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Illusions, misperceptions and false food preferences caused by the brain

The paired preference test would seem to be a simple test. Two foods are presented to a consumer, who tastes them, and reports which one is preferred or whether there is no preference. It would seem simple except that if two identical foods are presented, 60-80% of consumers report they have a preference, a false preference. This tendency to give false preferences can greatly distort measurements of consumer acceptance. Why does this happen? The answer lies in the organization of information processing in the brain. The central processor is required to process massive amounts of information, just to be able to see. Because of this it uses various strategies to protect itself from information overload. The brain is very selective with the input to which it pays attention. Some of the things our eyes see can be missed completely. If the sensory input to the brain is completely constant and providing no new information, the brain simply desensitizes itself to that input. Things can vanish completely. These effects will be demonstrated in detail in the lecture, giving an entertaining set of illusions, misperceptions and strange visual effects. We only perceive what the brain decides we should perceive. Yet, it is here that the answer to the false preference problem can be solved. To protect the central information processor, a lot of behaviors become over learned and automated. They can be visualized as being relegated to an information processing subroutine. This appears to be happening with a paired preference testing. Using disruption techniques, the information processing can be restored to the central processor and false preferences eliminated.

Biography

Michael O'Mahony is Professor and Sensory Scientist in the Department of Food Science and Technology, University of California, Davis. A very entertaining and informative lecturer, he is well known for his approach to communicating new concepts to broad audiences. He has published over 100 journal articles in Sensory Science and is the author of Sensory Evaluation of Food: Statistical Methods and Procedures. He consults extensively with consumer products companies globally. He holds a Ph.D. in Chemistry and Psychology from Bristol University, United Kingdom. Topics of interest like bias in fine discriminations between similar foods, bias when estimating the strength or liking for food flavors, vanishing tastes and smells, inventing a language for flavor, solving the problem of false preferences and designing a food that people will like, even though it doesn't yet exist.

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