Obtaining Insights Through
Applied Consumer Neuroscience

Michelle Niedziela, PhD

Using The Right Tool
For The Right Question:
A Method-Agnostic Approach To Holistic Communications With Consumers

Obtaining Insights Through
Applied Consumer Neuroscience
Michelle Niedziela, PhD
Sensory Marketing
Your Sensory Footprint

Products are experienced via sensory systems like sight, smell, taste, touch and sound – 5 dimensionally.

- Smell
- Sound
- Visual
- Taste
- Touch

Product1

Product2
Products are experienced via sensory systems like sight, smell, taste, touch and sound – 5 dimensionally. This experience forms impressions in the brain that affect mood and arousal levels while setting a context for the product.

**Mood**
Type of experience (positive or negative)

**Arousal**
Level of interest stimuli is generating

**Context**
Product attributes (concept, branding, perception)
Multidimensional Mood Map

- **Unpleasant/Activated**
  - Tense | Fear | Anger

- **Unpleasant/Deactivated**
  - Tired | Bored | Depressed

- **Pleasant/Activated**
  - Excited | Elated

- **Pleasant/Deactivated**
  - Calm | Relaxed

**Pleasantness**

**Arousal**

**ARoused**
- Hyper

**Quiet**
- Still | Sleepy
Multidimensional Mood Map

Approach/ Avoidance

Emotional Valence

Arousal

INTERESTED

ECSTATIC

EXCITEMENT

SURPRISED

NEUTRAL

HAPPY

PLEASANT

ENJOYMENT
Combination of traditional measures, biometrics and contextual psychological testing show us how the consumer is perceiving, evaluating and responding to stimuli.

**Communications Research**
- Interview
- Focus Group
- Survey
- Concept Test

**Psychophysiological Research**
- Heart Rate
- Skin Conductance
- Facial EMG
- EEG

**Contextual Testing**
- Implicit Testing - Cognitive tests to assess constructs
- Priming - Setting and measuring context
- Eye Tracking - Measuring attention

**Applied Consumer Neuroscience**
Breaking out of the Black Box

Input → BLACK BOX → Output
Case Study

Introducing...

**refreshing** energized

“pick me up”

*Underlined words are the emotional targets*
Applied Consumer Neuroscience

- Interview
- Focus Group
- Survey
- Concept Test

- Heart Rate
- Skin Conductance
- Facial EMG
- EEG

- Fragrance Alone
- Concept Alone
- Fragrance + Concept
HCD HedonicsPlus™

- Test Samples
- Benchmarks

Shaded area = Emot. Target

Emotions:
- Pleasantness
- Intense
- Unpleasant
- Arousal
- Pleasant
- Mild
- Tired
- Bored
- Sad
- Miserable
- Angry
- Afraid
- Disgust
- Distressed
- Astonished
- Happy
- Glad
- Relaxed
- Content
- Bored
- Tired
- Content

HCD research®
## HCD Research Capabilities

<table>
<thead>
<tr>
<th>Phase I - Exploration</th>
<th>Traditional Measures</th>
<th>Psycho-physiological Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Interview</td>
<td>Focus groups</td>
</tr>
<tr>
<td>What does the consumer think about this idea/product?</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>What are product improvement opportunities?</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>What design/elements deliver the optimal product?</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Is there white space in this product category?</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Who is my consumer?</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>What are the most highly valued product attributes?</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

## Phase II – Evaluation

| What flexibility is acceptable? | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Is my brand/product recognized by consumers? | ✓ | ✓ | ✓ | ✓ | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Is my brand correctly associated with my product? | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| What is the mood perception of my product? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | | |
| What claims can we use in communications? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

## Phase III – Validation

<p>| Is the product appropriate? | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Is this product detectably different from another? | ✓ | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Are my visuals (packaging, product, etc.) appropriate? | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |</p>
<table>
<thead>
<tr>
<th>HCD Research Innovations</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HCD BioStat Metrics</strong></td>
<td>• Combining statistical methodologies (conjoint analysis, bayesian statistics, etc.) with applied consumer neuroscience to create actionable metrics for consumer understanding</td>
</tr>
<tr>
<td><strong>HCD Mindset</strong></td>
<td>• Evaluating higher-order psychological benefits (confidence, beauty, alertness, etc.) of products and communications using a combination of psychological and neuroscientific methodologies</td>
</tr>
<tr>
<td><strong>HCD BeyondHedonics</strong></td>
<td>• Ingredient &amp; product differentiation - novel methodologies for testing beyond liking &amp; intensity for sensory testing (from flavors to fragrances, colors to sounds)</td>
</tr>
<tr>
<td><strong>HCD-CTM</strong></td>
<td>• Beyond applied consumer neuroscience - building consumer technical models for successful product development and developing research pipelines and programs for successful products.</td>
</tr>
<tr>
<td><strong>HCD WholeSense</strong></td>
<td>• Experience Innovation - consumer sensory market research methodology using a holistic approach to consumer understanding via the senses, understanding consumer multi-sensory experience from in-store, in-hotel, in-car to in-plane environments</td>
</tr>
<tr>
<td><strong>HCD neuroUX</strong></td>
<td>• Holistic approach to understanding user experience from websites to consumer and medical products such as toothbrushes and self administered medical tests; a methodology for studying consumer product use</td>
</tr>
<tr>
<td><strong>HCD MessageOptimizer</strong></td>
<td>• Multi-faceted research approach to determine optimal message/claim combinations for each of your audience segments</td>
</tr>
<tr>
<td><strong>HCD EMCodeRT</strong></td>
<td>• Concept testing that combines neuroscience and HCD AdverTest (online quantitative tool) to evaluate concepts by measuring conscious, explicit perceptions of brand messages</td>
</tr>
</tbody>
</table>
Working with clients to build research programs for consumer understanding, identify innovation opportunities, and provide scientifically meaningful claims.
Global Presence