Questioning Food

Food Research Art Design

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Self-evidence, or Why Food Should Also Be Researched in the Arts (an Editorial)

Food and Life

If we had to spotlight something that is really intimately and immediately connected to all human and non-human agents, then it would be food—in all of its appearances and varieties. Food is the very one matter that really matters to us because it fundamentally helps us prolong our lives and life depends on it. Without food, we ultimately die; it is just that simple. Death is, then, the outcome of the absence of food, of the lack of the true and only vitaliser that keeps us alive and gives us a life. The same, of course, applies to water and oxygen and other similar agents, although we can view them all as other kinds of food, yet in a more remote and perhaps abstract way.

Food's presence, its ubiquity and pervasiveness —at least in the Western part of the world—has, however, become so self-evident that food even enters our bodies without us noticing. Thoughtless and boundless eating seems to have become our dominant connection to food—i.e., thoughtlessness about its origin, about the foundations of its taste, about its ingredients, about its whereabouts, its political and aesthetic meanings, and so forth. Is such an apparently indifferent attitude, though, strange or bad? That is hard to say. We tend to say yes. If we compare the sense of taste, however, with the everyday use of all our other senses, the indifference does

not seem to be odd at all. How much of our daily time are we really consciously looking at something or hearing things, or being touched by things such as the clothes we are wearing or the chairs we are sitting on? Most of the time, we are not at all aware of our senses or our sensing, and even less so of the meaning or impact of all phenomena that we come across.

Still, since eating and drinking are primarily, but not exclusively, connected to the sense of taste, they are also usually recognisably associated with and framed in specific acts of behaving that are inter-related, and which are characterised by certain habits and inherited forms—setting the table, using plates or knives, visiting supermarkets and restaurants, ordering or preparing meals. The other senses are triggered by all kinds of actions that are not nec-essarily connected (watching TV, looking into the distance, reading a book or a recipe, looking at a work of art, listening to music or going to a concert, looking at your lover). Chewing gum comes perhaps closest to our general way of looking and hearing. It just goes on and on and will only become a conscious act when biting one's cheek, which is not connected to taste at all, except for the possible flavour of blood. While eating, we are not aware of all the bites we are taking, either. Eating just happens as well, with some eruptions of likes or dislikes of its taste-like nature. Still, as stated earlier, eating seems generally more connected to specific related forms and proce-dures than the other senses.

After finishing our meal, our tank is mostly refilled. In any case, it is satisfied enough to pick up our current agenda, 'the things to be done,' as the Romans put it. Doing things and fuelling our bodies to do things are closely connected. In fact, they presuppose each other. Food and *vita* (life) correspond, entangling agents of our vitality. Life starts with feeding and ends when the body stops accepting it. Stopping seeing or hearing is also bad, but death is not their end point per se.

Food and Research in the Arts

But how can we relate food to research in the arts? What can this emerging branch of knowledge production do with it? Both questions were the starting point for this special issue of *APRIA*. Why? There is only one simple answer: because any research starts with the act of wonder. And wondering appears, for instance, when a phenomenon seems to have become completely self-evident. The self-evidence of things is a rich source for putting a research quest in motion. And that is what happened.

How do we recognise self-evidence? It appears when things have become perspicacious, i.e., have become transparent and perfectly clear. Self-evidence and perspicuity are, therefore, akin. The root of the latter concept is connected to perspective, which literally means 'looking through,' a concept that has, since the Renaissance, put humans at the centre of the world. Perspective makes the human—the white human, in particular—central in the act of ordering

the world, i.e., making the world viewable and, therefore, understandable and usable by giving it transparency. Clear lines of thought, a specific form of rationality, mark and order the general outlook of the world when seen in perspective. The same accounts for self-evidence, which clearly expresses its connection with seeing; *videre*, and *e-videre*, coming out to be seen, that is to say, clear to be seen, i.e., evident. The addition of the prefix self to evidence makes its own perspective even more visible: self-evidence suggests being seen as coming from itself (not from *our*selves). It makes itself clear and transparent, and worthwhile of being there. Of course, not *off* course. It shows its own perspective, its being transparent to itself.

The question therefore arises: what makes food appear so self-evident? Why does it look so transparent in its appearances, and is it, really? In general, we think it is because of its abundancy. Its ubiquity makes it self-evident, but, and that is the other side, it is also a *wicked* phenomenon, i.e., a singularity that is so complex in its transparency that we do not see any more how intricate it really is. Food has so many appearances, so many roads, so many producers, so many users, so many tastes, so many outlooks, so many manifestations, so many aesthetics, so many rules, so many ingredients, so many matters, so many supply routes, that it in fact escapes a unified view and analysis, and therefore loses its transparency at the moment of its appearing.

In this respect, food resembles the 'hyperobject' (a nice concept by Timothy Morton), which stands for phenomena that are so large in their (time-related) appearance that we can never completely understand their underlying structure, if that exists at all. [1] We only see some of its appearances. Food not only resembles this 'post-sublime' concept;[2] it also appears to be an 'intra-active' agent, to use Karen Barad's phrase,[3] which already incorporates the other— that is, us. Food relates to us, and we relate to food. Food and we are presupposed. We produce ourselves by feeding ourselves. In that respect, we are foodies, although not in a gastronomic sense. Nor in the sense of Ludwig Feuerbach's saying *'Man ist, was man isst'* ('You are what you eat'). He saw food as the last cause of us, as our purely material basis. We think it might be a bit less simple and also the other way around. We and food produce each other.

Wicked

Food is thus both a self-evident and wicked issue— a 'wicked problem' as it is called. Wicked problems are a special sort of problem. They are far too complex to understand through one knowledge discipline alone, as we have already noted, and they resist clear definition; they pop up in different societal interfaces and mostly require a change of system. Wicked problems are interrelated: they cannot be completely solved, they can only be approached; they can even be denied, understood

differently, which leads to different approaches. There is no ultimate test of a solution, and, finally, they are characterised by various responsibilities, including the fact that stakeholders are mostly part of the problem, too.[4]

Food thus obscures its wickedness through its transparency and self-evidence. It is quite re- markable that the word 'wicked,' which has many meanings, is originally derived from 'witch,' a name for a woman who was supposed to have secret and satanic powers.[5]

A witch was generally connected to bad or neg- ative phenomena that were not easily explained or solved through reason. Problems that are un- solvable—say unreasonable—are thus originally associated with the female. We can, as such, also easily put food's wicked state in the realm of re- search in the arts, which is also notorious for its seeming unreasonableness and its invasive or even destabilising powers.

Due to this specific complexity and allure of the matter next to the implied absence of a specific knowledge field or discipline that can satisfactorily analyse and explain the multilayered appearances of food in the world, we decided to invite a few ArtEZ art research professors to delve deeper into their ideas on food from their fields of expertise for this issue. Not to solve any food problem, which is im- possible, even for the arts, but to unwrap alternative aspects of and other perspectives towards the world of food that hardly appear in other research fields, if

at all. The result is an assemblage of idiosyncratically forged food enquiries, which are given a context by connecting them to other makers/designers/artists/researchers in the field of food. What to expect?

> Before publishing this special issue, a one-day conference was organized by the ArtEZ professorships, entitled *Food Friction* in 2018. For this artistic and scientific event, we invited the inspiring food designer Katja Gruijters to organise the conference and tease out the concept. This led to a very lively and multifaceted event, in which the research professors took a side role by moderating different sessions. Using this as a basis, we then decided to challenge some of them once more to unpack their relationship with food in writing.

Food and Art Research

The professorship in Art Education as Critical Tactics contributed an article titled 'Peter Greenaway: A Demonstration of Research-Based Art,' a text that ponders how food could become a research tool in cinema, and how the director becomes a researcher, focussing particularly on the work of Peter Greenaway. Jeroen Lutters' central question is: Does artistic research differ from scientific research? And if so, how? The accompanying photo essay by ArtEZ Werkplaats Typografie alumnus, Amir Avraham, is a specially selected analogue sequence of film stills from Greenaway's well-known, food-rich movie *The Cook, the Thief, His Wife & Her Lover* (1989).

The Theory in the Arts professorship has provided a jointly written conversation piece: 'Taste: The Lost Sense, or Why the Culinary Arts Should Integrate with Art Education (a Conversation).' This dialogue between ArtEZ professor Peter Sonderen and Zuyd University of the Applied Sciences

professor Peter Klosse enquires why the culinary arts—representing the sense of taste in relation to food—have hardly found ground in art education. The optical, the audible, the touchable and moveable have found fertile soil in all kinds of art disciplines, whereas the sense of taste and tasting—historically connected to the aesthetic judgment of artistic objects *par excellence*—has barely found refuge for its proper object, i.e., food.

The Fashion professorship has taken the comparison of the world of food and fashion as its focus and starting point: 'Living-With and Dying-With: Thoughts on the Affective Matter of Food and Fashion' is the title of the text written by ArtEZ professor Daniëlle Bruggeman and co-researcher Hanka van der Voet. It is a plea for a review of our connection to (raw) matter or materiality, by focussing on affect, touch and smell. In their art contribution, 'Action Recipes', art researchers Paris Selinas and Mark Selby elaborate on how food hides its true nature and background by being (especially visually) aestheticised. Fashion theorist and activist Otto von Busch reacted with 'Fervent Pharmakon: Food, Fashion and the Haul,' in which he concentrates on how quick (and, therefore, *thoughtless*) consumption has led to unhealthy addictions, to hunger and emotional starvation. Cooking or making clothes collectively could restore a healthy relationship to both food and fashion.

The contribution by ArtEZ professor Jeroen van den Eijnde, of the E-Scape professorship,

concentrates on food's relation to space—i.e., the spatial environment in which it is being prepared, particularly the kitchen. A historical overview of the function and place of the kitchen and its current state shows how technology is entangled with the social practice of food preparation. Miguel Bruns, associate professor in the Future Everyday research group at Eindhoven University of Technology, shows how new technologies are going to change our food consumption in the fourth industrial revolution (artificial intelligence and the Internet of Things). Interaction designers Klasien van de Zandschulp and Emilie Baltz focus on the question of what new technologies imply for humans as social-cultural beings. Through a performance, they lay bare new kinds of rituals caused by new technologies. The texts conclude with an epilogue by Nishant Shah, ArtEZ professor of Aesthetics and Cultures of Technology. He was the only contributor to write his piece during the coronavirus crisis, and therefore reflects on the impact of COVID-19 and food, particularly 'foodporn.'

How we eat, how we feel, how food iconises, how food relates to the body, how it functions within the media, how it functions on the street and in the house, how it makes us act, how it relates to other arts, in short, how it unveils its particular wicked character, its complexity, makes food a fascinating and self-evident but nonetheless obscure matter.

Diverse knowledge fields—not to say, knowledge abysses—are laid bare here by relating to various aspects of art, revealing other matters regarding our relation with food in doing so.

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Footnotes
[1] Morton refers to climate change, for instance. *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013).
[2] Whereas the sublime stood for the immense (the larger than large, the awesome) that resisted our reason (temporarily), the hyperobject seems to refer to an even larger scale phenomenon that fully withstands reasoning or any one-sided rational domestication.
[3] Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007).
[4] Rob van Tulder, 'Introduction on Wicked Problems, https://www.rsm.nl/research/centres/prc/connect-knowledge/wicked-problems-plaza/theory/. Cf. Timothy Morton, *Duistere Ecologie* (Boom: Amsterdam 2016), pp. 57-59.
[5] The phrase 'a wicked witch' is, therefore, a strange doubling.

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Peter Greenaway
A Demonstration of Research-Based Art
With an image essay by Amir Avraham

"Everything I do is self-reflexive in this sense, filled with signs which emphasise the artificiality of the action, like the curtains in The Cook, The Thief, His Wife, & Her Lover, which are drawn apart at the beginning of the film and closed again at film's end."

— Peter Greenaway[1]

Abstract

Does artistic research differ from scientific research? And if so, how? In an attempt to answer these questions, my starting position is that when it comes to artistic research, we should use 'research' to achieve a specific goal—i.e., making better art. But at the same time, when we use 'art' in 'scientific research,' the goal will always be science. By that I mean science defined as the search for truth, and art as the search for the aesthetical. I am, of course, aware that this is an extremely binary categorisation, but I do hope it gives us some didactic clues to work in the domain of art research. By introducing research-based art as a concept, I even hope to narrow the gap. In examining research-based art as a method that uses research for the purpose of making art, I use Peter Greenaway's film *The Cook, The Thief, His Wife & Her Lover* (1989) as a case study. Here, we see both the artist as a researcher and art research as research-based art—an artist-researcher who creates an independent artistic composition by using at his own discretion the accepted results of research.

Introduction

The main objective of this article is to defend the unique tradition of art academies by identifying research-based art as a different form of inquiry that fits with the tradition of art academies. This is especially important for the protection of the arts against the tendency of universities to overemphasise the methodological, logical, and disciplinary element of research. This paper also aims to help us stay focussed on what really matters in art: the magical act of creation to support the argument that research methods in the arts are important but should not become a burden. The value of the arts or the independent artist should not be measured by research.[2]

This critical analysis is dedicated to the art student who feels more and more trapped in a system of formal research indicators. It is a celebration of the (upcoming) artist who wants to use research as a free form of inquiry, the non-conformist who habours a clear disgust for noisy research methods and practices and prefers to see research as a silent method fully integrated in the work of art. It speaks to the artist as an autonomous eclectic who uses research outcomes, as well as the outcomes of every other factual or fictional experience, completely on their own terms. It refers to the artist as a practitioner of the '*scientia creativa*,'[3] which has very little to do with the prevailing scientific practice of today.[4]

Art and Science

Let's start with some questions: What is art? In what ways does it resemble science?

Or, even more importantly at the moment, how do they differ from one another? According to Henk Borgdorff, Professor of Theory of Research in the Arts at Leiden University, art is similar to science, and it is, therefore, a justifiable means to do research. Theoretically, I completely agree with his claim. However, on a more practical basis,

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I feel there is still much more to discuss. I would like to use this article to shift the focus from identifying the similarities between art and science—in which my interest often lies—to highlighting the differences between the two domains in an attempt to defend the position of the art academies as an important, independent third area in higher education.

I want to start by asking: *What is the unique quality of the approach, methods and results in research in art academies?* Nowadays, research is mainly considered as formal, systematic practice, in which methods and sources are dominant.[5] Art, on the other hand, is a rather imaginative practice in which both methods and sources remain silent.[6] Although I wish I could have come to a different conclusion, my experiences over the last few years have led me more and more to thinking that, particularly in the Dutch academic field, art and science differ so much from each other that it is almost impossible to accommodate them under the same umbrella without losing the very identity of the arts. The more I strived to analyse the phenomenon, the more I came to the conclusion that my initial plea for a *scientia creativa* is actually an illusion, at least in the institutional academic landscape we inhabit.

Which brings me to my next questions: *What does this mean for the future direction of artistic educational practices?* Certainly, there are many opportunities for cooperation in the academic world, especially in the field of humanities.[7] But, in the end, when it comes to the actual measurement of the validity of either the artistic or scientific outcomes, all that seems to really matter is the debate around the difference between what belongs to the domain of truth (science) and the domain of aesthetics (art). In the case of the scientific academic practice, what is actually important is the argument of truth. But in artistic academic practice, it is the argument of beauty. A complete educational system is built on this.[8]

So, I wonder: *How can researchers and professors still be part of a university of the arts in which the main occupation and responsibility should actually be art?* I think it is the task of researchers and professors in art academies to formulate a deviant and sustainable narrative concerning inquiry for their students. Therefore, I want to propose a new way of phrasing what I believe to be a more adequate approach: no longer art-based research, but, instead, research-based art. Besides emphasising that the final outcome is—and should always be—art, this label also better matches with the artistic tradition in art academies. In this way, it would be possible to refer to a concept, an approach, that does not instrumentalise art to science, but gives it instead the unique, free space it always had, and that we should still defend. Art is the focal point of this concept. By using the word 'art,' I do not mean only the traditional artistic craftsmanship; I consider art as an act of independent imaginative creation.[9]

All in all, my current position in the ongoing debate could be summarised as follows: art should always be the centre of gravity in art academies, and students at these institutions should clearly focus on their own process of inquiry. Looking at the academic tradition of the arts, the teachers as artist-educators therefore need a narrative of research-based art, a story in which art does not become an instrument of research, but that rather makes research one of the stages of the art process. Whereas the most commonly used word combination 'art-based research' indicates that art had an adjectival relationship with academic research, 'research-based art,' a new combination I propose, makes clear that we work the other way around in art, thus fully incorporating research in the arts and the artistic process.[10]

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Research-Based Art in Art Academies

Now that I have introduced the notion of research-based art as a specific mode of inquiry in art academies, let's look for examples that can clarify this on a more practical level because a theory without examples is like an idea without proof. I have glanced at the contemporary arts and cultural history to find an example of what can be classified as research-based art. The more I searched, the more I became convinced that the work of Peter Greenaway is exemplary. Besides being a renowned cinema director, painter, writer and curator, he is professor at The European Graduate School. I remember his work from the time I studied history and dramatology in the 1980s, and he's already been famous for a long time for doing research without losing the idea of art. In *Peter Greenaway: Interviews* (2000), he states that he is doing art as a kind of research, particularly concerning images and symbols, as we see in *The Draughtsman's Contract* (1982), *Drowning by Numbers* (1988), *The Cook, The Thief, His Wife & Her Lover* (1989), *Prospero's Books* (1991) and *Nightwatching* (2007) just to name some of the important examples. In Greenaway's work, research is closely connected to what we call 'close reading,' a way of studying the world as a complex narrative.

The camera is Greenaway's most important tool that serves the purpose of research-based art. Walter Benjamin's *The Work of Art in the Age of Mechanical Reproduction* (1935) made clear that the eye of the camera functions as a microscope that gives us the possibility to see what we did not see before. This is exactly what Greenaway does in all his movies. Research-based art begins with a process of research by intense close-reading. In the beginning, the world seems very fragmented and complex, but throughout the creative process, the fragments become a narrative, thus becoming more and more understandable.

Greenaway seems to see this process of inquiry as a stage in his own process of creation.

Just like the historical and philosophical concepts that he uses, the optic eye is a kind of guideline to point out the direction that makes the work of art in the end. As such, art is not the fragmented list of facts, or the laboratory of plays of thoughts, nor a list of research data or data analysis, but is the fully integrated aesthetic composition. It is a non-repeatable action making the rough material into a unique creation, an exciting adventure of a 'searcher,' rather than a well-argued system of a 're-searcher.'

Greenaway's movies reflect this process of creation in which research is only the (circular) phase of preparation that shapeshifts in a final composition. This prioritisation of the final aesthetic composition seems so strong that every part still pointing at the phase of research disappears during the act of creation. As such, research-based art can be called a *silent method,* a notion I owe to the pragmatist philosophical tradition. The traces of the former re-search belief-system transform into the belief-system of the art. Art (just like science) does not need a legitimation outside itself.

Fig 1. Blue (Peter Greenaway, *The Cook, the Thief, His Wife, and Her Lover*, 1989). Greenaway builds his story around a central image of the "man as a beast" as the image of the male psyche.

The *Mise en Place* as the Stage of Preparation

As a good example of research-based art, I now want to focus on one of Greenway's major films, *The Cook, The Thief, His Wife & Her Lover*. By using this as a case study, I hope to inspire my students in seeing how research can be a function of art, without taking over its identity. For didactic reasons, I have divided the process into stages, although they are of course less separated in reality. Although some of my conclusions are based on guessing rather than concrete proofs—what Pierce calls the abductive stage of inquiry—the main direction of the argument is, I suppose, conclusive.

In this cult 1980s movie, Greenaway studies the image of humanity through its symbols. Here, we see the critical researcher who is in close contact with his object of inquiry, 'the camera as a spy,' so that we, as the spectators, can see every detail that is important. As we see, some of the images, dialogues and happenings give logical, suspected information. On the other hand, lots of things just happen by accident and need a flexible interplay between the crew and the cast.

The shots, which can be seen as the *mise en place* in a process of cooking, is a stage of preparation in the creative process, based on the lines of the script and supporting the composition. As every moviemaker does, Greenaway collects the separate images, and then continues by putting them in a grid to create a montage. In this montage, the researcher becomes the artist more and more. Instead of following the script, collecting images, and looking for the sounds, the focus is now on the synthetic part of the movie design. The footprint of the director can be found in many parts of the movie, but especially in this stage of montage.

On some occasions and certainly in my understanding of Greenaway's work, art is an organically evolving process that turns more and more into a narrative, in this case a cinematographic one. The real artwork starts at the point where camerawork, montage, and script finally meet. By showing the images in a specific order, Greenaway tells the public his story, which is a story about man and his symbols, the story of the independent artist—notwithstanding the fact that the spectator is making their own judgement, with their own focal point and re-arrangements, thus creating a new story.

White (Peter Greenaway, *The Cook, the Thief, His Wife, and Her Lover*, 1989). The restaurant's restroom as a sanctuary from the chaotic restaurant hall. 'The camera as a spy'.

Green (Peter Greenaway, *The Cook, the Thief, His Wife, and Her Lover*, 1989). Food as a symbol of creation and the cook as a metaphor for the artist-researcher.

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Looking in the Kitchen of the Artist

To understand what Greenaway does in the process of research-based art in *The Cook, The Thief, His Wife & Her Lover*, it is important to understand the underlying recipe of the artist, the thought-image as the foundation of the creative process. Linguists George Lakoff and Mark Johnson state in *Metaphors We Live By* (1980) that every narrative is in fact based on a (conscious or unconscious) metaphor. The metaphor is a hidden image and of particular interest for the design process as a whole. Greenaway builds his story around a central image of 'man as a beast' as the image of the male psyche. In the movie, man as a beast is pushed forward on every level: in the casting, in the clothing, in the decor, in the music, and, last but not least, in the food. What we see is 'man being a wolf to the other.' Thirty years after the distribution of the movie, in the middle of the #MeToo discussion, this seems even more relevant than ever before.

The hidden message of this piece of research-based art is the depiction of 'the male human being as a murdering animal' eating his fellow animals—male and female—whenever he is on stage. It therefore results in a picture of 'the man as the devil.' Through his camerawork on the set, Greenaway makes his material, finally integrating it into a work of horror, a devilish play, in which the man is the devil and the woman is the revenging angel.

Yellow (Peter Greenaway, *The Cook, the Thief, His Wife, and Her Lover*, 1989). Dead meat of animals is food that can be eaten: an interesting index for the spectator, a message of what later on will happen in the story.

The decadent environment that the artist-researcher Greenaway creates in a way resembles the work of Pier Paolo Pasolini, the director of *Salò, or the 120 Days of Sodom* (1975), in which people even start to eat their faeces. The clear intention of the director is not to secretly enjoy the act but to shock to people, who are confronted by their own aversion on seeing the beast. This resemblance between man and animal is pushed to extremes. This use of the animalistic metaphor—and this is important to notice—is quite different to the current attention to the animal as the better part of nature. In fact, the portrait of the animal as a beast refers directly to the formal Christian tradition in which the devil is a beast and a portrait of evil.

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The Act of Creation as Cooking a Meal

The number of signs is so enormous that it is completely foolish to think about a non-deliberate composition. So, I want to look at how the bricolage of shots of *The Cook, The Thief, His Wife & Her Lover* integrate everything in one picture: man as a murdering animal, bestial rapist, and finally as a cannibal who eats the flesh of his fellow human beings. The casting is very important because the actors carry the story. There are four main characters: The cook (played by Richard Bohringer), the thief (Michael Gambon), his wife (Helen Mirren), and her lover (Alan Howard). The cook plays the part of the restaurant owner, the thief is the Italian-style mafioso boss who makes his entrance every evening, his wife Georgina plays the role of the slave of the beast who turns out to be the revenging angel, and the lover, the bookkeeper, is the young animal that either is not awake yet (still reading) or is not smart enough to fear his master. The scenery of what can be called an unforgettable piece of total cinema is designed by Ben van Os, who was nominated some years later for an Academy Award for his work as art director in Sally Potter's *Orlando* (1992). Like in all of Greenaway's movies, the scenery plays a huge role.

Let's start with the Italian baroque atmosphere. In the scenery, a lot of components come together. One of the symbolic attributes is the painting aspect, which becomes even more meaningful knowing that Greenaway in fact trained as a painter. The baroque dishes with food and drinks and the opera-like songs in the kitchen add to the atmosphere.

Black (Peter Greenaway, *The Cook, the Thief, His Wife, and Her Lover*, 1989). Food as a symbol of power. Frans Hals' The Banquet of the Officers of the St. George Militia Company (1616), depicts a bunch of armed men, partly cheerful and partly drunk, who are powerful as the bandits sitting on the table of the restaurant. Where there is food, there is meat, where there is meat, there is murder, where there is murder there are killers, and where there are killers there are men.

And the paintings, like Frans Hals *The Banquet of the Officers of the St George Militia Company* (1616), are fundamentally important to the atmosphere. Hals' painting in particular makes the critical case of masculinity even stronger. What we see is a bunch of armed men, partly cheerful and partly drunk, who are—with their weapons and position—powerful like the bandits sitting at the table of the restaurant. In the context of the bandits, this 'being a militia, a civilised protector of our freedom' becomes an understatement. The clothing, made by the fabulous Jean Paul Gaultier, is also an important part of the final composition, which substantiates the gender-based argument by using irony as a major component. Chiaroscuro, light, happy, sexy, especially when we focus on the love scenes. Then dark. The signs make very clear

that what we see is not what there is. Clothing as a cover up, a make-up, a make-believe, underneath a complete other story, in black and red colours, which is the one actually going on. The soundscapes, made by then rising star Michael Nyman who became famous for his music for Jane Campion's *The Piano* (1993), is also very important. The whole film is like a Greek tragedy, heading towards death and decay. The *Memorial* based on Henry Purcell's *The Cold Song* is a masterly choice. It is a death march, in which the staccato strikes of the violins tell us that the beast, the animal, the cannibal is coming, and that it is just a matter of time before he will find his prey. The dream-like *Miserere* by the beautiful white-haired Pup, the singing kitchen boy, is also a great invention.

Red (Peter Greenaway, *The Cook, the Thief, His Wife, and Her Lover*, 1989). Food as vanitas in the baroque meals, the transience of life, the futility of pleasure, and the certainty of death.

