

# Buying behaviour

In an engaging conversation, **Professor Dr Claus-Christian Carbon** discusses his illuminating research into the preferences and attitudes that inform and influence consumer behaviour



**Why do you believe most consumer research is invalid and does not reflect what people really think about products?**

I would not only limit this statement to products and the thinking about products; it is much more far-reaching than that. Most consumer research does not effectively uncover preferences, attitudes, affections and behaviour towards products, brands and even companies. Fortunately, we can assist with solving these questions through more valid procedures developed in our laboratory.

**Could you explain the purpose of the Repeated Evaluation Technique (RET)?**

RET addresses a common problem: people are unable to assess the quality of highly innovative products due to lack of knowledge or familiarity. When we encounter something for the first



time, we do not have the visual and cognitive ability to evaluate it. The RET procedure allows people to develop familiarity with the product before it is evaluated. The result is that we are able to obtain product evaluations which mirror evaluations that would emerge in everyday life. Basically, we simulate future experiences



## Uncovering consumer attitudes

A group of researchers at the **University of Bamberg's** Department of General Psychology and Methodology is designing innovative techniques that facilitate advances in consumer research

**IN A WORLD** where big brands jostle for position and popularity, consumer choice is paramount. Yet, while many people have specific preferences for certain brands, understanding why this is the case and how these preferences have been formed is far from simple.

Professor Dr Claus-Christian Carbon is one researcher who is investigating the reasons and motivations behind prevalent consumer attitudes and buying habits. With an academic background in psychology and philosophy, he is currently based at the University of Bamberg, where he leads the Department of General Psychology and Methodology. He also heads Forschungsgruppe EPÆG, a research group devoted to furthering knowledge and methodologies in the respective fields of cognitive ergonomics, psychological aesthetics and design evaluation. Importantly, Carbon and his team have designed three key procedures for measuring consumer attitudes towards products and brands: the Repeated Evaluation Technique (RET), the multi-

dimensional Implicit Association Technique (md-IAT) and the Identification Machine of Unique Design Elements (IM-UDE).

### UNDERSTANDING ACCEPTANCE

The RET is a cutting-edge approach to measuring current preferences and predicting the future appreciation of consumer designs. It works on the assumption that new designs or products may initially be rejected by consumers due to lack of familiarity, meaning it is impossible to establish individuals' preferences before they have developed the visual or cognitive habits that allow them to process whether they like or dislike the product in question. One shortcoming of most empirical studies is that product attractiveness is measured only once, therefore not accounting for innovative designs that may initially be regarded as unattractive. Using RET, the researchers demonstrated that innovative designs became more attractive with increased exposure while low-innovation designs were

perceived as attractive in the beginning but did not profit further from increased exposure: "For instance, if you see a brand new car design you may reject it at first sight because you do not know how to use or interpret it," Carbon explains. "However, after being exposed for longer, and having actively dealt with it, you are able to build a greater understanding. The result: a more valid assessment of the product."

### IMPLICIT MEASUREMENT

Asking individuals explicit questions about their preferences or attitudes can often be counterproductive, failing to uncover their true feelings. To overcome this, implicit measures that cannot be cognitively penetrated are used to provide companies and product designers with useful information. The md-IAT is just such a method: "The idea is straightforward: if you read a word saying 'blue' but it is written in green, the colour and the term interfere with each other resulting in longer response times," Carbon elucidates. "However, if it

to obtain a more valid picture of what consumers really think about a product.

### What is the purpose of the multi-dimensional Implicit Association Technique (md-IAT) procedure?

The procedure tackles a different problem to RET. Most research asks people explicitly whether they like something through the use of direct questions. However, the response to a straightforward question such as "Do you like XYZ?" is often not reliable. This is because consumers generally do not know how much, or indeed why, they like specific products when asked in an artificial questionnaire situation. Additionally, they often do not answer honestly due to effects such as social desirability or societal needs.

In view of these problems, there is a need to employ more sophisticated techniques that uncover what consumers really think. So-called implicit measures help us to obtain a more unbiased answer that is much more in accordance with the buying behaviour of future consumers.

### You have also developed the Identification Machine of Unique Design Elements (IM-UDE) technique. What is its function?

