Tasting in mundane practices: Ethnographic interventions in social science theory
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Abstract:
Although ethnographies on food and the senses have explored people’s experiences and tasting as cultural expression, social scientists have paid less attention to what is called “physiological response”. Using a material semiotic approach, this paper investigates two ethnographically observed laboratory experiments on “taste in humans”. It argues that, in both experiments, tasting is configured as an object of quantitative science but enacted in different versions: as a perception in one, as a reaction to an exposure in the other.

Engaging with ‘a physiological response’

Tasting, according to David Howes in Sensual Relations (2003), is anything but pleasurable for a respectable person living the Massim river region in Papua New Guinea. It makes food, which in this region is an object to give away to others rather than consume along with them, disappear. The sweetness of meat and the sourness of curdled milk, and the food items themselves have long been part of the diet of Samburu cattle herders living in the North of Kenya, Jon Holtzman reports in Uncertain Tastes (2009). The people Holtzman spent time with remember them ambivalently, as instantiation of a superior pastoral way
of life and impractical “traditional” cultural practices. The hotness of a dish and the tastes of the mistress it is cooked for, Manpreet Janeja’s *Transactions in Taste* (2010) relays, are constantly attended to by cooks working in middle class households in Dhaka (Bangladesh) and Calcutta (India), contributing to the maintenance of “the everyday normal”.

These are three insights from ethnographies on tasting which are part of a large body of literature that has emerged over the past three decades in the fields of anthropology of food and the senses. This literature illuminates various facets of tasting, ranging from the relation between tasting, morality and personhood, to memories, the past, and modernity. They include its crucial role in everyday life, the organisation of differences between gender and age groups, and its relative importance with regard to other senses and across ‘cultures’.\(^3\)

The anthropology of tasting that has thus emerged is significantly different to the one of a century ago. In 1898 a group of Cambridge anthropologists, in order to find out about the “degree of sensory acuity or discriminability (…) of other people”, administered on the Torres Straits islands islanders diluted solutions of sugar, salt, acid, and quinine, recorded that “sweetness” was commonly expressed as “tastes good”, and concluded that this expression is the “most primitive [form of] taste vocabulary” (Myers, 1904: 119).

Today, we study how tasting “is not just a matter of physiological response and personal experience, [but] (…) the most fundamental domain of cultural expression” (Howes, 2003: xi). Still, while a lot of attention has been paid to, as Howes puts it, people’s “personal experience” and “cultural expressions” of their sensual relation to food, much less attention has been paid to what he calls “physiological response”. This has been written about, but only in general terms. For instance, Elisabeth Hsu states, “[B]iologically speaking, sensory experience is a perception, not a sensation” (2008: 434). How can we engage further with this “physiological response”?\(^3\)

\(^{3}\) For an extensive overview of the literature on taste, food, and the senses, see Sutton (2010).
A method, or “set of sensitivities” (Mol, 2010) to do so can be found in medical anthropology and Science and Technology Studies (STS). In the 1970s, scholars working in these fields set out to investigate how “the physiology of the human body” comes to be represented. Based on ethnographic fieldwork in the endocrinology laboratory SALK institute, Bruno Latour and Steve Woolgar for instance argued in *Laboratory Life* (1986) that scientists *constructed* the hormone TRF(H) as a scientific fact. More recently, Annemarie Mol, Dick Willems, Amade M’charek and others studied how a disease, such as atherosclerosis (Mol, 2002) or asthma (Willems, 1998), or one bodily characteristic, like race (M’charek, 2005), is not always *configured* or *enacted* in the same way in medical and scientific practices. In *The Body Multiple*, for instance, Mol recounts that while pathologists she ethnographically observed looked through a microscope at the thickening of the intima, vascular surgeons attempted to feel the heartbeat by putting their hands on patient’s legs. Mol has argued that different versions of the disease atherosclerosis are enacted in these medical practices. As the ethnographies of Mol and her colleagues describe what a disease or bodily characteristic “is”, they never disentangle the “is” of the disease or bodily characteristic from the medical and scientific practices it is part of and which it *depends* upon. The “is” has become specific, and in this sense, local.

