EXPERIMENTAL METHODS IN MARKETING
Learning about customers

John Roberts
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Marketing and the Measurement Imperative

Marketing is the understanding of the customer’s needs and the harnessing of the organization’s resources to meet those needs, at a profit

Bjorn Shorte
The Measurement Imperative

Marketing is the understanding of the customer’s needs and the harnessing of the organization’s resources to meet those needs, at a profit.

**Market linking**

**Market sensing**

Marketing metrics provide focus to our marketing actions. They are the sights on our rifle for targeting the customer. It is not that we won’t hit anything without the sights on the rifle. It’s just that our chances are reduced.
The nature of research in marketing

**Phenomenologically driven**

- **Marketplace behaviour**
  - Perceptions: Probing beliefs
  - Preference: Calibrating drivers
  - Purchase: Understanding choice

**Methodologically driven**

- **Analysis of market**
  - Mapping: Factor analysis, MDS
  - Conjoint: Stated & revealed
  - Discrete choice: Experimental design

**Managerially driven**

- **Management actions**
  - Positioning: Market structure
  - Perceptions: Mapping beliefs
  - Portfolios: Market coverage

Roberts “The Intersection of Modelling Potential and Practice” *IJRM* 2000
Types of Market Research

Quantitative
Done by statisticians, economists, econometricians
Puts numbers on things
Answers the "How many?", "How much?", "When?" questions

Qualitative
Done by psychologists, sociologists, anthropologists
Understands the process consumers go through
Answers the "Why?", "Where?", "How?" questions

Figure 11-4. Without a pre-measurement, it’s difficult to identify the effect of the experimental treatment. At this Cincinnati research facility, each subject’s natural body scent is being judged prior to testing of a deodorant formulation.
Methods of learning

Units of analysis

Population  (Aggregate)

Groups of  (Segmentation) consumers

Individuals  (Disaggregate)

Understand sources of heterogeneity for market view

Drill down for individual differences
## Methods of learning

### Units of analysis

<table>
<thead>
<tr>
<th>Population</th>
<th>Bass diffusion model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups of consumers</td>
<td>Urban’s Sprinter model</td>
</tr>
<tr>
<td>Individuals</td>
<td>Belief importance model (utility)</td>
</tr>
</tbody>
</table>

### Examples

- Bass diffusion model
- Urban’s Sprinter model
- Belief importance model (utility)
Units of analysis

Population

Groups of consumers

Individuals

Examples

Bass

Sprinter

Utility

Methods of learning (contd.)

\[ U_{ij} = \sum_k w_{ik} y_{ijk} \]
<table>
<thead>
<tr>
<th>Units of analysis</th>
<th>Examples</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Bass</td>
<td>Marketplace</td>
</tr>
<tr>
<td>Groups of consumers</td>
<td>Sprinter</td>
<td>Historical</td>
</tr>
<tr>
<td>Individuals</td>
<td>Utility</td>
<td>Secondary (ABS, Commerce)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Market research Laboratory</td>
</tr>
</tbody>
</table>
What do we learn?

(1) What Subjects (Ss): (2) Ss’ reaction to stimuli

- Think
- Feel
- Like
- Do

(and the relations between them)

Test: \( O_1 \; O_2 \; X \; O_3 \; O_4 \)

Control: \( O_1 \; O_2 \; O_3 \; O_4 \)

(the role of stimuli in evaluation updating)
References

Experimental design

Cook and Campbell
Quasi-Experimentation
1979

Shadish, Cook and Campbell
Experimental and Quasi-Experimental Designs
2002

Marketing

Eliashberg and Lilien
Marketing
1993

Lilien, Kotler and Moorthy
Marketing Models
1992
What’s fun in experimental design and lab work?

**Probably, not fourth order interaction effects!**

I like:

- Dynamic models (Chylinski et al. *Mkt Sc* 2011)
- Contingent models (Roberts & Lattin *JMR* 1991)
- Gaps in the market (Kayande et al. *Mkt Sc* 2011)
- Data fusion models (Danaher et al. *Mkt Sc* 2013)

Let me share with you a model using multiple data sources
The management application and the modelling innovation

Management Actions

The Problem: Kmart Australia was unprofitable, had poor perceptions, and was dominated by its major competitor, BigW.
A redesign of the store and move to EDLP had failed to change this situation.
How could management develop and communicate a compelling value proposition?

Modeling Choice

Fact 1: The following articles have as their first sentence a statement of the importance of emotions in choice:

Fact 2: Google “Choice models emotions” and one finds no relevant tier 1 article
Background

- Kmart bought by Wesfarmers
- Kmart had 190 stores,
- Baskets average $30, 4 items
- Inter-purchase time 8 weeks
- Annual store visits: 550 million

…. but no profit or growth in ten years
SHOULD WE CLOSE THE BUSINESS?
Kmart pruned the product range
Moved to $x.00 price points
Removed the dump bins
Cleaned up the stores
Transitioned to EDLP
Lowered prices
BUILD AND THEY WILL COME
Conceptual Model of Consumer Choice for Discount Department Stores

LIKELIHOOD TO CHOOSE STORE

VALUE

QUALITY

REPUTATION

PRICE

PERFORMANCE

Emotion Elements
- Surprise
- Happiness
- Love
- Pride
- Contentment
- Anger
- Sadness
- Anxiety
- Shame

QUALITY

- Many types of products
- Good brands
- A store for people like me
- Family – oriented
- A store I believe in
- Not too confusing

PERFORMANCE

- Available help
- Cheerful staff
- Low waiting times
- A store I feel comfortable in
- Products are on the shelves
- Good shelf layouts
- Products that last
- Aesthetically pleasing products
- Good location
- Excellent opening hours
- Accepts products back
- Rewards me as a customer

