

DECODE SCIENCE UPDATE 01/19

**SUCCESS CAN BE PLANNED –
HOW NEUROPSYCHOLOGY HELPS
TO DECODE, AND PROVIDE THE
BASIS FOR, SALES SUCCESS**

DECODE

Brand Code Management

WELCOME TO THE DECODE SCIENCE UPDATE

Over the past few years, neuroscientific research has revealed the key drivers of human behaviour.

In particular, the following finding stands out from all the others: Our brain evaluates options for action on the basis of whether, and how well, they help us to achieve our goals (so-called 'action value'). Categories, brands and products are a means of achieving these goals.

What we want to achieve, and which goal we pursue by making a purchase, depends on the situation or context – hence the subjective reward value of a product is dynamic.

Goals exist on many levels: They can be of a social, emotional nature or they can help us to get closer to our ideal state. In addition to this, functional goals also play a key role in the perception of value and, hence, for our purchase decisions. The neural system which calculates this added value plays a prominent role in the successful marketing of products and brands.

The challenge for marketing is to maximise the perceived reward value by ensuring correct implementation of the marketing mix. In this Science Update, we use a comprehensive case study about Ferrero's duplo brand to show how this can be done successfully. DECODE carried out the case study with Ferrero in Germany and published it in a professional journal. Special thanks go to Dr Enrique Strelow, Head of Shopper Neuroscience at Ferrero.

The conceptual and empirical approach implemented in the case study brings the 'why' of brand choice and purchase decisions to light. It allows us, systematically, to evaluate touchpoints and also to maximise the effectiveness of marketing activity - from the fit with the brand to the sale.

Enjoy your reading!
Your DECODE team

CASE STUDY ON DUPLO POS DISPLAYS (1/2)

A typical situation: The agency has created six versions of a point-of-sale (POS) display and now we have to choose a version. What do we do? Which visual would you choose and why? The toothbrush would probably not be chosen by anyone – it was created solely for test purposes.

Many people like the visual of the couple because it best expresses a wide range of emotions; others prefer the visual of the woman because a clear centre of attention (the face) is integrated and, also, the product's ingredients can be clearly identified. So far, we have enough points for an excellent discussion. It is not uncommon that the decision is then made on the basis of gut feeling, personal taste or company hierarchy. Ferrero follows a different path.

The company collected three types of data for each of these six displays, each of which will be described in more detail below:



Figure 1: Six point-of-sale (POS) displays for Ferrero's brand duplo.

CASE STUDY ON DUPLO POS DISPLAYS (2/2)

1) Brain data from an fMRT (brain scanner) study conducted by scientists of the University Medical Center of Hamburg-Eppendorf (Professor Gallinat and colleagues). Based on these data, the sales generated by each display were to be predicted.

2) Implicit behaviour data from a goal-priming paradigm study conducted with DECODE.

3) Last but not least, systematic retail audits were conducted to measure the sales generated by each display in supermarkets.

Can sales be predicted by brain data or implicit behaviour measurements? And if so, can we use these measurements to learn more about the 'why' of the success or failure so as to build future campaigns/executions based on these findings?

Let's take a closer look.