I would argue that this set of sensitivities, that is called material semiotic approach, allows us to also engage more directly with what Howes has called “physiological response” (2003: xi). From it we can take the idea of studying how scientific facts about taste are constructed, attending to how different research practices might enact differently what it “is” to taste, and while doing so, ensure to never disentangle this “is” from the research practices it depends upon. This is what this paper sets out to do. It is based on ethnographic fieldwork that took place between 2009 and 2011 in several research facilities in Western Europe using English as the language for publication.\(^4\) After an over-

\(^4\) I do not provide further details here on the country or town in which research was carried out, as it did not arise as an important factor for my informants. For a more thorough discussion of the question to which extent the geographical location is the context that matters for tasting, see chapter 4.
view of the field in which “taste in humans” is studied, sensory science, I will describe two experiments in detail. Both experiments turn tasting into an object of quantitative science, but, I argue, they enact different versions of tasting: as a perception and as a reaction to an exposure. I will propose that using a material semiotic approach allows reformulation of the answer to the question: why tasting should be cared about in the first place.

Sensory science: Researching “taste in humans”

“Taste in humans” is investigated, I learnt at the beginning of my fieldwork, in a field called sensory science. At the intersection of psychology, medical sciences, food science, human nutrition and consumer research, this field, as the homepage of one sensory science research centre puts it, deals with “the way humans perceive the world and act upon sensory input”. Research, I observed, takes place within the respective departments within universities, in external research facilities, in hospitals and in marketing departments of food producing companies. It does not take place without funding. In some cases, an alliance is formed of the university in which a project takes place, with the national government and food industry providing financial support. In others, an individual project is funded by and/or receives raw materials from a food producer. Some research is paid by and conducted for a client, which can be an individual company, a collective of food producers, or the national government or EU. It then morphs sometimes into more “tests”. On the more experimental side of the spectrum, I have observed and read about projects ranging from “taste function after section of chorda tympani nerve in middle ear surgery”, “implicit associations between taste and pitch revealed through food names”, “flavour perception in chocolate liquids” to “satiation in equally

5 See Mirowski & Sent (2008) for a critical discussion of the oft-raised critique that science is becoming commercialised.
6 For a sociology of testing, see Pinch (1993) and for a wonderful case study of tasting in the lab as part of the wine production process, see Brice (2015).
palatable sweet and savoury meals”. Here I present the execution of latter two in more detail. I begin by taking you to the laboratory where the first one of the latter two was located.

**Taste in lab F: Flavour perception**

Lab F, as I will call it from here on, is part of a department of *Food Science*, which consists of several research groups studying a variety of research topics. Some of them investigate *food objects*, for example, edible oils and fats, analysing their molecular structure. Others investigate *food production processes* like the process of malting and develop methods for monitoring the generation of flavours during this process. The department collaborates with food producing companies by, for instance, providing training for researchers working in their R&D departments.

While the other research groups in the department do research on food-stuff, lab F investigates how food objects are *perceived sensorially*. When I introduced myself as being interested in “taste”, the head of the department asked what exactly I meant by this. “What we study here is the sensation that you get when you eat food and what the ordinary man on the street means when he says, ‘This food tastes nice.’ It includes not only the receptor interaction with one of the five basic tastes of sweet, salt, bitter, sour, and umami but also other receptor interactions and their integration in the brain as well”. In the 1990s, she told me, researchers from the lab performed an experiment on the sensory perception of mint-flavoured sweets. In the traditional model of the five senses the perception of odours is categorised as smell, the perception of sugar as taste. They are assumed to be independent of each other. In the experiment, the research subjects’ perception, while sucking the mint, of the menthol odour had not matched the release of aroma compounds. Instead it had correlated with the amount of sugar contained in the mint. There were interactions between taste and smell. “We have thus come to call the sensation you get when you eat food ‘flavour perception’,” she summarised.
At the time I did my fieldwork in lab F, there were several research projects on flavour perception running. One was investigating the flavour perception of beer, another the flavour perception and emotions related to blackcurrant syrup. A third was a PhD project run by a researcher whom I will call Wendy. Her project was investigating the flavour perception of chocolate liquids. It began with the following research question:

*If in a chocolate liquid one varies the level of ingredients, the content of sugar, fat, and cocoa powder, and if one replaces one type of fat, namely cocoa butter, by other types of fat, rapeseed oil, or other equivalents, how does this change the perception of the chocolate liquid’s sensory properties?*

In order to answer this question, Wendy first organised the food object with which to do the research. She constructed a chocolate liquid model system because, she explained, “For this type of research, you can’t use the chocolate liquids you get in the supermarket. They vary far too much”. Constructing a chocolate liquid food model system was, however, far from simple. The first challenge was procuring the ingredients, the cocoa butter equivalents and the rapeseed oil in particular. Wendy needed rapeseed oil without its odour, the so-called “deodorised” version. It not only took Wendy quite some time to find a company specialised in making this type of food product, but once she had actually found one, as it happened, the company went bankrupt and the deliveries were delayed. Another problem was the different types of fat when she started mixing the ingredients. The samples needed to be liquid, she explained, but cocoa butter and some cocoa butter equivalents were solid at room temperature. A third problem was the cocoa powder and the different levels in different samples. Wendy recounts:

“And then, obviously, because I was using cocoa powder to flavour the samples, if you add more cocoa powder to the sample, it changes the colour. So I didn’t want the colour of the samples to impact the perception of the flavour. Because obviously, if you
see something that looks more brown, you’re gonna think: ‘That’s more chocolatey!’
So, initially, I was adding colouring, to kind of mask the differences. But in the end, it
turned out that this wasn’t feasible for one of the fat types. So then, we had to go and
explore other avenues. But eventually, I don’t know why we didn’t think of it from the
beginning, we used little brown bottles.” She laughs.

In the end, it took Wendy the entire first year of her PhD studies to figure out
how to construct samples of chocolate liquids with different levels of cocoa
powder and different types of fat that were equally brown and equally liquid.
After that year, she had a chocolate liquid model system in which it was pos-
sible to individually vary the level of ingredients and the type of fats while
maintaining all the other sensory properties (texture and colour notably) stable.

Once the model system was constructed, Wendy moved on using a mass
spectrometer to measure how the samples release aroma. In lab F, this is called
the flavour analysis. In the third and final step, she measured the flavour percep-
tion of the chocolate liquid model system. For this, she recruited 12 panellists
from a panellist pool that the laboratory has built up over the years. The pan-
ellists are people from the region, mostly elderly housewives, who are paid by
the laboratory to work for them. All of the panellists have been pre-selected by
the researchers as having a sensitive palate and being able to put into words
the sensations they had in their mouth. Many of the panellists working for the
laboratory have been doing so for a long time, some of them for over ten years
already, and have developed close bonds with the researchers. The researchers,
in turn, value the panellists’ work and an annual Christmas party and excur-
sion is organised for and with the panellists. “The panellists work very hard,”
the research manager emphasised, “They are our instruments. They are as ac-
curate as a nice shiny piece of kit.”

From the pool of panellists, Wendy chose a “sensory panel” of 12 who, in
previous research projects, had proven to be particularly acute and sensitive in
the perception of sweet food model systems. After handing out samples of the
liquid chocolate model system, she asked the panellists for words that exhaus-
tively described the sensory properties of the model system as they perceived it when they had samples in their mouths. In lab F this process is called “descriptor generation”. For the sensory property of, as Wendy put it, “taste/flavour” the panellists suggested more than twenty words, among others, “sickly”, “slightly milky”, “smoky cacao”, and “chalky”. After a discussion, they, as Wendy put it, “democratically” agreed on two terms: “sweet” and “bitter”. Other sensory properties for this particular model system were (and here again I use Wendy’s terms):

- aroma
- texture/mouthfeel
- aftertaste
- texture/mouthfeel after swallowing.