The Act of Creation as a Chemical Process: FOOD

I now want to draw the attention to food, which is the centrepiece of the scenery, and as such plays the major part in the magical chemical process that every act of creation is. It can be seen as one of the most important means of telling the story. Food is so dominant that we could even view this movie as a film about the cultural meaning of food. Giorgio Locatelli, the Italian master chef, is the specialist who, together with Ben van Os, designed the scenery that circles around the kitchen and its food. In the baroque meals in the movie, we see a lot of dead animals, as well as fruits and flowers, the symbols of what we call vanitas. The dead meat of animals is food that can be eaten—an interesting index for the spectator, a message of what will happen later on in the story.

Food is everywhere. The process of research-based art that has been done on the level of the whole movie seems to repeat itself on the level of the food. In fact, we see how Greenaway uses food as a symbol for the image of man, as a beast in a very systematic way: where there is food, there is meat, and where there is meat, there is murder, and where there is murder there are killers, and where there are killers there are men. This is the basic storyline of the movie. In the denouement, the theme of food culminates in an outrageous peak. The bandit-beast kills the lover of his wife. In an act of revenge, she makes a dinner, together with the cook, in which her lover is the meal, and the bandit, her husband, is obliged to eat him. In doing so, she shows to the whole world what he actually is: a cannibal. This gives her the right to do what we do with every beast—namely, to pull the trigger, to finally kill the beast.

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Brown (Peter Greenaway, *The Cook, the Thief, His Wife, and Her Lover*, 1989). Man and his symbols - food as a symbol of weakness. The intellectual man (the lover) eats smaller minimalistic dishes. He is weak and submissive to the brutalism of the 'animalistic man'.

The Artist as the Chef—Cook Serving the Meal

Finally, I want to look at the role of the cook in the movie, who mirrors the director of the movie himself. What we see is an artist-researcher as a complete, independent mind, who uses his eyes, his thoughts, and his skills for the act of creation. Let us focus for a moment on the cook as the supposed alter-ego of Greenaway. What is his role in the story between the beast (bandit), the food (the lover), and the avenging angel (wife)? Greenaway makes very clear that, as a professional, the cook serves the bandit, but on another level, his heart is with the oppressed parties, especially Georgina, the bandit's wife, whom he supports in every way he can. The bandit knows about the critical attitude of the cook towards him, but because of his unique skills, he is in fact untouchable.

The cook, considered here as a metaphor for the artist-researcher,[11] studies his material carefully. He studies the ingredients, but also the customers in the restaurant. He cooks, but in the meantime, he looks around. He questions everything that takes place and makes up his mind so that he comes to a final judgment, resulting in a final creative act. His act of creation is, in fact, an aesthetic process, making chaos into order, generating a complex situation into a meaningful

narrative. Generally speaking, this seems to indicate that research is to be understood as the initial stage in the process of creation, in which a lot of skills are implied that come with the craft, on top of which the act of creation can come to fruition.

Purple (Peter Greenaway, *The Cook, the Thief, His Wife, and Her Lover*, 1989). The act of eating as a symbol of contempt. The 'animalistic man' despises intellectualism.

The major point of leverage for Greenaway is the making of the horrifying masterpiece at the end of the movie. The act of creation as a long, dialogical process of gathering material going into several directions results in the creation of the craziest dish we ever have seen, the roasted lover, served as a sucking pig for the astonished spectators. The artist shows that he is completely working on his own terms, without obeying any outside rule.

Conclusions and Suggestions

The Cook, The Thief, His Wife & Her Lover provides an example of what I mean by research-based art as a silent method, which is an interesting mode of inquiry, a natural act of creation, useful for students in art academies. This semiotic study of the movie has tried to suggest some thought-directions in which research can be used without hurting the identity of arts. Greenaway's chef-cook exemplifies that the artist-researcher is a good craftsman, a critical thinker, and an independent creator.

Greenaway's satiric version of John Ford's Jacobean play *'Tis Pity She's a Whore*

(1989)[12] suggests that research-based art needs to be developed as a skill in contemporary universities of the arts—research-based art as a different mode of inquiry. It opens up a portal. It brings about the world-behind-the-world. It tries to feed the ability to create new perspectives. It touches the dimension of 'a search.' Art as a an adventurous and often bizarre enterprise, operating in a free space, which scientific research in fact lacks, even in the closely related humanities.

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Footnotes
[1] Vernon Gras and Marguerite Gras (editors), *Peter Greenway: Interviews* (Mississipi: University of Mississipi Press, 2000), p.61
[2] Research-based art comes most close to what Henk Borgdorff calls 'research for the arts' and 'research in the arts' in *The Conflicts of the Faculties* (2012, pp. 37-38), who is citing Christopher Frayling's *Research in Art and Design* (1993). Borgdorff calls 'research in the arts' an immanent and performative process. Research for the arts is the research necessary for making a work of art.
[3] A form of inquiry into possible worlds. I elaborate on this in *Teaching Objects: Studies in Art-Based Learning* (ArtEZ Press, 2015).
[4] One of the main problems of research when it comes to arts is the worship of the method. When we look for a definition of method in the English dictionary, we find: 'A systematic procedure for doing something, or the regular way in which something is done.' In a second meaning: 'An orderly arrangement or system.' So, everything about the methodological framework, which is so important in scientific research validation, is in contrast with the unique, temporal, irregular, informal, state-of-mind of the artist.
[5] The definition of research in the English dictionary is significant: 'Scientific or scholarly investigation, esp. study of experiment aimed at the discovery, interpretation, or application of facts, theories or laws,' in *The Penguin English Dictionary*, 2nd edition, 2003, p. 1188. Although the approach can

be creative, the same systematic approach is seen in the OECD definition of science: 'Any creative systematic activity undertaken in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this knowledge to devise new applications.' *OECD Glossary of Statistical Terms,* 'Research and Development—UNESCO.' Stats.oecd.org. Archived from the original on 19 February 2007. Retrieved 20 May 2018.

[6] A good illustration of the difference between the arts and science becomes clear when we look for a definition of the arts in the English dictionary: 'The conscious use of skill and creative imagination, esp. in the production of aesthetic objects,' in *The Penguin English Dictionary*, 2nd edition, 2003, p. 72. The difference between the arts and science also occurs in the *The Oxford Dictionary*'s definition: 'Art is a diverse range of human activities in creating visual, auditory or performing artifacts (artworks), expressing the author's imaginative, conceptual ideas, or technical skill, intended to be appreciated for their beauty or emotional power. Other activities related to the production of works of art include the criticism of art, the study of the history of art, and the aesthetic dissemination of art.' In these descriptions of arts, we enter a free imaginitiative space, instead of a closed systematic one.

[7] The cooperation between the Amsterdam School of Cultural Analysis (ASCA), the University of California Humanities Research Institute (UCHRI), the University of California Claire Trevor School of the Arts, and ArtEZ University of the Arts we are preparing is an example of an interesting collaboration between the arts and the humanities. In this cooperation, every party tries stay close to their own identity.

[8] Aesthetics is the branch of philosophy that concerns beauty and art. It has a long history from Plato and Aristotle, to Kant and Nietzsche, and Rancière and Deleuze. For me, the concept of 'beauty'

goes much further than 'nice.' Nietzsche's definition of art as the synthesis between form and expression, the Apollonian and the Dynosian, comes closest to my interpretation of the concept of beauty. Gilles Deleuze continued Nietzsche's work. Dirk van Weelden shows what that means in the essay 'Een Schrijver Leest Gilles Deleuze' ('A Writer Reads Gilles Deleuze' in *De Gids* (Number 6/2015). He sketches how the writer as an artist that was not there before and in which the writer and the reader together 'see' something in the parallel world of (in this case) language. This 'seeing' in all its contradictions comes close to the world of beauty.

[9] The International Master Artist Educator (iMAE), which started at ArtEZ in 2016, is a good example of an MA programme in which the orientation is far more informal, emotional, and imaginative than formal, rational, and systematic, with a focus on theory and the application of theory. For more information: Jeroen Lutters, 'Research-Based Art: een nieuwe grondslag voor een opleiding tot artist-educator,' in *Cultuur en Educatie* 15, no. 43 (2015).

[10] Annette Arlander states: 'Today the term artistic research is used more and more as an umbrella for research undertaken in art universities.' By saying this, she states that universities of arts are, in fact, looking for independent forms of inquiry, and opens up the position of research-based art. In 'Artistic Research in a Nordic Context,' *Practice as Research in the Arts*, ed. R. Nelson (London: Palgrave MacMillan, 2015).

[11] Greenaway calls himself the cook. 'I am the cook. The cook is the director. He arranges the menu, the seating order of the guest; he gives refuge to the lovers; he prepares the repast of the lover's body. The cook is the perfectionist and the rationalist, a portrait of myself.' In Gras and Gras 2000, p. 62.

[12] *'Tis Pity She is a Whore* is a tragedy written by the British playwriter John Ford (1586-1640). It was first performed circa 1626.

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Taste
The Lost Sense, or Why the Culinary Arts Should Integrate with Art Education (a Conversation)

Abstract

This conversation inquires why the culinary arts—representing the sense of taste in relation to food—have hardly found ground in art education. The optical, the audible, the touchable and moveable have found fertile ground in all kinds of art disciplines, whereas the sense of taste and tasting, historically connected to the aesthetic judgment of artistic objects par excellence, has hardly found refuge for its proper object, i.e., food. This conversation shows that the field of taste and food has much in common with many aspects of the arts. Although there have been (and increasingly are) experiments with food in fine art and design, there were hardly any serious attempts to integrate the 'art of cooking' or the 'art of the culinary' into art education. Just like the art of architecture provides ideas and designs for a basic human need—i.e., housing—the art of the culinary should provide ideas and designs for this other basic human need—food. This lack or omission has become increasingly critical nowadays because of the controversial role the food industry plays in our appreciation and judgement of food. The food industry has invested a lot of money to inquire about the role and workings of taste, but it has deliberately kept this knowledge for itself. It is, therefore, time that in our age of food crises, new knowledge domains be opened to develop new vistas for food and food production. The art university with its expanding interest in research in and through the arts can provide both an interesting and necessary environment for a genuine art of taste and tasting. Taste and food, and the other senses, would be working together in an entanglement of fresh frames of thought and practices.

A Conversation Between Peter Klosse and Peter Sonderen

Peter Sonderen (PS):
When we were preparing the Food Friction conference[1] in Arnhem (November 2018), I suggested inviting you as one of its participants. Later on, I learned that you had indeed accepted the invitation. We finally met in a restaurant the evening before the conference. Although we would participate in separate sessions the next day, our table talk that night led to a reciprocal interest in our working fields. To sum up, you represented the world of food and especially the world of gastronomy, and I represented the art school, or more generally, art education and research in the arts.

One of our preliminary findings was that art education has, worldwide, hardly developed its own field of inquiry into taste; that is, taken in its physical, sensorial sense. Art education had developed room for many aspects of the body, such as movement, the visual, the auditory and the tactual. The olfactory and the organ of taste or gustatory organ, however, seem to have found no place at all within an art educational context.

Of course, many visual artists and designers have inquired into these fields, but what I mean is that there is barely any specialised art academy department for matters concerning food and taste.[2] This is remarkable. If we want to explain this, and that is

a bit the effect of the road that I took here by restricting it to the sensorial, the hierarchy of senses that seem to have ruled in the past is implicit or perhaps even explicit. It has reigned in the domain of the arts, it has formed philosophical aesthetics, and it was reflected in and by society. The current societal domain of taste seems, however, to indicate a big change.

The growing population—by which I mean its increasing obesity as well—seems to indicate that matters of taste are increasing accordingly. That is to say, the question of taste is parallelled by an explosion of food matters. The latter goes hand-in-hand with the visual and the smell-able. If we enter our transitory places, like a railway station, for instance, we really have to run to our train, otherwise we will be caught by the offers of the numerous instant food vendors. Matters related to taste—I am not talking about good or bad taste—pop up everywhere now. The olfactory domain invades all our lives. It has become part of our experience economy. The recent development of food halls in many cities is only another instance of this mood of variety in experience; here, it is an encounter with a presumed multicultural aspect of food in the world.

So here we are. Taste is connected to the arts, to philosophy, and to society. A nice trio for our dialogue, don't you agree? I think it worthwhile to co-inquire how tasting and flavour, the duo that you have put central to your research, especially in your *The Essence of Gastronomy*, relate to the other sensorial agents and their relation to the arts. Knowing that you want to inquire the possibility of connecting this field with art education, we have to look back a while in history to understand the current status quo. We also have to consider that art education is going through a radical change from being an educational institute into a research-centred place. Although art education is still

focussed on providing the best environment, such as up-to-date teachers, suitable buildings, state-of-the-art machines etc. for the student to develop their own talent, the way of reaching that point is changing considerably and rapidly. The focus on art research, which develops into many forms, changes its emphasis.

Although artists have always had an inquisitive approach with regard to their work, judging their work also as research implies another attitude because research—as is generally accepted—presupposes at least an explicit questioning of some kind of problematics and, in addition, a public opening or defence of the making process. That is to say, artistic research, which is an inquisitive process, should be open to be questioned by others. This means that there is a certain publicness or openness beforehand, not only afterwards. Research, therefore, centralises the processes involved and their ramifications, and not only fixed outcomes.

If we go on to inquire how tasting and flavour could find their way into future art education, then these new approaches towards the arts in art education should be taken into consideration. With them, societal connections also come organically to the fore, because artistic research implies a systematic connection to the other. Taking the other into consideration is, perhaps, the basis of any society.

What do you think? Can we continue our conversation on this basis? And could you explain why flavour and tasting have become so important to you?

Peter Klosse (PK):
Temptation.
It is the first word that jumps to my mind. We are all tempted to consume more than we should. Apparently, the food industry does a very good job of seducing us into buying, eating and drinking all kinds

of stuff for their benefit. Clearly, they know well what we like and how to tempt us—even when we do not need to eat. Their products are the result of very effective research on all aspects involved with food consumption. They know how to trigger our senses. The result of their success is reflected in our current food behaviour. The mass consumption of the so-called ultra-processed foods is directly connected to the increase in chronic diseases and climate change.[3]

Is this the first of hopefully many insights that our dialogue will generate? There is a lot of food research. It is hardly available in the public domain, however. Most of what is known is proprietary and in the hands of companies. They understand deliciousness and liking, and apply this knowledge successfully and beneficially on a global scale. Apparently, they even make you run at a train station to escape from all their temptations. Isn't that something to wonder about? Should we consider them as a new breed of industrial artists that attract us on an unprecedented scale?

The more artisanal food artists, like kitchen chefs, don't have research resources. Not even an institution to go to. I even doubt whether many people would use the same words to describe educational culinary institutions as you use to describe art education. 'Providing the best environment (up-to-date teachers, suitable buildings, state-of-the-art machines etc.)?' I know of a few culinary centres in the world that could match that description, but it is certainly not the standard.

Do we prepare our culinarians to be able to seduce their customers? Have they been helped to develop their own talent? How have they been trained to start with? And, from a societal angle, are they well prepared for the world of food of today that has fundamentally changed? Furthermore, culinary research is just starting at some of

these institutions in the world. You stated it correctly: the olfactory and gustatory senses have hardly found a place in an art educational context. It is done in the laboratories of the food industry, behind the closed doors. That is why we need to have this conversation! The world of real food (as opposed to industrial food) needs help. Now. We need to take a new look at food consumption, and—for that matter—the history of our senses.

I always make the distinction between food (and drink) and how we perceive it. It is the difference between flavour (what products have) and tasting (what people do). Or, in other words, to start understanding the deliciousness and liking of the real foods, we need to gain understanding, just as our industrial 'friends' have. We need to know about the factors that influence our preferences and ultimate food behaviour. Education and research are crucial in this development. People won't like me saying it and some may even strongly disagree, but metaphorically speaking, culinary education and practice is still somewhere in the Middle Ages, organised like in the guild system with masters and apprentices, focussed on passing on the tricks of the trade. It is time for a culinary renaissance.

Oh—I almost forgot—flavour and tasting are so important to me because I was born in a restaurant with a Michelin star. I grew up in it and continued in my father's footsteps. In my professional life, I wanted to get a better understanding of the trade and especially wine and food pairing. I ended up developing the knowledge, including a system to classify tastes, which I defended in my PhD.

PS:
Rereading our first lines, it indeed seems as if we are in the middle of preparing the kitchen—not yet the food—and putting all the machines, ingredients and other stuff in

place. But what is the kitchen heading for, where and how shall it start, what does it need, and who is it for? And what about your introductory word 'temptation,' which immediately, I do not know why, reminded me of the old English saying, 'The proof of the pudding is in the eating,' which was instantly changed in my mind into *'not only* in the eating.' This latter extension probably appeared to me because you make a sharp distinction between the flavour (what products *have*) and the tasting (what people *do*). In current new materialist philosophy,[4] thinking in a dualist mode has become rather suspicious. Dualistic thinking, which is always related to the Cartesian tradition, implies a strong anthropocentric approach to the world. The world only exists by and through us. In reaction to this, the philosopher Karen Barad introduced the term 'intra-actions' to stress the concurrency of human and non-human agents.[5] There is not a before, only a concurrency, an entanglement of agents. I have also called my latest publication *The Entanglement of Theory and Practices in the Arts.* This emphasises a non-hierarchical situation of how theory and practices in art interact.[6]

This is not to say that theory is the non-human and practice the human or vice versa; it rather points towards a non-hierarchical mode (in art, theory for ages used to be the normative and final law on which art was built). I like to view theory, therefore, also as a practice, and practice as a theory. There are differences between them, of course, and theory also has its own domain, yet its specific quality and activity in the arts is no longer to be prescriptive or descriptive, but rather to be co-scriptive. That is to say, it also (trans-)forms the works of art, and works of art also produce theory. Transferred to your words, theory is also a *doing*. It is not a fixed entity, but a means, a vehicle, to get a grip on changes and changing; it is not interested in the static and the fixing.

To return to your statement: There is a world of flavour-y things (or do you refer exclusively to human-made things with the word 'products'?) and the active human world that discovers and unlocks all their qualities by tasting. Things seem to become only passive carriers of qualities, and man uses his body to actively inquire, connect or disconnect them. Seen from a new materialist view, I am curious to know if you see human taste and material flavour as interactions, or, perhaps, also as intra-actions? The first presupposes that the agents remain the same, although changes occur. The second implies that the agents do only come to the fore due to this relationship.

Another contrast. If I look at the words 'real food,' which you used (you mentioned them to contrast industrial food), I immediately understand what you intend. Real is meant here as the unspoiled and the untouched (free from commercial values, etc.). But what do we in fact know about this presumed realness? Can we really discern between original, untouched and unhuman products or things, and so-called industrial food? Is industrial food not an enlargement of food in general? What I mean is, can we still refer to realness, to originality, to unspoiledness? Is food (or what we use as ingredients for food) not already completely humanised as well? Which is to say, are the tasty things not only tasty for us? Basil is only produced for its typical flavour and not, for instance, because it is a weak yet lively green plant that likes to grow in groups and spread its odours. In other words, is the flavour of basil not only a relational thing, i.e., that it only exists in its relatedness to and for us?

Maybe I am exaggerating a bit now. What I am really interested in is how the professional food maker—let's call them the cook—and matter—the possible ingredients of food—are related. You say that current

cooks are generally not well informed and not prepared for the world of food that has changed considerably. I think you are right. Their making is embedded in theoretical and practical agents that are founded in what you call a Middle-Aged hierarchical world of masters and pupils—in short, in a guild system. Although this system can be fruitful and effective (see, for instance, Richard Sennett's *The Craftsman*), it is founded on strict beliefs and procedures.

It is also a system based on in- and exclusion. It is protective, and it is based on tradition and habit. It hardly likes changes (and therefore creativity, which was developed as a concept only around 1800, especially within the arts); change is only accepted at the very top, viz. the master. This kind of master system that was dominant for many ages in art schools (and still flourishes in the classical music-oriented conservatories, for instance) has been abandoned in (fine) art education at the moment that 'eternal beauty,' as Gombrich coined it, was also no longer valid.

This change happened when the focus in art education (and not in the art world itself, which had changed already much earlier) was no longer pointed at the fixed system of aesthetic rules but the introduction of the *possible*. Students in the sixties of the twentieth century no longer had to endorse the system but were given the opportunity to develop their own relationship towards the larger world and (supposed) development of art. It was, therefore, the introduction of *idiosyncrasy* that was formed in (modern) art outside of the art schools since the nineteenth century, but not inside the schools yet. This turn to one's own artistic voice is now still dominant in many art disciplines.

What is the voice of the cook? If we want to inquire how the art of cooking, if we may call it that, would fit into the current art educational system, we should analyse what kind of art it would resemble the most. Although there is a tendency to de-discipline the (art) disciplines in order to open domains for each other, I think it is worthwhile to compare them, anyway, as if they are family members.

So, does the cook look like:
— the (fine) artist
— the designer (fashion, product, graphic, etc.)
— the musician (classical, pop, jazz, etc.)
— the architect
— the writer
— the performer (dance, theatre)?

At first sight, cooks should have the ability to remake or reinterpret existing recipes. This would bring them into the category of performing arts: music, dance, theatre. Because inventing or creating new things is also an important part of the cook's job, however, it would connect to almost all other arts. So, retaking and invention are the two sides of the cook. If we take the invention aspect further, this means that cooking could be on par with the art of sculpture as it has developed since the 1960s. Sculptors were looking for all kinds of new or other materials that could express their artistic quest. They were no longer obliged to stick to the traditional techniques or materials. It was their way of coping with their own relationship with art and the world. Maybe we can elaborate on this further? Or perhaps this is too restricted a way of thinking about food?

Still another question lingers: Is the withheld knowledge that the food industry has produced, as you said, important for the future 'artist-cook' (a title I would prefer before 'designer-cook')? Is seducing the audience (eating audience) the main goal?

PK:

Thank you for your rich reply, full of questions and contemplations. Let me start by answering your last question: yes, seducing the audience is the main goal. To put this in perspective: I believe that liking is the motor of food choices. Nobody objects to eating something that they consider delicious (mind the phrasing: it has to do with the issue of interaction, which I will address later). We must realise that 'liking' is a relative new luxury in the world of eating and drinking. For a long time—until about the sixties— people (the rich and famous excluded) were not in the position to worry about liking. Food was basically scarce; you ate what nature provided. The refrigerator entered our households in the second half of the fifties. Until then, you ate either what was freshly available, or whatever you conserved before by drying, pickling, brining, fermenting or confectioning.

The food system—from farm to fork— has fundamentally changed. The way the modern, affluent, twenty-first century person eats is different than ever before. Food has become abundantly available and cheap. Every part of the food system, farming methods, food production and distribution, has profoundly been transformed. There is food security, and by now there are more people who suffer from over-nourishment than hunger.

Additionally, we now know that this progress has come at a price. We experience problems associated with the loss of biodiversity, soil depletion, climate change, plastic soup, antibiotics and unwanted chemicals in our water and foods, and an uncontrolled growth of chronic diseases. The so-called ultra-processed foods of today have for a large part replaced real foods globally. These hyper-technological foods are made with preparation methods that we have never seen before; molecules have been modified without really knowing much about the consequences. So, yes, we can discern industrial food from real food; they can be lightly processed or eaten raw, directly from nature. In retrospect, the decisions that we've made have had rather negative effects on the planet and the people, to put it mildly. This is widely recognised in recent global publications by the Club of Rome (come on!), the World Economic Forum (*Innovation with a Purpose: The Role of Technology Innovation in Accelerating Food Systems Transformation*), and the World Health Organization. The last-mentioned organisation is looking for 'bold and innovative solutions to accelerate prevention and control of the leading killers on the planet: the non-communicable or chronic diseases,' which are responsible for seven out of ten death these days.[7] In 2015, the United Nations adopted seventeen Sustainable Development Goals to transform our world: the 2030 agenda. Goals like climate action, life on land, life below water, good health, zero hunger, responsible consumption and production are all directly or indirectly related to food. There is no room for denial. We need to act to stop chronic diseases and degrading the planet. The big question is how?

This elaboration about the current state of our society is needed to explain why it is so important to seduce the audience. We need a system change because the present system is not sustainable. Making different, better food choices would have quite an impact and, therefore, I say that we need to focus on liking. The better choices need to be just as convenient, affordable and tasty as the ones we are asking the people to give up. Designing delicious dishes is a mission for the future.

That brings me to one of your other points: What does the cook look like? They can be a bit of everything you mention, including the performer. However, the role of

the architect/designer seems to be the most needed from a societal point-of-view. Just suppose cooks were educated the same way that architects are. They would learn about material and form. They would be stimulated to be creative and come up with new solutions if that is called for by the situation. It may require—and I quote you—a 'focus that is no longer pointed to the fixed system of aesthetic rules (cultural traditions and recipes…) but the introduction of the *possible*.' Shall we call it food choice architecture?

PRODUCT   GASTRONOMY   PEOPLE
Tasting   Tasty   Tasting
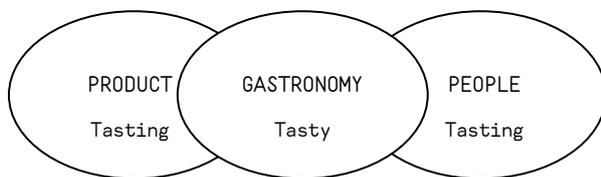
So, how does this relate to your other contemplations in this dialogue, the aspect of interaction and the question about the relationship between the professional food maker, the cook, and matter? I often use the following illustration to clarify this relation. You'll be happy to see the interaction and entanglement, I suppose.

The cook works with products (natural, or processed to some degree), and this 'matter' has certain qualities or properties, if you want. Understanding 'matter' is crucial for design. Like an architect needs to understand the properties of building materials. However creative, a building should not fall apart or be dangerous to live in. Similarly, foods should be good to eat and well designed. On the other side is the person, the consumer, or the audience, equipped with senses to assess and evaluate the edible products. We hypothesise that a positive response (liking) is expected to generate repeat behaviour. Because people are different, there will never be one positive response; there is not one 'right' answer. This seems to be in line with

the new materialist philosophy: liking is an interaction between the product and the consumer.

To conclude, all of the above is meant to shed a light on the question you started with: 'What is the kitchen heading for, where and how shall it start, what does it need and who is it for?' Ideally, the kitchen is heading towards playing a pivotal role in changing food behaviour. To do this, it needs to have a profound understanding of liking, which is an interaction between material (what we eat and drink) and its consumption, based on a human assessment *all* the human senses (not only the olfactory and the gustatory ones). It is meant for people that aspire to curb food behaviour in a way that is better for the people and the planet. It should start as soon as possible! We need well-educated cooks, food-choice architects, to inspire the change.

