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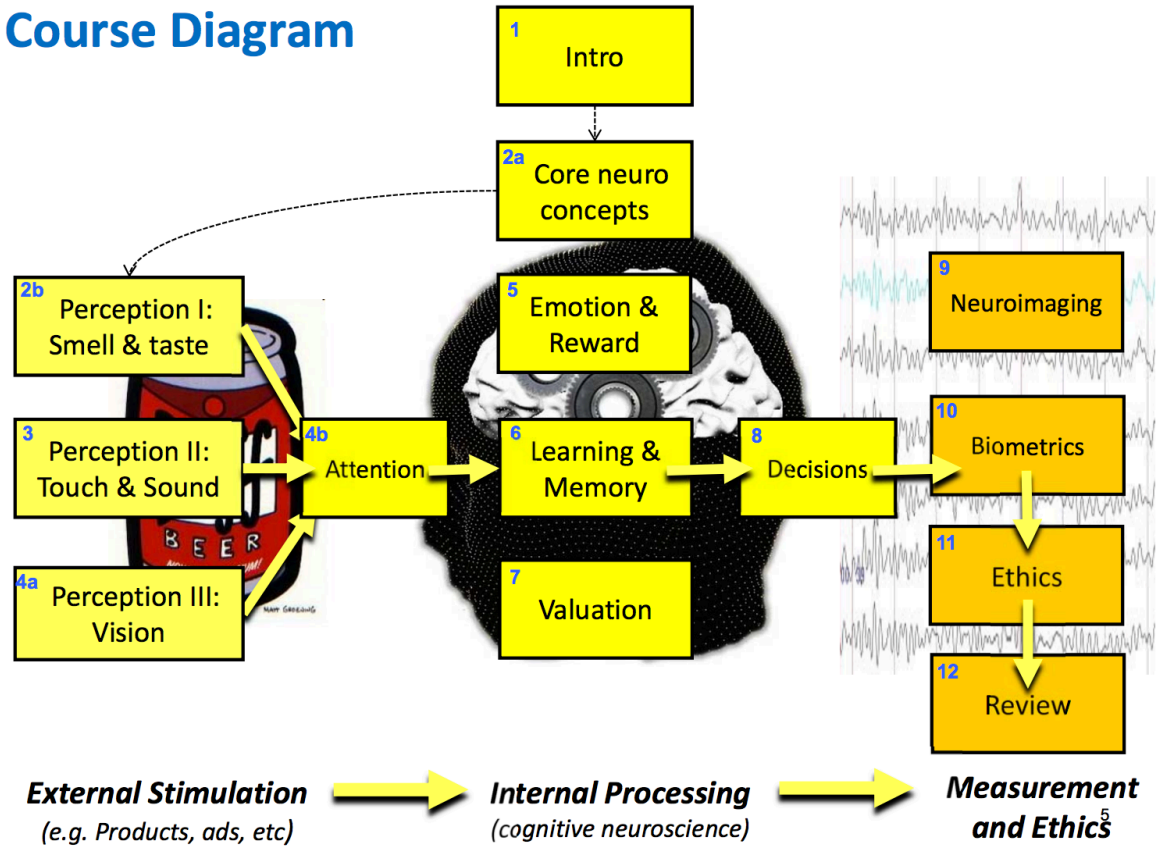
Neuromarketing Toolkit/Course Diagram

The course is structured in the following setting:

Cognitive Neuroscience	**Neuroeconomics (Neuroscience)**	**Psychophysiology**
how your brain works, functions, memory, sensory inputs, processes of brain	DM, value equation, reward circuitry	how your bodily changes reflect mental changes/internal processes – EEG and FMRI – inferences on emotion, based on changes in physical forms



Neuromarketing Background in Consumer Research

Limitations of Consumer Research

- Thought processes that occur largely 'beneath the surface' influence decisions
- Awareness and ability to reflect on thought processes that influence behaviour is limited
- Self-reported influences on decisions may not reflect actual decision factors

Contempoary Marketing Issues (FACC)

- Fragmentation (media) - mass audience is gone
- Ad avoidance - savvy consumers avoid ads using adblock etc.
- Control (media) - consumers control exposure
- Clutter - message attention is low

Neuromarketing Implications

1. **Theoretical Insight**
   Enhance economic theory of decision-making and consumer behaviour theory by examining specific mental processes underlying consumer behaviour
2. **Marketing Research Insight**

Examine regional brain responses that underpin consumer behaviour to inform marketing decision-making

Core "Neuro" Concepts (The Brain)

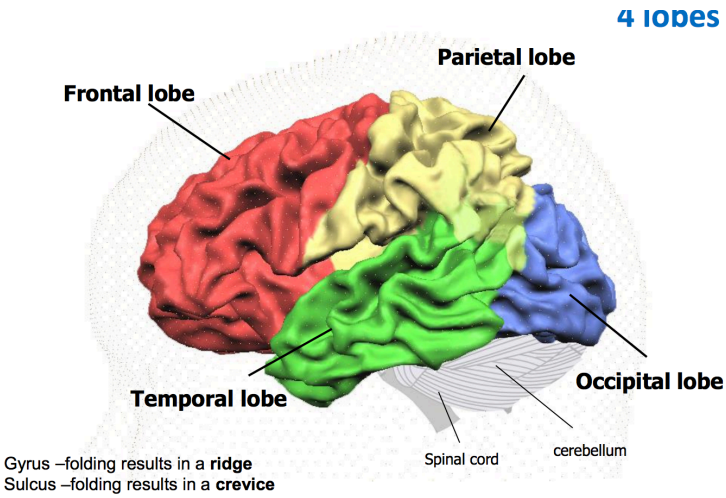
- Brain is modular: areas are **specialized** for different processes
- Some areas have **multiple functions**
- **Neural networks** that support complex behaviour