Next, Wendy trained the panellists. She gave them samples in which the levels of ingredients and types of fat varied, telling them each time how each sample differed from the previous one. Using this information, the panellists reflexively sharpened their perception and learned to distinguish differences that were increasingly subtle. Wendy then asked the panellists to rank samples according to one of the descriptors, for instance bitterness. “You have to make sure,” she explained, “that everybody is talking about exactly the same thing, because obviously there are many types of bitterness. There is bitterness related to caffeine, the bitterness of cocoa, initial bitterness, and aftertaste bitterness, what have you…”

After the preparation came the final experiment. On the first day the twelve panellists came to lab F, some of them in the morning, some in the afternoon, and sat down, each in one of lab F’s so-called taste booths. The taste booths in lab F are cubicles designed to accommodate a single research subject. The lighting in the taste booths is standardised according to the ISO norm 8589:1988, the walls are light grey, and each booth is furnished with an office chair and a table. On the table, there is a computer screen displaying instructions and questions, and a mouse. On the research subject’s right is a bottle of plain water
and a glass. A button allows the research subject to communicate with the researcher standing behind the wall, in which there is a hatch for the subject to be handed samples by the researcher. As she showed me the cubicles, the research manager, who is well acquainted with molecular cuisine and other food trends, stated, “This is a very different situation than the one you have in a restaurant or a hospital of course. But what we want to find out about is the underlying mechanism, flavour perception, how intense certain stimuli are.”

Through the hatch Wendy served the 12 panellists the first sample of the chocolate liquid model system in the small brown bottles. The research subjects put them in their mouths, swallowed, and rated their perception by clicking on scales that were anchored with the attributes generated earlier. Next, they neutralised their palate with a slice of green apple, a so-called palate cleanser, and moved on to the second sample. After ten minutes there was a break. Several one-hour sessions took place on that day and the following ones so that, in the end, Wendy had data from each of the panellists about the sensory perception of different samples of the chocolate liquid model system.

When I left lab F, Wendy was still analysing the data. However, she could already tell me that in her thesis she would relate the findings to those from experiments on flavour perception of other food model systems, especially those of solid chocolate model systems and liquids with banana flavour. When completed, the thesis was to be sent to the supervisors of the PhD project, the members on the PhD committee, and the company which had partly funded the project. The company required that the results not be made available to the public, which is why I do not have access to the final manuscript. It is possible that, once the confidentiality agreement ends, the results will be used by Wendy.
or her supervisors to write an article to be sent to one of the journals in which much of the research from lab F is already published. These are *Chemosensory Perception, Food Quality and Preference*, and *Journal of Food Science*.

*Field notes, lab F, March 2010*

The walls are painted a sunny yellow and a blue carpet covers the floor. Comfortable ruby red armchairs are set next to each other on three sides of the small room. In the corner, there is a side table with magazines, and there is also a radiator and a lamp waiting to be used on dark, chilly winter days. This is the room in which panellists wait and relax before and between tasting sessions. Right now, one of the chairs is occupied by an elderly lady with short grey hair. She is browsing through a women’s magazine on cooking. I take a seat opposite her. It’s half past one and I am hungry. I have spent the morning talking to PhD students who have been telling me about the experiments they have coming up. My next meeting is at 2 o’clock. I take a couscous salad which I bought this morning out of my bag. As I open the salad, the research manager enters the waiting area. She sees it and stops. “Anna, would you mind sitting in the conference room? Louise here, has her tasting session in a few moments. And while your salad does not smell a lot, it would be better if you ate it next door.” “Of course, of course.” I get up and grab my stuff. On the way to the conference room, the research manager explains further, “We abstain from using aftershave or perfume, because, like the smell of your salad, it might affect the assessments going on.” We arrive in the conference room and I take a seat at the huge table, which was designed for quite different purposes, and eat my smelly, tasty salad.

