

Foods of the future

Gastropolitics and climate change in the Anthropocene

A Master's Thesis for the Degree of Master of Arts (120 credits) in Visual Culture

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Abstract

Human existence depends on a functioning food system; today's food chain is cracking and alternative foods are being presented to the public. This thesis discusses how future food can be part of a greater discourse of climate change in the Anthropocene. Using three case studies of future food: 'The Next Menu', Huel and Project Nourished I investigate how future food is presented and what hidden meanings hides behind the imagery and appearance of these three examples. In addition to this I use Filippo Tommaso Marinetti's book *The Futurist Cookbook* as a historical example to discuss the meaning of technology and efficiency in the futuristic narrative. The theoretical framework for this thesis consist of different definitions and critiques of the Anthropocene, Peter Weibel's concept of exoevolution, as well as the concepts of transhumanism, posthumanism, Mark Fisher's capital realism and gastropolitics to discuss the relationship between human, nature and technology. The analysis falls into a discussion where I conclude that there is a relationship between human and nature and body image in the empirical material. Showing how the capitalist system have a hold on humanity. And further questioning what we are really fighting for: capitalism or climate change?

Keywords: Future food, Anthropocene, Capital realism, Climate change, Gastropolitics

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Introduction

What will the future hold? Will we abandon earth to inhabit some other planet in space? Will our resources be completely exhausted or will we find a way to continue our lives on earth? When it comes to the future we love to speculate, concerning our living situations, transports, our food consumption, simply, our way of life. Different forecasts of the future have been presented and rejected. These projections can be utopian or dystopian, as a way to prevent the apocalypse or in the aftermath of an apocalypse. This thesis will look at the future of food consumption. Will insects be our main source for protein? Will we get all the nutrients we need from a single pill? Or maybe we will completely turn to food products grown in the laboratory? This thesis will take a closer look at different expressions and representations of the future of food, investigating the visual culture of future foods. Starting with Filippo Tommaso Marinetti's futuristic manifesto in The Futurist Cookbook from 1932, where Marinetti explain what future food should consist of. The thesis will then continue to analyse three case studies of future food projections of today. The first is a gastronomical art project called 'The Next Menu', which is a concept dinner that speculate on what seafood dinners will look like in 30 years. The second case study is a substitute food-powder made by the British company Huel, this powder product includes all the nutrients, fats and proteins the human body needs. The third case study is a virtual reality experience of food in Project Nourished, simulating an eating experience where the mind is being tricked into thinking it is eating something it is not, this simulation comes with an edible food cube.

This thesis will not be exploring the everyday European food culture. It will not look at the future of gourmet food, even if some of the examples may be incorporated in that tradition in the future. Rather this thesis will look into what we can call an extreme food culture or a fringe food culture, call it apocalyptic food or survival food. The foods main purpose is to be nutritious, innovative, sustainable and ground-breaking. In some cases, it appears that looks and taste come secondary, in other cases it is the opposite. Based on the case studies mentioned above this thesis will discuss future food in relation to climate change in the Anthropocene and further illuminate the political dimension of food. The theoretical framework for this discussion will mainly consist of Peter Weibel's concept of exo-evolution, Mark Fisher's capital realism and the concept of gastropolitics.

Background and relevance

Today it is generally accepted that we must change our eating habits in the future. The way we live today is taking its toll on our planet and resources are declining. In the western countries, the tradition of eating algae and insects are slowly manifesting itself, an eating tradition that have been practiced for hundreds of years in Japan, Australia, Thailand, Cambodia, Nigeria and Mexico, to name a few. Looking back at European food traditions, this was not thought of as food before. Television shows like Fear Factor have contributed to the stigma around eating insects as something that is disgusting, a punishment rather than pleasurable. Preparation of bugs have despite this reached menus in restaurants all over the world as an alternative protein source and it have been considered to be a delicacy in many countries for a long time. The eating of insects is perhaps the most common image of future food today, alongside the image of a complete vegetarian or vegan diet. The eating of insects is a well-tried-out alternative that could easily be a reality worldwide, compared to the lab grown meat that is still being developed and tested in labs. The purpose of these two alternatives is of course grounded in the realisation of how much harm the meat industry causes our environment. It is a well-known fact today that the world's population, especially in western countries, eat too much meat and that our environment would benefit from us decreasing our meat consumption. Research shows that the meat industry generates as much greenhouse gas emissions as all transportation vehicles combined, that is airplanes, cars, ships and so on. It needs large amounts of land and water to operate, more specifically: 30% of the planet's land and 25% of the freshwater. It is from this situation that lab grown meat appears, along with impossible burgers, a plant based hamburger that 'bleeds' like a real burger. Ultimately, it is a change of today's food system scientists and researchers hope to see in the future.

