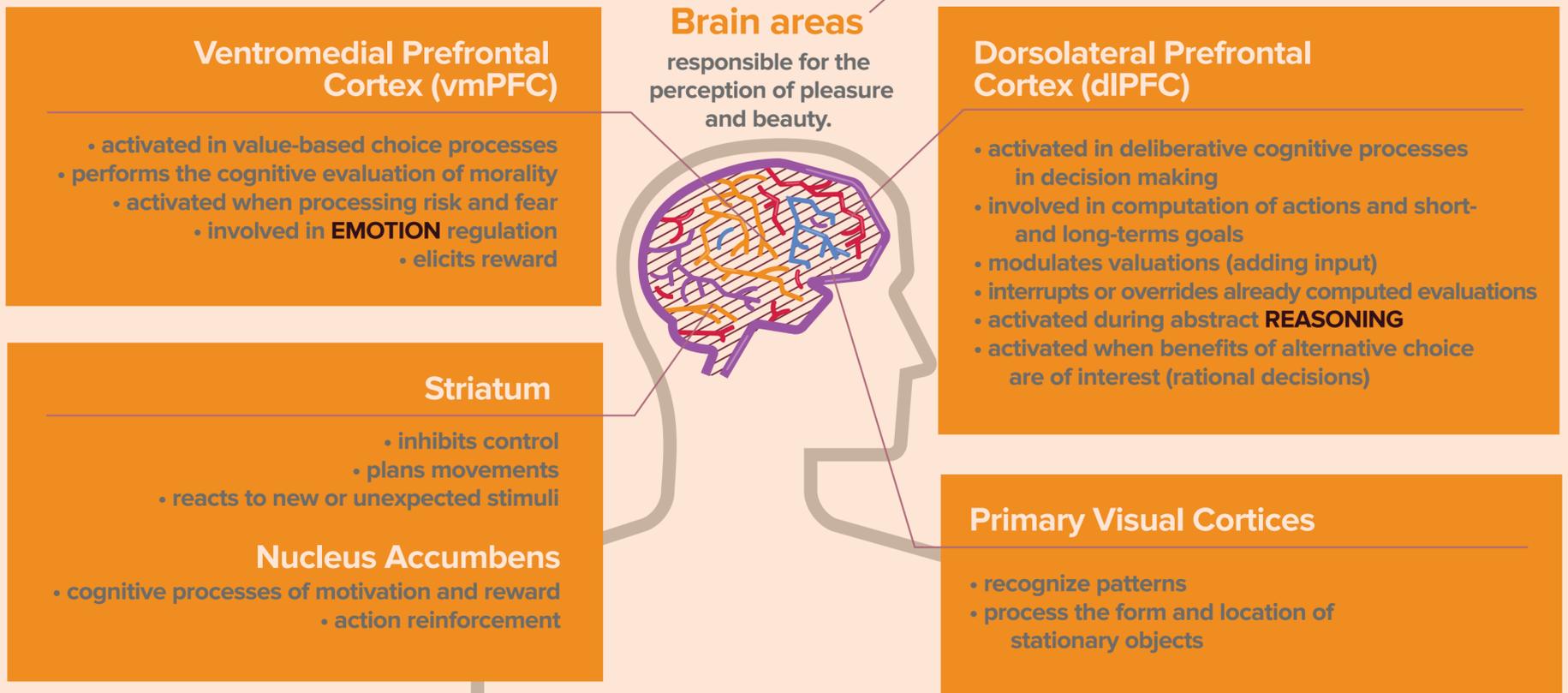


NEUROAESTHETICS

Why the brain chooses organic VS. conventional products

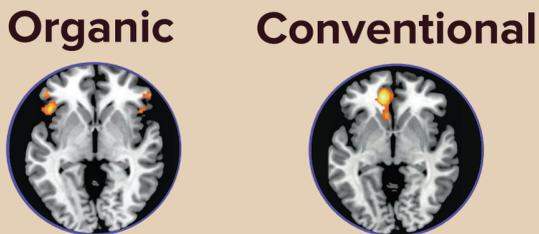
Neurodesign identifies design aspects of physical or virtual objects and environments that our brains naturally find more appealing. It can be considered part of *neuroaesthetics*, the discipline that studies the neural mechanisms of our aesthetic evaluations.