Importance of the Frontal Lobe

- Processes smell and taste
- Integrates outputs from other brain regions
- Complex processing of thinking/feeling/making decisions
- Moderates emotional signals [LINK Reward Circuit]

Perception & Sensory Inputs

- Provide intrinsic and extrinsic cues for products [LINK Value Equation]
- All sensory inputs linked to the reward circuit [LINK Reward Circuit]
- Occur in **cortical regions** of the brain: Surface of the brain, lobes



Olfaction (smell)

Associated Brain Regions: Frontal Lobe
Cues: Intrinsic

- <u>Does not pass through the thalamus</u> (attention gateway), connects directly to the cortex
    - No control over smells you perceive → cannot consciously direct attention away or to an odour
    - **More direct link to autobiographical memory formation (hippocampus)**
    - Marketing implication: exercise control over sensory experience of consumers → generate approach behaviour → familiarity → brand preference → purchase behaviour

Gustation (taste)

Associated Brain Regions: Frontal Lobe
Cues: Intrinsic

- Smell affects taste before and after [LINK Multimodal Encoding]
- Provides intrinsic cues for products → confirms/denies information from extrinsic cues (price, appearance)

Marketing Implications: Sampling

Touch

Associated Brain Regions: Parietal Lobe
Cues: Intrinsic

- **Need for Touch (NFT)** – the consumer's need to touch products. Can be:
  I. **Instrumental NFT**: dianostic for decision-making
  II. **Autotelic NFT**: for fun seeking

  Products have a high or low diagnostic power of touch (LINK to NFT in consumer side of equation)
- Interpersonal touch → **reduced perceived risk in decision-making** *eg. Male gambling more when female touches them*
- Attitudes → "endowment effect" (holding the product enhances sense of ownership)

Marketing Implications:
Having a "try me" button on products will assist consumers in making a purchase decision and will present an endowment effect.

Heading (sound)

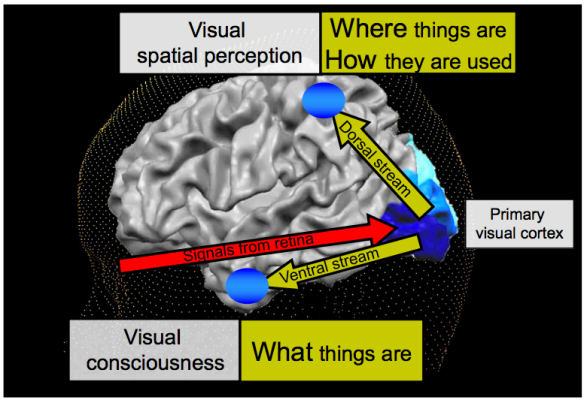
Associated Brain Regions: Temporal Lobe
Cues: Intrinsic & Extrinsic

- Auditory Perception
  - As a **context**: meaning processed without explicit attention given to it. Can also infer emotional states
    Eg. "cocktail party effect" when you are conscious of music being played in background (low involvement processing) Music volume and dynamics, tonality and texture can infer emotional states
  - As a **branding device**: sound logo of 3-5 notes [LINK Multimodal encoding]
    Eg. Hearing McDonalds sound can evoke positive emotional states associated with that memory
  - **Product specific**: used to evaluate products as an intrinsic cue of quality

Marketing Implications:
Sound in all applications can be used to influence emotional states of consumers and contribute to product value

Sight (vision)

Associated Brain Regions: Occipital Lobe
Cues: Intrinsic & Extrinsic



- 2 Visual Systems – strongly linked to perception
    1. **"What system"- ventral stream** - feature recognition, physical structure of objects - good at recognising <u>specific shapes</u>
        Marketing implication: product and logo design should be distinct
    2. **"Where system"- dorsal stream** - emotion perception, location of features in the visual field (THINK dorsal driving)

    Both systems feed from the **primary visual cortex**

Marketing Implications:
Visually salient cues need to be used in context of branding *Eg. Apple's 1984 TV commercial – Apple logo is the only stimulus with bright colours*

Multimodal Encoding

- Multiple sensory projecting onto experience → in working memory longer → more neurons firing together → more likely to form long term memory strand [LINK to LTM]

Marketing Implication:

- Make use of **sensory branding** via multimodal sensory cues to strengthen memory trace associations with the brand and increase accessibility, repetition, etc.

Attention

Spotlight of Attention

- **Selective attention** involves the selection of a subset of sensory stimuli for further processing
- The **frontal lobe** processes parts within your **conciousness**
- Stimuli **in spotlight of attention passed on for higher processing**.

Types of Attention