But this particular image of the future of food has not always looked the same. Looking back on the 1950s and 1960s, during the heyday of futuristic aesthetics and space programmes, future food looked like astronaut food. Meal-pills and food being prepared and served by robots and vending machines could be seen in the popular animated television show *The Jetsons*, first aired between 1962-1963. The meal-pill could also be seen in the 1930s musical *Just imagine* and in a cartoon by the Automobile Manufacturers Association in 1956 called *Your Safety First*. It was also featured in The American comic *Closer Than We Think* (1958-1963). Taking a bit more science

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¹ L. Unger, '4-H/Youth Entomology: Insect Snacks From Around the World', *College of Agriculture*, Food and Environment [website], 2009, https://entomology.ca.uky.edu/content/insect-snacks-around-world (accessed 5 Apr. 2018).

fictional liberation they also depicted crops bigger than people, meat plants and factory farms.² Although in 2018, this does not appear that far from reality, where meat and fish is grown in labs and agriculture uses genetically modified organisms (GMO) to improve crops.

When thinking about the future it seems inevitable to picture the flying cars and robotic assistants a la The Jetsons family. The futuristic aesthetic of modernism, 1950s and 1960s did have a big impact on depictions of the future, and it still has today. Although, this image has coexisted with a more dystopian image of the future. Due to the uncertainties of the future in the 1970s, there was a call for technological development and innovations that focused on earthly life and the environment.³ At the same time utopian images of yesterday's tomorrow was used as a distraction from reality, a retro-futurism nostalgia, looking back at the imagined tomorrow of the early modernism. In 1975 theologian Martin E. Marty said 'the past is back in favor because the present is too unattractive to provide a base for looking with hope into the future.'⁴

The last decades, most films about the future depict a dystopian world in the middle of, or in the aftermath of nuclear war, an environmental disaster, an alien invasion or a war against robots. Planet of the Apes, Mad Max, Soylent Green, Wall-E, The Terminator, The Hunger Games, War of the Worlds, Alien, to name few on this long list. In the movie world, it seems that utopia cannot exist without some kind of dystopia, looking at more utopian movies like Metropolis and Avatar. The futuristic setting is explored all through pop culture, in games, music, comics, art and books. This fascination of the future is grounded in the unknown. Creators can use endless imagination and creativity in picturing the future and audiences like to be presented with different scenarios of it. The same goes for future food, even if this thesis will focus on future food of reality, there is still a dimension of imagination in picturing what future food will look like and some are inspired by fictional prototypes.

Aim and research question

With this thesis, I plan to investigate three different projections and illustrations of future food. Using these depictions my intention is to look at future foods as an expression of the Anthropocene and further explore the political dimension of food connected to climate change. By studying visual representations as well as visual appearance of future foods I want to look at

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² M. Novak, '42 Visions For Tomorrow From The Golden Age of Futurism', *Gizmodo* [website], 2015, https://gizmodo.com/42-visions-for-tomorrow-from-the-golden-age-of-futurism-1683553063 (accessed 5 Apr. 2018).

³ E. Guffey, Retro: The Culture of Revival, London, Alexander Street Press, 2006, pp. 154-155.

⁴ Guffey, Retro: The Culture of Revival, s. 153.

the deeper questions and patterns that hides behind the case studies beyond the image's intention. I intend to look at the depiction of future food today and examine how they relate back to past representations, more specifically through the example of *The Futurist Cookbook*. Through the empirical material of 'The Next Menu', Huel and Project Nourished I question what the relationship between future food, the environment, the human body, capitalism and technology looks like in the Anthropocene, and further questioning what we prioritise when we plan for the future, discussing the relationship of nature and culture. This multifaceted study aims to investigate the political dimensions of food through gastropolitics and how this presents itself in representations and the appearances of future food, investigating what metanarratives are present in future food and the discourse surrounding it.

Empirical material and delimitations

The empirical material for this thesis consists of three case studies, each of these are examples of futuristic food. I will here look at representations through videos, images and text, my focus will be on the actual appearance of the food or of the eating experience. The images included in this study will be used to decode the discourse surrounding these future foods, some images will be analysed in more detail than others, depending on what the image convey. In some cases, the formal aspects of the food or the eating process will be investigated, in others the representations of the food will be analysed.

