

*decode Science Update 2\_11*

## Familiar *and* New – Squaring the Circle?

Why communication has to be both new and familiar simultaneously, and how to resolve this dilemma.

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# Welcome to the decode Science Update

A recent study by the University of Tokyo identified **two main drivers of advertising effectiveness: Newness and Familiarity.**

These factors are not surprising. **To be consistent, yet at the same time differentiated, is one of the biggest challenges in marketing communication.** It's a bit like squaring the circle. Little wonder then that we have many a discussion in our everyday Marketing lives about this topic - what should we keep and what should we, or must we, change?

**In this Science Update we take a closer look at what science has to offer on the issue of newness versus familiarity.** Cognitive science is particularly useful here: How can we structure our communications in an optimal way to allow the consumer to learn? Let's take a look, therefore, at the principles by which we humans deal with new and familiar information. These insights actually present a neat solution to the perceived dilemma of 'new and familiar'.

We hope you enjoy reading this Update!

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## Why do we find it difficult to learn new things?

Cognitive psychologists have known for a long time that our brain learns best when we can integrate new knowledge into pre-existing knowledge. **Therefore, familiarity is very important for advertising effectiveness and efficiency. That much we know.**

But why do we humans find it so hard to learn new things? How is it that something new is often rejected and disliked by consumers, or that when recalling recent advertising from ad tracking, consumers often talk about content which hasn't been part of the campaign for a long time? It is down to the way the brain responds to stimulation.

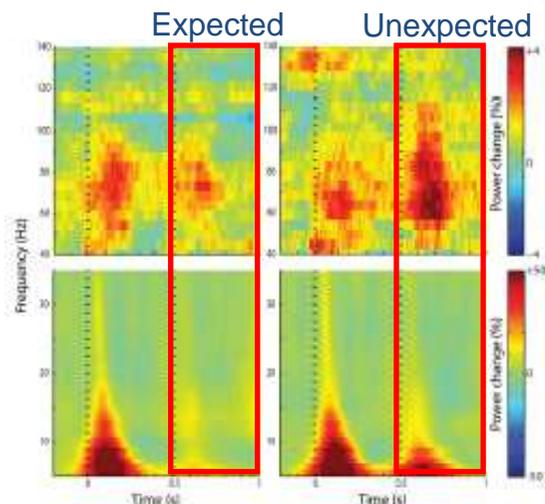
**Based on all our experiences, gained directly or indirectly, consciously or unconsciously, our brain forms expectations.** These expectations control our subsequent attention and the interpretation of stimuli and messages. **So when a brand communicates, it creates expectations.** Neuroscientist Moshe Bar from Harvard Medical School comments as follows:

*“The human brain is not a passive organ simply waiting to be activated by external stimuli. The brain continuously employs past experiences to interpret sensory information and predict the immediately relevant future.”*

We tend to validate our own expectations where possible – especially if they have served us well in the past, have not been problematic or if they're simply not that important to us. These requirements are true for most consumer goods. **Hence, communicating new messages to consumers efficiently is by no means trivial.** This tendency can even be observed at a sensory cellular level, as new tests show. Let's take a closer look at these results.

# Predictive Coding-Principle

Researchers at the Radboud University in Nijmegen (Netherlands) observed nerve cells reacting to familiar and new – i.e. unexpected – information. As soon as we expect something and our hypothesis is confirmed by a signal, our brain switches off and attends to other matters. This is very efficient. Why should we spend more time considering something when we already know what it is?



The illustration shows cell activity in response to expected and unexpected signals. If a signal was expected – i.e. is consistent with expectation – then this information is not processed further. **Information that matches expectation is suppressed.** Cells switch off and concentrate on other things.