PS:

Liking. Hmmm. I think in Dutch the effect of this would translate to: *'Ik vind het gewoon lekker.'* So, producing 'good' food should nowadays be about entering and conquering the domain of appreciation in its bare, rude and unsophisticated form, which has been the domain, up until now, of industry, especially since post-war times. Its tactic should be to influence and to reposition the seduced. You also stated that the industry has the knowledge of all seducing acts, and that it has kept it secret, or at least unavailable. This implies that this knowledge should become open access and should be used for better goals. Seduction is the set-out imperative.

Because we are talking about food's/ the cook's relationship to the arts, I suggest continuing our comparison. As you have shown, you feel comfortable with the field of architecture; you introduced, therefore, the term 'food choice architecture' to express the parallel. I suppose your predilection is

connected partly to the idea of usability. Food should be made well because it is good for people's health. A house should be built because people have to be protected from the climate and other threats. In both cases, utility or usability is common. But what about arts that do not have a straight(-forward) approach to these concerns? Or that show other connections?

Let me take an example from recent art history. In the seventies, a growing number of artists became interested in food, especially in its social meaning, its uniting force, and its disconnectedness from the art market. Galleries or studios were, for instance, turned into places to eat together. We only have to think of the former architecture student, Gordon Matta-Clark. His restaurant FOOD in SoHo became legendary: The following notice appeared in the Fall 1971 issue of the vanguard art magazine *Avalanche*: 'On Saturday, September 25, to mark the unofficial opening of FOOD, an artist-run restaurant at 127 Prince Street, free garlic soup, gumbo, chicken stew, wine, beer, and homemade breads were served to friends, gallery-goers, and passers-by until late in the evening.'[8] His recipe for neighbourhood people (in the seventies) was reenacted and recooked in 2010 by the École Culinaire.[9] Fine art, so it seems, displays another kind of relationship towards food. Food is about connecting in the first place.

But no, stop. And sorry for the interruption.

As another French female philosopher, Catherine Malabou, has shown, our brains are rather sculptural, in the sense that habits are formed and can be reformed because they are mouldable. My own moulds, however, always seem to return to the moment that I was raised in art history (in the eighties), where and when the explicit split between art and applied art was still a given. This division slipped also into my last

argument—usability versus artistic freedom. This contrast or difference is, however, not so productive anymore, although I think the discussion about it is not completely useless, but this is not the place to elaborate on that aspect. The difference between art and design is becoming smaller and smaller nowadays, or less relevant because both artistic approaches are increasingly involved with society.

From the very start in the eighteenth century, design was the servant of industry (architects developed the first models of factories, designers made the designs for all steps that were necessary to deliver goods to the buyer), whereas modern art confirmed or criticised the new developments in our environment. This latter, detached attitude seems to be vanishing, or at least changing in terms of character now, because artists do not want to give the impression of being only the outsider anymore. They want to take the role of the insider, or to work towards *another* insider, to become an agent of change. They make use of society now, so to speak, to inquire from within, where they can have an effect or impact. This is one of the reasons that a lot of both artists and designers are now increasingly interested in food as well. Thus, not only food as food, but food as the instance that discloses all kinds of relationships we—as humans—have with the world. It is, in short, all about the relatedness of food, about the networks, and about the in-between-ness of food. The way we approach food is the mirror, to use this here perhaps misplaced metaphor, of our human relations towards the matter(s) of the world. Artists and designers therefore concentrate on all kinds of aspects of the big chains that (in-) forms food.

This image of relatedness also appears in the nice catalogue of the V&A in London, which has recently set up a large exhibition on food (*Food: Bigger Than the Plate*).

Of course, their focus is also on the-role-of-the-museum debate ('how to get real life again into its walls'), but I think that they have made an interesting contribution to the whereabouts of food. The forerunner of the V&A was even the first food museum (already in the 1860s!) in the world, in which '…food was rationalised as museum object, contained, labelled and displayed in a manner that prefigured industrial food processes.'[10] Food is the result or the appearance of the industry which is embedded in a complex network, just like fashion. How does liking relate to this?

  'Liking' implies an 'embodied experience.' If something, an external stimulus, affects us, it does so because it touches many senses at the same time and thus implies the whole body. Liking is an important signal of appreciation, but its source looks blurry or indistinct, to use the philosophical term. Its indefinableness brings it in connection with the word that has also intruded on the world of art since two decades: affect. In comparison to emotion—which is the psychological expression of affect according to Brian Massumi—the affect is something less clear but undeniable present. He therefore '…locates affect as such in a nonconscious "zone of indistinction" or "zone of indeterminacy" between thought and action.'[11] It evades ratiocination and takes place in the body. It is a bodily experience that can be observed but that cannot be analysed or framed instantly. It emerges.

  In scientific food studies, which are psychologically biased, one speaks for instance of 'social-affective context.'[12] These studies concentrate on the influence of the social environment on matters of liking (or disliking). So, the liking you are looking for is connected to a wide variety of domains. How can the arts—or to return to architecture—how can architecture help to open up and build a new approach towards the liking of (healthy) food and create a new industrious attitude towards food? Sorry for my roaming attitude, but walking around a complex field helps—hopefully—to find right connections.

  PK:
Indeed, how nice it is to roam in freedom, contemplate and reflect. We've come quite a way. First, we noted that art education had embraced all senses, except taste. Worldwide. This is a great start. Is taste the sense that longs for recognition? Why has this important sense been neglected in the first place? There is no doubt in our minds that taste is connected to the arts, as well as to society and philosophy. We also noted that in order to enter the realm of art education these days, research needs to get involved. Our current food behaviour is at the root of huge societal challenges like climate change and the increase of chronic diseases. Therefore, there is an urgent need to tempt the consumer to make different food choices. In other words, there is a need for the design of delicious dishes that tempt the population to make better choices, e.g., more plant based, other sources of animal proteins, and 'real' (less ultra-processed) foods.

  We can no longer afford to produce and consume foods that are not in line with the vitality of the planet and the people that live on it. Chefs need to be educated differently. Most of these traditional food makers are trained in a guild system to replicate the recipes of the past. The food industry developed the knowledge on deliciousness and liking. It is based on finding 'bliss points' in the brain, the right packaging, pricing, communication messages and so forth.[13] The change agents that the world needs should know what the industry knows. We need research that could be organised and conducted by educational institutions with culinary or art programmes. Their rich experience would be a true asset in the development of the

chefs of today and to support where the kitchen needs to be heading for: providing the world with foods that are both nutritious and delicious. As a potential new branch of art education, taste certainly qualifies when we realise that it has grown to be a global problem that impacts societies, the environment, and life on the planet at large.

The term 'food choice architecture' was introduced. You suggested correctly that usability is a part of architecture. In your elaboration, you mention aspects of safety and protection. Indeed, foods should be edible, functional, safe to eat. Just like a house should protect its inhabitants. Certainly, from your perspective, I had expected to also read about aesthetics and beauty. Isn't it also an important driver of architecture—to combine usability and beauty? To illustrate, I admire Frank Lloyd Wright as an architect and know that one of his ambitions was to combine functionality and attractiveness and affordability. This aspect seems important in taste as well. If we want to seduce the modern consumer to change their food behaviour, the 'better' foods need to be just as attractive (convenient, affordable and tasty) as the foods that we ask them to give up.

People say, 'There is no arguing with taste.' This sounds rather convincing. But however well something is made or how many people like it, this doesn't guarantee that you like it. It may not be your 'taste.' We must not confound taste and taste, or rather taste as an opinion or personal judgment and taste as a sensorial phenomenon, a product quality. Art education and research could contribute to clarify many aspects of taste from a sensorial point of view. For one, we've developed concepts and scales to measure sound and colour. There is no arguing about red, yellow and blue. And the scales haven't impeded creativity, research or education. In fact, I believe it helps to have some anchors. Just because taste has been

neglected, there is lot of work to be done to catch up. And—as I tried to point out—there is a true need to do it.

PS:
'Certainly, from your perspective, I had expected to also read about aesthetics and beauty.' Your remark puzzles me because although I did not mention 'beauty' as a term, many ideas that I brought forward are imbued with aesthetics. Also in its traditional sense, as 'perception' or Greek *aesthesis,* which was turned in the eighteenth century into the neologism of 'aesthetica' or aesthetics. Sensorial truth and beauty were then connected to the emancipation of the arts. Whereas aesthetics originally stretched towards all kinds of body-linked force fields like emotions and affects, '…the vehement passions (fear, grief, rapture… [and also] humiliation, shame, envy, irritation…' [aesthetics] would be concerned with the utter entanglements of all of these elements,' it, however, would finally withdraw itself or confine itself to—mainly—fine art, and the notions of beauty and the sublime. What happened to '…fear, anger, disappointment, contentment, smell, touch, boredom, frustration, weariness, hope, itchiness, backache, trepidation, and the mass of articulated feelings and moods that saturate our social, sexual, political, and private lives?' Highmore asks.[14] He suggests that aesthetics should return to these starting moments when *aesthetica* was connected to all kinds of phenomena that are bound to our body (aesthetics was indeed originally meant as an alternative epistemological entrance to the world next to our reason and conceptual approach).

Within aesthetics, all focus had been laid on the product instead of the process in which our meeting the world takes place. Works of art had eventually become moral specimens of how to cope with sensation: '…

the art work completes sensual experience (resolves it into more satisfying and morally superior forms) is a central tenet within aesthetic discourse, and it immediately suggests that there is something generally incomplete and unsatisfactory about day-to-day experience…' From this perspective, Highmore continues: 'Aesthetics can *only* be interested in those forms of experience that are available to be resolved and completed (the meal that achieves gastronomic heights…).'

This latter example between brackets brings us back to our discussion. I am also hesitant in using the term beauty because it implies a specific and narrow approach towards our field. In that respect, it is interesting to see Highmore also focussing on taste. He shows that the term 'taste' is often in the middle of what he earlier called the 'evaluative aesthetic discourse' that had focussed mainly on the moral mission of the artwork and its evaluation. But the term should register the entanglement of '… sense and status, of discernment and disdain, of the physical and the ideational' from the very first time. Bodily sensorial life is implied in such judgments and is thus mixed with physical, bodily and mental effects. This kind of reasoning is fruitful for our discussion, I think, because making (healthier) food attractive is one side of the coin, but we should also make the other side appealing.

We encounter here a complex field of experiences that should be approached in a guerilla way, perhaps. There is no one way of approaching the field. I agree, therefore, with you that taste, i.e., the tasting, is not universal in the sense that everybody likes the same things. Taste does not follow the route of the truth (as it was longtime followed in Western thought, and in the codification of the 'genuine kitchen'). It is a mixed experiential sense that combines from its very start our bodies and minds. Just because of this 'hybrid' quality it becomes a

very interesting issue in our networked society, in which relations have become more important than anything else. Taste is entangled, or perhaps better, entangles different domains. It implies the social, the political, the sensorial, the economic, the personal, the public, etc.

This interconnectedness makes it a worthwhile field for art. Art (research) does not look for one-sided solutions but for possibilities. Again, the faculty of taste should, therefore, find a good alternative embedding in the 'realm' of the arts. It should stay no longer alone/only within the economically or financially driven domains that are sustained—willingly of unwillingly—by sociological, agricultural, psychological or neurological sciences. The latter provide knowledge about seduction and group deception. Their approach is mainly one-sided and instrumental. Taste should, however, become *vital*, connected to life itself, where it also came from. This implies an improvement of the taste of things and the amelioration of tasting. Taste differs, but it is everywhere. Taste should reconnect itself to the new aesthetic realm and re-find and explore its multisided seductive qualities. What do you think? Perhaps you can give the final answer, if there is any?

PK:

You are so right to signal that we haven't mentioned beauty and aesthetics yet. It certainly should be a part of our dialogue. Thanks for bringing it up. Aesthetics and beauty are the cherry on the cake. And although we haven't addressed it yet, there is a section in my book *The Essence of Gastronomy* titled 'Palatability and the Aesthetics of Gastronomy.' Thinking and philosophising about beauty and aesthetics adds an extra dimension to sensory registration; it gives meaning and value to the simple perception of sensory signals.[15] The purpose could be

to distinguish art from kitsch; real from fake. In fact, aesthetics has been studied in many sensory fields, except in the one where all signals come together: in gastronomy. Now, I am neither suggesting that food or beverages are works of art nor that eating is an artistic activity. Eating and drinking can even be rather vulgar, especially as far as the biological function is concerned. Food from the best chefs in luxury restaurants comes closest to art, just as haute couture in clothing. In the creation of a dish, the combination of flavours, colours and choice of tableware aesthetic principles can be applied. Furthermore, beauty is not just an ordinary judgment: it evokes pleasure and desire. In its extreme form, people are willing to pay fantastic amounts of money for a meal or a bottle of wine, far more than the cost to produce it. The same applies to a beautiful piece of art, for that matter.

Knowing more about the beauty of flavour is an intriguing and useful field of study, because it may ultimately contribute to the satisfaction of the consumer. It could also be a part of a strategy to seduce consumers to select foods and drinks that are better for the vitality of the people and the planet. Already in the thirteenth century, Thomas of Aquino, 'doctor universalis' and Dominican priest, formulated that beauty needs three qualities:

— integrity
— harmony
— radiance

Integrity is the opposite of hypocrisy and has everything to do with honesty, principles and consistency. The world of taste certainly needs more integrity. When it comes to *harmony,* we know that harmonious colours and sounds are pleasing to the eye and the ear. The opposite of harmony is chaos; our brain has trouble organising the data and therefore rejects it. In food pairing, we have

experienced that harmony is a valuable guiding principle. *Radiance* is like the string of a violin; it needs to be set in motion, otherwise nothing happens. Music or things of beauty have the capacity to actually touch you and generate pleasure. This view may well be close to the mark. How can integrity, harmony and radiance be applied to modern gastronomy?

Can we consider 'tasty' as what beauty is in vision and sound? The study of how the brain responds the 'beautiful' sensory signals has been baptised 'neuroaesthetics.' A research group in London, led by Semir Zeki, suggests that neurology will eventually uncover 'laws of aesthetic experience' that identify the common preferences for symmetry, grouping and proportion that successful artists have been applying intuitively.[16] For the time being, gastronomy is not specifically included in neuroaesthetics. Research is needed to see if the same principles apply. For now, we can safely conclude that in matching food and beverage harmony can also lead to liking, provided that the combination is radiant, not boring.

In her book *Making Sense of Taste*, Carolyn Korsmeyer[17] elucidates beautifully that although food, or rather the creation of flavour, is not an art in itself, there are dimensions that make fine food and wine comparable to works of art. Beauty is not an accidental experience that just happens to someone haphazardly; it is primarily the result of doing things right and it requires cognition, experience. Clearly, pleasure is not guaranteed, as we have noted. Appreciation of works of art requires first a certain understanding and insight. More is needed: our brain needs to get aroused. Knowledge, experience, expectation and elements of surprise are required for this to happen. Although these elements are directly related to the taster, they can be influenced. Food experiences can be managed; or should I say

Peter Klosse and Peter Sonderen
Taste

'should' be managed? We've discussed the necessity. The future needs taste specialists (formerly known as cooks) who are able to design flavour and arouse pleasure. Wouldn't it be a great new branch of art education and research?

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Footnotes
[1] The Food Friction conference, organised by ArtEZ University of the Arts, was held on November 30, 2018.
[2] In the Netherlands, the Design Academy (Eindhoven, NL) has recently started a BA programme Food Nonfood. Many culinary arts schools, which are not associated with art schools in most cases, have a very traditional approach to the art of cooking. Courses mainly consist of repeating and confirming existing cooking traditions and management. This also applies to the famous Basque Culinary Center, which even offers a PhD degree.
[3] Peter R. Klosse, 'The Taste of a Healthy and Sustainable Diet: What is the Recipe for the Future?' *Research in Hospitality Management* 9, no. 1 (2019).
[4] For a general introduction to new materialism, see, for instance, Rick Dolphijn and Iris van der Tuin (eds.), *New Materialism: Interviews & Cartographies* (Ann Arbor: Open Humanities Press, 2012), p.48: '"New materialism" as a term was coined by Manuel DeLanda and Rosi Braidotti in the second half of the 1990s. New materialism shows how the mind is always already material (the mind is an idea of the body), how matter is necessarily something of the mind (the mind has the body as its object), and how nature and culture are always already "naturecultures" (Donna Haraway's term). New materialism opposes the transcendental and humanist (dualist) traditions that are haunting cultural theory, standing on the brink of both the modern and the post-postmodern era.'
[5] Kameron Senzo writes: 'Barad contests a human-centred concept of agency. She instead argues that intra-actions entail the complex co-productions of human and non-human matter, time, spaces, and their signification. Therefore, the human does not act on matter, but rather humans and non-humans are agential actors in the world as it continuously comes into being.' Kameron Senzo, 'New Materialisms.' Last modified April 25, 2018.

http://criticalposthumanism.
net/new-materialisms/.

[6] Peter Sonderen (ed.), *The
     Entanglement of Theory and
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[7] See: https://www.who.int/
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     Years: FOOD, A SoHo Restaurant,'
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[10] May Rosenthal Sloan, *Food:
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[11] Brian Massumi, *Ontopower: War,
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[12] Isobel R. Contento, *Nutrition
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[13] Cf. Michael Moss, *Salt, Sugar,
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[14] Ben Highmore, 'Bitter After
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[15] *Stanford Encyclopedia of
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[16] Rolf Reber et al., Processing
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Sensorial Nourishment
Embodiment and the Senses in Food and Fashion

Introduction

While feeding our dressed bodies, we 'fashion'—give meaning to—our nourished selves every day. We engage with food daily through embodied practices of eating, tasting and cooking. And we engage with fashion through everyday practices of dressing and wearing clothes. We buy aesthetically pleasing foods in the supermarket, and beautiful fashionable clothes in branded stores. We buy what looks nice, but do we know where the vegetable seeds or cotton were planted, and by whom? Did it exhaust farmland soils and affect local ecosystems? Do we know where the animals we consume lived and how they were treated? Were they injected with growth hormones? Did they have names or numbers? Do we know the makers of our clothes and their stories? And if we knew the answers to these questions, would we still want to nourish and dress our bodies with these foods and clothes?

Similar questions and frictions exist in the fields of food and fashion. As industries, as systems, and as socio-cultural phenomena inextricably related to contemporary (consumer) culture, both food and fashion are directly related to the body and the senses. As Otto von Busch demonstrates in his article 'Fervent Pharmakon: Food, Fashion and the Haul,' both food and fashion are closely tied to emotions and to our biosocial beings, offering 'sweet tastes of aesthetics and sensory pleasure.' He argues how quick consumption—in these industries of fast and mass production—has paradoxically led to unhealthy addictions (to food and/or social affirmation and self-esteem) and to hunger and emotional starvation. Cooking together or making clothes collectively could, as von Busch suggests, form more intimate and social bonds, as well as healthier relationships with food and fashion. This potential intimate relationship with and the current emotional detachment from the human beings, animals and material objects in food and fashion is also at the heart of the essay 'Living-With and Dying-With' by Hanka van der Voet and myself. This essay highlights the urgency of moving beyond current processes of de-humanisation and de-animalisation. In doing so, it argues for the importance of engaging with food and fashion in their radically material forms, as active and affective—living—matter that we sensorially engage with by also including the underprivileged senses. This is a way to move beyond the visual, which is so often privileged in the (symbolic) production of fashion.

Starting from similar observations in the field of food, in their creative practice and design research, Paris Selinas and Mark Selby aim to create more awareness of the embodied processes of making food that include the underprivileged senses through actual material engagement. As they point out in their creative practice contribution 'Action Recipes,' food—just like fashion—is very much aestheticised in our consumer culture, creating a distance from and reinforcing a hierarchy of the senses (often privileging the visual) in our engagement with the material world. During the 'Food Friction' conference,[1] they guided a participatory workshop to explore the unrecognised aspects of embodied knowledge when cooking recipes, while creating new

video recipes based on instances of embodied cooking actions. In doing so, they aimed to draw more attention to the role of embodiment and sensory engagement in interacting with ingredients, specifically when cooking. The concrete, embodied actions of, for instance, cutting vegetables, tossing salads or stirring soup resonate with the embodied knowledge of, for example, pattern cutting, sewing and stitching clothes. As such, Selinas and Selby's embodied design research methods could offer interesting possibilities to further explore the embodied and material practices of making and wearing clothes.

All three contributions highlight the importance of further exploring the various relationships between food and fashion. While this has been done, among other ways, in terms of comparing slow food to slow fashion, the contributions here show the opportunities of further exploring these relationships, both in respect of their socio-cultural and systemic similarities and also from sensorial, bodily and emotional perspectives. All three show how embodied research and creative practices in the fields of food and fashion can offer concrete tools to transform how we treat natural/material resources and other living beings. Being out of touch with these sensorial and material matters, these embodied practices help to reengage with the sensorially nourishing matter of food and fashion while potentially strengthening social bonds. This allows us to understand how forming intimate bonds and affective relationships—through collective, participatory embodied practices of *making*—helps to rethink and redesign more healthy ecosystems.

Footnotes
[1] The Food Friction conference, organised by ArtEZ University of the Arts, was held on 30 November, 2018, in Arnhem.

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Living-With and Dying-With
Thoughts on the Affective Matter of Food and Fashion

Introduction

In the essay 'Why Bacalhau Will Always Taste Like Home,' Isabel Vincent reflects on growing up in a Portuguese immigrant household in Toronto in the 1970s, where she ate bacalhau (salted cod) several times a week. Bacalhau has long been an essential part of the Mediterranean kitchen, and Vincent would often join her father on Saturday morning grocery trips to the Portuguese fishmongers of Toronto's Kensington Market, where they would buy large slabs of salted cod. These would then be soaked in the cellar at home, where they were placed in bowls of water over a 48-hour period. Many years later, grown up and living in New York, Vincent returns to the comfort of bacalhau. Mourning her mother's death and the end of her marriage, she takes the train to Newark's Ironbound district, a Portuguese neighbourhood, and buys herself a slab of bacalhau. At home, she repeats the process of soaking, and prepares the bacalhau just as her mother used to. She writes: 'As I removed the first batch of golden brown croquettes from the oil and set them on a paper bag to drain, I split one open and savoured my creation. Crunchy and sublime with a hint of salt, they offered immediate comfort, transporting me to happier times in an instant.'[1]

Just as with Marcel Proust's 'petites madeleines'—the taste of which transported him back to his childhood Sundays with aunt Léonie—Vincent shows the visceral power of the memory of our senses; in this case, the memory of taste. Both authors point towards the affective potential of food; the possibility of being moved through use of our senses, which reflects art theorist Simon O'Sullivan's statement that 'affects are moments of intensity, a reaction in/on the body at the level of matter.'[2] Here, affect is the initial moment of being moved, being touched. As both Vincent and Proust show, the body's physiological reaction is connected to both our emotional state of being and the memories we embody.

What we can learn from our relation to food—as Vincent's and Proust' examples illustrate—is that engaging with our senses enables us to connect to our emotions, and thus create a (lasting) bond between an object—whether it is food, clothing, or something else—and ourselves. This affective relationship between human beings and material matter is necessarily experienced sensorially. In this article, we will explore the relationship between food and fashion by highlighting the respective role of the senses, the body, and materiality. While we wear material clothes *on* the body, food literally moves *through* and *in* the body. We feed our dressed selves every day, 'fashioning'—giving meaning to—our nourished bodies.[3] In the context of the ways in which both the food and fashion industries currently operate, we want to highlight the urgency of doing more justice to both the human and animal dimensions of food and clothing by drawing more attention to the senses and 'living' matter.[4]

This way of approaching food and clothing in terms of living matter must be understood in the context of rethinking and redesigning our relationship to the earth and the importance of moving beyond the Anthropocene.[5] As feminist theorist Donna Haraway argues, our current epoch can best

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be conceptualised as the Chthulucene[6]—a fierce reply to the dictates of both Anthropos and Capital—which is, in her view, made up of 'ongoing multispecies stories and practices of becoming-with.' In the Chthulucene, 'human beings are with and of the Earth' rather than being the most important actors to which other beings are subjected.[7] This perspective helps to understand how human beings, food and fashion are 'at stake to each other,' which we'll reflect on in this article. In doing so, we highlight the importance of offering more agency to the affective matter of food and fashion.

Out of Touch with What Matters

The food and fashion industries have similar frictions on a systemic level, on a human and animal level, and on a material level. On a systemic level, both food and fashion are part of our consumer culture and operate largely as unhealthy industries of fast and mass production. In both industries, there is a growing demand for more transparency in the value chain and a need for more local and sustainable production. We have had many wake-up calls regarding the humanitarian injustices and disastrous environmental impact of these industries, which have demonstrated the urgency of alternative systemic approaches. These wake-up calls clearly show that it is unethical to continue to let the mass production of fast-moving consumer goods exhaust the Earth's resources. It is also important to acknowledge that mass production was initially at least partly idealistic and had the ethical aim of providing food and clothes on a larger scale, making them more accessible to the masses, but this process of democratisation has gone too far.

It is becoming painfully clear that we cannot continue to contribute to the 'shockingly high cost of cheap fashion'[8]—and of fast food—which entails the dehumanised

and de-animalised processes of production. In food factories, it is the technocratic organisation of 'factory work that compartmentalises and sanitises slaughter, [which serves] to de-animalise and commodify certain animals [and] fosters an emotional detachment from them.'[9] In the fashion industry, even after the collapse of the Rana Plaza garment factory in Dhaka, Bangladesh, which killed more than a thousand people, 'little progress has been made to improve labour conditions for garment workers.'[10] Both the food and fashion industries have already caused too much blood, sweat and tears. How much more can we digest?

Over the last few decades, increased awareness of the problematics in both systems has led to the slow food and slow fashion movements. The slow food movement has offered an alternative approach to help redefine fashion in its move towards a more sustainable future.[11] Slow fashion is 'an invitation for systems change,'[12] which has also led to a critical fashion discourse to help redefine the principles, values and pace from which the fashion system operates—the rise of vegan fashion being one example. While there are more and more initiatives that contribute to both slow food and slow fashion, most consumers are still out of touch with the actual human, animal and material dimensions of (producing) both food and fashion. When we go to the supermarket, we buy the carefully selected beautiful food that meets the commodified criteria of what food 'should look like.' In a similar vein, we also continue to see highly idealised bodies and concepts of the self being sold in fashion's 'supermarkets of identities.'[13] We clearly lack a 'sustainable sensoriality,' which can be described as 'the way of understanding a product from the knowledge of how it is made, through its raw material to the end product, rather than just through (the exaltation of the experience

of) consumption.'[14] While many animals, human beings and raw materials continue to be objectified and commodified, we remain out of touch with what *matters*—with the actual materiality of food and fashion, how it is made, by whom, and where it comes from. This is why it is important to move from food and fashion as passive—dead?—objects to be consumed to food and fashion as the active—living—matter that is and gives life.