**Taste in lab N: Sensory specific satiation**

Lab F does research on flavour perception, but what happens elsewhere? Let me take you to another laboratory, to lab N as I call it hereafter. Lab N is part of a *Division for Human Nutrition*, which consists of several research groups that all study *health and human eating behaviour*. Some projects focus on specific populations, for example children and study their preference (or rather the lack
thereof) for Brussels sprouts. At the time of my fieldwork, however, most of the research in lab N was on one topic in particular: obesity. Some of the scientists working on obesity were in dialogue with policy makers working in the public health sector. The research done in lab N indirectly serves to design targeted, effective and not too expensive intervention programmes for the prevention and treatment of obesity. When I first met him, the head of the department told me that he wanted to understand “the meaning of taste for humans” and that he was interested in all aspects of human eating behaviour, including the “cultural” or “social” dimensions. He was familiar with Marvin Harris’ material approach to food and knew the French food sociologists Claude Fischler personally. With a laugh, he said that Bourdieu’s long and complicated sentences in Distinction were quite a challenge for a nutrition scientist like him to read.

At the time that I did my fieldwork, the broader question that was explored under the heading of obesity was how people in an environment of food abundance eat (and over-eat). In this vein, researchers were studying food choices people make, “food selection” as it is called in the lab, stages in eating behaviour such as the point in time at which people start or stop eating, “initiation of food intake” and “termination” in the researcher’s terms, and, last but not least, the researchers were interested in satiation and satiety.\footnote{In lab N, a difference is made between the two terms. “Satiation” is used to describe the processes that bring a so-called eating episode to an end. “Satiety” refers to those happening after a meal has been eaten, involving the suppression of hunger and inhibition of further eating.} So one project was investigating how satiety is affected by hormones released in the stomach, the so-called “gastric contribution to satiety”, another was exploring “oral contributions” to satiety, in other words, how satiety is affected by food’s sensory qualities. This last project, on “sensory specific satiety”, consisted of two PhD sub-projects, one investigating how satiety and satiation are affected by the texture of food, the other focusing on, according to the project’s website, “taste”. When I first met the researcher running the project, whom I will call Sandra, she explained:
To begin with, Sandra was interested in finding out how taste (her word) affects food intake in, what she called, normal humans. She formulated the following research question:

In a population of normal weight young adults, does satiation differ depending on whether a meal is sweet or savoury?

In order to answer this, Sandra used a statistics programme to calculate the amount of data needed to produce results that would ultimately be statistically significant, i.e. the size of the population. The programme calculated that she needed 64 participants. Sandra then wrote an advertisement that she pinned on the black boards of the department and circulated through a mailing list the department has established over the years and to which people who are willing to participate as research subjects in the experiments of lab N for a bit of extra money have subscribed. These are mainly students. Sandra got numerous replies, from which she made a selection. “You want to get a bit of a homogenous group,” she commented. She excluded all those applicants of not “normal weight”, which, in this case, meant everybody with a Body Mass Index below 17 or above 25. She also excluded all those who were not “healthy”, all those who had problems with swallowing, suffered from a stomach or bowel disease, a thyroid or other endocrine disorder. She did not include vegetarians, pregnant women or anybody above 35 either. Most importantly, she included only those who ate “normally” — those who did not watch their diet. In other words, she included those who were, as lab N puts it, “unrestrained”. She assessed who was and who was not “unrestrained” using the “Normal Eating Behaviour Questionnaire” she asked the applicants to fill out. This includes, amongst others, the following question: When you pass a bakery and you smell
the aroma of freshly baked bread, do you enter? If you answered yes, you were, according to the questionnaire, unrestrained. Sandra brought up that the experiment she was about to perform would interfere with the participants eating habits. She pointed out that she would not, therefore, recruit them again for any of the future experiments that she was planning to do in the course of her PhD, but would instead select new and “fresh” research subjects. That these “fresh” research subjects might have already participated in one of the many other experiments constantly under way in lab N is a problem which, according to one of her colleagues, cannot be avoided.