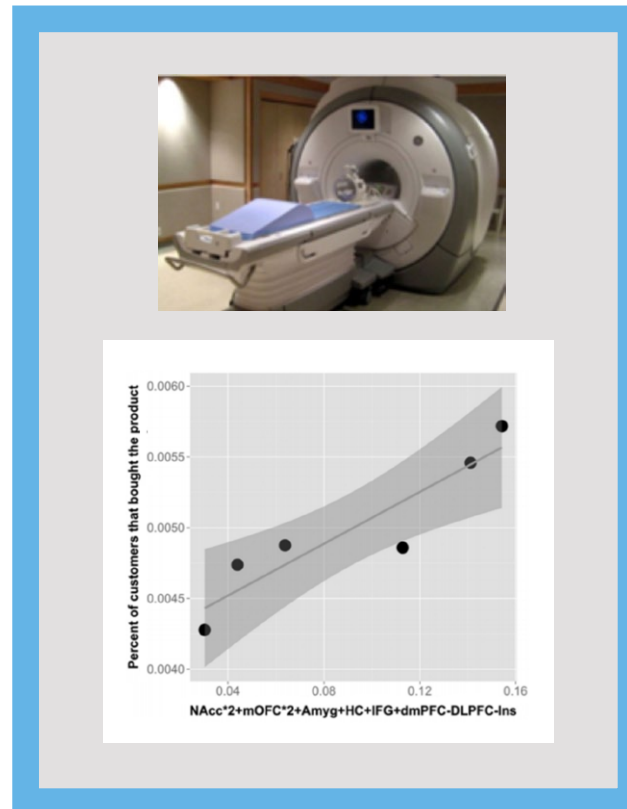
SALES FORECAST BASED ON BRAIN SCANNER DATA

Test subjects were positioned in a brain scanner and images of duplo, together with one of the displays, were shown to them. At the same time, their brain activity was measured and, on this basis, the success of the sales of each display was predicted.

To determine these sales forecasts, the researchers had to focus on certain brain regions because not all brain regions are involved in the purchase decision for a duplo chocolate bar. So the focus was on those systems which were already known to significantly influence our (purchase) behaviour.

A comparison between the brain's reactions and the actual sales figures showed a high and significant degree of consistency with the forecasts. Of particular interest was:

The activation of an individual brain region in the 'reward system' – the orbitofrontal cortex (OFC) – showed the highest correlation with the resulting sales figures. This is further evidence that purchase behaviour is strongly influenced by the expected reward value, and that marketing touchpoints such as the visuals used in the duplo fMRI



study can in fact activate this very region.

However, in order to reproduce the success systematically, the marketer must know precisely why a particular visual, packaging design or commercial worked so well.

What were the specific reasons for the activation (or non-activation) of the reward system?

In order to answer the 'why' question, we need to go beyond brain activations and switch to the content-related level: What rewards people in general and, specifically, in the context of chocolate products? And how can we use this to explain the effect of the different visuals?

Figure 2: Top: Brain scanner; Bottom: Correlation between brain activation (X axis) and sales (Y axis) for each of the six displays (Source: Kühne et al., Multiple buy buttons in the brain, *NeuroImage*).

SALES FORECAST BASED ON IMPLICIT GOAL PRIMING DATA

STEP 1: DECODING THE BRAND LEVEL (1/2)

The fMRT could quantify the reward value of duplo for each of the different displays, but what's missing is the specific consumer goals which have triggered this activation. Now we're talking about the content-related level – the message.

How can a display activate the reward system prior to the purchase? In order to avoid having to do everything and try everything first, our brain calculates reward value on the basis of expectations – expectations with regard to the goals which a brand or a product helps us to achieve. These goal expectations are activated by the displays and everything they include (images, text). This process is analogous to language, because people are able to extract the meaning from images and text without having to think about it. The expectations created in this way are then compared to our current goals and, if the 'fit' between goal and expectation is good, we make a positive decision. If I want to spoil myself (goal) after a stressful day at the office and a duplo display promises exactly that (expectation), then I will very likely reach for a duplo on display.

The question concerning general goals which reward or

motivate people universally can be answered quickly because these have been known for some time and have been described in detail in many articles and books (see "Recommended literature").

The specific chocolate goals were chosen for the duplo project by DECODE on the basis of existing studies, relevant scientific literature and previous brand and category communications. In total, a list of 60 potential goals which people might pursue when buying a chocolate bar (e.g. relaxation, spoiling oneself or doing something good for other people) was compiled. Firstly, these reward values were quantified at the brand level to determine the specific reward profile of the brand.

Over the years, people have not only learned a lot about the duplo brand but what they've learned also seems to be rewarding for many people because duplo is the market leader in chocolate bars in Germany. Therefore, the brand name alone already activates certain goal expectations. Communication has to connect with these existing associations if it wants to be successful.

SALES FORECAST BASED ON IMPLICIT GOAL PRIMING DATA

STEP 1: DECODING THE BRAND LEVEL (2/2)

Since every reward value is always relative to the other options available, other brands were included in the study in order to identify the distinct reward profile of duplo. In this particular case, duplo was sold together with “Kinder Bueno” and “Hanuta”, both from Ferrero as well, so duplo was evaluated against these two brands to quantify its reward profile.

The result of this initial implicit measurement with 320 female consumers is summarised in figure 3.

Clear and distinctive reward profiles of the three brands become evident. The key reward values of duplo are sensuality, friendship, community, harmony, sharing with others and doing something good for other people.