PRICE

- Good promotions
- Low catalogue prices
- Easy to understand prices
- Always low prices
- Will beat competitors

EMOTIONS

- Surprise
- Happiness
- Love
- Pride
- Contentment
- Anger
- Sadness
- Anxiety
- Shame
% OF FEELINGS RATINGS
% OF THOUGHTS RATINGS

LATENCY (MS) VS RATINGS COLLECTED

Mean – 1184ms, Median – 1050ms, Mode – 750ms
<table>
<thead>
<tr>
<th>FEELINGS</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 SURPRISE</td>
<td>0.96</td>
<td>0.10</td>
<td>0.12</td>
<td>0.16</td>
<td>-0.05</td>
<td>0.11</td>
<td>0.02</td>
<td>-0.09</td>
<td>0.04</td>
</tr>
<tr>
<td>2 HAPPINESS</td>
<td>0.10</td>
<td></td>
<td>0.95</td>
<td></td>
<td>0.13</td>
<td>0.04</td>
<td>0.07</td>
<td>0.13</td>
<td>0.17</td>
</tr>
<tr>
<td>3 LOVE</td>
<td>0.11</td>
<td>0.13</td>
<td></td>
<td>0.97</td>
<td></td>
<td>0.10</td>
<td>0.02</td>
<td>0.12</td>
<td>0.04</td>
</tr>
<tr>
<td>4 PRIDE</td>
<td>0.16</td>
<td>0.04</td>
<td>0.10</td>
<td></td>
<td></td>
<td>0.97</td>
<td></td>
<td>0.13</td>
<td>0.03</td>
</tr>
<tr>
<td>5 CONTENTMENT</td>
<td>-0.05</td>
<td>0.06</td>
<td>0.02</td>
<td>0.06</td>
<td></td>
<td>0.98</td>
<td>0.05</td>
<td>0.07</td>
<td>0.13</td>
</tr>
<tr>
<td>6 ANGER</td>
<td>0.11</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>-0.05</td>
<td></td>
<td>0.96</td>
<td></td>
<td>0.07</td>
</tr>
<tr>
<td>7 SADNESS</td>
<td>0.02</td>
<td>0.16</td>
<td>0.04</td>
<td>0.03</td>
<td>0.07</td>
<td>0.05</td>
<td></td>
<td>0.97</td>
<td>0.15</td>
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<tr>
<td>8 ANXIETY</td>
<td>-0.09</td>
<td>0.05</td>
<td>0.03</td>
<td>-0.09</td>
<td>0.13</td>
<td>-0.07</td>
<td>0.15</td>
<td></td>
<td>0.96</td>
</tr>
<tr>
<td>9 SHAME</td>
<td>0.03</td>
<td>0.10</td>
<td>0.07</td>
<td>0.02</td>
<td>0.06</td>
<td>0.05</td>
<td>0.06</td>
<td>0.07</td>
<td></td>
</tr>
</tbody>
</table>
THE BASELINE
DDS BASELINE EMOTIONS READ

*Non-significant drivers

Kmart
Big W
TRANSLATION TO CREATIVE
EMOTIONS ACTIVATION PROCESS

PRE-WORKSHOP
Target emotion identified: PRIDE

Pre-workshop ideation around emotional themes for PRIDE

CONTEXT & BOUNDARIES
Forethought emotions expert gives background on PRIDE
Kmart marketing shares Brand Strategy & Positioning

PRIDE defined as VALUED ACHIEVEMENT and GROUP MEMBERSHIP
Kmart positioning is MAKING LOW PRICES IRRESISTABLE

EMOTIONAL IDEATION
 Syndicate ideation on emotional themes & communication vehicles

Optimal Pride territories generated:
Mums making smart, thrifty choices at Kmart to manage the budget (Achievement Pride)

A collective experience of savings (Group Membership)

DRAFT CONTENT
Talent, imagery, story line, tone

Genuine, relatable narrative. Real mums.
On July 11, Kmart invited 1,000 mums
Kmart Brand (n = 222)
Kmart (TVC) (n = 223)
Big W Brand (Stream 1) (n = 224)
Big W (TVC) (n = 228)
BUSINESS OUTCOMES
DRIVERS TARGETED BY 1000 MUMS CAMPAIGN

RATIONAL

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
</tr>
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<tbody>
<tr>
<td>Kmart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always low prices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Store I feel comfortable in</td>
<td></td>
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</table>
DRIVERS TARGETED BY 1000 MUMS CAMPAIGN

EMOTIONAL

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pride</td>
<td>Kmart</td>
<td>Big W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Love</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Aggregate level results

<table>
<thead>
<tr>
<th></th>
<th>June 2011 Probability of choice (%)</th>
<th>June 2012 Probability of choice (%)</th>
<th>June 2011 EBIT</th>
<th>June 2012 EBIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kmart</td>
<td>36</td>
<td>40</td>
<td>204</td>
<td>266</td>
</tr>
<tr>
<td>Big W</td>
<td>35</td>
<td>37</td>
<td>177</td>
<td>178</td>
</tr>
</tbody>
</table>
EMOTIONS ARE CATEGORY SPECIFIC

- Pharmaceutical (Specialty): 72/28%
- Diapers: 75/25%
- Media: 60/40%
- Retail Banking: 45/55%
- Private Health Insurance: 39/61%
- Discount Department Stores: 25/75%
- Prepaid Cell Phone Credit: 5/95%

100% Feelings
50/50
100% Thoughts
THANK YOU