These case studies are divided into sections called Gastropolitical foodart, Fast food and Sensory food. The first is a New York based gastronomical art project that makes themed dinner-party's, called Bad Taste. I will here focus on the "The Next Menu' featured on the website of Bad Taste and the imagery of this, which is one of many concept dinners that Bad Taste have done. In "The Next Menu' I have decided to focus on one specific dish from this five-dish menu, as a way of delimitating the material, this dish is called 'Five futures' and it will be the main empirical material for the first case study. Through the analysis I will at times refer to the whole menu of 'The Next Menu', in other cases I will analyse just the dish 'Five futures', to avoid confusing I will mention which part is discussed in each case. The second case study is a powdered meal product called Huel, for this study I will primarily analyse the images on their website and Instagram. The last case study is Project Nourished, which is a virtual reality experience of eating. Here I will analyse a video and their website. I will use *The Futurist Cookbook* written by Filippo Tommaso Marinetti (1932) as a secondary material to put in relation to the previous material. This historical material will function as a starting point and a point of reference in the analysis of the empirical material. I

will not look at Marinetti's artistic work in this thesis, rather I will focus on the gastropolitical statements mediated through this work.

Delimitations for the empirical material have been to focus on real food products. Meaning actual foods of reality and not from fictional representations such as Science fiction films, comics or novels. The exchange between fiction and reality will be taken into consideration throughout this thesis though. The main focus, of the thesis will be the portrayal of the food products or the food eating philosophy presented through the materials collected.

Other delimitations are made by mainly focusing on the visual representations of the food. I do not intend to make a detailed semiotic analysis of these images, rather I focus on the visual appearance and visual representation of the food and the discourse surrounding it. To do this I will use texts in addition to my visual material that I find relevant to bring the discussion forward. Delimitations have been made in the empirical material as I have chosen to focus on imagery of the food. More specifically I look at commercial images for Project Nourished and Huel in the form of a video in the former and Instagram images and website images for the latter. For 'Five futures', I have chosen to look at an image featured on the website, this image is put on the website for publicity purposes. My focal point in this case though will be on the appearance of the food and the different types of futures these foods represent. The visual material in this thesis will then be put in relation to the literal material of *The Futurist Cookbook* to discuss the type of future they represent. I use a combination of images, videos and text as my empirical material. I will treat these as part of a narrative of the Anthropocene and climate change and use these to bring forward questions on future existence and survival of humans and the planet.

Theory

This study started out as a study solely about futuristic food representations and the connection to futuristic representations of the past, there is still an element of that in the thesis, but the longer into the subject of future food I got, the more political my topic became.

My main concept through this thesis is climate change in the Anthropocene. This is the discussion surrounding the human being as the leading force on earth, in the universe really. Through different definitions and critiques of this concept I will discuss the relationship between human and nature through the example of future food, using arguments from human ecologists Andreas Malm and Alf Hornborg and historian Dipesh Chakrabarty, to name a few. In relation to the Anthropocene I will use the culture theorist Mark Fisher's concept of capital realism, which is the notion that we are blinded by the capitalistic system, convinced that this system will

continue to shape our future and that this is the only viable economical system there is. In addition to this Peter Weibel's concept of exo-evolution will be used to discuss the idea that technology will save humanity. Peter Weibel is an Austrian theoretician, he developed this idea for an exhibition with the same name at ZKM Center for Art and Media Karlsruhe in 2015-2016. The concept is an extension of the French philosopher Michel Serres' idea of Exo-Darwinism. Exo-evolution is an evolution outside of the human body, where technological revolution function as an external factor that elevate the human body to new levels. With this idea I will also discuss the concepts of transhumanism and posthumanism and the breaking down of boundaries between nature and human and machine.

Another theoretical framework I will use in this thesis is the concept of gastropolitics, which is a concept first used by anthropologist Arjun Appadurai in 1981, in the article 'gastro-politics in Hindu South Asia', where he defines it as cultural and economic conflicts around social transactions of food. Gastropolitics threat food as a political tool and this thesis will discuss the political dimension of food through this concept, exploring how food can express ideologies and attitudes. Throughout the thesis different theoretical perspectives and concepts connected to imagery and visuality will be used to discuss the visual and perceptional aspects of the empirical material. I will here turn to Nicholas Mirzoeff's definition of visuality and Roland Barthes' idea of the 'rethorics of images.' In addition to this I will also use Jean Baudrillard's definition of simulacra and hyperreality. These ideas will be elaborated on in more detail in chapter two.