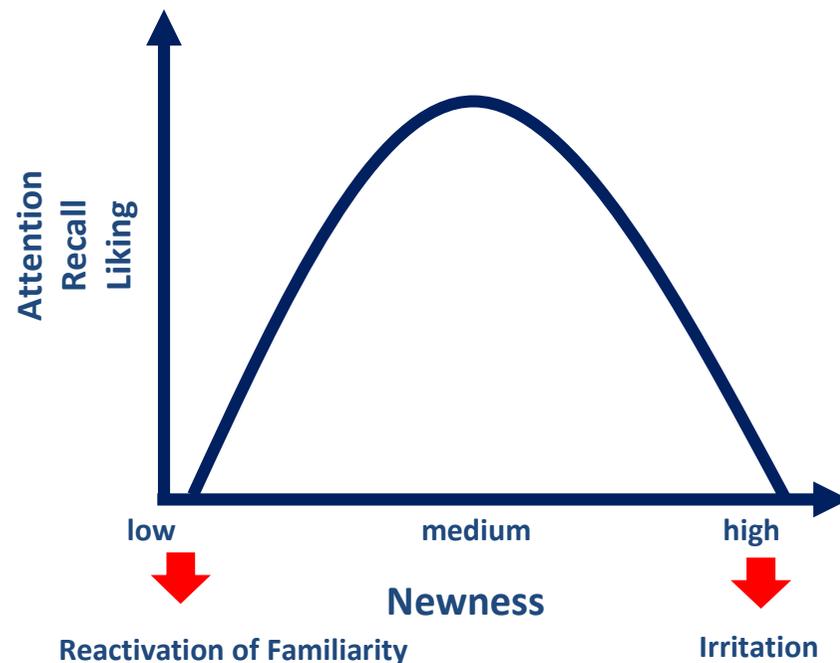
Source: Todorovic A, van Ede F, Maris E, de Lange FP (2011). Prior expectation mediates neural adaptation to repeated sounds in the auditory cortex: an MEG study. *Journal of Neuroscience* 31, 9118-23

This neuronal switching-off effect is also the reason why most car crashes happen on roads that we know best. We no longer concentrate enough and our brain completes the information from memory. Researchers call this “Repetition Suppression”.

This is why communication has to be new in order for consumer learning to be achieved. In other words: **Without newness nothing is learned. Newness opens the door for new things to be communicated.**

# The MAYA-Principle: Most Advanced, Yet Acceptable

But **how much newness can the consumer cope with?** How much familiarity is necessary? “Disruptive” communication, which goes completely against expectations, does create attention and higher cognitive activity – consumers try to solve the inconsistency – but can only be kept up long-term in exceptional cases and this requires the recipient to be highly involved. Advertising, however, (and advertising researchers are in agreement on this) is usually processed with low involvement. Research shows that the most effective strategy to utilise is the MAYA-Principle: **Most Advanced Yet Acceptable**. Many studies agree that a message that is moderately incongruent with expectations is the most efficient at increasing:  
(a) Attention, (b) Liking and (c) Recall and Recognition.



**TABLE 2**  
CELL MEANS, STANDARD DEVIATIONS, AND MAIN EFFECTS FOR ATTENTION AND MEMORY

Dependent variables	Degree of schema incongruity			F-value
	Congruity	Moderate incongruity	Extreme incongruity	
Attention (H1)	8.56 (3.50)	17.39 (5.04)	10.22 (3.54)	23.68*
<i>Quadratic component</i>				45.87*
Recall (H2)	2.61 (.98)	6.11 (2.63)	2.94 (1.89)	17.57*
<i>Quadratic component</i>				34.87*
Recognition (H3)	5.33 (1.45)	7.50 (1.58)	5.00 (1.37)	15.31*
<i>Quadratic component</i>				30.15*

\*p < .001  
Note. Standard Deviations in parentheses.

**Moderate incongruities work best. Total newness has just as little effect as total familiarity.**

Source: Halkias, G. & Kokkinaki, F. (2010). Attention, Memory, and Evaluation of Schema Incongruent Brand Messages: An Empirical Study. LabSi Conference on “Neuroscience and Decision Making”

# The MAYA-Principle in Product Design

The question of how much newness the consumer can cope with is also one of the central questions in product design. There are a number of studies in furniture, kitchen appliances and car design that examine the MAYA-Principle. The result is always the same: **People prefer designs that use moderate incongruity.**