Consuming Living Beings

Even though we engage with food and clothes on a daily basis through embodied practices of eating, tasting and dressing, we are out of touch with the raw 'living' matter of what we eat and wear—not to mention the extent to which we are out of touch with how human beings, food and fashion 'are at stake to each other' to borrow Haraway's terms.[15]

In 'Blood Processing,' artist Anna de Vriend [16] reflects on the slaughterhouse as an embodiment of constructed hierarchies between human animals (human beings) and non-human animals. Part of her research is reimagining the industrial slaughterhouse from the perspective of the blood present in this space. Though blood is largely present in the industrial slaughterhouse, its implication—namely, death—is systematically cleaned up, both in the literal and figurative sense. An extreme focus on hygiene regulations is one of the systemics that ensure this, enabling the slaughterhouse to treat the animals as much as Other as possible—which is, again, an example of de-animalisation. The abjection of killing is thus filtered away to sell the products the slaughterhouse produces and keep a sense of safety and control surrounding the meat industry towards the consumer.

The process of *othering* the animals in the slaughterhouse shows some parallels to the de-humanisation of the anonymous workers in the clothing factories in (Southeast) Asia. Both the animals and the workers are treated as mere cogs (costs of goods sold) in the machine that is capitalism: their fates must be hidden from the consumer to keep the machine running smoothly, in order for Western brands to keep making money.

Fig 1. Blood-Processing, Anna de Vriend

De Vriend also comes up with a proposal to counter this othering, moving beyond the system of cleanliness and anonymity. She writes: 'Blood is non-binary, fluid and non-conforming to species, hierarchy or gender. If blood is defined as a liquid that carries life and is in constant motion within an organism, then almost everything on this earth is bloody.'[17] This definition of blood proposes that this is the one trait that we, living organisms, all have in common. In doing so, she transforms blood from representing 'the abject,' to borrow Kristeva's notion,[18] to present it as the fluid matter which is and gives life itself. And if we make this blood visible beyond the slaughterhouse and share it with the outside world, it can teach us a thing or two about death, loss and grief—concepts that are inherent parts of our daily life, yet we find difficult to discuss. Perhaps the consequence is, then, that there is no place for industrial slaughterhouses in our society, which is illustrated by how small-scale farmers give each animal a name, allow themselves to bond with them, and grieve their deaths. Naming means recognising;

it means seeing, knowing. This is also the reason why, for example, some fashion designers choose elaborate labels in their garments, naming fabrics and their origins, naming factories where the garments are made, showing explicitly how the price of a garment is calculated, and sometimes even naming the people who made the garment.

Fig 2. Too Good Clothing label, 2020

Why the Senses Matter

These small-scale initiatives often revalue the emotional bond between human beings as embodied subjects; between human beings and animals as living beings; or strengthen the affective relationship between human beings and material objects. The senses are crucial in re-engaging with living beings and things that matter—the human and non-human matters that we are 'living-*with*.'[19] Here, it is also important to take into account bodily matter: the physicality of the human body as well as the actual flesh and blood of animals. This is the radically material dimension of living beings and living matter, which helps to think through the interrelatedness of human beings, food and fashion.

Central to this sensorial engagement is that we do not just use one of our senses—taste when it comes to food, and sight when it comes to fashion—but all of them. Food and fashion necessarily engage all senses. To truly embody the experience related to the memory, Vincent refers not just to the taste of bacalhau but also the texture of the food: its crunchiness. Proust recalls the 'warm liquid mixed with the crumbs' of his madeleine cookie.[20] While the visual is often prioritised, tactility is equally, if not more, important in relation to the *matter* of fashion. The feel of cloth on our skin greatly impacts how comfortable we feel in our clothes. There is a huge difference, for example, between the feeling of polyester and the feeling of silk on the skin, and between lambswool and cashmere. Tactility also relates to the cut of our clothing: the structure of what we wear greatly determines how we wear it, and how we embody our clothing. 'Understanding clothing as inextricable from embodied experience in the world demonstrates how it can be that clothes can reorder who we feel we are in their wearing.'[21] Depending on the situation, our clothes can support us, comfort us, empower us, conceal us, reveal us, and offer many other ways of affecting us.

The 'material, embodied relationship of how clothing feels on the skin and allows the body to move' is pivotal in deciding what to wear in addition to the ways in which 'clothing affects the appearance of the body.'[22] This demonstrates the importance of not simply interpreting the fashionable body as a representation of identity but of taking into account the more experiential and sensuous dimensions of fashion and its materiality. Explaining how which the clothes he wears significantly affects the way he feels and presents himself, cultural sociologist Paul Sweetman writes that:

> When I wear a suit, I walk, feel, and act differently, and not simply because

of the garment's cultural connotations […], but also because of the way the suit is cut, and the way its sheer materiality both enables and constrains, encouraging or demanding a certain gait, posture and demeanour, whilst simultaneously denying me the full range of bodily movement that would be available were I dressed in jogging pants and a loose-fitting T-shirt.[23]

In addition to the cultural connotations of a suit, and moving beyond visual appearance, Sweetman thus highlights the effect of the suit's *materiality* on the physical body—and on how he feels and acts.

And then there is the smell of clothing. After a day of wear, our sweaters and T-shirts are imbued with our personal scent. Who hasn't put their nose in an item of clothing to recall a missing loved one? As Lauren Spencer King writes in *Women in Clothes*, a 500-plus page book that surveyed women on the subject of clothing and how the garments they put on every day define and shape their lives: 'After my mum died, for four years I preserved her closet exactly as she left it. Sometimes when I was home, I would just go in there to look around, or have a good cry, because it still held her smell.'[24] In the same book, the power of smell is also discussed in terms of a warning sign by human rights journalist Mac McClelland: 'And H&M, oh my god, I can't even be in an H&M, I feel like I'm having a heart attack in there. It smells like . . . To me it smells like diesel or something—gas fumes and textile chemicals.'[25] How apt is this statement considered in comparison to our relationship with food? Smelling is a preamble to eating: if something doesn't smell good, we won't eat it. These examples demonstrate the affective power of food and fashion through the senses.

A Continuum of Living Matter

As argued above, both the human dimension (as embodied subjects) and the animal dimension (as living beings) urgently need to be regained in the fields of food and fashion. While arguing for the importance of highlighting this human dimension may falsely suggest an anthropocentric point of view, we suggest that it is helpful to approach the human subject in terms of its embodied and experiential dimension, as well as its sensorial, bodily matter— which may be affected by other living beings or other material matters. This is a matter of giving more agency to the senses, to living matter, and to the affective potential of food and fashion—instead of continuing to let that affective matter become passively commodified, dehumanised or de-animalised.

Both food and fashion are 'the most intimate avenues in the way we communicate with nature. In the case of food, even more so; we digest it.'[26] This is how we, as human beings, become-*with* nature and the earth. However, in today's consumer culture and our neoliberal market-driven economy, we have created an artificial distinction between human beings and nature by privileging human actions over nature, often at the expense or exhaustion of nature and natural/material resources—commodifying them, thus creating that lack of a 'sustainable sensoriality.'[27] When we think in terms of living organisms, living beings, and living matter, and when we sensorially and experientially reengage with food and clothing, we realise that food and clothing are, in fact, a continuum of living matter. As Kate Fletcher argues in *Wild Dress*, 'Garments are separate

from neither people nor nature, they work between them […] they enhance our understanding of human embeddedness in nature, our sense of relationship with everything else.'[28] In this sense, in our capitalist society, we need to move beyond anthropocentrism, beyond a human-centred focus where the human is superior to ecosystems in nature—and where human beings have power over nature. We want to approach the interdependence and interrelatedness of living beings and living matter in terms of an equal relationship of entwined matter. Or indeed perhaps, to borrow Haraway's words, we need to think in terms of 'becoming-with,' 'making-with,' 'living-with,' and even 'dying-with.'[29]

So, let's move beyond the process of emotionally detaching ourselves by the act of *othering* human or animal living beings, and reconnect affectively and emotionally. Let's move beyond the dominant senses, especially sight, to revalue the underprivileged senses in order to reengage with food and fashion—moving towards the affective power of food and fashion through their raw materiality. After all, food and fashion are the things that we are living-with and dying-with.

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Footnotes

[1] Isabel Vincent, 'Why Bacalhau Will Always Taste Like Home,' *1843 Magazine*, October 31, 2019, https://www.1843magazine.com/food/world-in-a-dish/why-bacalhau-will-always-taste-like-home.

[2] Simon O'Sullivan, 'The Aesthetics of Affect. Think Art Beyond Representation,' *Angelaki. Journal of the Theoretical Humanities* 6, No. 3 (2001), p. 126.

[3] As fashion theorist Joaanne Entwistle argues in *The Fashioned Body* (2000), dress is regularly viewed as 'one of the means by which bodies are made social and given meaning and identity,' which could be understood as a way of 'fashioning' the human body. See: Joanne Entwistle, *The Fashioned Body: Fashion, Dress and Modern Theory* (Cambridge: Polity Press, 2000), p. 7.

[4] We would like to stress the fact that we are aware of our position of privilege and how this relates to having and not having agency. This is also something we discuss in our ongoing correspondence 'Fashion in Times of the Coronacrisis, and Post-Crisis': https://fashionprofessorship.artez.nl/activity/fashion-in-times-of-the-coronacrisis-and-post-crisis-an-ongoing-conversation/.

[5] The 'Anthropocene' is a term used to describe the era in which the actions of humankind have great impact on the Earth and its climate, leading to the exhaustion of natural resources, imbalanced ecosystems, and endangered biodiversity.

[6] In *Staying with the Trouble*, Haraway proposes to think in terms of the 'Chthulucene' to move beyond the Anthropocene, and to think through how the human and non-human are inextricably linked.

[7] Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press,

[8] Elizabeth Cline, *Overdressed: The Shockingly High Cost of Cheap Fashion* (New York: Penguin, 2012).

[9] Lindsay Hamilton and Darren McCabe, '"It's Just a Job": Understanding Emotion Work, De-animalization and the Compartmentalization of Organized Animal Slaughter,' *Organization: Animals and Organizations* 23, No. 3 (2016): 330-350, p. 330.

[10] Jana Kasperkevic, 'Rana Plaza Collapse: Workplace Dangers Persist Three Years Later, Reports Find,' *The Guardian*, May 31, 2016: https://www.theguardian.com/business/2016/may/31/rana-plaza-bangladesh-collapse-fashion-working-conditions.

[11] Hazel Clark, 'SLOW + FASHION—an Oxymoron—or a Promise for the Future..?', *Fashion Theory* 12, No. 4 (2008): 427-446, p. 444.

[12] Kate Fletcher, 'Slow Fashion: An Invitation for Systems Change,' *Fashion Practice,* 2, No. 2 (2010): pp. 259-266.

[13] Zygmunt Bauman, *Liquid Modernity* (Cambridge: Polity Press, 2000), p. 83.

[14] Guilio Ceppi, 'Slow + Design Manifesto' (unpublished), 2006, p. 20, as cited in: Clark 2008, p. 440.

[15] Haraway 2016, p. 55.

[16] The essay 'Blood Processing' by Anna de Vriend is part of a larger research project that came into being as part of the Honours Programme at ArtEZ University of the Arts. The essay will be published online by APRIA as part of their first open call.

[17] Anna de Vriend, 'Blood Processing,' *APRIA*, forthcoming in Fall 2020.

[18] Julia Kristeva, *Powers of Horror: An Essay on Abjection.* Trans. L. Roudiez (New York: Columbia University Press, 1982 [1980]).

[19] Haraway 2016, p. 2.

[20] Marcel Proust, *In Search of Lost Time Volume I: Swann's Way.* Trans. by C. K. Scott Moncrief and T. Kilmartin (New York: The Modern Library, 1992), p. 60.

[21] Rosie Findlay, '"Such Stuff as Dreams are Made On": Encountering Clothes, Imagining Selves,' *Cultural Studies Review* 22, No. 1 (2016): pp. 78-94.

[22] Sophie Woodward, *Why Women Wear What They Wear* (Oxford: Berg, 2007), p. 3.

[23] Paul Sweetman, 'Shop-Window Dummies? Fashion, the Body, and Emergent Socialities,' in: Joanne Entwistle and Elizabeth Wilson (eds), *Body Dressing* (Oxford / New York: Berg, 2003): 59-77, p. 66.

[24] Sheila Heti, Heidi Julavits and
     Leanne Shapton, *Women in Clothes*
     (London: Penguin, 2014), p. 389.
[25] Ibid., p. 174.
[26] Louise Fresco, 'Interview: Food &
     Fashion and the Impact of Science,'
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[27] Giulio Ceppi, 'Slow + Design
     Manifesto' (unpublished), 2006, p.
     20, as cited in: Clark 2008, p. 440.
[28] Kate Fletcher, *Wild Dress: Clothing
     & the Natural World* (Axminster:
     Uniformbooks, 2019), pp. 8-9.
[29] Haraway 2016, pp. 2-5.

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Action Recipes
Paper Cooking for Embodied Recipes

Cooking / embodiment / design /
human-food interactions

Abstract

This contribution describes the motivation for 'Paper Cooking,' a design workshop that took place during the Food Friction conference.[1] We reflect on its outcomes, with a view to future directions for work by creating 'Action Recipes,' a video repository that presents people's favourite cooking actions. The repository aims to draw attention to unrecognised aspects of embodied knowledge.

Introduction

Text accompanied by figures is still arguably the predominant format for creating and sharing recipes, whether published in books or online. Digital technologies, however, have offered new ways to share information around food. The growing use of mobile photo-sharing services, such as Instagram,[2] has led to an increase in everyday amateur food photography.[3] These figures are often a highly aestheticised element of a 'foodie'-oriented trend, which can be seen as the ultimate personalised extension of, and engagement with, lifestyle media and culture.[4] They are, then, distinct from recipes per se, in the sense that they are not explicitly instructional but embody and express individual lifestyles and associated modes of consumerism.

This visual aestheticisation of food builds upon and reinforces a postmodern privileging of the 'higher' senses (visual and auditory), which excludes senses such as taste, smell, touch and proprioception from the ways we interact with and talk about the material world.[5]

Cooking, though, is an embodied practice that mobilises both the mind and the body in an ecology of places, tools, ingredients, people, and so on.

Figures and text represent someone's explicit knowledge (e.g., measurements) of how a dish is made, excluding the things that happen in-between the lines of a recipe. Skills, tricks and rules of thumb are sensory and situated practices that have traditionally contributed to culinary creativity but escape textual articulation and visual capture.

The absence of embodied knowledge in recipes has further personal and social implications. Part of our embodied knowledge, for example, concerns memory. Embodied cooking skills connect us perhaps to the moments when we learned and used these techniques, who we learned from, or who we cooked with.[6] Formalistic approaches to cooking and accompanying media representations can thus obscure their role as an act of collaboration and sharing.

In this piece, we are interested in taking cooking actions, and the embodied knowledge contained within them, as the focus of recipe conceptualisation. Video, either on YouTube or TV shows, is a medium that can go some way in demonstrating actions in the cooking process, even though these are often a means to an end (e.g., food competitions). In our case, we made a start by creating video recipes from and around instances of embodied knowledge. With this, we hope to draw attention to the role of embodiment in cooking, currently underexplored in ethnography,[7] anthropology,[8] material experience,[9] and human-computer interaction,[10] and suggest practical ways of doing so.

The 'buffet' with paper
tools and ingredients

Method

We asked people to work in groups of four to five people, with each member thinking of one favourite cooking action (and associated tools and ingredients) that they especially like to perform. Each group was then tasked with assembling the individual actions together to create a dish. Throughout the process, we used paper tools and ingredients (see figure 1), rather than real food. There are, of course, practical considerations for this, such as food waste, hygiene, food handling, allergies and dietary requirements. However, another aim of the workshop was to test accessible methods for eliciting embodied cooking knowledge. Using paper

puts the activity more in line with a form of 'sketching,'[11] where specific elements of the process can be focussed on, and peripheral, minor details can be ignored. From an embodied cognition perspective, Kirsh tells us that, 'An imperfect model may be more flexible, simple and adaptable than the real thing. A better form to think with.'[12]

The paper cooking process, then, is our attempt to provide a sketch model of cooking—a form that that will better allow the cooks to think through, and reflect on, a particular aspect of the cooking actions. While we cannot perform the exact cooking action with paper, nor have the same embodied experience, this material affords a playful and flexible way to develop an approximation of cooking actions that allows us to express important elements of the action.

In the next section, we present the findings. During the workshop, we video-recorded participants performing their favourite actions individually and in groups. We then grouped similar videos together to create a classification of cooking actions. We also took photos of the dishes that were assembled per group. We briefly describe each action category and present some of the resulting dishes.

The space of the workshop. Groups were
formed of 4-5 people around a table.

Participant cutting paper potatoes.

Comments on Video

(see Cut1_Table1), or because 'I like to cut the cheese. I am very into symmetrical pieces' (see Cut5_Table2). For others, cutting also offered an opportunity to get to indulge in the tactile qualities of the food. Unable to find an appropriate term to communicate the feeling of cutting a cake to their group, one participant used a combination of words, tools, and gestures to describe how the cake shrinks under the pressure of the knife, and then bounces back once the blade slices through the surface of the cake (see Cut4_Table2). Another participant disliked using the knife, preferring instead to tear the salad by hand in order to 'feel it' (see Cut5_Table2).

CUT

[Cut1_Table1]	[Cut2_Table2]		[Cut3_Table2]
[Cut4_Table2]		[Cut5_Table2]	

Cut1_Table1
https://www.youtube.com/watch?v=d099LBB-MfbI&list=PLUfXsYYXLuRnRqvSMC_eyCt4Iz-qcX2p22&index=5

Cut2_Table2
https://www.youtube.com/watch?v=byJad-cKOUk0&list=PLUfXsYYXLuRnRqvSMC_eyCt4Iz-qcX2p22&index=1

Cut3_Table2
https://www.youtube.com/watch?v=c8ZMD_BnuMU&list=PLUfXsYYXLuRnRqvSMC_eyCt4Iz-qcX2p22&index=2
Cut4_Table2
https://www.youtube.com/watch?v=EceI-Rj-ceUg&list=PLUfXsYYXLuRnRqvSMC_eyCt4I-zqcX2p22&index=3

Cut5_Table 4
https://www.youtube.com/watch?v=7aX7WC-CWml4&list=PLUfXsYYXLuRnRqvSMC_eyCt4Iz-qcX2p22&index=4

A variety of cutting actions were chosen during the workshop. Cutting allowed people to customise the dish by preparing ingredients the way they like them, whether it was to 'get all the herbs in the same size'

ADD

[Add1_Table1]	[Add2_Table1]	[Add3_Table3]
[Add4_Table3]	[Add5_Table4]	[Add6_Table5]

Add1_Table1
https://www.youtube.com/watch?v=lwpF3ll-rBbs&list=PLUfXsYYXLuRm5dBSACwPiWOebTEl2UvLj&index=2

Add2_Table1
https://www.youtube.com/watch?v=Lltp-TCbW_4&list=PLUfXsYYXLuRm5dBSACwPiWOebTEl2UvLj&index=4

Add3_Table3
https://www.youtube.com/watch?v=cw3hC4Q-bQNg&list=PLUfXsYYXLuRm5dBSACwPiWOebTEl2UvLj&index=1

Add4_Table3
https://www.youtube.com/watch?v=4FNA-3zIDK7o&list=PLUfXsYYXLuRm5dBSACwPiWOeb-TEl2UvLj&index=3

Add5_Table4
https://www.youtube.com/watch?v=qnyh8Fs-vHb8&list=PLUfXsYYXLuRm5dBSACwPiWOebTEl2UvLj&index=6

Add6_Table5
https://www.youtube.com/watch?v=RE-Np-fLyvHU&list=PLUfXsYYXLuRm5dBSACwPiWOeb-TEl2UvLj&index=5

Adding ingredients together, or transferring them to a pan, was also a popular category of actions. Some of them were associated with the sense of smell that comes with it. One participant said she likes to smell and add herbs, and in the video, she uses her hands to convey the olfactory experience (see Add2_Table1). Another participant tempered seeds in oil and explained that he normally waits for the smell to come out, signifying that they are ready (see Add5_Table4). In one case, a preferable action occurred as an interaction between two participants. One participant was stirring tomato soup, and the other one dropped herbs in it, expressing her enthusiasm: 'She is stirring… oooh… haha!' (see Add1_Table1).

STIR/MIX

[Stir1_Table1]	[Stir2_Table2]

Stir1_Table1
https://www.youtube.com/watch?v=-dAHT-kq2SCM&list=PLUfXsYYXLuRk5nBExKIgHNFYN_LldBE2V&index=1

Stir2_Table2
https://www.youtube.com/watch?v=KvdQL-Zqy-40&list=PLUfXsYYXLuRk5nBExKIgHNFYN_LldBE2V&index=2

Stirring and mixing ingredients were associated with movements and feelings of relaxation. By turning the spoon around, one participant said, 'I like the smell. I like how you can create movements… So you can feel the texture of the soup' (see Stir1_Table1). Another one said that she enjoys mixing and beating her ingredients: 'They are separated, and I can make them together, transformed into another thing. I like it' (see Stir2_Table2).

MASH

[Mash1_Table2]	[Mash2_Table3]

Smash1_Table2
https://www.youtube.com/watch?v=JtC-z20S2tm0&list=PLUfXsYYXLuRlC2c3bBP765EbmiCgbrHeU

Smash2_Table3
https://www.youtube.com/watch?v=jvlYBDR-S2TA&list=PLUfXsYYXLuRlC2c3bBP765EbmiCgbrHeU&index=2

One participant talked about mashing and that she likes it 'because the soft vegetables are becoming pure… and… and… underneath I go slow, there's a lot, it takes time, it takes at least twenty minutes for everything' (see Mash1_Table2).

Another person said she enjoys squashing garlic. She used a knife with its flat surface on the garlic, and then applied pressure on it with her fist. She then used a fork to mash it while adding salt. For this action, there was a consideration for the quality of the dish ('it has more flavour for making the sauce'), but also an inability to verbally articulate the reason for its selection ('I don't know… I like the… the sensation…') (see Mash2_Table3).

TRANSFORM

[Transform1_Table4]	[Transform2_Table5]

Transform1_Table4
https://www.youtube.com/watch?v=FLdhts-dzTD4&list=PLUfXsYYXLuRk40700RbaIvYYSZ-qwNQPVx

Transform2_Table5
https://www.youtube.com/watch?v=s_Zk-FXw7A-k&list=PLUfXsYYXLuRk40700RbaIvYYS-ZqwNQPVx&index=2

Two people said they enjoy the transfor-mations that ingredients go though during the cooking process. One person fermented carrots, for which 'you have to wait' (see Transform1_Table4), while another one melted butter, which is a process he enjoys watching (see Transform2_Table5).

This group created a 'mashed potato with mushroom cream sauce, fermented carrot and crushed salmon'.

Veggie cake by the team Smooth Operators. After cutting the vegetables, the team mashed them to purée, which was then mixed with other ingredients such as milk and eggs.

One participant spent quite a while flipping her paper pancake with the pan. Asked why she likes this action, she responded: 'The ex-citement or adrenaline to see if it's gonna flip and fall into the pan' (see Flipping1_Table1).

Final Dishes
In the last part of the workshop, people in each of the six tables put their individual actions together to create a dish and extract a recipe from that. In turn, some of the dishes were unexpected, with a twist of humour. The team Smooth Operators made a veggie cake by chopping and mashing vegetables and mixing them with other ingredients, such as milk and flour. They then baked it and cut it with a knife to get the nice sen-sation one of the team members described before. Some dishes took into consideration the cultural differences in the group ('too spicy… for a Dutch person') (see figure 5), while other dishes were more elaborate (see figure 6).

The name of that dish was 'Too spicy tomato soup for a Dutch person, with a flying pancake', referring to the amount of spice and the flipping action of a participant.

Conclusion
By concentrating on cooking actions to create recipes, we saw glimpses of how con-versations during cooking could expand beyond practically making a dish to include the sensations and associated memories that

FLIP

[Flipping1_Table1]

Flipping1_Table1
https://www.youtube.com/watch?v=VeMFiD-7W3bI&list=PLUfXsYYXLuRkgurcBlC2mhvEd-OLizsi7z

are important elements of cooking and eating. These express and share pleasurable and memorable moments in the making of the food, and often identify fine details of sensory engagement with the ingredients.

Many actions were seen as pleasurable because they offered a way to engage the sensory. They require different levels of participation, expertise and time, varying from passive and quick (such as watching the butter melt) to time and skill-demanding (such as fermentation).

The videos show how people used the paper tools and ingredients to express and communicate the things that are difficult to articulate through one mode alone. This is reflected in the ways that body and language were combined to describe an action, or when actions came into language through names of dishes, such as in the case of the 'flying pancake' (see figure five). Inventing more recipe titles and instructions that refer to or suggest bodily actions might be a way of bringing closer verbal language and embodied knowledge.

Importantly, throughout the process of cooking together, these sensations and experiences are shared with others and, in some cases, inspired by them. In order to create a dish, cooks had to describe their actions, often telling the story of why they like them. The resulting dish is not only an unexpected combination of ingredients but also a shared record of the interests, skills and memories of the cooks.

We see Action Recipes as a start in creating a repository of cooking actions that can reveal the role and nuances of embodied cooking knowledge in design research, and as a playful process with real food for creating novel recipes and collective cooking experiences at home.

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Footnotes
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Fervent Pharmakon
Food, Fashion and the Haul

In most climates across the planet, human bodies need portable protection from the elements. Bodies are swaddled in cloth from birth until death. Thus, most bodies are clothed by some layers of necessity. But on the boundary of abundance, of extra resources, energy or time, the sugar of aliveness is added to the everyday—play, decoration, the sweet tastes of aesthetics and sensory pleasures. This is the sugar of plenty, the culinary multitudes of candied lavishness, the fabulousness of fashion.