Once the 64 normal weight young adults were recruited, Sandra invited them to come to the laboratory and had a talk with each of them. “We had an experiment once,” she explained, “for which we asked the participants to go online one day before the experiment was scheduled and to fill out a questionnaire. We thought that this would be enough for compliance. But on the day of the experiment they did not show up. ‘Oh sorry, I forgot about it!’ ‘Oh sorry, I have eaten already!’ Now we always have talks. Then they at least call you if they have a flat tyre and arrive late.” In the conversations, Sandra instructed each participant to avoid extensive physical exercise before the experiment, to have a normal breakfast in the morning, and to stop eating two hours beforehand. “You want to get them a bit in a standardised state,” she explained. At the end of the meeting, she told each of them once more the date of the day on which the study would be conducted and the time slot for which they had signed up. To remind them, she sent out emails three days before the experiment and one day before.

On the morning of the experiment Sandra cooked two dishes. The main ingredients in both were risotto rice and milk. The dishes were standardised — a dietician had helped Sandra with this — in terms of energy density, macro-nutrient composition, texture, and pleasantness, called “palatability” in lab N. One dish was seasoned with vanilla sugar and cinnamon, artificial sweetener,
and butter, the other with garlic and bouillon, salt and crème fraîche. One was sweet, the other savoury. At around noon, the first six of the 64 research subjects came in and sat down in six taste booths.

The taste booths in lab N are cubicles designed to accommodate a single research subject. The lighting in the taste booths is standardised according to the ISO norm 8589:1988, the walls are light grey, and each booth is furnished with a swivel stool and a table. A tap and a sink are built into the table to the left of the research subject. To the right, there is a mouse on a mouse pad. A button allows the research subject to communicate with the researcher standing behind the wall, in which there is a hatch for the research subject to be handed food objects by the researcher. Above the hatch there is a computer screen displaying instructions and questions.

Sandra served the six research subjects very, very large portions, 800 grams, of one of the two risotto dishes on simple white porcelain plates. Via the computer screen they were told that they could eat as much as they wanted, and that if they were still hungry after finishing could even ask for more. This research design is called “ad libitum” food intake study. The six research subjects started eating, ate, and stopped eating at some point. When they had left Sandra weighed their leftovers, entered the numbers into a spreadsheet file that also recorded the height, weight, and sex of each research subject, and calculated how much food every one of them had taken in. The experiment was repeated several times that day and on the following days so that, in the end, Sandra had data on each participant eating both the sweet and the savoury version of the dish.

Next, Sandra analysed the data, calculated the mean intake of each meal, the standard variation, and wrote a paper discussing “satiation due to equally palatable sweet and savoury meals”. This paper embeds the findings within
the literature on satiation and satiety. It refers to publications on satiation and food intake in the case of snacks of different sizes (nibble- and bar-size), food with varying texture (solid, semi-solid and liquid) and more or less volume (due to inserted air). The paper was published in one of the journals that results from lab N usually appear in, *Journal of Nutrition, Appetite, and International Journal of Obesity*.