Translated into a design language, this means that a successful package has the power to activate particular brain areas responsible for decision making.



STUDY 1

What happens to our brains when we choose between an organic and a conventional product? Using functional magnetic resonance imaging technology (fMRI), researchers were able to measure brain activity by detecting changes associated with blood flow when individuals were asked to choose between a conventional and an organic packaging. The resulting brain activation is graphically represented by color-coding the strength of activation across the brain.



Activation	dlPFC	vmPFC
Time of Response	1.31 sec	1.08 sec
Attractiveness	2.38/5	2.97/5
Healthiness	2.73/5	1.9/5
Tastiness	2.37/5	2.9/5

RESULT

- For the **ORGANIC** product, the time response was higher and the **dlPFC** was activated: More attention focused on long-term goals (healthiness) was found to affect behavioral choices. It seems that “rational” buying decisions that can be associated with activation in the dlPFC may override the emotional decision of the vmPFC.

- For the **CONVENTIONAL** product, the **vmPFC** was activated: Consumers’ choice was made on an emotional level. Self-control is crucial when it comes to primary triggers such as tempting (and unhealthy) food.

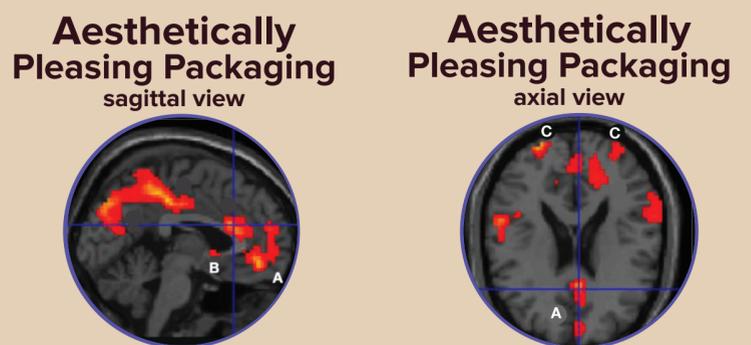
STUDY 2

What happens to our brains when we are presented with an aesthetically pleasing packaging design? In this neuromarketing study, an aesthetically pleasing packaging and a standardized popular packaging are compared. The fMRI revealed that the aesthetic packaging:

- Activates the vmPFC and the striatum, in particular the nucleus accumbens
- Activates the primary visual cortices

This implies:

The more aesthetic the packaging design, the more emotional processes will be engaged, resulting in increased reaction times. Consequently, consumers are more emotionally involved. In the case of beautiful packaging, there are major visual elaborations.



- A vmPFC
- B Striatum, Nucleus Accumbens
- C Primary Visual Cortices

RESULT

Results say that differentiation by aesthetic packaging design triggers reward and choice, despite someone’s lack of brand awareness and brand reputation. It also explains why sales of not very popular brands in bland packaging improve significantly when their packaging is enhanced by showing images of food with appetite appeal.

Sources:

- Organic or popular brands—food perception engages distinct functional pathways. An fMRI study (K. Feise, F. Simmank, E. Gutyrchik, A. Sztrókay-Gaul) *Cogent Psychology*, 4, 2017.
- Neurodesign: The new frontier of packaging and product design (A. Gallace) *Packaging Design*, October, 27, 2015.
- Aesthetic package design: A behavioral, neural, and psychological investigation (M. Reimann, J. Zaichkowsky, C. Neuhaus, T. Bender, B. Weber), *Journal of Consumer Psychology*, 20, 431–441, 2010.