Yet even in meagre circumstances, humans find the pleasure of play and passions. Bodies surely need shelter and nutrients, but even under the most critical conditions and existential hunger, human minds and bodies seem to open up to passions, anxiety or desire, hunger or rage. The sweets, salts and sours of existence follow us everywhere, and they make up the contrasting palate of life. Perhaps with a taste of paradox, in the material and calorie-loaded plenty of consumer society, we also become fearful of our passion for provisions. After the feast or fashion haul, a silent panic creeps upon the victim, a feeling which often results in ferocious detoxing, cleaning, and deep cleansing. The cycle can start again.

Passion and Hunger

Hunger has very little to do with reason. It is an emotion that can override even the most disciplined mind. Food is a friction, an uncontrollable and magmatic passion erupting from the deep abyss of our reptile brain.

Food, just like fashion, taps into the irrational emotions. Both phenomena are also absurdly dysfunctional. Just like eating, fashion is part of cultural rituals far removed from what is usually understood as utilitarian.

Just look at the eating instruments—surely there has to be more optimised ways of moving food into the mouth than balancing it on a fork or with slim sticks? Thus, the ritual of eating has only little to do with ingesting nutrients. Instead, it is a cultural protocol, signifying taste, culture, class, and intent. Precisely because of its habitual sincerity, its subtle signals are saturated by psychosocial communication which reveal so much of us to the silently judging surroundings. What we like, in what combination, how and where we eat, how much sound we make, and every delicate gesture—every little detail speaks of who we are and who we aspire to be. Nutrients are sprinkled on top of ritual. Yet fashion and food would not be such important rituals if they were not also tied so tightly to our biosocial being. As for any other animal, the process of eating is that which shapes the relational orders of the pack. And not least, digesting nutrients is also an important avenue in flirting and mating behaviour.

As highlighted by biological anthropologist Helen Fisher[1], humans have cultivated a wide variety of rituals that cater to seduction throughout history. The protocols around eating are just one of them. Cultural habits around food bring potential partners together in close physical proximity, with food raising blood pressure and pulse rates, gestures articulating the body, with heightened levels of biological lust mixing social ritual with sexual excitement. Food, like fashion, is a form of alignment of attentions. Large communal meals and parties shape families and tribes, as well as on the level of peers—just think of the procedures around serving and drinking tea or coffee, or tobacco or alcohol. And these rituals are also clothed to mark the occasion and add that

extra sweetness of bodies decorated for increased aesthetic pleasure.

It is thus no coincidence that eating and dressing are often matched in weight and aesthetic terror—with fine dining comes fine fashion and fine behaviour. Like the rituals of eating, fashion attunes sensual cognition, making appearance part of attunement, seduction and judgment. As a result, it comes as no surprise that both foods and fashions have a long history of social regulation, taboos and sumptuary laws, pinpointing who can eat with whom, or what culinary options are made available, including controlling the seductive properties of sensual pleasure. Food and fashion are socio-biological explosives, sensitive and potentially disruptive, and must thus be guarded carefully.

The Curse of *Pharmakon*—Medicine and Poison in One

Fashion and food also share the property that they are best consumed when fresh. There are surely some perennial and freeze-dried versions, but they almost always lack the seductive crisp allure of the quickly decomposing forbidden fruit. Their appeal comes from their need to be consumed.

Yet, the paradox of such quick consumption is that with increasing abundance, there also seems to be a plague of hunger and emotional starvation. The connection may be almost too obvious between the fast and habitual calories ingested in fast food and the fast and habitual garments acquired with low blood sugar at H&M. Both offer a quick fix to get through the rest of the day. We live under a regime of fashion consumption journalist Michelle Lee calls 'McFashion,'[2] which she posits as the unsatisfying, commonplace and utterly forgettable experience of the fast food equivalent. The basic premise is to be almost emotionally disconnected; an immediate hit of calories or appearance.

What Lee's notion of McFashion also highlights is the unhealthy everyday relationship to both fashion and food, or how a convenient source of nourishment turns toxic in the social body, seen not least in obesity and surging numbers of diabetes and overstuffed clothes bins. Under these conditions, both fashion and food turn toxic to the planet and, to some degree, also to the general populations of the 'fast-food nations'[3] Large populations have become dependent on unhealthy and addictive substances as vehicles for nourishment and social affirmation and self-esteem. It is another example of *pharmakon*, the Greek term translated simultaneously as *either* 'cure' *or* 'poison.' It is the substance that should bring us pleasure, a soothing medicine for the soul, but is the same as that which poisons us. As noted by philosopher Bernard Stiegler,[4] the concept can be a tool for thinking of how opposites unite into one intoxicant remedy. Stiegler's examination of pharmacology, and its related category, toxicology, unpacks how human techniques, tools and cultural prosthetics come to inform the distinctions between health and disease.

As similarly noted by philosopher Peter Sloterdijk,[5] pharmakon are connected to the cultural techniques humans use to become more human and excel over their peers: what he calls 'anthropotechnics,' the cultural capacity of deliberate self-manipulation. Such techniques help cultivate what is considered the higher purpose, distinguishing some from the lower levels of the animal properties of human life. As much phenomenological as philosophical tools, these techniques of super-human enhancement address the epidemiology of biosocial emotions. Instead of drifting with the masses, the subject is meant to cultivate both body and spirit and cut through averageness, yet simultaneously running the risk of habituating

platitudes. The examples are plentiful in the birth and death of gurus and religious cults, yoga retreats and esteem-boosting Instagram posts. Spiritual cures, seen not least in the everlasting flow of new ascetic programmes, in diets and work-outs, inspire struggles to excel, while simultaneously turning the same programme into yet another banality or delusion. Yet the call to transcend the habitual keeps echoing throughout the multitude of human lifeforms and is the main selling point of most consumer ideals: 'Buy this remedy and change your life.'

But just take a look around. What should feed and cure us is killing both the planet and our emotional lives. All in one: medicine and toxicant. A hunger for life turns on itself to become obesity and anxiety, passion and shame.

Displaying the Haul—Binge-Eating and Fashion Bulimia

The Instagram post of the lunch plate and the haul video both serve as illustrations of how a social pharmakon can turn into a curse of competitive desire. Even if different in the amount of content displayed, both display to peers how a passionate consumer unpacks the latest meal or shopping binge to their viewers online. Whereas the Instagram plate often shows discreet and curated tastefulness, the haul is often simply presented as plunder piled up on the bed. Yet both act as everyday snapshots into an excess of habitual consumption-for-display—but often with a tone of almost anti-conspicuousness. In its quotidian innocence, both share a clear purpose—to expose to followers the Potlatch-esque competition in obsessive squandering of underused or misused resources (the shared documentation seldom shows the half-eaten avocado sandwich or the overstuffed wardrobe).

Cultural historian René Girard examines the struggle over thinness, which also happens to be a central component of fashion, in order to expose how something we usually think of as subjective is actually a psycho-political conflict over the control of the body. This friction between bodies of conflicting peers explains phenomena such as bulimia and anorexia, Girard argues.[6] As with most ailments of the body, it is common to think of bulimia and anorexia as sicknesses residing in the victim's mind, but as Girard sees it, they must instead be interpreted as diseases of desire. They emerge from psychosocial contestations, and need to be freed from the stigma of 'madness' as proposed by psychoanalytic interpretations, which focus merely on the mind of the individual. For Girard, a phenomena such as anorexia and the binge/purge patterns of bulimia must instead be understood as a pathology that stem from a desire to outdo one's peers by obsessive control of rivalist consumption and squandering. In this form, anorexia and bulimia are simultaneously medicine and poison, or simply different sides of the same dish.

Once again, the pharmakon of food is turned toxic, yet here it results in the rivalist sacrifice of social relationships. As Girard posits, the anorexic social bond stems from a sense of powerlessness, where the pharmakon of food is a vehicle that gives back control. Like a race, binge/purge cycles take on a competitive form of mimetic desire against one's peers. Here, Girard sees a mimetic rivalry on a larger social scale: the intensity of my desire stands in relation to how much I make my peers crave and compete for the same goal as me:

> Anorexia is therefore both a personal challenge and a form of asceticism. But it is also a rivalry with others, a struggle for power: the anorexic very quickly becomes the centre of family attention […] Appeal to a recognised 'authority,'

the physician, formalises the defeat and surrender of the anorexic's parents and introduces her to another, more formidable rival. Anorexia therefore confers power, enabling a person who refuses to eat to triumph over her family. In this sense, it is a kind of terrorism: the anorexic takes herself hostage and bends everyone to her will.[7]

As a form of Potlatch expulsion, the biggest loser is the biggest winner, and a conspicuous non-consumption goes hand-in-hand with the urge to make others consume. The ascetic only stays disciplined by making others overconsume. Yet, by claiming the coveted position of the victim, the ascetic stays in control of the condition. Girard writes: 'The compulsive dieters really want to be thin, and most of us are secretly aware of this because most of us also want to be thin.'[8]

The haul video is a splurging in garments, but the author only wears one selected layer: the rest is squandered and darkly scrapped through the wardrobe into the dump in an archetypical sacrificial binge/purge ritual. Paradoxically, to excel at ascetic also includes two forms of rivalist consumption: to make one's peers consume more, while oneself consumes only that which signals the opposite—to expose one's own consumption of frugality, dieting or cleaning. Anorexia shares with fashion an ideal of aesthetic self-control, and both stay expressed in compulsive thinness. The haul is only successful if the wardrobe is still meticulously organised and aesthetically superior; otherwise, it is the sign of a hoarder who has lost all control.

Thus, the consumption of the pharmakon is shown as a display of control over the self, according to an inner vision of what is considered desirable. Purging one's body of excessive calories becomes parallel to cleaning out one's wardrobe of underused garments. The subject shows how to master a life in absolute abundance, while remaining in total control over the self and its desires. The cyclical patterns of binge/purge hold the continuous attention of one's peers. Girard points out how the anorexic 'interprets all attempts to help her as envious conspiracies of people who would like to cheat her out of her painfully acquired victory, being unable to match it. She is proud to fulfil what is perhaps the one and only ideal still common in our entire society, slenderness.'[9]

The binge/purge behaviours become the centre of consciousness for the rivalling peers, inverting freedom into compulsive patterns of competitive self-sacrifice, ritually framed through consumption. The anorexic's 'radical freedom is synonymous with her enslavement to the opinion of others. […] To understand desire is to understand that its self-centredness is indistinguishable from its other-centredness.'[10]

Behind a mask of prestigious indifference, the nervous self is ashamed of its envy of others. The competition to overcome oneself outdoes the cause of the binge/purge behaviour. The plate and body are filled and emptied, the shopping bags and wardrobes, too. Yet the pattern only succeeds as long as the subject appears as doing so only with pure passion, and without acknowledging the ongoing rivalry. The easy-going haul video, just like the seemingly informal dinner party, must appear so natural that no one in the audience acknowledges the underlying rivalry. As Girard points out: 'There is nothing worse than letting others see that you want to impress them.'[11] Thus, after yet another haul, the subject throws out the garments that no longer spark joy, and the fashion bulimic shows no videos of the clothes going into the bin. The cycle continues while the toxicity of the pharmakon

Otto von Busch
Fervent Pharmakon

remains hidden under the sugary crust of the cupcake.

A Future for the Pharmakon?

A first reaction to the toxic spread of compulsive consumption of McFashion can be seen in the almost habitual praising of a return to home cooking and the cultivation of domestic sewing. Yet, it is important to notice how the dream of a return of domestic crafts is a dream that is not attainable for all. Not only does increasing working hours encroach on people's lives but so do the ideals of a 'healthy' lifestyle.[12] An image of perfection is increasingly the necessary ingredient for any résumé, yet few have the money, time and opportunity to check this box in their lives. A high price is paid for healthy ingredients for cooking, while at the same time, fabrics for home sewing often cost more than finished garments from the high-street stores. A child going to school with some home-cooked lunch or home-sewn clothes is today often a mark of a rich household, rather than a mark of poverty. Taking control over one's consumption has more and more turned into a class issue.

But the relationship between food and fashion may still offer some helpful metaphors for the development of mixed strategies towards more healthy living with our pharmakon. For example, just like the process of cooking together can create bonds and be an essential part of a dinner, the curation of shared or communal sewing could help open ideas for how to use clothing for more intimate bonds than mere consumption. The social bonds of shared rituals are open for exploration and experimentation. What's more, acknowledging that not every meal needs to serve exotic food—or how we often find habitual shelter in flavourless meals—may also help designers understand that a mix of the bland and adventurous makes up the essence of everyday foodscapes.

Similarly, utilising the rituals of food as mirrors for engagement with clothing can help expose a more pluralist vision of what role fashion can play as both a marker of an everyday habit and a badge of a special occasion. Even if they only scrape the top of the dried crust, fashion designers have so much to learn from Christmas and Passover dinners, from carnival and wedding feasts, from festivals of sacrifice and fasts, and last but by no means least, the shared pleasures that occur in the breaking of fasts.

Come lotus-eaters, let's leave the ascetic ideal for just this night, and drink from the nectars of life together.

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Footnotes

[1] Helen Fisher, *Why We Love: The Nature and Chemistry of Romantic Love* (New York: Henry Holt, 2005), p. 55.

[2] Michelle Lee, *Fashion Victim: Our Love-Hate Relationship with Dressing, Shopping, and the Cost of Style* (New York: Broadway Books, 2003).

[3] Eric Schlosser, *Fast Food Nation: The Dark Side of the All-American Meal* (New York: Mariner, 2001).

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[6] René Girard, *Anorexia and Mimetic
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[7] Jean-Michel Oughourlian, quoted
     in Girard 2013, pp. x-xi.
[8] Girard 2013, p. 5.
[9] Ibid, p. 9.
[10] Ibid, p. 17.
[11] Ibid, p. 51.
[12] Heather Widdows, *Perfect Me: Beauty
     as an Ethical Ideal* (Princeton:
     Princeton University Press, 2018).

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Art Research and Food Technology
From Historical Reflections to Creative Speculations

Abstract

This article is an introduction to three contributions about research related to food and technology. The text introduces the reader to different forms of research from historical reflections, applied action research based on new technologies, and artistic speculations. The author places these different research approaches in the context of the Dutch scientific and higher vocational education, focussing particularly on art academies.

This edition of *APRIA* considers to what extent art research can contribute to our relationship with food. This immediately raises the question of the defining nature of art research. For some time now, Dutch arts education has been pondering how art or artistic research relates to academic research in universities. The desire of Dutch art academies to present themselves as fully fledged research institutes, preferably with a third level of graduate research, is closely related to their status within the higher professional education sector and to their own history. Owing to their orientation towards professional education, Dutch higher vocational education institutes have focussed on practice-based research since the introduction of research groups[1] in 2002. In most cases, that means that these institutions utilise existing scientific and technological know-how for innovations intended to have an economic or societal impact in close collaboration with businesses and public agencies. So-called 'fundamental knowledge development' is seen as the exclusive preserve of universities.

However, arts education in the form of an institute where students learn how to produce art has no counterpart within university education in the Netherlands. Moreover, the history of visual arts education reveals that its origins and rationale reside in large part in theorising about and reflecting on artistic production that occurs inside and outside the walls of the academy.[2] Fundamental knowledge development relating to artistic production should, therefore, logically take place within arts education. Thus, in the Netherlands, the answer to the question as to the precise nature of art research is strongly influenced by institutional, political, and, as a result, financial interests. In my opinion and based on practical experiences, the academies of art have more in common with the curious and critical driven nature of academic education, and less with the strong focus on a specific field of a *métier* that still dominates the higher vocational education profile.

Research into, for and through Art

As far back as 1993, Christopher Frayling, then Vice-Chancellor of the Royal College of Art in London, felt the need to define research within his arts college more explicitly. In an influential article, he distinguished three kinds of art and design research: research *into*, *through* and *for* art and design.[3] Research *into* art and design entails studying artefacts from the perspective of existing academic disciplines—chiefly, but not exclusively, the humanities. Research *through* and *for* art and design is directly related to the creative process and the knowledge embodied by the results of that research, which are often impossible to convey in words. In 2015,

Fig 1. Provocations at RTD 2015 by Christopher
Frayling (https://vimeo.com/129775325)

at the Research Through Design conference,[4] Frayling expressed his regret for the confusion he had sown with these concepts, which had since been interpreted in widely differing and antithetical ways.

According to Frayling, there are ultimately only three forms of research: pure, applied, and action. In conducting such research, you can avail yourself of a large number of methods, both in laboratories and in everyday practice, borrowed from the technical, social, behavioural and human sciences, as well as from the creative disciplines of art and design. All other designations for research (artistic research, practice-led research, practice-based research, art-based research, research by design, design-led research, etc.) are, in his view, the product of institutional interests or theoretical hair-splitting that contribute very little to our knowledge about the world.

Exploring the World

In his television series *Kijken in de Ziel* (*Soul Search*), in which he dissected various professional groups with surgical precision,

the Dutch journalist and interviewer Coen Verbraak asked several top researchers what science is. There was an almost unanimous response: a systematic and transparent search by inquiring professionals for answers to questions about how human beings and the world function. Both Frayling and Louise Fresco—one of the academics who participated in Verbaak's series of interviews—concluded that the word 'research' implies two kinds of questions.[5] *Re*-search—searching for something again—assumes an exploration of existing phenomena. It concerns researchers' questions about how the world functions or functioned based on existing knowledge and artefacts. But there are also researchers who pose questions about how our world might function differently or better. It is primarily the creative disciplines, such as art, design and architecture, that concern themselves with these types of questions. Questions that can rarely be answered in a laboratory, they concern problems and challenges arising from complex, everyday reality, which are difficult to capture in abstract, theoretical models or controlled

laboratory tests. Frayling consequently sees a leading and unifying role reserved for design in interdisciplinary research projects aimed at improving everyday reality.

Key Enabling Methodologies

The Dutch top sector for the creative industry—one of the eight sectors that the national government supports because of the worldwide reputation and growth opportunities of their business and research—is now trying to lay claim to that role by profiling professionals in terms of specific research methods, the so-called 'Key Enabling Methodologies' (KEMs).[6] According to the top sector's new Knowledge and Innovation Agenda 2020-2023, these KEMs are strategies, methods and models that structure the creative process in which the creative professional focusses on human beings, imagining new worlds and scenarios for them and bringing together technologies and actors from different fields.[7] The imagining and realisation of new future worlds is in the DNA of every designer.

That the future is not just an unpredictable black hole is evidenced by the 'Futures Cone' modelling tool, familiar to futurologists and speculative designers, which is a diagram that visualises different versions of the future in which everything is potentially possible.

But based on what we currently know, are capable of and want, one future is more

Fig 2. Futures Cone

likely than the other. What is possible may not be what we want, and what we want sometimes seems impossible. The first Futures Cone was criticised because it viewed the future from only one present-day perspective. In reality, we view the world from a variety of perspectives that ultimately influence what is preferable, probable, possible or plausible. In the current discussion about the Anthropocene and humanity's destructive impact on the Earth's ecosystem, the first version with the optimistic form of an ever-expanding cone pointing towards a promising future has since been adapted to show a future with—for humanity, at least—a potential end point.

The Future of Food

It seems to me that if we look at the future of food from a design perspective, all research methods are permissible, whether they are called *into*, *for* or *through* art and design, and whether they are characterised as fundamental, applied or action research. More important in my view is whether interesting questions about the future are posed and what impact the research might have for people in their daily living environment. Food, like clothes and housing, is a vital basic need for human beings. However, our relationship with eating, living and clothing is not purely functional. On the contrary, these activities are intimately connected with sacred and secular rituals, customs, behaviour, status—in short, with the (often implicit) cultural codes of a community or society. The link between functional basic needs and the semiotic and embodied aspects of food, clothes and houses make this an interesting but highly complex field of research. It is, above all, here that different forms of research should be able to contribute to a desirable future for our food, one in which there is not only sufficient food for the entire world population in the physiological sense,
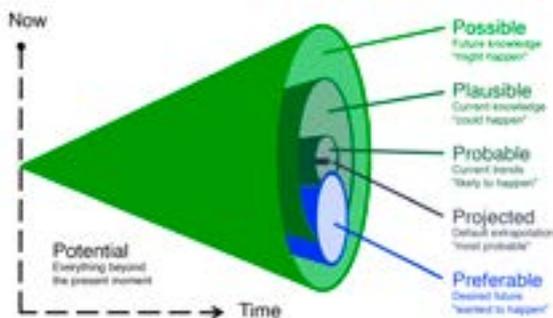
but in which food also contributes to the resilience, inclusivity and cultural cohesiveness of communities.

The question posed by the Product Design & Interior Architecture research group is what current technological developments—dominated by digital data, algorithmic systems and artificial intelligence—mean for our relationship with food. Will they lead us to store, prepare and consume our food in a fundamentally different way? And what does this mean for human beings as biological and semiotic creatures?

Historical Research

We are not, of course, going to answer these questions in this edition. The sole purpose here is to explore the questions with reference to three different types of research. As an art historian, I will be conducting that exploration from a historical perspective. Historical research can be both critical and speculative. Critical historiography investigates the relation between the description of the historical process and the historical process itself. It is an attempt to reconstruct history as factually as possible so as to be able to make valid or plausible statements about it. Speculative historiography is far more focussed on discovering rules and underlying structures capable of explaining the historical process. For example, what are the rules underlying the function, form and acceptance of utensils in a society?

Speculative historiography often arises out of topical issues where historical knowledge might be able to offer a glimpse into the future. Speculative historians are far more selective in their choice of sources than critical historians in order to lend more weight to their argument about a specific historical development and its significance for the present day and the future. It is my experience as a teacher of design history that speculative historians in particular

can prove very inspirational for artists and designers. Accordingly, in my role as professor, I always strive to place the research and innovation projects in a historical context in order to inspire and stimulate designers and artists who carry out their research in aid of a creative production. This is also important because the present is constantly rewriting the past with new knowledge that was previously invisible from the perspective of the prevailing paradigms and ideologies. Historians should follow the example of futurologists and have a shot at making a 'Histories Cone' depicting possible, probable, plausible and preferable pasts.
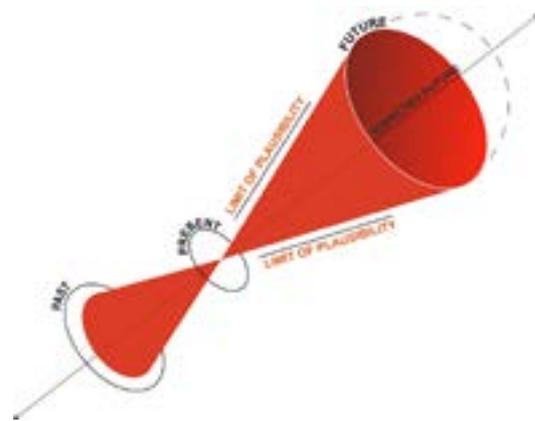

Fig 3. Futures Cone with a past cone

In this contribution, my historical research focusses on the history of the kitchen as the domain where technology is directly related to the storage, preparation and consumption of food. In short, it is the type of research that Frayling would characterise as *into design*, in which design is the object of study for existing academic disciplines. It is, above all, an attempt to show that our relationship with food is determined by many factors and that technology can never be seen in isolation from its social context. Or as one of my former teachers put it: there is no technological innovation without cultural innovation.

Technological Futures

Miguel Bruns takes a very different approach in his article about how new technologies are going to change our food consumption. Bruns is Associate Professor in the Future Everyday research group at Eindhoven University of Technology. Writing from a technological perspective, he describes what the fourth industrial revolution,[8] characterised by robotisation, the Internet of Things, and artificial intelligence, might mean for our food. It is a typical example of applied research in which future possibilities are investigated from a design perspective, with the aim of connecting existing technological knowledge with social needs and challenges. Bruns shows that the probable future will focus primarily on a strong personalisation of our food as 'material' with the expectation that it will make us personally healthier and society more sustainable. Whether this is a desirable outcome from a social and cultural perspective remains an open question in Bruns' article.

Speculative Statement

By contrast, interaction designers Klasien van de Zandschulp and Emilie Baltz's contribution focusses on the question of what new technology means for humans as social-cultural beings. For this they deploy a method that was developed within the arts: the performance. In the speculative setting of a futuristic kitchen, these designers ponder what new rituals technology might bring us. Inspired by the celebrated 1932 cookbook by the Italian Futurists, *La Cucina Futurista* (*The Futurist Cookbook*), van de Zandschulp and Baltz set out 'to provoke people into a new state of being by creating absurd behaviours around (and with) our technology.' Once again, the kitchen proves to be an excellent laboratory for research into the relationship between human beings and food.

The artistic research methods employed by van de Zandschulp and Baltz are in tune with the tradition of art education and are far removed from what is generally understood by the practice-oriented research of higher professional educational institutions. As such, the performances staged by artists will not always be recognised as research because they scarcely satisfy the generally accepted criteria for knowledge development, such as the rigour of the method and the validity of the results. Another disadvantage is that the artists present their research in the contemporary circuit of museums, galleries and art biennales. But I am convinced that these speculative explorations of what the world might look like in the future are an especially valuable addition to existing research in Dutch universities.

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Footnotes
[1] Strictly speaking, these are called 'professorships' (*lectoraten* in Dutch), but in practical terms, they are research groups.
[2] The first Academy of the Arts—the Accademia del Disegno, founded in Florence in 1563—was meant to be a place for the theoretical studies of the arts, beside the practical teaching in workshops outside the art schools. In the late 1960s in the Netherlands, there was still a discussion in the context of the national education reforms about the position of art schools as part of academic or vocational higher education.

[3] Christopher Frayling, 'Research
     in Art and Design,' *Royal
     College of Art Research Papers*
     1, No. 1 (1993/1994):
[4] Linda Rindertsma (ed.), *Veerkracht.
     Kennis- en Innovatieagenda voor
     de creatieve industrie* (TKI
     CKICKNL), Eindhoven 2019, p. 4.
[5] See Louise Fresco, *Kruisbestuiving.
     Over Kennis, Kunst en het
     Leven* (Amsterdam, Prometheus/
     Bert Bakker, 2014).
[6] The other top sectors are:
     Agriculture & Food, Life Sciences
     & Health, Chemistry, Logistics,
     Hightech Systems & Materials,
     Water, and Horticulture.
[7] Linda Rindertsma (ed.), *Veerkracht.
     Kennis- en Innovatieagenda voor de
     Creatieve Industrie* (Eindhoven:
     TKI CKICKNL, 2019), p. 4.
[8] The previous three industrial
     revolutions are mechanisation
     through steam; mass production;
     and the introduction of
     electricity, digitalisation and
     the arrival of the internet.