So, for duplo, it is essential to do something good for other people, i.e., not to buy the product for oneself or not only for oneself. This is not really surprising given the brand’s communication over the last two decades.

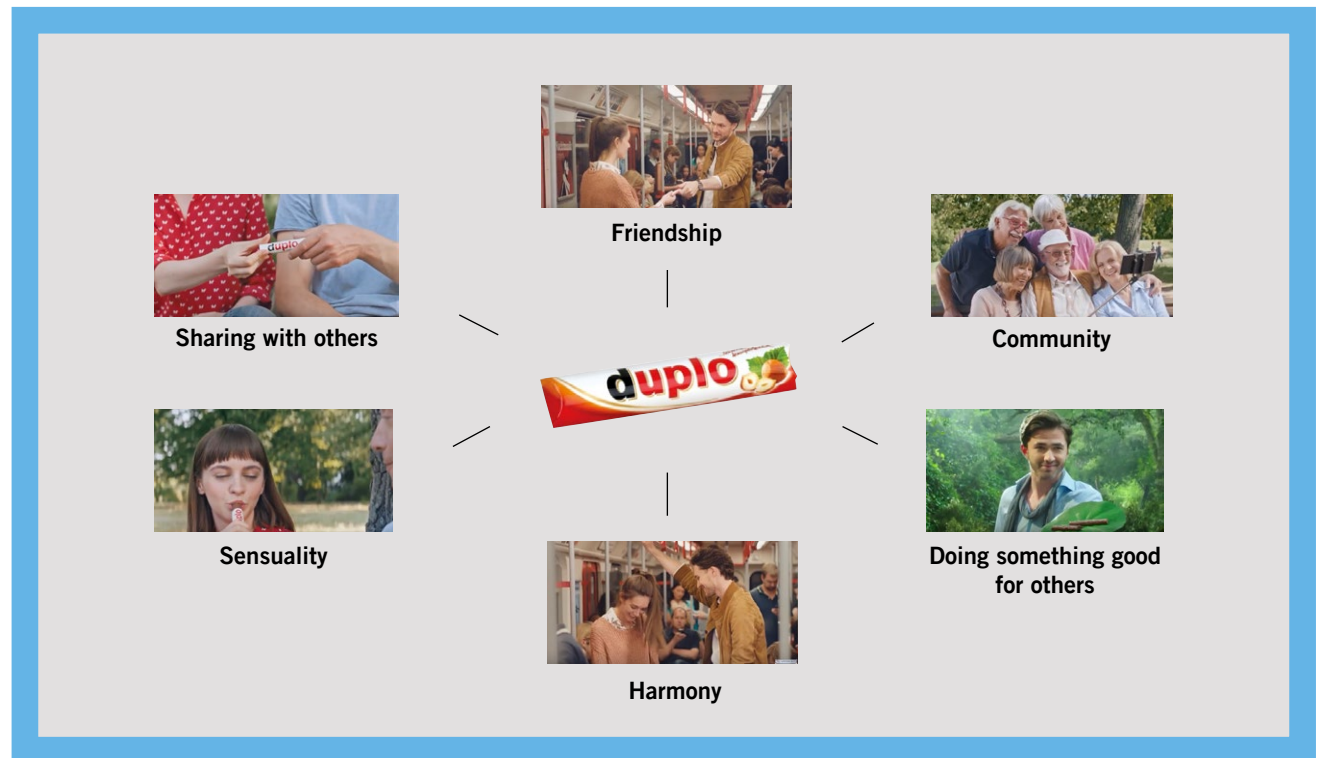


Figure 3: Implicit rewards of the duplo brand

SALES FORECAST BASED ON IMPLICIT GOAL PRIMING DATA

STEP 2: DECODING THE DISPLAYS (1/3)

After identifying the specific rewards of the brand, it was necessary to determine what rewards are conveyed by each of the POS displays. To this end, another 150 female consumers were invited to participate in an implicit test. Three of the POS displays were found to have particularly high reward activation, and each one of them showed a distinct reward profile (see figure 4).

So, we have the reward values available for all the relevant levels: Category (not shown here), brand and touchpoint. This allows us to reproduce exactly what our brain does: Calculating how good the fit is between the reward of the category, the brand and the reward profile activated by the display. In theory, the better the fit, the higher the sales should be.

And this is precisely what was found in practice: The visual of the 'group' shows the best fit and, therefore, achieved the best sales results.



