>28.1%</td>
<td>32.4%</td>
<td>9.1%</td>
</tr>
<tr>
<td>50% discount</td>
<td>29.3%</td>
<td>44.1%</td>
<td>12.9%</td>
</tr>
<tr>
<td>Free trial</td>
<td>70.6%</td>
<td>2.8%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Free + coupon</td>
<td>76.2%</td>
<td>18.8%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td>9%</td>
</tr>
</tbody>
</table>

Recall BBVA iPad give-away reduced some funnel measures.
Anchor and adjust

- If the Vers Shellcase were offered at a price equal to the last two digits of your SS#, would you buy it?

- How much would you be willing to pay for the Vers Shellcase?

- When tested on students, those with higher SS# digits were willing to pay more!

- But does not replicate well.

A case and stand in one, the Vers Shellcase brings a warm organic aesthetic to the iPad with steel-reinforced, hand-crafted hardwood or bamboo.

© Vers Shellcase. All rights reserved. This content is excluded from our Creative Commons license. For more information, see http://ocw.mit.edu/help/faq-fair-use/.

Table 1

<table>
<thead>
<tr>
<th>Quintile of SS# distribution</th>
<th>Cordless trackball</th>
<th>Cordless keyboard</th>
<th>Average wine</th>
<th>Rare wine</th>
<th>Design book</th>
<th>Belgian chocolates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$ 8.64</td>
<td>$16.09</td>
<td>$ 8.84</td>
<td>$11.73</td>
<td>$12.82</td>
<td>$ 9.55</td>
</tr>
<tr>
<td>2</td>
<td>$11.82</td>
<td>$26.82</td>
<td>$14.45</td>
<td>$22.45</td>
<td>$16.18</td>
<td>$10.64</td>
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<td>3</td>
<td>$13.45</td>
<td>$29.27</td>
<td>$12.55</td>
<td>$18.09</td>
<td>$15.62</td>
<td>$12.45</td>
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<tr>
<td>4</td>
<td>$21.18</td>
<td>$34.55</td>
<td>$15.45</td>
<td>$34.55</td>
<td>$19.27</td>
<td>$13.37</td>
</tr>
<tr>
<td>5</td>
<td>$26.18</td>
<td>$65.64</td>
<td>$27.91</td>
<td>$37.55</td>
<td>$30.00</td>
<td>$20.64</td>
</tr>
</tbody>
</table>

Correlations: $r = .415, p < .001$; $r = .516, p < .001$; $r = .328, p = .014$; $r = .319, p = .0153$; $r = .419, p = .0013$.


40
Decoys can increase targets
Recent research clarifies the decoy effect

Widely reported example, is actually from a hypothetical experiment and does not replicate well.

<table>
<thead>
<tr>
<th>Direct Replication</th>
<th>N=2,003</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Web</td>
<td>Print</td>
<td>Web/Print</td>
</tr>
<tr>
<td>2 choice</td>
<td>75%</td>
<td>18%</td>
<td>21%</td>
</tr>
<tr>
<td>3 choice</td>
<td>69%</td>
<td>18%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Prototypical counterexample:

Lesson: Stay tuned. This research is at a turning point. Works well for verbal (web-based) but not necessarily visual (shelf-based) stimuli. Although in the “popular press,” effects are more subtle.
Preference for the complex, the conjunctive fallacy

Pantene makes your hair beautiful.

Pantene makes your hair healthy, shiny and beautiful.

What is more probable? HTHH or THTHH
Consumers often use simple decision rules

“I will only consider GPSs with small size, color displays, that float”
An example verbal protocol study.

Introduction → Quiet Sorting → Commented Sorting → Re-Examination of Card Stacks (Laddering)
Automotive consumers use fast, simple heuristics for consideration

- Percent who take less than 5 seconds per vehicle* 87% (during the silent sort phase)
- Percent who use a cognitively-simple rule 76% (during the vocal sort phase)