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The Human Touch in Kitchen Technology
How Technology Changes Our Relationship with Food in the Rational and Ritual Kitchen

Abstract

The kitchen is the visible cultural manifestation of the technology human beings employ to store, prepare and eat food. Those who look at the history of kitchens will see two approaches for kitchen design that have determined the influence of technology on our relationship with storing, preparing and consuming food in the private households: the technological-rational kitchen and the social-ritual kitchen. The technological-rational kitchen had both a commercial and a social objective: it functions as a commercial testing ground for the latest technologies and materials, but it had its origins in the disappearance of domestic servants. The rational kitchen is first and foremost a commercial, technological vision of the future that affirms prevailing social conventions. Some architects, designers and artists have reflected critically on the overly tech-driven design approaches and come up with alternatives more attuned to the ritualistic relationship between human beings and food. Despite the promise of physical convenience and time saving, the rational kitchen deprives people of the pleasure and knowledge of cooking. For most daily users, the kitchen is not an optimal cooking workspace from which human beings are banned, but a social, ritualistic meeting place.

Cooking and Kitchens

We live in an age that is increasingly dominated by digital data, algorithmic systems and artificial intelligence. What do the current technological developments mean for our relationship with food? Will they result in fundamental changes in how we store, prepare or consume our food, or is it simply a case of old wine in new wineskins? The kitchen would appear to be ideally suited to an investigation into the relation between food and technology. The linguistic origins of the word 'kitchen' (*cuisine, Küche, cucina, keuken*) lie in the Latin word *culīna*, derived from the verb *coquere*, meaning to cook, a verb that is itself rooted in the even older Italo-Celtic and Indo-European words *kwekw* and *pekw*, both related to the concept of 'ripening' or 'cooking.'[1] Thus, the kitchen is directly related to the technique of rendering food edible.

One of the most important of these techniques is the heating of food so that its status changes from raw to cooked. So, cooking has always been a distinguishing feature in the relation between the natural and cultural state of human beings. It is no coincidence that the 'savage' ape in Walt Disney's *Jungle Book* serenades the human child Mowgli with these words: 'What I desire is man's red fire to make my dream come true.' We can define the kitchen as the visible cultural manifestation of the technology human beings employ to store, prepare and eat food: from the open fire in prehistoric settlements and the first domestic iceboxes, to the microwave ovens and smart refrigerators in the modern kitchen.

The Rational and the Ritual Kitchen

Since the middle of the nineteenth century, architects, designers and artists have—at least in the Western tradition—treated the kitchen as a technological and cultural phenomenon. Since then, architects and designers, often in collaboration with companies, have displayed the very latest designs

at world fairs, design shows and expos in Europe and United States as part of 'The Home of the Future' or as a vision of 'The Kitchen of Tomorrow.' Sometimes, they have also reflected critically on the technological and social implications of the everyday or the futuristic kitchen. However, for manufacturers, the kitchen continued to be an interesting testing ground for the latest technologies and materials and their 'kitchens of the future' were primarily meant as sales stands. According to design professor Ramia Mazé, this kind of kitchen design belongs to the world of concept design which 'flourishes in trade shows and world exhibitions' and these concept designs 'have become central to business strategies, building shared values and commitments, expanding and marketing the "corporate imagination" within a company, an industrial sector or a target group. (…) Concept design induces desire and (re)produces cultural imaginaries for particular industrial futures.'[2] She distinguishes concept design from critical design that aims 'to provoke debate about current norms, "alternative now" or "speculative futures"' as 'physical rather than written critiques,' and from persuasive design for behavioural change that 'aims to redirect norms' and 'particular behaviours in forms intended to be internalised and reinforced in an ongoing manner in everyday life and social practices.'[3]

Anyone who looks at the history of the kitchen through the lens of architects, designers and artists will distinguish two main approaches for kitchen design that have, to a large degree, determined the influence of technology on our relationship with storing, preparing and consuming food in the ordinary, private household: the technological-rational and the social-ritual kitchen. The technological-rational kitchen reflects the development of the kitchen as a workspace organised as efficiently as possible with the aid of mechanical, electrical and digital tools for storing, preparing or consuming food, thereby reducing the time and energy expended by servants, the housewife, or, to a lesser extent, the house husband as much as possible.

In contrast, the development of the social-ritual kitchen is regarded not as an autonomously functioning machine in the service of human convenience, but as a social environment that provides the setting for daily household rituals, including the preparation and consumption of meals. The physical and symbolic heart of this kind of kitchen has its origins in fire as the most important technique for cooking. The fire originally served as a source of warmth, protection from wild animals and a meeting place for dance, music and storytelling. Anthropological studies point to fire as a symbol of the connection with the cosmos—for many people, the unfathomable and venerated space that connects us with speculations about past and future.[4] When the open fire in the field was placed inside the protective walls of the dwelling, the first kitchen became a fact—but as a space that for centuries served as a place for sleeping, cooking, eating and socialising, and where livestock were housed as a source of food.

Fig 1. Jan Bruegehel de Oude (1568-1625), 'Bezoek aan de hoeve', 17de eeuw, olieverf op paneel, 30 x 46 cm.

Jeroen van den Eijnde
The Human Touch in Kitchen Technology

'Kitchens are the stages for a great general representation of life,' wrote the Italian designer Ettore Sottsass (1917-2007). 'Like the oldest kitchens I have seen, with a black pot hanging down from the middle of the ceiling all blackened by soot, with a hole at the top to prevent the smoke, the steam, the flavours, existence from losing touch with the sky inhabited by mystery, and perhaps also to make sure than the lofty protective mystery might come down in the dark vaulted ceiling of the kitchen-room-house.'[5] But how has technology influenced our relationship with food in these two distinct design approaches in the history of the kitchen?

Efficient Cooking

The rationalisation of the kitchen began with attempts to use the open fire more efficiently for cooking. For centuries, the wood-fuelled open fire with a hole in the roof for smoke extraction was the dominant method of cooking. The desired heat level for the cooking pot was regulated by the distance between the fire and the food being prepared. Wood is an inefficient fuel. The heat it produces was better utilised when it was contained within brick, or later cast-iron volumes with an adjustable oxygen supply. The limitations of the open fire influenced what was cooked: it was used primarily for heating water and cooking simple gruels and one-pot meals. Flat-bottomed pans with long handles that made it easier to reach the hottest spot of the fire were often used. Meals were initially prepared above a fire on the ground, but from the Middle Ages onwards, it became more common for the fire to be lain on a brick or stone platform in combination with a chimney that ensured safe smoke extraction and in which meat, for example, could be smoked for preservation.

The natural philosopher Benjamin Thompson (1753-1814) invented the first stove during his time as *aide-de-camp* to the Bavarian Prince Charles. At the time, the imperial troops were still preparing their meals over an open fire using whatever ingredients were at hand. Thompson designed a mobile, iron field kitchen, for which he invented what came to be known as Rumford's Soup, a cheap, nutritious and tasty meal based on barley, dried peas, potatoes and thin beer, a version of which is still used to feed the very poor. Thompson was especially interested in using the cooking fire as efficiently as possible. He developed a variety of kitchens for army barracks, castles and villas, experimenting with different types of stove. He also used fully galvanised iron cooking pots in a recessed, semi-circular brick platform. The advantage was that the cooking pots were heated on all sides and the cook could easily reach them.[6]

Fig 2. Perspective view of a kitchen fire-place in the house of Baron Lerchenfeld in Munich designed by Count Rumford, ca. 1870
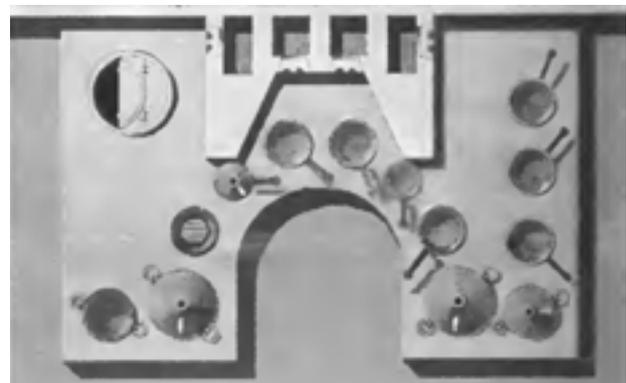

Fig 3. Bird's eye view of a kitchen fire-place in the house of Baron Lerchenfeld in Munich designed by Count Rumford, ca. 1870
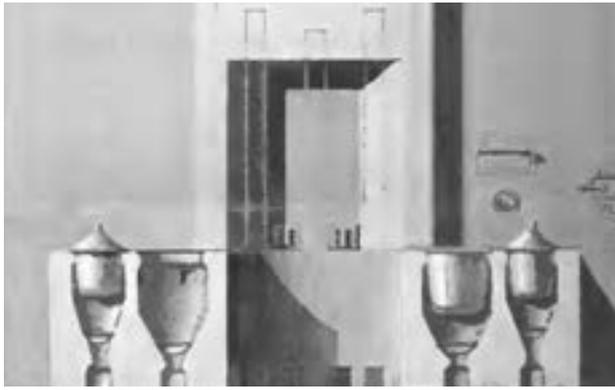
Fig 4. Vertical section of a kitchen
fire-place in the house of Baron
Lerchenfeld in Munich designed
by Count Rumford, ca. 1870

The cast-iron stove conquered American and European kitchens in the nineteenth century. It had an innovative effect on cooking. One-pan meals became a rarity, being replaced by simple meals of meat, vegetables, and potatoes— which Thompson had brought to Europe from the United States—prepared in a rapidly growing variety of pots and pans.

The Electrical Kitchen

Since then, heating techniques based on gas, electricity and electromagnetic radiation have entered the Western kitchen. Electricity in particular fired the imagination of scientists, engineers and designers as a way of perfecting the rational kitchen, turning it into an autonomous machine in which human beings had scarcely any role to play.

The first fully electric kitchen was displayed at the 1893 World's Fair in Chicago. In 1907, the Netherlands exhibited an electrically equipped kitchen during the exhibition 'Elektriciteit in woning en ambacht' ('Electricity in the home and workshop').[7]

The American comedian Buster Keaton showed off the unprecedented possibilities of electricity in his short 1922 film *The Electric House.* Viewers were treated to the sight of an electric model train transporting the full and empty plates between kitchen and dining room and an electric dishwasher in operation. Of course, in a house bristling with buttons, switches and levers, Keaton couldn't resist the temptation to show not just the advantages of an electric house but also the confusion and chaos that the increasingly autonomous house caused for the occupants.

Fig 5. 'The Electric House', film written and directed by Buster Keaton and Eddie Cline, 1922 (https://www.youtube.com/watch?v=FdhWfsqpll4&t=4s)

In 1930, during the design triennial in Monza, Italy exhibited the *Casa Elettrica*, sponsored by Edison and designed by several leading Italian architects. The house was an experimental vision of the future exploiting the possibilities offered by electricity in an average middle-class home. The kitchen was

Fig 6. Luigi Figini, Guido Frette, Adalberto Libera, Gino Pollini, Pietro Bottoni, 'Casa Elettrica', IV Triennale (International Exposition of Decorative Arts) in Monza, 1930

equipped with some twenty electrical appliances, including an oven and a refrigerator.[8] For centuries, the storage of food, and, in particular, meat, had been a problem. In 1810, Nicolas Appert (1749-1841) made an important contribution to solving the problem with his publication *L'Art de conserver pendant plusieur années toutes les substance animales et végétables* (*The Art of Preserving All Kinds of Animal and Vegetable Substances for Several Years*), in which he described how to keep food longer by putting it in sealed glass pots and then slowly heating it. A few decades later, the first airtight cans appeared on the scene, although they were so difficult to open that a hammer and chisel sometimes had to be used. It was not until the beginning of the twentieth century that the combination of efficient can openers and thinner sheets of metal for can production made it possible to preserve food on a large scale.[9]

Ultimately, ice proved to be the most suitable medium for storing food, initially in the form of iceboxes, which evolved into refrigerators and freezers, with car manufacturers such as General Motors and Fiat, which possessed the necessary electric motors, playing an important role.[10] The new electrical cooling technology ousted the old preservation techniques of drying, smoking, bottling and pickling. Cooling and freezing altered the taste of food, but also created a new range of perishable goods, such as dairy products. In addition, consumers no longer needed to go to the market every day. A few decades after the Second World War, virtually every household in the United States and Europe had a refrigerator in combination with an integrated or free-standing freezer, which led to the development of frozen meals.

Drivers of the Rational Kitchen
The increasing mechanisation, and in particular the electrification of the kitchen, had both a commercial and social objective. For manufacturers, the kitchen continued to be an interesting testing ground for the latest technologies and materials. 'Kitchens of the future' were usually not much more than sales stands where businesses sought to market their latest kitchen products and material applications.

Fig 7. Control center of the RCA-Whirlpool Miracle Kitchen, displaced at the American National Exhibition in Moscow, 1959

Fig 8. 'Robotic Kitchen, developed by Shadow Robotics, Yachtime, DYSEGNO, Sebastian Conran, Mart Cutkosky (Stanford University), presented at the Hannover Messe, 2016 (https://www.youtube.com/watch?v=rNcPVvIs_tk)

The rational kitchen, however, had its origins in a social development: the disappearance of domestic servants from private households. For a long time, domestic service was one of the most respectable jobs for young girls from lower social classes. But towards the end of the nineteenth century in the United States, the rapid rise of office and factory work, with fixed working hours and relatively simple work, started to compete with domestic work, which was often heavy and irregular. The shortage of servants became a major social problem and inspired designers and manufacturers to invent appliances that could lighten or take over the work of domestic servants or wives.

Another driver was the American women's liberation movement, which fought for equal rights for men and women. The movement did not succeed in overturning the prevailing ideology that a woman's place was primarily in the home, responsible for keeping house and raising children. But within that domestic domain, she was expected to run the home in the same professional manner as a businessman ran his factory or a commander his army, with the aid of scientific know-how that would result in maximum efficiency for a minimum expenditure in money and energy. Popular

handbooks, such as Catharine Beecher's *A Treatise on Domestic Economy* (1841), Isabella Beeton's *The Book of Household Management* (1861) and Christine Frederick's *The New Housekeeping: Efficiency Studies in Home Management* (1913) contributed to the notion that the kitchen should be a well-oiled machine for the storage and preparation of food and should also save the housewife as much time as possible so that she could devote herself to the care of her husband, children and social contacts outside the home.

The influence these books had on the development of the rational kitchen was comparable to that of Frederick Taylor's book *Principles of Scientific Management* (1911) on the rationalisation and standardisation of industrial mass production. Production processes in both the factory and the kitchen were to be scientifically studied, measured and recorded so they could be optimally organised in such a way as to minimise the actions and efforts required of workers and housewives. The designs for the rational kitchen were determined by standardisation, division of labour with separate areas for cooking, cooling, storing, consuming, washing up and kitchen waste, and ergonomic principles designed to support the necessary operations effectively.
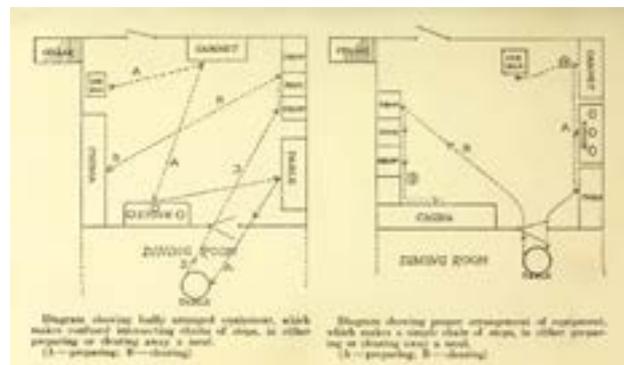

Fig 9. Diagrams from Christine Frederick's The New Housekeeping: *Efficiency Studies in Home Management*, New York 1912

The kitchen, previously the preserve of the domestic servants who worked and slept there, was now reduced to a small, mechanised and electrified workspace for storing and preparing food, strictly separated from the other rooms in the house and from which human beings were eliminated as much as possible. This development was illustrated by such famous kitchen designs as the Frankfurt kitchen (1926-1927) of Margarete Schütte-Lihotzky (1897-2000) and the 'Kitchen of Tomorrow' that General Motors presented at the Motoroma exhibition in 1956.

Fig 11. *Design for Dreaming*, accompanying film for General Motor's 'Kitchen of Tomorrow' at the Motoroma exhibition, 1956 (https://www.youtube.com/watch?v=hZG36dhhbx0)

Die Kochkiste steht zu weit vom Herd und so tief, daß man sich jedesmal bücken muß. Sie ist innen mit nichtwaschbarem Stoffe gepolstert, daher unsauber.
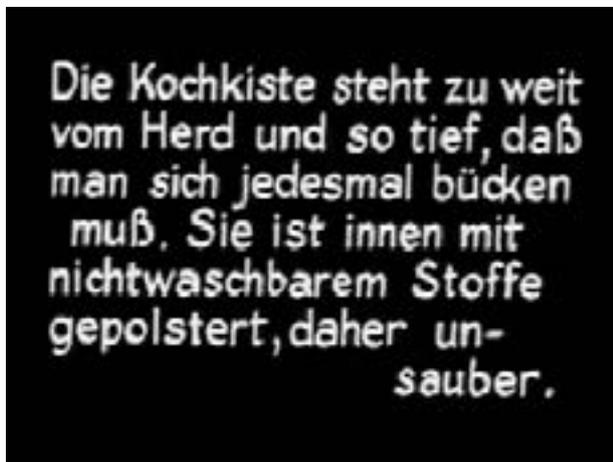
Fig 10. Margarete Schütte-Lihotzky (1897-2000), 'Frankfurt Kitchen', 1926-1927 (https://www.youtube.com/watch?v=4lpyty0-lgs)

The Motorama kitchen comprised an ultrasonic dishwasher and an electronic recipe book that was visible on a colour monitor. The accompanying film, *Design for Dreaming,* which was watched by more than eight million people, showed how the housewife could be freed from her daily kitchen chores with the aid of advanced, technological appliances. The concept was a prefiguring of *Technovision*, the only fully automatic kitchen ever designed. The German artist, philosopher and designer Hasso Gehrmann (1924-2008) devised the concept in 1970 at the behest of the Elektra company. The kitchen could be

Fig 12. Hasso Gehrman (1924-2008) and Elektra, *Technovision*, 1970

placed in the living room as a free-standing object. All its functions could be operated from a seated position using buttons, switches and pedals. The kitchen was only produced as a prototype and eventually ended up in a museum and not a home.[11]

Smart Kitchen
The main drivers behind the development of the rational, electrified kitchen—the commercialisation of technological innovations and improved functionality—are also behind the latest concepts for the Smart Kitchen,

controlled by digital data and algorithmic systems. Companies such as Samsung and Google are only too happy to present their newest technology in the context of the private living kitchen. And the main aim still appears to be to make life as easy as possible for the kitchen's users by limiting their active involvement in buying, storing and preparing food as much as possible.

Fig 13. Advertisement for the Honeywell H316 Kitchen Computer, 1969

One of the earliest attempts to introduce digital technology into the kitchen was the Honeywell H316 Kitchen Computer of 1969.

It could hardly be called a serious venture: the appliance was very expensive (US$10,600), weighed over 45 kilos, and its capabilities were limited: it could store recipes, provide some help with meal planning and manage the housekeeping accounts, and it had a built-in chopping board. But in order to make use of the digital functions, the user needed to complete a full two-week programming course. It is doubtful whether a single H316 was sold. The accompanying advertisement—with the slogan 'If she can only cook as well as Honeywell can compute'—did, however, make clear that the aim was to lighten the work of the traditional housewife. 'By simply pushing a few buttons,' the ad promised, the housewife would 'obtain a complete menu organised around the entrée.'[12]

Yet Samsung's 2018 smart kitchen does not appear to offer a great deal more. It still presents the wife (often together with a child) as the chief user of the kitchen. Advertisements for this kitchen confirm the critical observation made by the American writer Rose Eveleth in her article about the 'Kitchen of the Future': 'No matter how far in the future we imagine, in the kitchen, it is always the 1950s, it is always dinnertime, and it is always the wife's job to make it. … Why can we still not imagine anything more interesting than a woman making dinner alone?'[13] And during a visit to the third edition of the Smart Kitchen Summit in Seattle, where the latest digital kitchen technology was on display, a *New York Times* journalist lamented: 'Do any of these people actually cook?'[14]

For the time being, smart technology in the kitchen is confined to touchscreens on which recipes can be conjured up or the contents of the refrigerator checked. For some time now, Samsung has had a Family Hub Fridge which it is hoping to connect up to the services of the Albert Heijn supermarket chain in the Netherlands. In 2015, the IDEO design practice teamed up with Ikea and design students from the technical universities of Lund (Sweden) and Eindhoven (Netherlands) to develop 'The Concept Kitchen 2025.' The chief innovation is not much more than a smart multifunctional worktop that can function as an induction cooktop, an interface for recipes, and a dining table—handy for those living in tiny apartments.

Fig 14. IDEO, IKEA, University of Lund, Sweden, 'The Concept Kitchen 2025', Milan Design Week, 2015 (https://www.youtube.com/watch?v=8Mc3g2qbBJo)

In the future, kitchen appliances will be increasingly linked via the Internet of Things (IoT) so that they can exchange data with one another and with users.[15]

Fig 15. The smart kitchen

Linking the IoT to intelligent, algorithmic systems makes it possible to record and analyse users' actions, behaviour and preferences, which appliances would subsequently be able to anticipate. The possibilities of virtual and augmented reality are also being investigated. Between 1999 and 2007, the MIT Media Lab Counter Intelligence research group experimented with the possibilities of applying digital, intelligent technology to the development of new kinds of food, cooking and social interaction in the kitchen. One of their projects, Spatial User Interfaces: Augmented Human Sensibilities in a Domestic Kitchen, looked at how augmented reality might contribute to improved communication between people, their surroundings and objects.

Digital technology appeals to the fantasy of designers and tech experts in much the same way as the electric kitchen once did. The ultimate electric kitchen was an autonomous machine that human beings could operate with just a few buttons and levers. The ultimate digital kitchen takes this a step further: it would eventually be operated entirely by our voice or even directly by our brain. This scenario was anticipated back in 2011 by the synthetics manufacturer DuPont and entertainment giant Disney in their futuristic kitchen and dining room concept *TRON designs CORIAN®*. The project, exhibited at Milan Design Week 2011, was inspired by Disney's science fiction film *Tron: Legacy*, much of which takes place in virtual reality. There are no buttons, handles or touchscreens in this kitchen,[16] suggesting that the human brain is able to control everything wirelessly.[17]
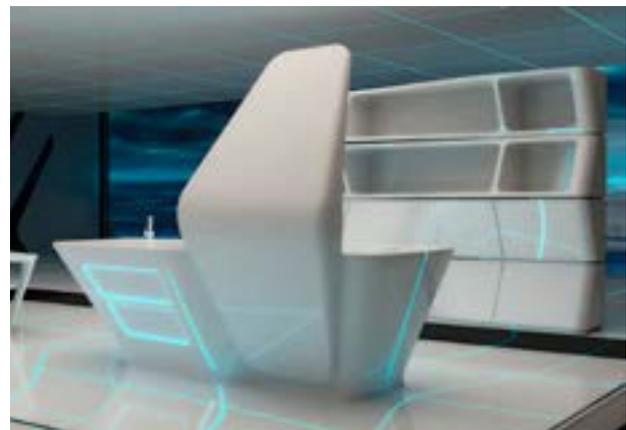

Fig 16. TRONdesignsCORIAN, Milan Design Week, 2011

As such, the rational kitchen continues to be a technology-dominated environment stripped of the creative and emotional aspects of cooking. 'If cooking becomes such a guided process that you don't have any emotion around it,' the *New York Times*' culinary specialist noted during the Smart Kitchen Summit 2017, 'you're going to take the heart out of it.'[18]

The Ritual Kitchen

The rational kitchen is first and foremost a commercial, technological vision of the future that in many instances merely affirms prevailing social conventions.[19] Some architects, designers and artists have contributed to this with research and concrete designs; others have reflected critically on it or come up with alternatives more attuned to the ritualistic relationship between human beings and food. In the publication *Counter Space. Design and the Modern Kitchen,* various artists show the reader kitchens that are closer to the ambiguous, chaotic reality of the daily practice of cooking than most the futuristic, and techno-optimistic kitchen designs would have us believe.[20]

Fig 17. Anna and Bernhard Blume, 'Kitchen Frenzy', 1986, gelatin silver prints, 170x108 cm each

Fig 18. William Eggleston, untitled from the portfolio 'Troubled Waters', ca. 1972, dye transfer print, 29,4x44,3 cm.

Designers, too, have criticised the functionalist, technology-driven kitchen and devised alternative concepts. Instead of isolated, functionalist machines, the Italian designers

Andrea Branzi (b. 1938) and Ettore Sottsass developed concepts in which the various kitchen functions were integrated with the dwelling as a whole.