IM-UDE has one overarching purpose: to provide clear information about the

specific design elements that enable us to identify a certain brand or product. Directly asking typical consumers on what basis they recognise a brand does not achieve anything because most people are unable to explain such implicit knowledge. Because of this, we decided to develop the IM-UDE technique, which shows images of products to consumers and seeks to establish the brand-specific design elements of the product.

### How do you see this set of research techniques progressing in the future?

We are in the process of developing further implicit mechanisms that measure consumer attitudes. For instance, there is one technique in the pipeline that captures affective assessments through the analysis of characteristic bodily movements when interacting with a product. We call this technique the 'emotional footprint'. Another idea, conceived some time ago when I was studying for my PhD at the Freie Universität Berlin, one of the German Excellence Universities, has recently been fine-tuned. It involves giving people a brief glimpse of the product in question. Interestingly, this uncovers evaluations that seem to reflect the component that effectively predicts a product's success: namely, its affective connotation.

fits – for example, 'blue' written in blue – we are much faster to respond." Therefore, swift responses to specific combinations are indicative of strong associations between the category and target.

The md-IAT has a number of strengths. Firstly, it is well-suited to measuring attitudes consumers may not be overtly conscious of, or opinions they are unable to express or perhaps unwilling to divulge. Secondly, the detailed, multi-dimensional assessment provided by the md-IAT offers marketing practitioners valuable information that could inform the design of complex and differentiated brand profiles. Finally, it is also a useful tool for academics, allowing them to test complex constructs such as brand or product personality.

## REVEALING KNOWLEDGE

Branded products contain unique design elements (UDEs), making a brand recognisable and differentiable. However, because knowledge about consumers' perception of UDEs is sparse, Carbon created an innovative technique – the IM-UDE – that aims to uncover the stand-out features by which consumers recognise such characteristics. The technique works by presenting participants with strongly blurred images of products, logos or brands, and asking them to spontaneously categorise them based on what they see. The strength of the blurring follows a randomly

generated probability matrix that results in more or less blurred areas of original brand images. Probability matrices for the correctly categorised blurred images are then averaged and IM-UDE tests the calculated matrix against chance, thereby identifying the UDEs of the brand or product in question. Finally, the recognisable areas are superimposed on the original images to highlight the UDEs.

The visual information uncovered by the IM-UDE technique is vital for understanding and optimising brand recognisability and, as a consequence, for planning and designing new products: "When the outcome is just a blurred picture, this implies that hard work needs to be done to create a visual brand for the product as people do not yet recognise it," Carbon states. "On the other hand, if there are clear areas that are indicative, these should not be dropped or changed in the next generation of the product – otherwise recognisability could be at risk."

## FUTURE AIMS

Carbon's innovative procedures have revealed important information about the preferences, attitudes and behaviour of consumers, with important implications for companies and academic researchers. Looking ahead, he and his team are eager to continue developing ingenious implicit techniques that measure consumer attitudes towards brands and products.

## INTELLIGENCE

### EXTENDING METHODS FOR ASSESSING CONSUMER ATTITUDES BY TAKING MULTI-DIMENSIONAL IMPLICIT ASSOCIATIONS INTO ACCOUNT

#### OBJECTIVES

- To extend the existing Implicit Association Test (IAT) into multiple dimensions, thus allowing a more detailed assessment of implicit consumer attitudes to commercial products and brands
- To use the Identification Machine of Unique Design Elements (IM-UDE) tool to objectively measure the distinctive visual characteristics of commercial brands

#### KEY COLLABORATORS

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**CLAUS-CHRISTIAN CARBON** studied Psychology (Dipl.-Psych, equivalent to a BSc and MSc), followed by Philosophy (BA and MA) at the University of Trier, Germany. He received his PhD from the Freie Universität Berlin in 2003 and his Habilitation from the University of Vienna, Austria, in 2006. He holds a full professorship, and he is leading the Department of General Psychology and Methodology in the University of Bamberg and the Forschungsgruppe EPÆG – a research group devoted to enhancing knowledge and methodology in the fields of cognitive ergonomics, psychological aesthetics and design evaluation.

