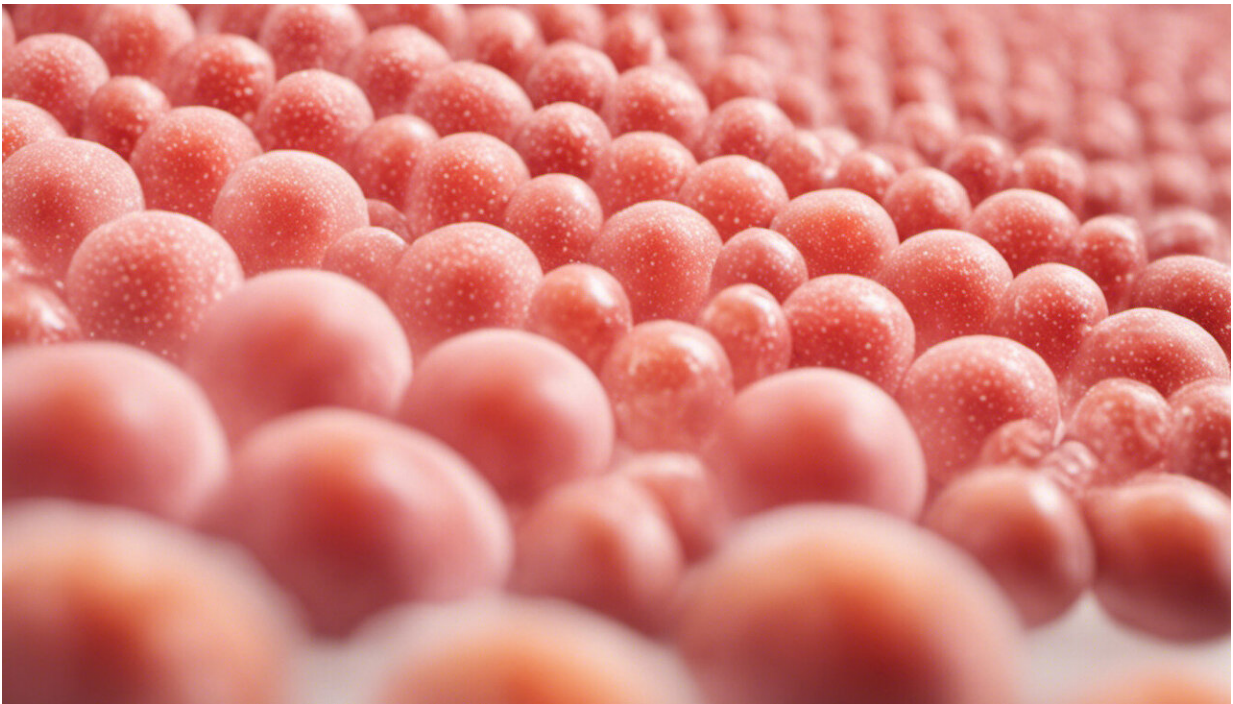


Playing with the senses can change how food tastes

April 5 2017, by Charles Spence



Credit: AI-generated image ([disclaimer](#))

It was Apicius, the Roman gourmand, who [came up with the line](#) that "the first taste is with the eyes". The latest research from the emerging field of gastrophysics shows that he was absolutely right. Our brains evolved to help us find food – and making food look more visually appealing can prime expectations and therefore enhance the taste.

It isn't just the sight of the food, though – you should see, hear, smell and touch food as well if you are going to make enough of a meal of a dining experience. Here are a few ways in which our senses can conspire to make food more of an experience.

Think about the plate

Research shows that we rate food as tasting different depending on the colour of the crockery on which it is served. We conducted an experiment at Ferran Adria's Alicia Foundation just outside Barcelona a few years ago in which we demonstrated that people would rate a pinkish strawberry mousse as tasting 7% sweeter, 13% more flavourful and 9% more enjoyable when it was served it on a [white plate rather than a black plate](#). Meanwhile, [others have demonstrated](#) that we will eat less junk food if it is served from a red plate than from a plate of any other colour.

But it isn't just the colour of the plate that affects our food behaviour and flavour perception; it is also the shape. Several studies have shown that people rate food as tasting sweeter if it's [served off a round plate](#) than a more angular plate. So, for anyone with a sweet tooth, the recommendation from the gastrophysics lab is that you should save the angular black slate for the cheese.



Heston Blumenthal's Sounds of the Sea seafood dish. Credit: Sergio Coimbra, CC BY

Think about the cutlery

In order to get the food from the plate to our mouths, most of us use cutlery. But just how much thought have any of us given to the cold smooth hard metal that we put in our mouths several times every day? The latest gastrophysics research shows that food tastes better – and we are willing to pay more for it – if we [eat with heavier cutlery](#). Adding texture to the handle or spoon of the cutlery can also make for a more enjoyable, more stimulating, and definitely a more memorable tasting

experience.

It's results such as these, collected from both the science lab and also from the comments of real diners in restaurants, that help explain the why Heston Blumenthal gave diners a heavy furry-handled spoon to eat the last course of "[Counting Sheep](#)" at his Fat Duck restaurant in Bray.

It is amazing to see all the new cutlery designs that are being developed. But some chefs in top restaurants – such as the [two Michelin-starred Mugaritz](#) in San Sebastian, Spain, and at the [Chef's Table by Kitchen Theory](#) in London – are going even further and putting out dishes that are specifically designed to be eaten with the hands.



Comfort cutlery? The furry spoon designed to eat Heston Blumenthal's food.

Think about the music

Sound really is the forgotten flavour sense. Enhance the sound of the crunch and people think that crisps taste crisper and fresher. This is the groundbreaking research that got us the [IG Nobel Prize for Nutrition back in 2008](#). However, beyond the sound of the food itself, have you ever wondered why crisps so often come in noisy packets? It turns out that that too is part of "the experience". Noisier crisp packets also make foods appear crisper – as we showed in [research with Heston that was reported](#) in 2011.

However, one of the most intriguing ways in which what we hear affects what we taste relates to the [emerging field of sonic seasoning](#). For it turns out that playing tinkling high-pitched music brings out the sweetness in [food](#) and drink, while low-pitched brassy music accentuates bitterness instead. We have now identified the kinds of music that will bring out sourness, spiciness, and even accentuate the creaminess of a chocolate.

It may seem crazy, but the business world really is starting to sit up and listen. For instance, British Airways launched a ["sound bite" menu](#), long-haul meals with matching musical accompaniment back in 2014. Meanwhile, a café in Vietnam just opened playing lots of sweet music to help people reduce their sugar intake.

Think about the lighting

You should also think about the lighting when you eat. Research [from the US](#) shows that people who like "strong coffee" drink more of the

stuff under bright lighting, while increasing the brightness of the lighting can also nudge people toward ordering spicier chicken wings. In [our own research](#), testing more than 3,000 [people](#), we showed that we could enhance the fruitiness of a red wine (served in a black tasting glass) by around 15% simply by putting on some red lights, rather than regular white, or green lighting instead. Adding some of that sweet music in the background made the effects even more pronounced.

Put all the research together – and you can read about this [in my recent book](#) – and what some have been tempted to call "[off-the-plate](#)" dining can, I firmly believe, help us all to create more enjoyable, tastier, healthier, and more memorable meals.

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