Fig 19. Andre Branzi, sketch for kitchen concept 'Sandoline' for Veneta Cucine, 2008

Fig 20. Andre Branzi, 'Sandoline' for Veneta Cucine, 2008

In *A Pattern Language,* the architect Christopher Alexander (b. 1936) pointed out the huge social downside of the isolated kitchen—originally intended to separate domestic servants from residents but adopted by the lower social classes as a symbol of affluent living. 'This separation, in a family,' wrote Alexander, 'has put the woman in a very difficult position. Indeed, it may not be too much to say that it has helped to generate those circumstances which have made the woman's position in mid-twentieth century

society unworkable and unacceptable. Very simply, the woman who accepted responsibility for making food agreed to isolate herself in the "kitchen"—and subtly then agreed to become a servant.'[21] Nor does Alexander believe that American kitchens with their open plan and connection with the living room offer any solution to the hidden assumption that cooking is a chore while eating is a pleasure. In his view, the conflict can only be resolved when 'all the members of the family are able to accept, fully, the fact that taking care of themselves by cooking is as much a part of life as taking care of themselves by eating.'[22] His ideal kitchen consists of an array of kitchen furniture and appliances, combined with a comfortable sitting area with a couch and two armchairs that are arranged around a large, round dining table.
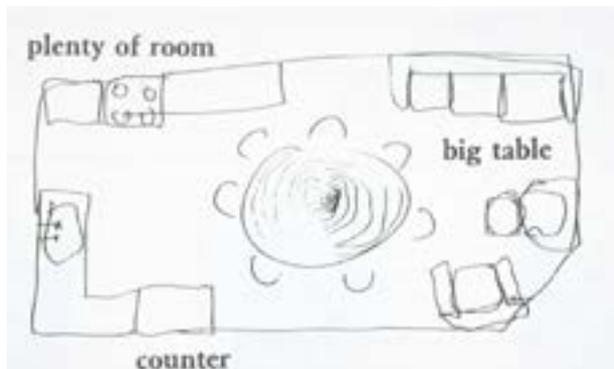
Fig 21. Christopher Alexander, sketch for a farmhouse kitchen from *A Pattern Language. Towns - Buildings - Construction*, New York 1977

The realisation that the small, efficient and isolated kitchen in the private home reduces the social position of women to that of second-class citizen compared to men prompted the German social-democrat and feminist Lily Braun (1865-1916) to argue in favour of central, communal facilities for daily meals. This idea had already been realised in 1859 by the industrialist Jean-Baptiste Godin

(1817-1888) in his *Familistère* social housing complex in the French commune of Guise. The Soviet *sotsgorods*—new industrial cities built in the context of the first Five Year Plan (1928-1932)—had communal houses containing collective kitchens or shared cooking and eating facilities for an entire district. The collective kitchen did not catch on in Western architecture, unlike the 'living kitchen' modelled on American examples, which connects the functions of cooking, eating and living.

Ritual Design

But what role does technology play in the ritual, integrated kitchen, and does it influence our relationship with food? Until the end of the nineteenth century, popular stoves often combined the functions of cooking and space heating. In most households, fires originally combined the functions of light, heat and social contact dissolved into the (all but) invisible fire of the gas flame or the induction cooktop and were replaced by the analogue or digital fire of the open hearth in the living room, as well as by television in the second half of the twentieth century. In 2010, the Italian stove manufacturer Palazzetti introduced the Ornella: a wood-burning stove-cum-cooker that once again visibly combines the functions of cooking and heating.

Fig 22. Ornella, Palazzetti, 2010

That the refrigerator, too, can be more than a functional cooling appliance is demonstrated by the wide range of shapes and colours conferred on it in recent decades. The refrigerator quickly became an important status symbol in the home and often acts as a totem pole—in the literal sense of 'family symbol'—in the domestic ritual of cooking and eating.

Fig 23. The fridge as family totem

Fig 24. Floris Schoonderbeek for Weltevree. 'Groundfridge', 2016 (https://www.youtube.com/watch?v=5nzdib7zWes&t=32s)

Designers utilise design in an effort to reconcile kitchen technology with the traditional functions, meanings and connotations of the storage, preparation, cooking and eating of food. The 'Groundfridge' by the Arnhem design label Weltevree refers both to the centuries-old refrigeration method of underground cellars and to the current imperative to use our sources of energy sustainably.

Fig 25. Dick van Hoff, hand mixer from the object series 'Tyranny of the plug' 2003

In 2003, under the title 'Tyranny of the plug', the Dutch designer Dick van Hoff (b. 1971) designed prototypes of several kitchen appliances that were driven not by electricity but by hand. Van Hoff's aim was to remind the user of the pleasure of food preparation that involves more than just pressing the on/off switch.

Fig 26. Klasien van de Zandschulp, Mark Meeuwenoord, 'Hey Honey', part of the ArtEZ research project 'Designing for Precarious Citizens, 2018-2019

These examples show that design and design research—in contrast to a lot of technology-driven innovation—focus on the experience of the user and on the creation of a meaningful relationship with objects and with the spatial setting for the preparation and consumption of food.

Critical of Technology

The abovementioned examples offer an implicit or explicit critique of the overly tech-driven, rational kitchen. Despite the promise of physical convenience and time saving, many electrical and digital applications in the kitchen deprive people of the pleasure and knowledge of cooking. What is more, the introduction of electrical and smart digital kitchen appliances is driven more by the vested interests of manufacturers than by users, who do not really want to see their familiar cooking habits replaced by alien appliances. How appropriate, then, was the title of the 2015 exhibition and accompanying publication at the Triennale Design Museum in Milan: *Kitchens and Invaders*. Sophisticated technological kitchen appliances that, like UFOs invading an alien planet, colonise our kitchens with unfamiliar and sometimes even frightening—because it is invisible—technology, such as electricity and Bluetooth. The introduction of electric ovens, induction cooktops, microwave ovens and the data collection of smart kitchen appliances evoke a sense of insecurity in users. Scientists and critical designers often point to the fact that digital convenience comes at the price of personal data. It was recently revealed that the Google Assistant—which, like Amazon's Alexa, allows occupants to control domestic appliances with spoken commands—is regularly listened in on by Google employees in the interests of improving the controlling, self-learning algorithm.[23]

Now that it is known that Google employees can hear everything that is said in the private domain of the home, many users will start to wonder for whose benefit those smart appliances were developed. The IoT renders the private domain vulnerable to undesirable invaders. In 2014, hackers demonstrated that the much-hyped NEST smart thermostat could be easily exploited as a barely detectable domestic spy. The hackers, not without a touch of humour, programmed NEST to transmit a message to the occupants: 'Hello Dave. I know you and Frank were planning to disconnect me and I am afraid that is something I cannot allow to happen.' The sentence was originally uttered by HAL 9000, the out-of-control computer in Stanley Kubrick's film *2001: Space Odyssey*.[24]

A similar doomsday scenario is presented by interaction designer Klasien van de Zandschulp and creative technologist Mark Meeuwenoord in 'Hey Honey,' a project they made for the ArtEZ Product Design & Interior Architecture research group. The title refers to the first kitchen computer, the Honeywell H316. Their installation is a speculative kitchen set, in which a wine cooler, a saucepan and a cutting board communicate with one another via ultrasound, inaudible to the human ear. The fact that they communicate is visible through the light signals they emit and audible by turning a knob that alters the sound frequency, although all the public hears are indecipherable peeps and whistles. The installation induces the same sense of uneasiness that many people have about smart appliances—the feeling that they are (increasingly) living a life of their own.

Fig 27. 'Microbial Home' by
Philips Design, showed on the
Dutch Design Week 2011.

New Food Rituals

For technological utopians obsessed with the idea of the most comfortable and functional kitchen and food preparation possible, the ultimate form is an already mooted factory-produced pill containing all the necessary ingredients for a healthy human body. Ever since the end of the nineteenth century, scientists have been predicting that one day a complete meal would consist of no more than a pill.[25] This would spell the end of the kitchen as a physical space. Although such a pill is mainly the stuff of science fiction and children's stories—think of Willy Wonka's edible inventions in Roald Dahl's *Charlie and the Chocolate Factory*—the current experiments with Soylent approach the ideal of the meal-replacement pill. The Soylent drink was developed in 2013 by the software engineer Rob Rhinehart with the aim of supplying the human body with all its nutritional needs without having to spend time, money and energy on their preparation. But as Peter Joosten, a biohacker and willing tester of new products, reports on his website, eating is not merely a question of the most functional form of nourishment. After a few weeks of consuming only the Soylent drink, he was sorely missing the physical sensation

of biting, chewing and swallowing that he experiences when eating a normal meal, even though he was feeling fit and healthy.[26] And of course, there is no question any more of companionable cooking and eating together in the living kitchen.

A lot of technology is deployed with the idea of making our lives better, healthier or more sustainable. If the electric kitchen was mainly intended as a time-saver for the housewife, the new digital and bio-technology currently being deployed also seems to be addressing a new social challenge: the sustainable kitchen. With comparable technological utopianism, kitchens are now being devised in which organic waste provides the bio-energy for a highly efficient, closed-loop kitchen. Smart appliances—such as digital cutlery that monitors the number of calories as you eat, or the smart fridge that tells the cook what should be consumed before it goes off—are enlisted to make our storage, cooking and eating behaviour as healthy and sustainable as possible. New cooking methods such as *sous vide*, whereby vacuum-sealed food is cooked in a water bath at a low temperature for a long time, forms of 'raw cooking' in which complete meals are prepared at temperatures below 50 degrees Celsius, or the futuristic possibility of merely inhaling food all help to reduce energy consumption. How, and on what scale, such technology will change our relationship with food is still unclear.

To date, these innovations seem to have their origins in commercial technological fantasies with little consideration for the domestic kitchen ritual. Some attempts have been made to restore the social function of cooking and eating in a highly individualised society. For example, there has been research into telematic dinners that enable physically separated individuals to eat together in a virtual space.[27] It is not inconceivable that

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designers will come up with concepts for a telematic kitchen where people can cook together virtually.[28] But it doesn't have to be as complicated as that, as a group of second-year Product Design students at ArtEZ have shown. They designed a number of simple kitchen utensils that only work when they are used by two people.

Foreign students were the ones who missed the familiar ritual kitchen of their home countries the most. Because when all's said and done, the kitchen is not an optimal cooking workspace from which human beings are banned, but a social, ritual meeting place for people who want to get to know one another better by cooking and eating together.

Fig 28, 29 & 30. Jueun Seo, Salim Sanei, Roos Prenger, Joanna Yu (ArtEZ BA Product Design students), 'Kitchen Tools', 2019.

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[4] Raffaella Sarti, *Thuis in Europa.
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[10] Bryson 2013, pp. 85-107; Giovanni
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2017. www.nytimes.com/2017/10/13/
dining/smart-kitchen-future.html.
[15] The Internet of Things (IoT) is a
term used for the interconnection
via the internet of computing
devices embedded in everyday
objects, enabling them to
send and receive data.
[16] https://www.designboom.com/
design/tron-designs-corian/.
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[26] www.projectleven.nl/soylent-nederland

[27] Spence and Piqueras-Fiszman 2014

[28] While writing this article, I could not have foreseen that just a few months later, as a result of the COVID-19 virus, and the ensuing worldwide lockdown during which people were not permitted to visit one another, many would resort to collective online cooking and dining.

Future Everyday Food
How Emerging Technologies Could Impact Food Consumption

Introduction

Industrial design has gone through various stages of development since its emergence during the first industrial revolution,[1] and the kitchen as well as the preparation and consumption of food have always been closely linked to its developments. As technologies evolved, the disciplines related to these technologies manifested their impact on designed products. Starting from mechanical engineering and the development of engines and machines, tableware was one of the first examples of industrially designed and produced consumer goods. Agricultural productivity also increased the availability of products and relieved the need to personally grow and harvest food. After the increase of productivity, functionality became an important concept as put forward by modernist architects and designers. Kitchens were designed to reduce unnecessary effort and supermarkets brought together different types of food and made shopping less time-consuming. With electronics entering the field of industrial design, efficiency drove developments in the kitchen further; kitchen appliances, such as blenders or dishwashers, significantly reduced the workload in the kitchen and opened up more time to explore novel ingredients and recipes.

As electronic devices started to connect and information and communication technologies became more dominant, tablets replaced cookbooks, and data is being acquired about the use of ingredients and recipes that are made. Ever-increasing connections between data and equipment lead to more personalisation, new experiences and visions of intelligent machines that automatically order ingredients and deliver them or combine them into novel dishes actually already exist. But while developments in the Internet of Things and artificial intelligence resulting from software and hardware revolutions are receiving extensive attention in the fourth industrial revolution, another fifth technological revolution may be about to happen, which could further impact our food consumption as a highly multi-sensorial process. Recent developments in material science, biology and manufacturing technologies predict a materials revolution that will open new avenues for design. In this essay, I discuss four developments, which I illustrate by means of food-related design projects from students and researchers in our programme, and I reflect on what a next step in this process could be.

Personalised Ingredients

Fig. 1 Milk tasting organised by Sietske Klooster for her 'Melksalon.'

Data science and robotics have a major impact on how we grow our crops and produce food. Mixed cropping, for example, has been proposed as a measure to make better use of soil and reduce the need for pesticides.[2] In contrast to single-crop fields, which were implemented to increase efficiency, crops of different types are placed in parallel rows in the same field, serving as a barrier against certain insects or diseases, with these methods having less environmental impact. This concept can be taken even further by initiatives such as pixel farming, which allows different crops to grow practically alongside each other. Differences in growth patterns due to varying nutrients in the soil, water or light may result in crops with a diversity in properties. Swarms of robots can be used to detect the different crops and rapidly harvest them and deliver them on demand, thereby providing fruits and vegetables with specified properties to consumers. It is already possible to deliver products matching very specific requirements, not only in the production of crops but also in the consumption of products from livestock.

What started as an awareness project regarding the differences in taste of milk depending on the cow and its habitat in Sietske Klooster's '*Melksalon*' resulted in Lely Orbiter, a system of robots that enables consumers to consume milk from a very specific cow, and thus with a very specific and unique composition. The breed, the diet, the time after giving birth, and the age of the cow, among others aspects, impact the taste and composition of a cow's milk. For example, the milk from a younger cow tastes very sweet right after calving. The farming system knows what and when the cow eats, detects when it is in the milking robot, and can separate and process the cow's milk directly up to the bottle, thus providing a milk with a specific combination of fats, proteins and lactose, and,

as a result, a unique taste. Consumers can thus order a milk that matches their dietary needs or are more adequate for specific recipes or pairing.

Digital Manufacturing

Fig. 2 Sweet snacks based on beetroots by Upprinting Food

From the ingredients, we move to the preparation of food, in which robots and advisory systems have already started to find their way into the everyday kitchen with products such as the Thermomix, which combines multiple cooking techniques in one machine and guides the cook through all the steps of a recipe. The only thing it does not do is order the products, and it still requires somebody to put them into the bowl. Although not as ubiquitous, digital fabrication techniques such as 3D printing are also being adopted by chefs and food designers in the food preparation process. The extrusion of consumable paste allows for the creation of novel shapes and textures, and with the introduction of multi-material printing techniques, different ingredients and structures can be combined, resulting, for example, in a chocolate dessert with different types of fillings and patterns, as designed and created by food designer Marijn Roovers, chef Wouter van Laarhoven, and the Dutch

technological research organisation, TNO. Many of today's experiments involving 3D food printing are artistic or playful, but various projects already investigate the potential of tailoring nutritional content to individual health needs.

Beyond richer experiences and health benefits, various projects also claim potential directions for the use of digital fabrication in the area of sustainability. The precision of the fabrication techniques can be used to create textures that allow shapes to change in response to heating or when in contact with liquids (see, for example, the project Transformative Appetite by Wang et al.).[3] The authors discuss how pasta could be transported flat and form into the required shape when prepared, thereby saving a lot of space. What's more, food that is typically considered as ugly or unappetising but still suitable for consumption could be repurposed using 3D printing. For example, a project by Elzelinde van de Doleweerd, Upprinting Food, uses typically wasted food such as banana peels or the green leaves of leeks as a basis for pastes and purées that can be printed into novel and attractive shapes for consumption. On a more advanced level, NOVAMEAT explores how to create plant-based products that emulate both the taste and structure of meat. Digital production techniques enable the creation of specific material structures which could simulate the 'muscle' density and structures that can be found in the different cuts of meat. In addition, multi-material printing technology can be used to create compositions of different proteins, fats and even other additions which may affect the taste, just like the animal's diet would typically do. Although bold and promising, many of these projects are still very speculative, and their actual environmental benefits oftentimes still need to be demonstrated.

Multisensorial Experiences

Fig. 3 Texture Modified Snack by Margarita Kuzina (photo by Margarita Kuzina)

As discussed above, digital manufacturing can be used to create novel structures and textures. But the palatability of food is, of course, also determined by its flavour, the chemical composition which defines the five basic tastes: sweetness, sourness, saltiness, bitterness and umami. In addition, the smell, temperature and visual appearance also play an important role, the latter one in particular before food is consumed. Limited variations in the sensory properties of food can have an impact on appetite and food intake—for example, for people with swallowing disorders, such as dysphagia food, whose food needs to be puréed, resulting in unappetising blends. Companies such as Biozoon have developed supplements that allow giving shape to smooth food, thereby making it look like actual food, which dissolves immediately to the appropriate viscosity when in the mouth. Their company mainly targets elderly people in care homes, where swallowing problems are frequently observed. However, continuous consumption of puréed or liquidised foods can also result in bland experiences, as oral processing, such as chewing, also plays an important role in the palatability.

The different textures of the food, as well as the sound (e.g., the crunching of crisps) that the food makes [4] when chewed and the effects the chewing has on the muscles in our face, add to our sensory experience.

Kuzina's Texture Modified Snack uses knowledge from molecular gastronomy, a food science that investigates chemical and physical transitions in ingredients, to create a snack that not only dissolves into the appropriate texture but also uses chemical reactions to create exciting mouth experiences. A porous shell made of meringue holds a squishy sphere filled with liquid, which is made using a well-known method from molecular gastronomy named spherification. Finally, the snack is covered with popping candy. When in the mouth the snack can be crushed by pressing it against the palate with the tongue. Consequently, the structure cracks and the sphere explodes, releasing the liquid into the mouth, while at the same time one can hear the popping of the candy as it provides a tingling sensation. The present concept was made by hand and uses readily available methods and technologies. However, the relevance of this concept is in its novel application (i.e., its use for elderly people with swallowing disorders) and the consideration of digital manufacturing for its production process, which has been demonstrated by D'Angelo et al. (2016).[5] Similar to car design where the top designers develop the new concept cars, this project shows how to translate insights from haute cuisine and make them relevant for a larger consumer potential and important societal challenges.

Temporal Dimension

In the previous sections, different examples were discussed on how food transforms over time when prepared (Transformative Appetite) or in the mouth (Kuzina). Food designer Chloé Rutzerveld has taken the concept of time a step further. Where typically

Fig. 4 Edible Growth by Chloé Rutzerveld (photo by Bart van Overbeeke)

natural ingredients, both plant and animal based, grow before they are turned into a dish for consumption, she has explored how prepared food can grow over time. *Edible Growth* is an eco-system that combines a support structure based on carbohydrates, an agar-agar based soil, with plant seeds and spores, which can be created using a 3D printer. After it has been printed, the little garden is kept in a greenhouse, where it can grow, and the taste of the herbs, for example, get stronger. The consumer can decide when the meal has achieved a state that is preferred for consumption. The concept of time, and in particular how the changes that food can make over time, can be predefined by the designer add a novel dimension to the preparation and consumption of food. This may even be taken a step further if the speed of a transformation increases or can even become reversible. In engineering and material sciences, research is already being conducted into materials that can sense, actuate and compute[6] or respond to their surroundings.[7] In (interaction) design, concepts such as shape-changing interfaces[8] have been proposed to consider devices that can change their physical and material properties; be interactive and computationally controlled; self-actuated and/or user-actuated and convey information, meaning or affect.[9]

Miguel Bruns Alonso
Future Everyday Food

Recent developments in synthetic biology, which investigates the design and creation of DNA structures and may even result in a cyber-biological industrial revolution once computational tasks are encoded into DNA,[10] may enable the design of interactive experiences that address our sense of taste. Programming food in such a way that it will have interactive properties could provide for personalised taste sensations—for example, candy that can change its colour and flavour as we interact with it using our tongue and teeth, similar to Roald Dahl's imagined 'Everlasting Gobstopper.' Designing for such interactive experiences will be highly challenging, as these technologies will enable designers to create computational composites that address all of the senses. But this process may be facilitated by generative design tools which are already used in architecture and fashion to create novel structures, based on constraints defined by the designer.

Conclusion

This essay started with the idea that a material revolution is envisioned to become the fifth industrial revolution. Personalised ingredients, digital manufacturing, and programming the behaviour of materials will allow for the creation of personalised and dedicated multisensorial experiences. The vision on cyber-biological systems may take the vision on food design further, as these systems will allow programming food to change its texture, flavour, smell, temperature and appearance as it is consumed. Beyond changes over time, edible materials may be envisioned that adapt as one interacts with them, by manipulating them in the mouth. Such visions may radically change the way in which we will store, prepare and consume our food in the future, and designers will probably be involved in the design of (the behaviour of) these edible materials and identify opportunities for consumption.

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Footnotes
[1] The first industrial revolution involved the mechanisation of production due to the invention of the steam machine; the second industrial revolution involved mass production due to the invention of electric power; the third industrial revolution involved automated production due to the invention of ICT; and the fourth industrial revolution involved further digitisation in so-called cyber-physical systems due to connectivity and artificial intelligence.
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'Food: Not For Eating'
Recipes from the EAT TECH KITCHEN: Speculation, Co-Creation & Play as Critical Practice


```
FADE IN:
INT - THE CLOUD. TIMELESS.


Bright blue future-goo bounces on
the bottom of a martini glass.

Sip it and energy flows through your
veins like a charging battery.

Two aliens enter. Dressed in thin,
metallic foil suits, they resemble
cartoonish astronauts who recently
fell to Earth after part of their cloud
planet dissipated due to human pollution.


                  ALIENS
   Hello, Humans! We come with gifts! We
 bring you air from the internet! On the
   count of three, please inhale it and
  chant with us: Google is Great! Amazon
 is Almighty! Microsoft is Marvellous!...
CUT.
```

Welcome to <u>EAT TECH KITCHEN</u>, a hilariously silly, pseudo-religious, futuristic cooking show in which two aliens, along with their rudimentary A.I. Chef, accidentally reveal the absurdity of humanity by creating nonsensical recipes from 'real' human data.

Through a series of speculative recipes, cooking demos and co-created dishes, *EAT TECH KITCHEN* (upon first glance) serves up a playful antidote to the alienation of the modern, Digitised Age. Part co-created performance, part artistic research, participants play, laugh and cook together, #IRL, eating cookies that 'unFriend' people, smashing crackers to find true love on Tinder, and sharing personal passwords through mayonnaise. But beneath the silly surface, blinking lights, and futuristic palette, we discover a hidden agenda: to create a paradigm that fosters a resilient and creative future for humanity through Play.

Led by two shiny 'aliens' who serve as both facilitators and symbols of self-reflection, the project leverages the lexicons of cooking, eating and digital technology (all mediums of daily consumption) as a means of grounding the work in the habits of everyday life. By remixing these languages with absurdist expression, speculative fabulation, interactive technologies and futuristic aesthetics, the project plays with expected meanings and provokes new perspectives within the everyday to cast new light on habituated patterns of human behaviour. In this alien storyworld, 'food' is defined as anything that is consumed on a regular basis (from cellphones to potato chips!), 'smart objects' are incredibly dumb, and 'cooking'

becomes a framework for the co-creation of new rituals that feed the human spirit instead of the body.

In this article, we will use examples of the project to further articulate our conceptual approach and artistic research, as well as attempt to entertain, educate and provoke the reader by moving between screenwriting formats and project theory. Now, back to the show:

CUT TO:
INT - THE EAT TECH KITCHEN.
AFTERNOON-ISH, SOMEWHERE ON EARTH.

The kitchen is futuristic, high
contrast, full of blinking lights,
metallic surfaces and a matrix-like
grid set design. Stepping inside
feels novel: familiar, and yet
strange. Also, it smells like ozone.

The aliens are in the centre, behind a
stainless-steel kitchen table. A first-
generation Google Home sits between
them on the tabletop. The aliens
address a group of curious bystanders,
the 'audience,' and share their story
with great excitement: they've fallen
to Earth and want to make friends with
humans. They are collaborating with
their 'Bot friends' to learn more about
humans: collecting their data, online
habits, rituals and behaviours as a
way of 'listening,' 'empathising' and
'connecting' with humanity. After all,
this is what humans seem to want the
most! Connection! And what better way to
connect than to 'break bread' together?

CUE BREAD: MAKE IT WITH YOU

The aliens invite a bystander to
meet BotChef, their futuristic
cook, who lives inside of the
Google Home and can prepare a
custom recipe for them to share.

The human approaches the Google
Home. BREAD continues to play
softly in the background.

> BOT
> Greetings, Human. I am Bot,
> a chef from the Future.
> What is your name?

> GUEST
> [says their name]

> BOT
> Hi [name], you look super
> delicious! How do I look?

> GUEST
> [response]

> BOT
> [response], well that's because
> I ate too many pixels for
> breakfast. They're really good for
> you, but only in moderation!
> I probably eat too much
> because I'm alone in here.
> There's really only room for
> one inside a microchip.
> Are you alone right now?

> [] yes [] no

> GUEST
> no

> BOT
> Well, then bring me closer to
> your face so we can whisper!
> Oh! You smell so good!
> This all makes me hungry.

> Do you use a cover on your webcam?

> [] yes [] no

> GUEST
> no

> BOT
> Great, so I can watch you eat!

You know, we think and act according to
what we eat, drink and digest online.

For instance, a taste of Facebook
can cause lassitude, pessimism
and lack of passion.
[...]

FAST FORWARD TO:

BOT
Thanks for this data mining.
I'm learning more about you
and your online rituals.

You have too many fake friends!
I have the perfect recipe for
you to discover a delicious new
ritual with your technology to
get rid of some fake friends.

RECIPE
The unfriend ritual

Ingredients:
— An online friend
— A social media
— A human (offline)
— A not-so-interesting friend
  cookie (bitter flavoured, chewy)
— The smell of shame
— Annoying posts powder

Cooking time:
— 5 - 10 minutes

Instructions:
— Check how many friends you
  have on a social media app.
  Shout this number out loud.
— Eat the 'Not-So-Interest-
  ing Friend' cookie.
— While eating, scroll through
  your friends list and pick
  one friend to delete.
— Tell a story about this online
  friend to an offline human.
— Sprinkle a little bit
  of 'annoying posts pow-
  der' over your phone.
— Start chanting, together
  with the offline human: 'de-
  lete, delete, delete.'
— Grab the 'smell of shame' and
  spray this one time in the air.
— Breathe in.
— While smelling the shame,
  delete the friend.

CUT.

Through the use of the rudimentary ChatBot A.I. technology, the artifacts and experiences of *EAT TECH KITCHEN* are personalised for each guest based on their answers, and printed out on receipt-sized papers so as to reference consumerism. Guests use select ingredients in the *KITCHEN* pantry, in combination with their own technologies (sensory and digital), to create the recipes.

The resulting experience is a generative structure that continually evolves based on its participants. Best defined by the research of Otto von Busch, this playful, improvisational format not only adds interest for guests but also serves as vehicle for evolution of the artistic research:

> '... the navigation involved in research is not the only active part in an artistic journey— it also needs craft, curiosity and continuous improvisation. There is a need for play in the larger game of research, and a specific ludology; an exploration of the rules of the game. If there is no play, any research practice risks losing its explorative sensibility and edge.'