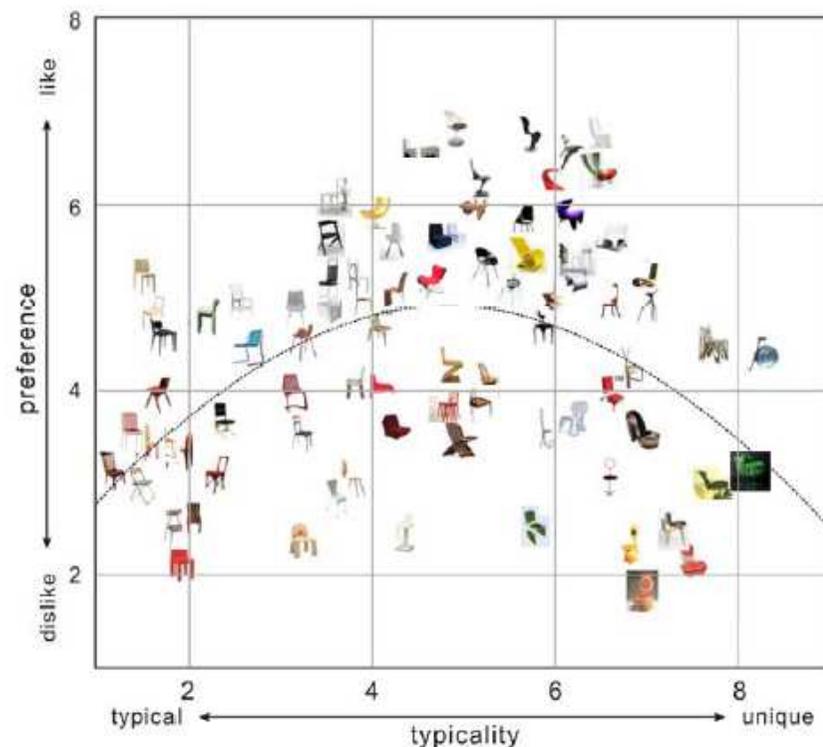


Figure 2. Scatter diagram of typicality and preference for all participants

A further example of moderate incongruity: the function is identical but the context changes (left), or vice versa: the context stays the same but the function changes (right).

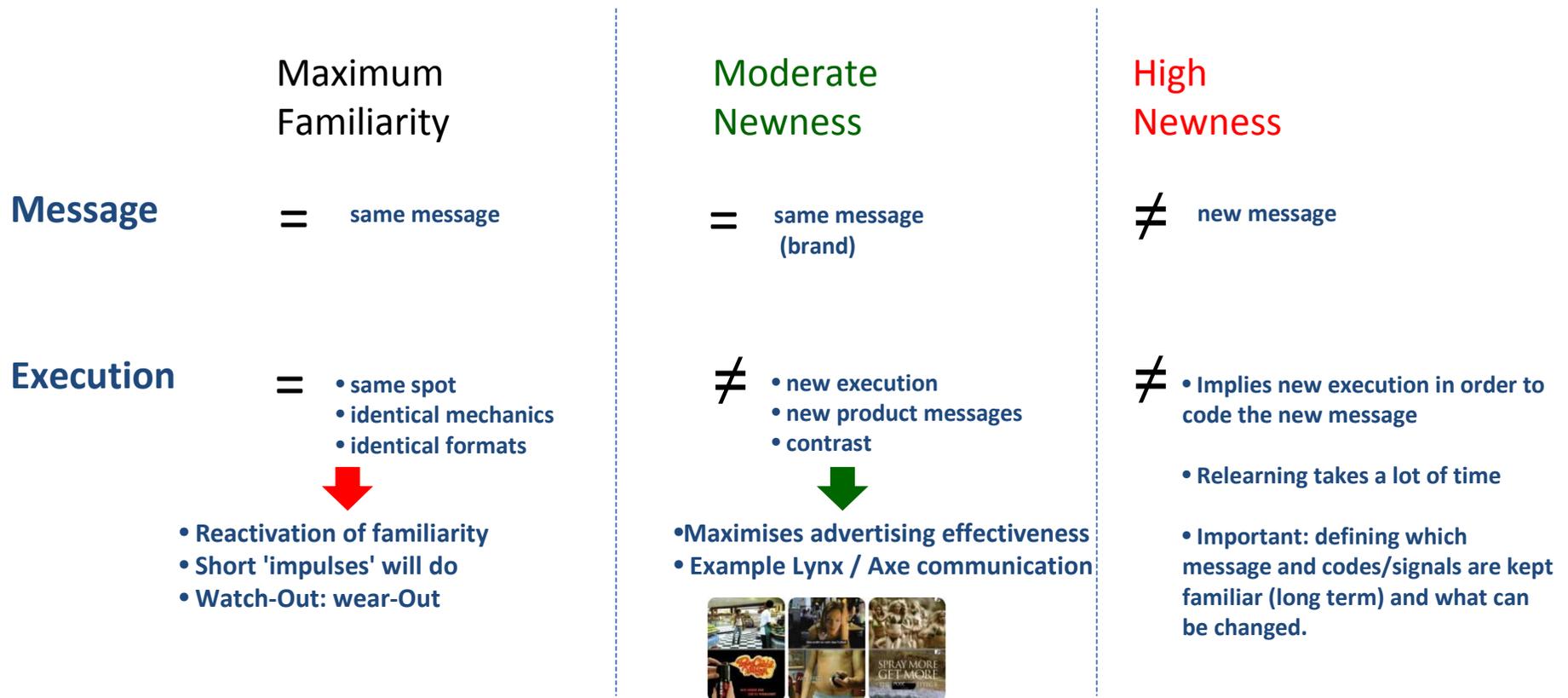


Figure.5 (left) Ron Arad – 'Rover bench' – 1981: the function of the chairs stays the same, but the context (the living room) is new. (right) Axel Stumpf – 'Frtischeschale' 1984: a kitchen strainer transformed into a fruit bowl. The function of the object is transformed, but the context (the kitchen) stays the same.

