Introduction to Neuro-Marketing

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Introduction Session

Instructor: Timothy Desmet

The Neuro-marketing Toolbox: The methods to do neuro-marketing with

A short history of marketing

The brain is predictably irrational

Ethical Considerations

Assignments

The goal is to increase (returning) customer satisfaction, by minimising disrupting factors such as stress or queuing. E.g. The stressful and queued security check minders positivity.

The updated Toolbox

The toolbox includes the following methods:

- **Brain Imaging** (implicit measures)
  - EEG
  - FMRI
  - FNIRS
- **Physiological** (implicit measures)
  - Eye movement
  - Pupil dilation
  - Heart rate
  - Galvanic skin response
- **Online** (implicit measures)
  - Reaction time tasks

- Association tasks
- Visual search tasks

Why do we need a new toolbox?

Traditional tools: Focus groups, interviews, surveys **We ask for their opinion** -> *Biased answer, as being close to the situation.* Unconscious influence of external/internal factors affecting choice or opinion.

The updated Toolbox focuses on analysing *System 1*, the fast and subconscious system, where as traditional tools are much more adequate analysing the rational methodology of *System 2*.

Common problematics That the traditional toolbox struggles with and why there is a need for a revised methodology of measuring reactions.

Socially desirable answering Some answers and topics are socially undesirable to talk about, such can be the question whether or not one prefers *"Trump over Clinton"*, or whether one is *"pro Brexit"*. Thus, the social pressure of abnormality and being excluded from society because of that abnormality, steers and influences socially desirable answers.

faulty introspection (unconscious decision making) Given, that people are not aware of the factors influencing them unconsciously, they tend to give a reason of being *nudged* towards a given choice due to more primitive factors.

> Often consumers don't have a good understanding of what really drives their own behaviour.

Strategic answering Some answers are given with an intention in mind to disguise the true opinion. An example could be the stimuli: *"How much would you pay for this product?"* - To which one could understate the price willing to pay, considering their affinity towards that product. Thus, their intent is to lower the price with their answer. Another example could be a hiring interview, in which one would clearly answer lying, with a strategy in mind, than telling the truth, with the objective in mind to increase one's position within the perception of the interviewer.

Implicit measures

Eye Tracking

Eye tracking is the most frequently used Neuro-marketing technique, because it is easy to use and cheap considering modern technological advancements. Eye tracking is the ideal example of why asking questions is sometimes impossible.

E.g. *"What did you notice in the file?"*, *"What stood out the most on the way to class"*

Bottom-up attention Through eye tracking we know which marketing elements draw the attention. It is good to know what draws attention in order to make conclusions about whether or not what needs to be seen is being seen or what should be minimised to be seen.

Skoda Fabia Attention Test Video

Top-down attention Through eye tracking we know what people want to pay attention to, or what they're looking for. When looking for book-shops, they will be easier recognised visually and attention will be drawn to those subjects.

Liking, Wanting & Emotions Through eye tracking we know what people like/want/enjoy. Just by comparing products and how people looked at them can give indication about their preference.

Eye movements consist of *fixations* and *saccades*. Fixations are when the brain focuses on a point and captures information, where as saccades are the process of when the eyes move from one to another point to focus on.

The two eye tracking methods, being stationary and mobile, have their advantages and disadvantages such as being more adequate for contingent situations or for special circumstances. Mobile eye tracking changes physical environment, thus the analysis of the data is much harder to classify.

Physiological implicit measures

Galvanic Skin Response / Skin conductance

Arousal as distraction/focus implies physiological effects, such as a raised heart beat frequency, dilated pupils et cetera. As there are many physiological effects, we measure *galvanic skin response and heart rate variability*. Arousal can be of feared nature or desired nature, such are fear of e.g. predators or sexual encounters.

Schweppes Advert

Emotions and attention in Commercials

FIAT 500s advert

a) What emotions do you think are triggered by the commercial? Joy, Hapiness, weirdness, surprise, cringe
b) List main emotions for different time windows 0-7: neutral, joy 7-19: Weirdness, surprise, joy 19-28: Joy, happiness, funny 28 - : neutral
c) Do you think the emotional profile is appropriate? Its staged - funny (controllable imitiation of women actions) -> sexism?
d) 5 attracting aspects Do they contribute to the story line of the commercials? Kicking, the bag, walk away (testing guy), Real-life/women action
e) Logo processing? Bad BoyS, logo is always small - but its known that FIAT is the company in question, If there weren't any sound, you'd probably miss that it's FIAT explicitly. The logo is central at the very end - attention slip?

The nervous System

Neuro in *"neuromarketing"* refers to our entire nervous system (central + peripheral).

The nervous system is the system containing all nerve cells (neurons).

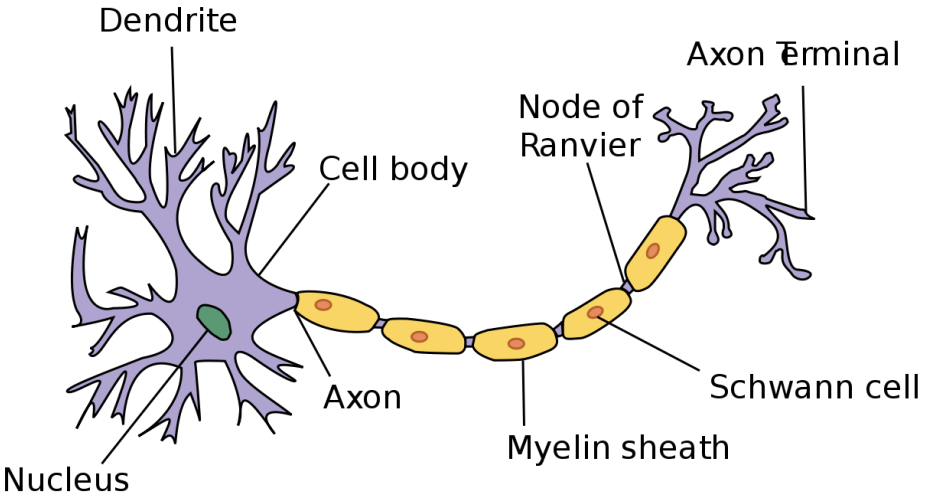

Figure 1: Nerve cell

Sensory neurons get information from the outside world and pass it via other neurons to the CNS. The Interneurons get information from neurons and pass it on to other neurons, where as motor neurons get informed from the CNS and activate muscles, organs etc.

Neuroplasticity The brain forms new neurons and the connections and functions can change or adapt throughout our lives.

The Triune Brain Theory from Macleon is too simplistic. Every brain structure has been changed through evolution.