



Book Review

The Perfect Meal: The Multisensory Science of Food and Dining

Charles Spence and Betina Piqueras-Fiszman, 2014

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The central idea behind this book is deceptively simple: that our perception of flavour is multisensory. Consequently, to serve up great tasting food is not simply a matter of tickling the taste buds but of engaging a whole range of sensory experiences. Drawing on recent innovative research carried out by Spence's team at the Crossmodal Research Laboratory at Oxford University, the authors argue that we must go beyond four or five individual taste sensations (which respond to particular sensory nodes on the tongue) to focus on the interaction of multisensory experiences as it is here that flavour emerges. They show how a host of sensory elements ranging from the colour of the plate to the frequency of concurrent sounds all affect the ways we perceive flavour.

Spence and his team have published prolifically on the topic, and 'The Perfect Meal' is evidence of a wider aim to encourage those in the food industry to think about eating as a multisensory experience and therefore allow professionals to better deliver positive results to diners and consumers. Rather than looking at food itself the focus is on the particular performance of fine dining, shrouded in the mystery and spectacle that comes along with the molecular gastronomy oeuvre made famous by Heston Blumenthal or restaurants such as El Bulli. By engaging directly with this trend the authors 'hope that chefs would want to find out more about how changing the aroma of a food (by adding the aroma of strawberry or vanilla, say) can change its perceived sweetness and how changing the colour of a food or beverages can send a very powerful signal to the diner's brain about the likely taste and flavour they are about to experience' (p. 22).

Affiliating themselves with the recent term 'gastrophysics', this new, high-tech 'science of the table' uses 'well controlled experiments' to 'investigate the way in which people... respond to sensory stimuli' (p. 18) The physical responses that taste experiences elicit in us offer a potentially powerful tool in the context of the food industry by offering the scope to manipulate our experiences of food in much more precise and fundamental ways.

Throughout the book the authors methodically build a case for the inclusion of a number of elements in the multisensory perception of taste. In Chapters 2, 3, 4 and 5, they elaborate the role that different devices employed in restaurants can play in enhancing a meal. Addressing in turn the start of the meal (the menu, setting of the tables, waiters, etc.), the language and labelling used on the menu, the plate itself and the cutlery, these chapters summarize the latest research to show how these various elements affect the way we perceive flavour. A prominent example from the authors' own research is the finding that a dessert on a round white plate tasted up

to 10% sweeter than when served on an equivalent black plate. The atmosphere, the setting, heat, sound, colour – as well as tactile and cognitive cues – are digested by our brains, generating particular perceptions of flavour before the food even reaches our lips.

While the concept of the multisensory perception of flavour is central to this book, those looking for a detailed definition and analysis of this phenomenon are likely to be disappointed. The authors make some (albeit somewhat apologetic) moves towards explaining the science in Chapter 6, yet, while this relatively new area of study has excelled in demonstrating relationships between hitherto unconnected aspects in the experience of flavour, there is still a long way to go to show exactly how this works.

However, the findings so far offer fascinating provocation for food studies as well as wider social and philosophical study that relate to embodiment and food practices. By emphasizing the diversity of elements at play, the book shows that eating becomes about a lot more than what goes on in our mouths, sweeping away the static understanding of flavour as a quality of the food itself. The authors' examples explain how listening to crunching sounds can make a food feel more crisp, that the colour of a food can increase or decrease the perceived sweetness and that, by altering the pitch of sounds playing in the background, a food can be given a sweeter or more bitter flavour (see also Spence, 2013).

Raising the possibility of a 'flavour network' that spans across our bodies and includes all of our sensory faculties, the book might be productively considered alongside recent work in medical anthropology and related fields. For example, Mann and others' experiments with eating with their hands (2011), Caldwell's (2014) work on the role that the gut and digestion play in food practices, and Guthman and Mansfield's investigations into processes at the cellular level that might affect wider food practices (2013), all similarly debunk the myth of taste and flavour as being just located in the mouth. As such, the book offers an exciting provocation for more trans-disciplinary concern over our relationship with food that moves beyond traditional assumptions of bounded individuals and rational action to reconfigure the ways in which we think about taste and flavour in both social and embodied terms.

While the contents of the eponymous perfect meal is never revealed, towards the end of the book the focus shifts towards the future of such meals and the role that technology will play in advancing the experience of dining out. At its culmination in Chapter 11 this leads the authors to speculate what our meals may look like in 2084. As with all future predictions, this seems to offer more a commentary of the way we eat now rather than to act as an inspiring glimpse into a distant future. Technologies such as in vitro meat, sous vide techniques, and the use of smart phones and tablets at the table are all trends that exist already and it might be more productive to provoke analysis, not of the technological possibility of new techniques, but of the wider social, political and economic forces that play a decisive role in the spread of these practices between laboratories, restaurant kitchens, supermarkets and the home.

Where this book excels is as a provocation. Through a collection of fascinating pieces of evidence it challenges our understanding of the way in which humans experience flavour. The innovative methods employed by the research team offer grist to the mill of those interested in the study of the science and technology of food and are likely to provoke discussion around the ethical and philosophical issues at play in deliberate manipulation of food behaviours through sensory cues.

Insights derived from social sciences and food studies would offer a great deal to develop more critical analysis of these issues than offered in this book, and ‘gastrophysics’ offers particularly fertile ground for those interested in embodied experiences of consumption, cultural studies of eating and food design. Moreover, as issues such as social justice or environmental sustainability remain absent from this research, interesting questions might emerge when we consider the multisensory experience of eating in the context of such pressing agendas. How might multisensory perception affect practices around food waste for example? While social scientists have long considered the role of taste in social life, this new research might provoke us to push both medical and social sciences further to ask what role flavour might play in the ways in which we experience food both inside and outside of the laboratory.

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