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the cognitive load of making a decision. During food selection, for example in a supermarket, choice is not always based on logical or scientific reasoning. Rarely is there time to read every ingredient and

planned will result in a well-balanced, nutritious diet. Instead, the consumer is guided heuristically by food packaging, appearance such as colour, and simple terms that may be written on the packaging such as 'wholesome', 'nutritious', 'fresh' and 'natural'. But

fours (pea, wheat, sorghum) gave rise to different responses, possibly due to lack of familiarity. generally not considered natural, even when derived from natural sources.

In contrast to the situation in Europe, the term 'natural' has no legal definition within the USA so consumers from the EU and the USA have a different perception of the term 'natural'. These different (2012)

What is a 'natural' ingredient?

The term 'natural' is defined as "existing in

by humankind', or 'having had a minimum of processing or preservative treatment'. An image is conjured up in the mind of the consumer of green fields, the open rural environment, and often a sense of healthier and perhaps safer products.

defined as "made by chemical synthesis, to imitate a natural product" or "not genuine; insincere", and conjures up images of industrial chemical synthesis in an urban environment and an inferior product.

of chemistry when considering clothing materials, for example, where natural (cotton) and synthetic (nylon) are quite distinctly different in their chemical make-up. However, the distinction is blurred when it

synthetic versions are identical chemically. In terms of

of production, nor the origin are relevant. But even

mean safe; most recognise that some fungi can be dangerous, and are also aware of headlines such as "Two-star Michelin restaurant chef suspended over puffin fish poisoning". It is clear that the definition

consumers, as food regulators or as food chemists.

Consumer perception and consumer choice – heuristics

of natural, and how does this influence their purchase intent? All consumers (including regulators and food chemists) use heuristics to select at least some of their grocery products. The term heuristic refers to any approach to problem solving, learning,

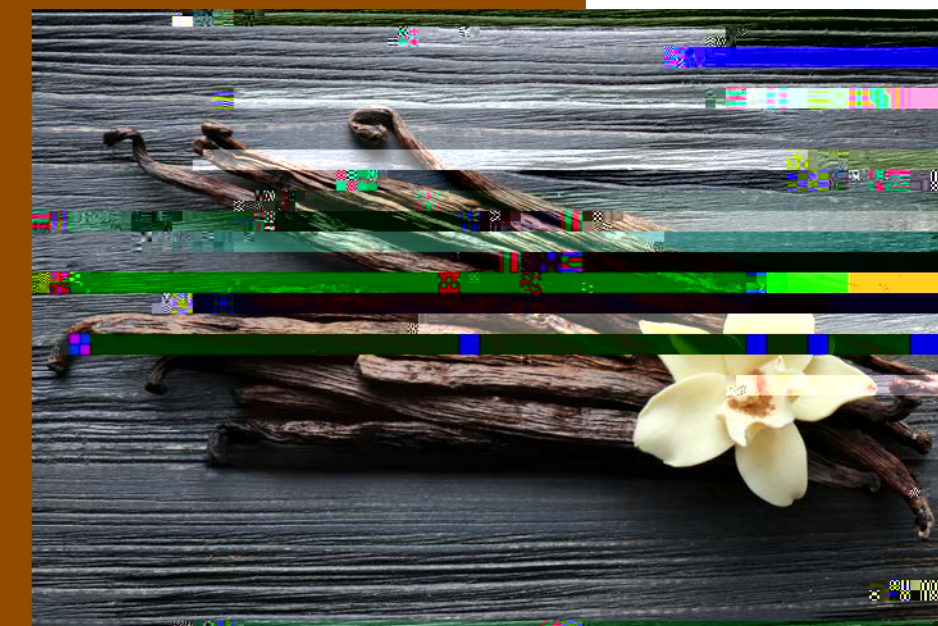
guaranteed to be optimal, perfect, logical, or rational, but instead sufficient for reaching an immediate goal. Heuristics can be mental shortcuts that ease

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BELOW: Vanillin that has been synthesised from petrochemical precursors needs to be labelled differently to the identical molecule that has been extracted from *Vanilla planifolia*



In the first of a two-part article, scientists *Martin Rose*, *Taichi Inui*, *Moira Dean* and *Jane Parker* examine the true meaning of the term 'natural' within the food sector, and examines whether or not it's always a safer, more nutritious choice.

AS CONSUMERS, we expect and demand food ingredients and additives (particularly in Europe with the removal of E numbers), proof be safe and of good quality, but our perception of 'safe' and 'quality' is personal, and constantly evolving. Increasingly, the consumer is seeking organic produce, fewer natural and sustainable ingredients. But what

was "no additives" whereas in Europe it was "lack of processing". Interestingly, "origin in nature" was only used by about one third of respondents, although in France and the UK, this figure was much lower.

'Natural' food choices are generally important for consumers, although there are differences associated with country, gender and age of the

⁴. Many characteristics contribute to the concept of 'natural' and these can be assigned to six basic groups: psychological factors; situational factors; socio-cultural factors; extrinsic product

and biological and physiological factors. Consumer

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