Source: Hung, W, Lin-Lin, C. (2010). Exploring Relationships between Product Aesthetics, Typicality and Preference.

# Implications for Marketing in Practice

So we not only need familiarity in communication but also newness. How, though, can we solve this dilemma in practice? **The most important step in this is the separation of message and execution.** By far the most effective communication has a familiar message – at least on a brand level – but is new, creative and divergent in its execution.



Schumann, D.W./Petty, R.E./Clemons, D.S. (1990): Predicting the Effectiveness of Different Strategies of Advertising Variation: A Test of the Repetition-Variation Hypotheses, in: Journal of Consumer Research, Vol. 17, No. 2, S. 192-202.

# Implications for Marketing in Practice

Let's take a look at an example of the successful use of the MAYA-Principle: **the 'Lynx / Axe' advert.**

In this, the same reward has been addressed for years: to be attractive to the female sex. **The brand sends out very different signals, but always communicates the same message.** What is especially important is that, in all of the brand's campaigns, the specific product and its properties are connected to this higher reward. By doing this, familiarity at a brand or message level is achieved and the specific product is tied to it.

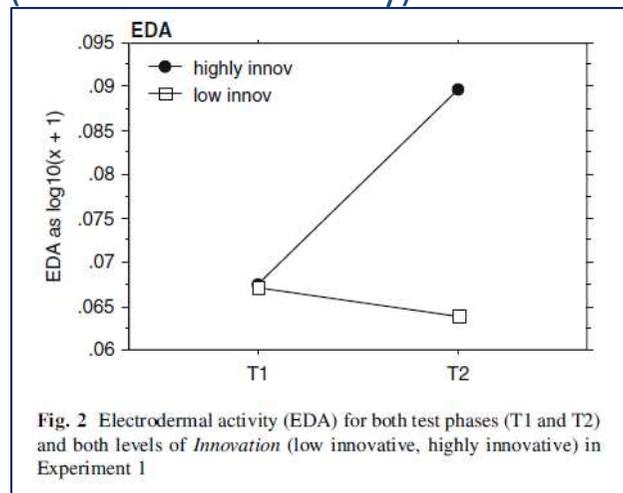


## Further Learnings

Research into the MAYA-Principle has gained even more insight into how best to integrate familiarity and newness. Let's take a look at an example:

**The preference for new, creative and innovative designs is time-dependent.** On first exposure, there is a definite preference for the familiar. Further examination, however, leads to clear preference for the new. It is therefore important, especially when researching innovative ideas, to take this time dimension into account. Otherwise many innovations, which are in fact wanted by the consumer, will fail simply because consumers prefer the familiar on first contact.

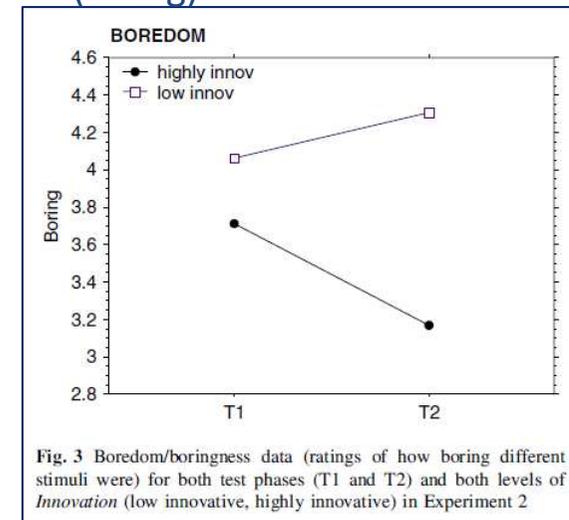
### Involvement (electrodermal activity)



Innovative designs (black dots) produce significantly more involvement on second contact and also significantly reduce the perceived boredom.

Left: EDA  
Right: Boredom

### Boredom (rating)



## Further tips & literature

Prof. Dr. Claus-Christian Carbon



Exciting research into the MAYA-Principle in product design.

Example:

Carbon, C. C. (2010). The cycle of preference: long-term dynamics of design properties. *Acta Psychologica*, 134(2), 233-244.

Link: <http://www.experimental-psychology.de/ccc/docs/pubs/Carbon2010b.pdf>



Very well written overview article on aesthetics research by Helmut Leder, Professor for Psychological Aesthetics and Cognitive Ergonomics at Vienna University.

„Wie es uns gefällt“, in *Gehirn & Geist*

Link: <http://www.gehirn-und-geist.de/artikel/1061953>

This article in German

# Welcome to the Dialogue

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