Method

This visual study will focus on the images surrounding us in everyday life concerning our future food practices through case studies. This qualitative study will use three case studies to examine the images, videos and texts and further try to understand the patterns that appear in these representations and appearances of future food, these will then be compared to each other.

The thesis will use history as a tool to understand the present, or in this case the way we picture our future, a process explained by Lars-Eric Jönsson and Fredrik Nilsson in *Kulturhistoria: En etnologisk metodbok*. Historical material like Marinetti's book, will be used as a historical referencing point in the attempt to speculate why we picture the future the way we do. I make no

⁵ P. Weibel, 'Peter Weibel: Introduction to the exhibition – Exo-Evolution', ZKM, [website], 2015, https://zkm.de/en/peter-weibel-introduction-to-the-exhibition (accessed 23 March 2018)

⁶ A. Appadurai, 'gastro-politics in Hindu South Asia', *Journal of the American Ethnological Society*, vol. 8, no. 3, 1981, p. 495. Available from: AnthroSource (accessed 19 Aug. 2018)

⁷ L.E. Jönsson & F. Nilsson (ed), *Kulturhistoria*: En etnologisk metodbok (transl. Culture History: An Ethnological Methodology Book), Lund, Lunds Universitet, 2017, pp. 9-10.

claim to suggest that *The Futurist Cookbook* is the only source of reason why our image of the future looks the way it does, but I believe it plays a part in it. This method looks into history to find answers today, this will be done by repeatedly putting the case studies in relation to the historical context through Marinetti's book.

Through this thesis I will look at the imagery in two different ways. First I attempt to unveil the hidden meanings of the image, the second part is to see what image of the future is portrayed. Through a brief semiotic reading of the images, I can read how these hidden meanings are mediated through juxtapositions, or the binary opposites as Roland Barthes and Levi Straus call it. Binary opposites is the idea that something can only be defined in relation to something else.8 This will be useful in my discussion of images collected from Huel's Instagram feed. When I talk about the hidden meanings, I talk about both the intentionally hidden meanings and unintentionally hidden meanings. I argue there is always an intention with an image or a visual appearance, but most importantly that there is a message behind every image, intentional or unintentional meanings, that we must deduce through the study of images. That being said, I do not intend to make detailed semiotic readings of each image in this study, as the actual image is not the thing being analysed in this thesis. Instead I focus on how these future foods are being depicted and the actual look of the food, meaning I look at the overall appearance and representation of the food and what this says about the intention of the food and how this relate to climate change in the Anthropocene, looking at the meanings behind the images and the appearances of food.

Discourse analysis will be used to expose the power relations that is produced in these images of the future, as part of the environmental discourse. This will function as a method to figure out the construction of ideologies in my material and to understand the ideological discourses that hides behind the images. Through the concepts of the Anthropocene and exo-evolution the power relations and dichotomies of man and nature and man and technology will be investigated, this is part of the discursive formation of the environmental discourse. A discursive formation will here be used in the terms of Michel Foucault, who defines discursive formations as regularities, for example correlations, positions or functions. Nelson Phillips and Cynthia Hardy explain that issues surrounding climate change and environmental destructions has

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⁸ G. Sonesson, Bildbetydelser: Inledning till bildsemiotiken som vetenskap, Lund, Studentlitteratur, 1992, pp. 50, 190.

⁹ B. Ehn & O. Löfgren, Kulturanalyser (trans. Culture analysis), Malmö, Gleerups Utbildning AB, 2001, p. 13.

¹⁰ G. Rose, Visual Methodologies – An Introduction to the Interpretation of Visual Medias, 2nd edn. London, SAGE Publications, 2007, p. 143.

led to a new understanding of the relationship of business and the environment. Environmental discourse is also an important part of the recent development of an anticapitalism discourse and has led to a strong oppositional discourse to the dominant-and usually positive-globalization discourse.¹¹

It is within this discourse that my research will take place, questioning the capitalist system and its effects on the environment as well as on the pursuit of human and planetary survival.

Previous research

There are plenty of studies regarding futuristic pop culture, art and technologies, studies regarding the future of food does occur, but not as frequently. By making a quick search on the internet you can find information about the up-coming future food trends, research made within the food industry and innovative solutions for the problems we may face in the future, or in some cases already are. Within the academic field there are not much research on the topic of future food in relation to climate change from a visual perspective. Here is where this thesis comes in, to fill the gap of up to date academic research of this topic within the visual culture field.