Woman	Couple	Group
Spoiling myself	Security	Sharing with others
Feel at home	Friendship	Doing something good for others
Enjoyment	Seduction	Community
Feel balanced	Care	Pampering others
Optimism	Warm-heartedness	Recognition

Figure 4: Implicit rewards of the 'woman', 'couple' and 'group' visuals.

SALES FORECAST BASED ON IMPLICIT GOAL PRIMING DATA

STEP 2: DECODING THE DISPLAYS (2/3)

The visual of the 'group' came first in both actual sales and in the implicit test. The visual shows a gesture of offering or sharing, as well as a group as the context. Even though the visuals of the couple or the woman may appear to be more emotional at first glance, the 'group' visual best matches the brand's reward profile and sells best at the POS. The 'group' visual also scored best in terms of neural activation in the brain scanner (see figure 5).

Moreover, the implicit measurement could explain the 'why'. This provides the team with clear guidelines for how this success can be repeated systematically. While both the neural and implicit measurement ranking of the six displays correlated statistically significantly with actual sales, this was not the case with traditional questions such as liking (whether the display was liked or not) and purchase intention (whether the product would be bought based on the display). With those metrics, the 'woman' and 'couple' visuals were preferred, and the visuals with the hands also received a significantly higher score than their actual sales figures merited.

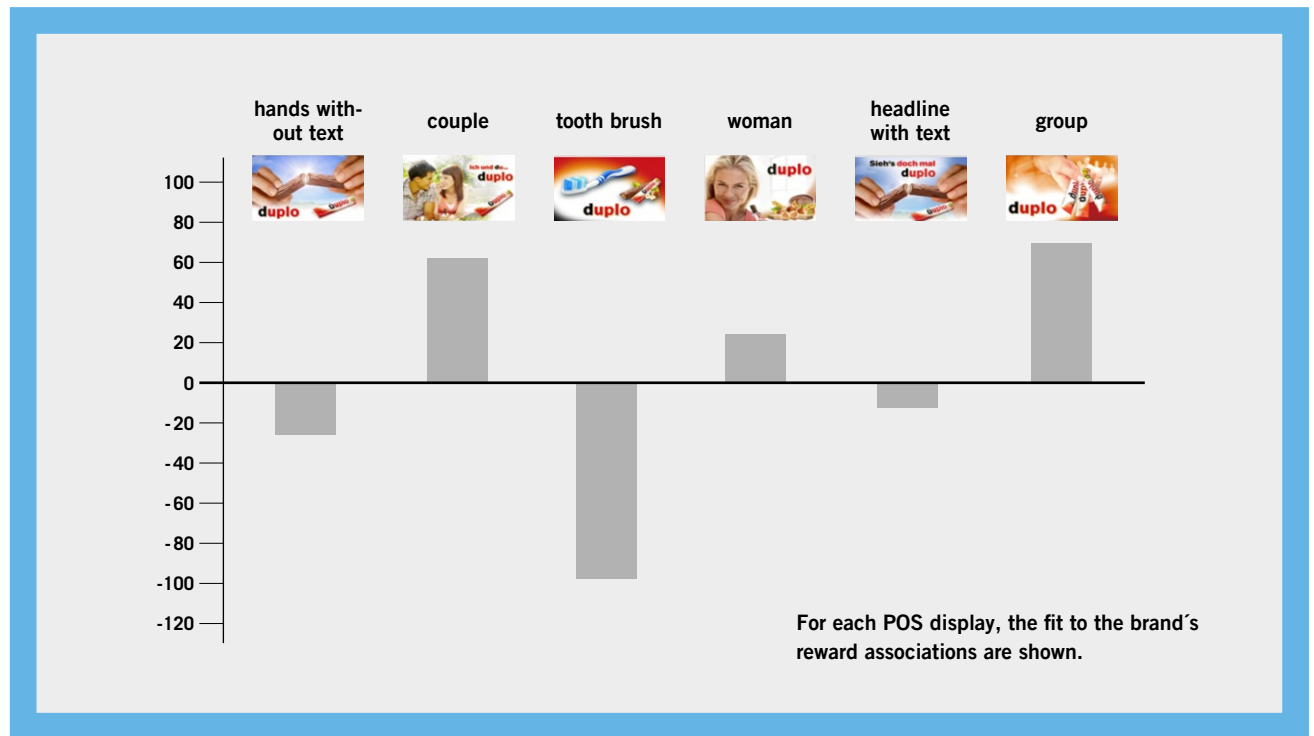


Figure 5: Brand fit of the six visuals: How well do the rewards communicated through the visuals fit the duplo brand?