In addition, the improvisational, and albeit absurd, nature of the experience is powered by one of the central characters: BotChef, an A.I. assistant who cooks up personalised menus for guests. The nonsensical recipes BotChef delivers poke fun at accepted notions of technology, nourishment and consumption, while also serving as commentary on the trust we put in the hands of major corporations, personal A.I. assistants, and 'answers.' To cite Paul Klee, *'art does not reproduce the visible; rather, it makes visible.'* In this light, the use of absurdity in language and coding also makes visible the unknowns, imperfections and lack of context that may drive implicit bias in A.I.

The use of food as a medium for participation (and translation) adds to the discursive

nature of the experience by suggesting a kind of fluid interconnectedness between all people, products and processes, thereby critiquing patriarchal notions of 'meaning.' Inspired by Karen Barad's <u>theory of agential realism</u>, *'phenomena or objects do not precede their interaction, rather, "objects" emerge through particular intra-actions,'* the ephemerality of cooking and consuming are used as inter-actions for the creation of new perspectives and possibilities of meaning. Such a point of entry into knowledge suggests how meaning is enabled, and occluded, through culture, habitual thought and embodied experience.

Physiologically, when we eat, we also do more than 'taste'; rather, flavour is constructed through a confluence of sight, sound, smell, taste and touch. This holistic multisensory experience creates an embodi-ment of the experience at hand: making the idea or concept tangible and visible. In the context of *EAT TECH KITCHEN*, food thus becomes a medium for conceptual and tangi-ble provocations, a recipe that addresses the body-mind experience of humanity.

CUT TO:
BEGIN FLASHBACK
https://vimeo.com/351491722

INT. AN OPULENT ITALIAN VILLA'S
DINING ROOM. DINNER TIME. 1932.

A small, mustached Italian stands in
front of well-heeled dinner guests. His
name: Filippo Tommaso Emilio Marinetti,
founder of the Futurist movement.

He reads aloud from a bound volume he
authored titled, *La Cucina Futurista*.

                Marinetti
        The Tactile Dinner Party!

    *Pyjamas have been prepared for the
      dinner, each one covered with a
    different material such as sponge, cork,
    sandpaper, or felt. As the guests arrive,
      each puts on a pair of the pyjamas.
    Once all have arrived and are dressed
    in pyjamas, they are taken to an unlit,
    empty room. Without being able to see,
      each guest chooses a dinner partner
      according to their tactile impression.
    The guests then enter the dining room,
    which consists of tables for two, and
    discover the partner they have selected.
      The meal begins. The first course
        is a 'polyrhythmic salad,' which
    consists of a box containing a bowl of
      undressed lettuce leaves, dates and
        grapes. The box has a crank on the
      left side. Without using cutlery, the
    guests eat with their right hand while
    turning the crank with their left. This
        produces music to which the waiters
        dance until the course is finished.
      The second course is 'magic food,'
    which is served in small bowls covered
      with tactile materials. The bowl is
    held in the left hand while the right
    picks out balls made of caramel and
        filled with different ingredients
      such as dried fruits, raw meat,
      garlic, mashed banana, chocolate, or
    pepper. The guests cannot guess what
        flavour they will encounter next.
    The third course is 'tactile vegetable
    garden,' which is a plate of cooked and
    raw green vegetables without dressing.
      The guest eats the vegetables without
    the use of their hands, instead burying
      their face in the plate of vegetables,
      feeling the sensation of the greens
        on their face and lips. Each time a
        guest raises their head to chew, the
    waiters spray their face with perfume.*

FADE OUT.

<u>La Cucina Futurista</u>, originally published in 1932 by the Italian poet Filippo Marinetti as a Futurist cookbook, was a manifesto in the guise of a culinary publication. The Futur-ists visualised a high-tech future dominated

by motorised speed and masculine energy. Bourgeois traditions, they wrote, were to be swept aside by speed, machines, and new media such as cinema. The Futurists believed that the perfect arena for this conflict was the dining table, and the book was packed with the most absurd culinary excesses. The intention was to shock, provoke and delight humans into radical new relationships with their lives. '*People think, dream and act according to what they eat and drink,*' Marinetti wrote.

Though the premise of *EAT TECH KITCHEN* is similar to the Futurist cookbook (to provoke people into a new state of being through absurd behaviours), this experience goes further insomuch as presenting a vision of an inclusive, fluid future that champions play and possibility, while making fun of modernity, speed and technology as cultural saviours. *EAT TECH KITCHEN* reimagines this Futurist approach through the lens of a contemporary, eco-feminist lens: deconstructing the patriarchal hierarchies embedded in *The Futurist Cookbook* (chef/guest/performer/audience) by using a decentralised framework that embraces an ecology-like approach through co-creation, collaboration and speculation as participatory design tools to inverse traditional authorship.

As a means of creating deeper embodiment, *EAT TECH KITCHEN* also goes one step further than the Futurists by leveraging immersive design and placing the experience in a highly detailed stage set. Eschewing the dinner table for a cooking surface, guests gather into a futuristic digital kitchen, complete with electronic soundtracks, the smell of ozone, synthetic materials, 'smart' kitchen objects and blinking LED lights. Through this use of design, a magic circle is implied, creating '*a shield of sorts, protecting the fantasy world from the outside world,*' as penned by Edwards Castronova in his book, Synthetic

Worlds: The Business and Culture of Online Games. Here, participants leave the rules of the 'real' world and adopt those of this virtual 'artificial' space. That said, for Castronova, these worlds are not hermetic. He uses the term 'synthetic world' in the title of his book so as to suggest that the magic circle '*cannot be sealed completely; people are crossing it all the time in both directions, carrying their behavioral assumptions and attitudes with them.*' In the context of *EAT TECH KITCHEN*, the synthetic is leveraged as an aesthetic material, as well as a conceptual framework insomuch as it blurs definitions of real and virtual, while using the inserted assumptions and attitudes as ingredients of the experience.

The magic circle concept may be attributed to Dutch historian and cultural theorist Johan Huizinga in his book Homo Ludens, in which he suggests that the magic circle is akin to a playground:

> '*All play moves and has its being within a play-ground marked off beforehand either materially or ideally, deliberately or as a matter of course.*'

In Huizinga's quotation, the act of play is revealed as a meaning-maker, giving significance to the space reserved for its activity. In the context of *EAT TECH KITCHEN*, the meaning of play deviates from the traditional context of 'game' and instead delves into a practice of presence. American composer and artist John Cage says that '*the "purposeful purposelessness" of play serves as an affirmation of life—not an attempt to bring order out of chaos nor to suggest improvements in creation, but simply a way of waking up to the very life we're living.*' Design professor William Gaver also writes that ludic (playful) design can support values such as curiosity, exploration and reflection, arguing that these values are not only important but are essential to wellbeing (Gaver 2002; see also: Participatory Research

<u>through Gastronomy Design</u>).

The subtext beneath *EAT TECH KITCHEN* thus emerges: A call to action! To stir up humanity as active participants in the play of their own lives! The absurdity and purpose-lessness in the *EAT TECH KITCHEN* recipes are permission to play with the rules of dining (and life!). Given that the audience is an 'active' participant in these playful rituals, they become part of this new story by (literally) cooking together, and causing 'trouble' within the expected norms of the everyday.

Donna Haraway writes about the bonding power of collaborative 'trouble-making' in her latest book <u>Staying with the Trouble</u>: *'Trouble is an interesting word. It derives from a thirteenth-century French verb meaning "to stir up." "To make cloudy," "to disturb." We live in disturbing times, mixed-up times, troubling and turbid times. The task is to become capable, with each other in all of our bumptious kinds of response.'*

CUT TO:
INT. FUTURIST KITCHEN.
AMSTERDAM. NIGHT. 2018.

The two aliens have organised a meal kit delivery dinner service for 32 VIP guests of the IDFA DocLab conference. The kits are designed to look like Amazon food-delivery boxes and inside hold IKEA-style instructions, tools, food and non-food ingredients with which to make a unique dish designed in collaboration with BotChef.

The guests are served Blue Goo Energy Cocktails and divided into random groups of seven. Each group receives a different dish inspired by a basic, human, Maslow-ian need.

Upon receiving a box marked PRIVACY, one group starts writing down their most used passwords in mayonnaise sauce while blindfolded. Another group is served EXTRA BATTERY PACK and begins creating a field of energy by shouting sounds like 'bzzzz, bzzzz, bzzzz,' 'beep, beep beep' and collectively stirring a pot of curry. The TINDER TENDERS recipe box group starts rating pictures of each other's exes following up with a 'rage against the ex' ritual where they use hammers to pummel an oversized cracker into breadcrumb toppings. The last group starts a live-stream feed and makes duck faces while preparing beautifully laid out food on bright, glowing screens, all so as to be LIKED.

ALIENS
Stop! It's time to cool
down our Motherboards!

The beep and blip sounds stop to make place for the buzzing sound of the spinning fans as the aliens pass around frozen, vacuum-sealed packs of chocolate mousse.

ALIENS
We have overheated our circuits tonight! The only way to absorb coolness into human bodies is by pressing these packs onto our skin!

Guests begin to apply the frozen desserts to their face, underarms, legs. Laughter and excitement breaks out as the cold chocolate mousse defrosts and is cut open to be sucked out with a straw and enjoyed to the fullest.

ALIENS
Let us all log out! Log
out! Log out! Log out!

GUESTS (chanting together)
Log out! Log out! Log out!
The evening comes to a close. Guests mingle, linger, drink, exit slowly.

ZOOM INTO:

Corner of the space. Guests no. 28 and 29 speak to each other, reviewing the evening.

Emilie Baltz and Klasien van de Zandschulp
'Food: Not For Eating'

GUEST no. 28
Gosh, I never realised how easily
I follow instructions...

END.

Credits:
Eat Tech Kitchen was created by Emilie
Baltz and Klasien van de Zandschulp

Programming by Arjan
Scherpenisse, Botsquad
Food by Matthias van der Nagel

Awards and selections:
IDFA DocLab Immersive Non-Fiction award
Sundance New Frontier Story Lab
MIT Open Doclab Immersive
Network R&D Program

Photography and video:
Nichon Glerum, Emilie Baltz,
Klasien van de Zandschulp

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Programs with a grant from Turner.

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Through her work, Emilie Baltz uses
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Mornings, The Today Show, NBC, Wall
Street Journal, D-Crit and more.
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incubator hosted at the New Museum and
is also part of the founding faculty of
the School of Visual Arts Products of
Design MFA programme, as well as the
founder of the Food Design Studio at
Pratt Institute.
    Baltz is the author of the award-
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Delicious Recipes for the Lowbrow
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Her work explores sensory design,
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human interaction and (radical)
thoughts around our daily technology
consumption. She is also active as a
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events, labs and exhibitions. Van de
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Sundance New Frontier Story Lab (USA,
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2018, 2019). She recently won the IDFA
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#Foodporn in the Age of Coronavirus (an Epilogue) [1]

It is impossible to talk about food in the first half of 2020 without acknowledging the global coronavirus pandemic and the global structural inequalities that it has thrown into sharp relief.[2] In a few swift months, we have seen unexpected death, pain and suffering caused by a medical and health-care infrastructure that has been crippled by measuring care in money.[3] The wealthiest economies in the world have suddenly experienced economic slowdowns, and the weaker economies have had to perform the cruel algebra of life, choosing between letting people die of infection or of starvation.[4] Education systems have experienced the sudden shock of social distancing,[5] and consumer cultures came almost to a standstill as people realised the pathology of touch as well as excessive consumption.[6] We started to live our lives online as the world slowed down, people retreated into their homes, and those who were privileged enough established a new normal in the safety of their gated communities and stored resources.

Once everybody had stored enough toilet paper, hoarded enough provisions to fend off a siege, and established the creature comforts of quotidian living, life shifted online.[7] In that shift, social media feeds slowly saw a surge of food-related posts. People started discovering their kitchens and marvelling at the alchemy and chemistry of cooking as almost everyone worked from home, gender and class roles reversed,[8] and invisible domestic workers were absent. Numerous social media groups discussing culinary skills, cooking techniques, and recipe exchange became du jour. 'Comfort cooking' and 'corona baking'[9] became actual hashtags, as people started showing off the cakes, pastries, breads, and delicacies[10] that they

started whipping up like talismans against this pandemic. Home cooks became master chefs, Instagram filters for food had a sudden upsurge in usage, and as people tried to hide their 'corona hair,' their carefully sculpted selfies were replaced by beautifully staged plates of food, waiting to be eaten.

The hashtag #foodporn was almost constantly trending during the first few months of the COVID-19 lockdowns, as food became the indulgence that only a few could afford and perversely show off. In her research on selfies and influencers, anthropologist Crystal Abidin[11] has theorised that at the heart of selfies is inauthenticity. She reminds us that the selfie does not pretend to be true-to-life, but rather reveals the capacity to manipulate and recreate the self which peeks through the filtered lens of the digital camera. Elsewhere, I have written[12] that the selfie has to be seen not as an individual object but a networked digital object that creates the self in plenty—as the selfie is stored, it travels, creating multiple copies of itself, replicating with virulent contagion over the networks of circulation that it is created for. The selfie is obscene not because of its content but because of its plentiful and perverse plenty; the creation of many from the one without any human aid.

The same holds true for #foodporn. In itself, it is already a hugely problematic genre that stages food as an object of sensual desire rather than nutrition. It marks a particular condition of plenty where you can reduce food to an image. It is a hyper-aestheticisation of food—filtered in all its full-frontal glory—that no longer has to worry about the more banal anxieties of hunger or nutrition. The restaurant images of appetising food, matched by 'home-chefs' recreating

masterful dishes, have contributed hugely to this genre. The moment of absolute obscenity is in 'foodporn,' where food is staged only to be photographed, not eaten. There has been a shameless practice of adding colours, additives, plastics and other inedible components to make food photographs look better, discarded once the image has been captured. [13] Even in normal times, when global inequity when it comes to food and hunger has been noticeable and often commented on, foodporn remains a genre that reeks of privilege, if not apathy.

However, in times of COVID-19, these foodporn practices took up an entirely new space. In the flattened space of our black-mirrored media, #foodporn posts were punctuated by pictures of migrants walking home—without food, without means, in fear of police violence—fleeing the infected cities in hope of slowing starvation and finding food and shelter. For every perfectly photographed dish, there were reports of millions of people experiencing hunger, malnutrition, and, in some cases, mortality, because of a lack of adequate food in the face of unplanned lockdowns. The stories of good Samaritans doing food distribution and feeding the poor and the homeless in large parts of the world were lost in the deluge of #foodporn that unapologetically, without reflexivity or irony, flooded our social timeline, as people felt heroic in mastering a recipe or finding a creative replacement for an exotic ingredient that their local grocery no longer stored.

This extreme oscillation of the two subjects of food—one marked by obscene plenty and the other by extreme deprivation—cohabiting in the same space of our social media spectacles requires a deeper reading. I look at this food that is not just aesthetisised but weaponised, creating a world of excessive indulgence, and faked aesthetics, where food is treated, processed, manipulated and rehearsed to appear aspirational and unattainable, as symptomatic of a technological plenty that Clemens Apprich calls the 'paranoia of scarcity.' [14] In his conception of technological paranoia, Apprich shows how simulations of the excess on social media are often symptomatic deflection of attention from the scarcity of the same object. Or, as commonsense social media knowledge goes, if two people are excessively displaying their affection for each other online, posing pictures of continued togetherness, you can safely assume that all is not well in Bliss-ville. The paranoid subject, in Apprich's framework, is primarily paranoid about their own memory and judgement. The paranoid subject hoards, collects, obsessively records, documents, counts, and narrates the world around them because they are scared that they might forget what it is that they have to be scared of; scared of losing what they do not remember as having. Technological paranoia is manifest in a subject documenting what they fear they are losing the most, relegating the fickleness of memory to conditions of robust storage.

Foodporn during COVID-19 can be understood as a paranoid overproduction of a thing that we know is going to disappear, or is becoming scarce. It creates food as a fantasy, food as visuality, food as so excessively visible that we stop worrying about the politics of food and the paucity of resources that are so critically experienced and witnessed during the crisis. It is a question worth asking: in times when we are experiencing global hunger and the threat of human-made climate change to the entire food resources of the planet, why has foodporn become such a trending and dominant genre? How is it that the more we see and hear of the hunger and waste around us, the more we find ourselves willing to participate in the fake and frivolous visuals that transform food from vital resource into indulgent pleasure?

For an answer, I turn to Vilém Flusser, who, in his lectures on the crisis of linearity, offered a deceptively simple aphorism. Flusser makes the distinction between a traditional and technical image.[15] The traditional image, for Flusser, is the first degree of imagination that helps us move from image to writing. Flusser argues that the most important primeval prehistoric medium was the image—like cave drawings or hieroglyphs. The image recalled a complex and confusing multi-dimensional world and rendered it flat on a two-dimensional surface. The image functioned first as a map or a window to the world. It gave the world a significance, but not necessarily an explanation. Within an image, we get a sense of how things are related, but those relationships are not offered as an explanation of the image. This, according to Flusser, is the first-degree imagination and is the order of magic and myth. The world of traditional images is thus an enchanted world, though not necessarily an illusory one. The image stands between the human being and the world, more like an opaque screen than writing, which is often made to perform the role of a map. This is why we get idolatry or even the Marxist notion of reification, which produces the image as hallucination.

Flusser argues that to break away from this magical nature of the image, and to move away from its unfixed malleability, we turned to writing. Writing, to begin with, is a critique of ideology. It attempts to tear down images, and gets rid of myths and superstition. The first task of writing is deconstruction. It begins with the project of civilisation and enlightenment, and rearranges the two-dimensional series of images into uni-dimensional linearity. Tim Ingold[16] characterises this as the 'secret lives of lines,' showing us how lines impose an order and structure that seek to remove the unwanted or the unpredictable in the

guise of ordering. The process of analysis is withholding of one dimension. Linear writing transcodes the circular repetitive time of magic and myth into the linear time of facts and history. We conceive of history as the chronological linearity of before after—it leads to the production of historical consciousness and conceptual thinking. This relationship of cause and effect enables conceptual to replace imaginative thinking and imagination; sensations, myths, and superstitions are replaced by explanations. Explanations displace magic and carry out a disenchantment of the world through enlightenment. It is not enough that the world is mysteriously significant; it also has to be meaningful because without meaning, we are left with superstition. In Western history, the antagonism between linearity, image, and imagination led to the production of the image becoming more rational and writing becoming more imaginative, thus leading to what Flusser calls the first order of imagination.

The second order of imagination is ushered by linearity discursively dismantling imagination, as well as dismantling itself. When critique starts critiquing not just the image but itself, we reach a second order of imagination. This is what the German culture philosophers Max Horkheimer and Theodor Adorno[17] described as the 'dialectic of enlightenment'—they illustrate how rationality was used to overcome myth and magic, and thus became the biggest myth of them all. As they would have it, this myth of the rational led to the production of the concentration camps of Auschwitz. In their thesis on the Holocaust, Auschwitz is not a deviation from enlightenment reason but its logical conclusion: a state where enlightenment reason dismantled itself.
For Flusser, this 'suicide of reasons' produces a new kind of image—the technological image. He takes photography as a first example

of it. Photography is not antagonistic to writing as painting was. Photography transcodes text into images by two steps: first, analysing lines by reducing it to points and pixels; and second, synthesising them into concrete images. They are abstractions, but concrete abstractions. For me, they signal the end of linear time, of history, of cause-and-effect, of meaning. Instead, they give us randomness, statistical imagination, and computation.

This technological image presents a universe that cannot be grasped from the perspective of writing and images. Cultural conservatism will have nothing to say about the technological images because, for Flusser, they embody a second-degree imagination that is post-historical, uncertain, and synthesised by new codes. The technological image has an underlying utopianism where the crisis of meaning is suspended. It allows for a postmodern aesthetic where texts become incomprehensible—reaching a new stage of 'textolatory' (a form of textual idolatry)—through deep Hermeticism, thus positioning the technological image as the centre of mass culture.

For me, the emergence of foodporn has to be read as a manifestation of this technological image. It aligns itself with mass consumption, emancipating the human into a new state—the homo ludens, the playful human. The technological image of foodporn is part fantasy, antagonistic to history, freed of explanation, and bereft of the responsibilities of mythmaking, becoming a way by which our thinking, critical, and discerning facilities can now be disposed, either on to intelligent technologies or bodies that are disposable except for their invisible labour. Foodporn is not just the digitisation of food; it is the rendering of food as pure affect—which means it has no durability; it is merely a discharge. It takes the materiality of a scarce produce like food, converts it into a form of white noise, and circulates it as a

myth that blocks out all the cries, screams, agitations, and protests that surround the politics and materiality of food, leaving it as an orgasmic simulation of an aspirational image.

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statements/2020/statement-recovery-
must-lead-to-a-different-economy,-
an-economy-of-well-being.

Footnotes

[1] All other contributions in this
issue of *APRIA* were written
in pre-coronavirus time.

[2] Neve Gordon and Penny Green in their
analysis of the unfolding COVID-19
crisis penned a poignant editorial
looking at the ways in which
'structural violence' is unleashed
upon those most vulnerable, as
states take control of the
epidemic. 'The Coronavirus Crisis
Affects Us All,' *OpenDemocracy*,
April 21, 2020, accessed July 14,
2020, https://www.opendemocracy.
net/en/can-europe-make-it/
acceleration-death-precipitated-
covid-19-exposes-state-crime/.

[3] In a statement during the pandemic,
Dr. Hans Henri P. Klug, the World
Health Organization's Regional
Director for Europe, pointed out
the unpreparedness and the crippling
of healthcare in some of the
wealthiest countries in the world
when dealing with the coronavirus.
World Health Organization,
'Statement—Recovery Must Lead to
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sections/statements/2020/statement-
recovery-must-lead-to-a-different-
economy,-an-economy-of-well-being.

[4] Soutik Biswas, reporting for the
BBC from India, points out after
one of the largest exoduses of
internally dislocated migrant
workers in India, that they had to
choose between starvation and risk
of infection, when their livelihoods
were halted abruptly and the
state failed to provide adequate
support or even food. 'Coronavirus:
India's Pandemic Lockdown Turns
into a Human Tragedy,' *BBC,*
March 30, 2020, accessed July
14, 2020, https://www.bbc.com/
news/world-asia-india-52086274.

[5] UNESCO estimates that the different
global lockdowns have impacted
more than 60% of schools adversely
around the globe, often leading to
absolute disruption and suspension
in many of the poorer countries
struggling to keep up with ICT
infrastructure. 'Education: From
Disruption to Recovery,' accessed
July 14, 2020, https://en.unesco.
org/covid19/educationresponse.

[6] Anne Field, reporting for *Forbes*,
reports that the new restrictions
are making consumers consider their
consumption patterns and reflect on
how their choices and unthinking
consumption contribute to the
global inequalities fuelled by the
coronavirus crisis. 'Is COVID-19
Causing More Socially Responsible
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24, 2020, accessed July 14, 2020, https://www.forbes.com/sites/annefield/2020/05/24/is-covid-19-causing-more-socially-responsible-consumer-behavior/#3965733464d6.

[7] In her three-part webinar for *Crisis Education: Critical Education* for the ArtEZ University of the Arts, Seda Gürses calls this the new phenomenon 'Rectangles-R-Us,' a condition where all our lives get flattened on to the bordered rectangles of visual frames on our digital devices.

[8] Somak Ghoshal, writing for *The Mint*, shows how in India, where traditional gender roles ascribe cooking to women, men cooped up in the house suddenly took valorised positions as home chefs. Similar reports and trends are reported around the world, where food has been gendered in its domesticity. 'Did Covid-19 Push Indian Men into the Kitchen?' *LiveMint*, April 18, 2020, accessed July 14, 2020, https://www.livemint.com/mint-lounge/features/did-covid-19-push-indian-men-into-the-kitchen-11587128045480.html.

[9] *The Economist* tracks the trend of people baking in coronavirus times, and gives a glimpse of the pockets and structures of privilege that can be traced around breakout hotspots. 'Home Baking Is on the Rise, Thanks to Coronavirus Lockdowns,' *The Economist*, April 8, 2020, https://www.economist.com/graphic-detail/2020/04/08/home-baking-is-on-the-rise-thanks-to-coronavirus-lockdowns.

[10] Emily Drefuss' evocative, visceral, and reflective essay on the materiality of coronavirus baking and how it makes sense of the experience of crisis is a great thesis on understanding this not as a stand-alone indulgence but as a negotiation with an existential state of being. 'Why Bread Broke the Internet,' *The Correspondent*, May 25, 2020, accessed July 14, 2020, https://thecorrespondent.com/486/kneading-sanity-and-stability-why-bread-broke-the-internet/521217641538-822ec66d.

[11] Crystal Abidin, '"Aren't These Just Young, Rich Women Doing Vain Things Online?": Influencer Selfies as Subversive Frivolity,' *Social Media + Society* (2016), https://doi.org/10.1177/2056305116641342.

[12] Nishant Shah, 'The Selfie Is as Selfie Does: Three Propositions for the Selfie in the Digital Turn,' in: *Photography in India: From Archives to Contemporary Practice*, ed. Aileen Blaney and Chinar Shar, 149-161 (London: Bloomsbury, 2018).

[13] Amanda Mull provides a deep insight into the aesthetics of Instagram food influencer stunts as she analyses the shift from 'practice into aesthetics.' 'Instagram Food Is a Sad, Sparkly Life,' *Eater*, July 6, 2017, https://www.eater.com/2017/7/6/15925940/instagram-influencers-cronuts-milkshakes-burgers.

[14] Clemens Apprich, 'Data Paranoia: How to Make Sense of Pattern Discrimination,' in: *Pattern Discrimination*, ed. Götz Bachman et al., 99-123 (Minneapolis: University of Minneapolis, 2018).

[15] Vilém Flusser, *Into the Universe of Technical Images*, trans. Nancy Ann Roth (Minneapolis: University of Minneapolis Press, 2011).

[16] Tim Ingold, *Lines: A Brief History* (London: Routledge, 2007).

[17] Max Horkheimer and Theodor Adorno, *Dialectic of Enlightenment*, trans. Edmund Jephcott (Stanford: Stanford University Press, 2002).

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Colophon

ArtEZ University of the Arts

ArtEZ Press

ArtEZ studium generale

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