Field notes, lab N, May 2010

In the kitchen Eva, a PhD student, is busy preparing another experiment. As I enter she is using a ladle to scoop a yellowish mass out of a blue plastic container and into a smaller transparent bucket. The small bucket stands on a weighing scale. She fills the bucket until the scale shows a number greater than 1000.0. “At least 1000.0 grams, 1004.3 or so is better,” Eva instructs me so that I can give her a hand. We fill bucket after bucket, and as we do so, she tells me more about the experiment, “In this study we serve ad libitum portions, like in the one you have seen. The participants come in in the morning and then each of them gets one of these buckets for breakfast. It’s kind of a yoghurt. Beside this, there is one with another flavour. It’s browner and tastes of caramel. Each subject is served the two flavours and, then, we compare the intake… Would you like to try it?” “Of course.” Eva opens the drawer for the cutlery, grabs a spoon, dips it into the yellowish sticky mass and hands me the taster. I take it and put into my mouth. It tastes lemony, but not like lemon cheese cake, more like cleaning liquids. And it is sweet. Very, very sweet. My facial expression must have changed and lacked enthusiasm, because Eva asks, “Sweet, right?” I nod. “We were provided with a choice of several flavours. Tropical fruit, vanilla, cashew nuts, chocolate, caramel and this one, lemon. We did a pilot study in which we rated the hedonic liking for all the flavours. When you give people ad libitum portions the hedonic liking is very important. There shouldn’t be a great difference between the products you hand out. The scores for the lemon one was quite low, the one for caramel, too. As they were equally low, we chose those two in the end.”
One object of quantitative science, two versions of a bodily response

In the previous sections, I have described two experiments. The scientists conducting these two experiments told me that they were either about “taste” or that they were related to my, the ethnographer’s, quest for “taste”. I, therefore, consider them to be about taste. The experiments are similar in that they share a methodological style. To use Bruno Latour’s terms, both proceed through a “regulated series of transformations, transmutations, and translations” (Latour, 1999: 58). They are geared towards quantification, generalizability, comparability and the writing of a specific kind of text.

Quantification (Potter, 1992) was achieved in both labs through counting and measuring a few “variables”, entities that had been developed earlier in the research field — for instance, attributes such as “sweet” and “bitter” — and putting them into a (statistical) relation with each other. Standardisation (Lampland & Star, 2009) contributed crucially to quantification. While a few variables were measured, many others which were not the focus of the research project in question — ranging from “colour” in lab F to “hedonic liking” in lab N — were meticulously kept constant. Generalizability and comparability were achieved through the use of a model system of chocolate liquids in lab F and a population of healthy young adults in lab N. This rendered the results independent of differences between two specific chocolate liquids or two individual students, and turned them into those of all liquids with a chocolatey taste with the same level and types of ingredients as in the model and of all humans with certain characteristics: healthy, young, and adult. In addition, both labs used the device of the taste booth. Making research subjects take the food objects in in this environment rendered the results comparable to numerous previous studies that had already taken place in the taste booth, many more that would take place there

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8 For an analysis of the use of models in chemistry research practices, see Francoeur (1997); and for the political struggles around inclusion of people other than white men in populations for clinical drug trials, see Epstein (2004).
in the future, and, in theory, with each other — despite the wallpaper being yellow in lab F, the sun having shined on a crisp blue sky on one of the days of one of the experiments, and rain having drizzled down on another one.

Quantifying and standardising, crafting generalizability and comparability, all of which require a lot of work, and the writing of a specific kind of text at the end of it, makes both experiments qualify as quantitative science. Both experiments, by quantifying and standardising, crafting generalizability and comparability, and writing a specific kind of text, disentangle goings-on such as research subjects reading women’s magazines in the waiting room, having done sport in the morning, putting stuff into the mouth, and stopping to eat from researchers standing behind the wall of taste booths, cooking dishes in kitchens, entering numbers into spreadsheets and clicking on computer mice; and all this from bicycles tyres having gone flat and food deliverers having gone bankrupt. By doing so, both experiments configure taste as a discerned and discernible, neatly packaged entity, an object (of quantitative science), a bodily response.

While both experiments share a methodological style, they differ in that their technical set-up stages different objects, different bodily responses. With in the technical set-up in lab F an encounter was organised of just a handful of extensively trained and highly sensitised people, panellists, who discriminated and detected most subtle changes in for instance degrees of “sweetness”. Taste, in that experiment, is staged as a perception, constituting a human who, through tasting, becomes a subject knowing about the world that is out there. How different in lab N, where a large group of students whose eating behaviour was supposedly natural were made to twice have lunch consisting of a dish in two rather undifferentiated tastes, sweet and savoury, of which they ate a measured

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9 For an analysis of the work required to become a properly functioning research subject in a perfume test, see Muniesa & Trébuchet-Breitwiller (2010); and a description of the experience of being a research subject in a taste booth, see Jakobsen (2013).

