Music, Psychology & Advertising

Daniel Müllensiefen
Thinking and decision Making
• The rational mind fallacy: *We are rational creatures*

• Supremacy of reason

• Emotions are dangerous and need controlling

**Traditional view of the mind**
Challenging the Traditional View

Les Binet
Head of Effectiveness adam&eve DDB
“it [i.e. emotion] allows the possibility of making living beings act smartly without having to think smartly.”

=> a brain that can’t feel can’t make up its mind
Bechara et al. (1997)

- After 10 cards, physiological signs (SCR responses) to wrong deck
- By 50 cards, people “learnt” the game
- But 80 cards before could explain why
- Patients with damaged prefrontal cortex never showed anticipatory SCRs

Wagar & Dixon (2006)

The Iowa Gambling Task
“Humans are to independent thinking like cats are to swimming. We can do it when we have to but we’d much rather not.”
Kahneman’s Two Systems

System 1
- Unconscious
- Automatic
- Emotional
- Fast
- Associative
- Pervasive

System 2
- Conscious
- Controlled
- Rational
- Slow
- Linear
- Limited
• Cognitive availability heuristic
• Loss aversion
• Confirmation bias
• Framing and anchor effect
• Halo effect
• Status quo bias

(and many more!)

Biases and Heuristics
How advertising works
Psychological Theories of Advertising

• Hierarchy-of-effects models
• The Yale Reinforcement Approach
• The Information Processing Model
• The Cognitive response Model
• The Dual Process Model
• The Unimodel
The Dual process model

- Two types of information:
  - Arguments / Message
  - Heuristic Cues
- Processing capacity / motivation decide on route
- Includes host of low-attention processes:
  - Priming
  - Evaluative condition
  - Mere exposure
  - Emotional processing
Two kinds of advertising effects

- **Rational product & pricing messages** ➡️ **System 2** ➡️ **Short term behavioural responses**
- **Emotional brand associations** ➡️ **System 1** ➡️ **Long term brand preferences**

Source: Binet & Field 2013
**Short term effect on sales**  (Binet & Field 2013)

- **Sales activation messages**: Big direct effect, but decays quickly.
- **Emotional brand building**: Smaller effect on all metrics. Decays slowly.
Longer term effects

Sales activation messages
Short term sales uplifts, but no long term growth

Emotional brand building
Long term sales growth
Reduced price sensitivity

(Binet & Field 2013)
How to appeal effectively to system 1?
Music: One of the prime heuristic cues appealing to system 1

Music ...
- is used in 90% of internationally used TV ads (Applebaum & Haliburon, 1993)
- enables ‘bonding with brands through emotional register’ (Charpentier, 2007, J Adv Res)
- creates bridges between personal experiences of viewers and brand/product (Allan, 2006, J Adv Res)
- helps gain attention, create mood, change pace, facilitates brand and message recall, etc. (Admap, 2003, ‘Music in advertising – best practice’)
- ...
Take home messages

- Music works most effectively through system 1 / peripheral processing route / by manipulating emotions, feelings and associations

- Music works best for brand building (not for rational messaging)
Implicit measurement of advertising effects
“The trouble with research is that people don’t do what they say, they don’t say what they think, and they don’t think how they feel.”

David Ogilvy
Traditional methods of advertising (pre-)testing (questionnaires, surveys, focus groups) don’t measure effects on system 1 and the low route of processing

The Problem
Alternatives

- Emotion Tracing
- Reaction Time Measurement (Implicit Attitude Test)
- Affect Misattribution Procedure
- Eye Tracking
- Facial Expression Recognition
- EEG
- fMRI
- Psychophysiological Measures (Skin Conductance, Heart Rate)
What are skin conductance responses?
The Autonomic Nervous System

Sympathetic nervous system: Stress and ‘call to action’

Parasympathetic nervous system: Relaxation, rest and digestion

Indicators of (para)-sympathetic activity:
• Electrodermal activity
• Heart rate
Emotions activate autonomic nervous system

Changes in heart rate and SCRs

Magnitude of bio-signals ≈ magnitude of emotional arousal

The Autonomic Nervous System
Skin Conductance Measurement

- Method to measure physiological arousal and emotion without asking participants
- 2 electrodes apply external current across the skin
- As eccrine sweat glands sweat more, current flows better
- Simple extension to include heart rate measurement

Skin Conductance Measurement
SCR Data: tonic vs. Phasic Activity
Indicators of emotional arousal level:

1. Number of spontaneous sweat bursts
2. Level of tonic activity
Measuring the emotional effects of music in TV ads

An experimental study with Sensum
The Experiment

• Questions:
  • Are effective more emotional than ineffective ads?
  • Does music drive emotions in TV ads?
• 33 participants
• 20 advertisements (embedded in a BBC documentary)
• 2 groups
  • same ads
  • muted and ‘normal’ ads with music swapped between groups
• Measurement:
  • SCR
  • Ratings on traditional questionnaire measure (Awareness Index) for each advertisement
<table>
<thead>
<tr>
<th>Effective Advertisements</th>
<th>Music vs. No Music</th>
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<tbody>
<tr>
<td>Aldi</td>
<td>no music</td>
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<tr>
<td>Virgin Atlantic</td>
<td>music</td>
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<tr>
<td>Heinz</td>
<td>no music</td>
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<tr>
<td>Nikon</td>
<td>music</td>
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<td>Actimel</td>
<td>music</td>
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<td>Lloyds TSB</td>
<td>music</td>
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<tr>
<td>KFC</td>
<td>no music</td>
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<tr>
<td>John Lewis “Always a woman”</td>
<td>music</td>
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<tr>
<td>John Lewis “The long wait”</td>
<td>music</td>
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<tr>
<td>Tropicana</td>
<td>music</td>
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<table>
<thead>
<tr>
<th>Ineffective Advertisements</th>
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<tbody>
<tr>
<td>McCain</td>
<td>music</td>
</tr>
<tr>
<td>Homebase</td>
<td>no music</td>
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<tr>
<td>Capital One “One man’s identity theft”</td>
<td>no music</td>
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<tr>
<td>TOTAL Greek yoghurt</td>
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<tr>
<td>Virgin Media “Search”</td>
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<td>Petits Filous</td>
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<td>Heinz Beanz Snap Pots</td>
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<td>Virgin Media “Three Tuners”</td>
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<tr>
<td>Sprite</td>
<td>music</td>
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<tr>
<td>Capital One “Monster Truck”</td>
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1) Effective ads significantly more arousing than ineffective ads ($p < 0.05$)

2) Ads with the music were significantly more arousing than the same ads with music muted ($p < 0.05$)

3) First segment of ads was significantly less arousing than the later two ad segments ($p < 0.05$)

4) No difference between effective and ineffective ads on traditional questionnaire measure (Awareness Index)
1. The emotional (system 1) road to advertising drives brand building and long-term profits
2. Music works for branding/advertising most effectively through emotions
3. Need to use implicit measurement techniques for testing emotional effect of music on ads and brands

Wrap-up in 3 steps