SALES FORECAST BASED ON IMPLICIT GOAL PRIMING DATA

STEP 2: DECODING THE DISPLAYS (3/3)

Sales	fMRT	implicit measurement
		
		
		

CONCLUSION FOR THE MARKETER

For the brand manager this means that it is possible to make valid forecasts of the sales success of a piece of communication using neural and/or implicit measurements. However, the neural measurement has the disadvantage that it is, in general, very time-consuming (and, among other things, cannot be flexibly scaled to other countries) and, more importantly, that it does not answer the ‘why’ question.

In addition to the methods of measurement, the most important findings which can be taken from the case study are:

- Focus on the goals which the consumer wants to achieve with the category and the brand – what is the “job-to-be-done” which the consumer wants to achieve with the purchase?
- Identification of the goals, i.e., which goal territories are there in the market?
- Definition of the distinct reward values of the brand at all levels - the social, the emotional and the functional level.

A clear focus on the intersection between consumer need – social, emotional, functional – on the one hand and learned brand associations (equity) on the other hand will secure a relevant, distinct and credible value proposition. This value proposition then provides the framework for agencies and is used as a strategic reference point for consumer research.

RECOMMENDED LITERATURE

ARTICLES ON IMPLICIT PRIMING DATA

Strelow, E. & Scheier, C. (2018): *Uncovering the WHY of consumer behavior: From neuroscience to implementation*. Marketing Review St. Gallen, 1, S. 889 – 894

ARTICLES ON FMRT DATA

Kühn, S., Strelow, E. & Gallinat, J. (2016): *Multiple “buy buttons” in the brain: Forecasting chocolate sales at point-of-sale based on functional brain activation using fMRI*. NeuroImage, 136, pp. 122–128

PRESS REVIEW

w&v

German article with Johannes Schneider (27/12/2018)

Was Kunden wollen: Tchibo verpackt bunter. ('What customers want: Tchibo starts packaging in vivid colours.')

https://www.wuv.de/marketing/was_kunden_wollen_tchibo_verpackt_bunter

ZDFzeit: Documentation

German TV report with Dr Dirk Held (18/12/2018)

Die Tricks der Kosmetikindustrie.

('The tricks of the cosmetics industry.')

Available in the ZDF Media Library

next

German article with Dr Christian Scheier (Issue 02/18)

Alles Kopfsache. ('All in the head.')

<https://next.pwc.de/2018-02/niederlage.html>

return. Magazin für Transformation und Turnaround

(German magazine)

Interview with Dr Christian Scheier (October 2018)

Intuitiv und emotional sind nicht dasselbe

('Intuitive and emotional are not the same')

<https://decodemarketing.com/content/4-science-update/links/return-6-18-interview-scheier.pdf>

LECTURES

Phil Barden

Commercial Management Course

Why we buy

Ashridge Management College, 11 June 2019

Johannes Schneider

W&V Sportmarketing Summit 2019

Dramen, Tränen & Triumphe - Die Wirkung des Sports aus neuropsychologischer Perspektive ('Dramas, tears & victories - The effect of sports from a neuropsychological perspective')

Munich, 30 April 2019

Dr Christian Scheier

Sparkassen Innovation Hub

KI im Brand Management ('AI in brand management')

Hamburg, 27 March 2019

Phil Barden

Shopper Marketing workshop

Shopping decoded

Mexico City, 27 March 2019

Phil Barden

Change for Good conference

Why we do what we do

London, 25 March 2019

Phil Barden

B2BNXT

Driving human insights and intelligence

London, 12 March 2019

Phil Barden

Revenue and Pricing Management Group

My brain hurts!

London, 07 March 2019

Phil Barden

APG Planning Skills

How Decision Science can make advertising more effective

London, 27 February 2019

Dr Christian Scheier

PlakaDiva 2018

Wie Werbung wirklich wirkt. Aktuelle Erkenntnisse des Neuromarketings ('The real effects of advertising. Neuromarketing's latest findings')

Hamburg, 16 May 2018

Dr Christian Scheier

Marketingclub Hamburg

KI im Brand Management ('AI in brand management')

Hamburg, May 2018

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