10 The technical set-up differ also in the way “culture” is dealt with. In lab F. research strives to move towards an underlying physiological response that is assumed to be independent of place. It aims to strip off “culture”. In contrast, research in lab N. aims at studying meals research participants are assumed to have anyway, local specificities of eating. Studies strive to include “culture”.
quantity. This latter study configures taste as a response to an exposure to qualities of edibles during eating; a transformation of food into body that keeps alive an organism, which happens to be a human.

While both experiments enact taste as a physiological object, they stage two highly specific versions of it — flavour perception and (an effect leading up to) sensory specific satiation. Although one might wonder how the two versions relate to one another, during my fieldwork the relation between these different types of research was never raised as an issue by the researchers. They seem to relate to their own contexts more than to each other. Through the technical set-up in which they are staged in, flavour perception and sensory specific satiation come to relate to particular sets of practical concerns. The study of flavour perception of chocolate liquids addressed issues such as the consequences of changing levels of ingredients or replacing one type of ingredient with another, concerns that arise during the optimisation of the production process of a food product. The study of satiation due to sweet and savoury meals articulated whether or not the sweetness or savouriness of a dish is a factor inhibiting an excess of energy intake within a population, which is a question that is relevant in the design of health policies. In doing so, they also relate to a specific “bigger” concern or societal issue. Flavour perception (enacted in the study on chocolate liquids) has the question built in how to better organise and optimise the production of a food product. And sensory specific satiation (enacted in the experiment on satiation due to sweet and savoury meals) has incorporated the issue of how obesity might best be targeted and prevented. Each version of taste enacted in the two experiments has built in and allows for the addressing of a “bigger” concern or societal issue.

This resembles what Tiago Moreira described in “Heterogeneity and Coordination of Blood Pressure in Neurosurgery” (2006). During a surgical intervention, anaesthetists, Moreira observed, measure a patient’s blood pressure with a sphygmomanometer in order to keep a patients’ body alive while neurosurgeons feel it with their fingers in order to intervene in the patient’s body.
Why tasting? Revisited

Why should we care about tasting? This is the question anthropologists of the senses were confronted with a few decades ago when they started studying people’s sensual relations to food. David Howes argued that investigating taste is important as it is “not just a matter of physiological response”, but “the most fundamental domain of cultural expression” (2003: xi). In this paper, I have drawn on a material semiotic approach to study how what Howes calls a “physiological response” is enacted in sensory science research practices. I have reported on two experiments, one on flavour perception in chocolate liquids, and the other on satiation in equally palatable sweet and savoury meals. Studying flavour perception relied on a group of highly trained and sensitised panellists, while researching sensory specific satiation depended on a large group of hungry and present students. Researching a bodily response in the two experiments depended on a huge variety of other entities being organised in a particular way, and therefore involved a lot of work.

While both experiments enacted taste as an object of (quantitative) science, the technical set-ups staged different versions of the bodily response. Taste was configured as a perception in the first and as a reaction to an exposure in the second. Each of the two versions of taste researched in the experiments was related to a specific set of practical concerns, the optimisation of the food production process and the design of health policies. Along with that, they addressed a “bigger” concern or societal issue, the optimisation of food production and the prevention of obesity.

Drawing on a material semiotic approach and attending to what a bodily response “is” in natural science research practices thus allows reformulation and expansion of the answer to the question (which has not gone away since Howes and others have started studying peoples’ sensual relations to food) of why tasting should be cared about: because “we” incorporate “our” concerns into tasting — whereby neither the “we” nor the set of concerns are singular — while, at the same time tasting allows “us” to address them.
References