Looking at the visual representations and the visual appearances of food is a rather unexplored topic within visual culture. Not even the discipline of food studies seems to spend that much research on visual aspects of food. The book *Food Studies: An Introduction to Research Methods* written by Jeff Miller and Jonathan Deutsch do not even mention visual studies of food. Some researchers that do use visual material to study food is critical literacy teacher Signe Rousseau and food studies scholar Fabio Parasecoli. Rousseau in her book *Food Media: Celebrity Chefs and the Politics of Everyday Interference* and her essay on 'Food Representations', both written in 2012 and Parasecoli in his books *Bite Me* (2008) and *Feasting Our Eyes: Food Films and cultural Identity in the United States* (2016). Both researchers write about representations of food in pop culture, cookbooks, television and magazines. Another example is the French philosopher Roland Barthes, who looks at the consumption of food through images in *Mythologies* from 1957. I will not only look at the representations of food, but I will also study the appearance of the future food in relation to past representations of future food.

The issue of future food, climate change and food security is discussed in both scientific reports, within different fields of research within the academics, newspaper segments, blogs, the list goes on and on. This topic is very up-to-date and something that many scholars want to emphasize.

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¹¹ N. Phillips & C. Hardy, 'The Variety of Discourse Analysis', in *Discourse Analysis*, Thousand Oaks, SAGE Publications, 2011, p. 8. Available from: SAGE Research Methods (accessed 6 Aug. 2018).

Some studies incorporate the Anthropocene, like the conference paper Food Systems in the Age of the Anthropocene: Addressing Demands for Change from University of California at Berkeley in 2016. Another example is the American doctoral student in Theatre and Performance Studies, Shelby Brewster's essay 'Food Futures: Speculative Performance in the Anthropocene' written in 2017. This study come from a similar approach as this thesis and it will be incorporated in discussions further on. The main difference between this study and my thesis is my focus on foods that are suggested as real food, as real solutions to the food crisis and that is not only a commentary on this issue, some of my material is within the artistic field, but I argue that these are more solution oriented than merely artistic expressions. My study focuses more on the visual and political aspects compared to Brewster's study. Cammie Sublette, scholar in food studies and literature examines nostalgia and hedonism achieved through junk food in the zombie apocalypse narratives in motion pictures in her essay 'The Last Twinkie in the Universe: Culinary Hedonism and Nostalgia in Zombie Films' in 2016. Tapping into the discussion of human existence she elaborates on the meaning of capitalism in a post-apocalyptic landscape and the role that zombie narratives play in 'extended critical metaphors of capitalist consumption gone awry.' Food as a power tool is studied in art historians Lori Parks and Jennifer Yamashiro article 'Consumed: Food in The Hunger Games' from 2015, where they use the American film The Hunger Games as a visual and literal study object to discuss the power relations in food and further discuss the moral and political implications that food can carry. Connecting Michel Foucault's understanding of power, surveillance and the symbolism of memento mori to the divide between the rich and poor through food supply in *The Hunger Games*. These are some examples of research within the visual field that discusses representations of future food from a similar perspective as this study, looking at the politics of food and criticising the capitalistic system. This study will move away from fiction and look at future food representations in reality, something that separates this study from most visual food studies in the academics. Within visual culture this is a topic that has not been studied before. Also, the use of recent examples of future food brings this study up to date within the academic field.

Disposition

In the following chapter I will make a brief description of what past images of the future of food could look like and then continue to what we see for the future of food today. In this chapter I

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¹² C. Sublette, 'The Last Twinkie in the Universe: Culinary Hedonism and Nostalgia in Zombie Films', in C. Sublette & J. Martin (eds.), *Devouring Cultures – Perspectives on Food, Power, and Identity From the Zombie Apocalypse to Downton Abbey,* Fayetteville, The University of Arkansas Press, 2016, p. 166.

will also make an introduction of Filippo Tommaso Marinetti's *The Futurist Cookbook* and his vision for the future of food in the 1930s. Chapter two will consist of detailed descriptions of the empirical material divided up into segments called Gastropolitical foodart, Fast food and Sensory food, implemented with discussions connected to the different aspects of the material and comparisons amongst the three cases. Chapter three will then discuss climate change in the Anthropocene and human relation to nature and technology through the concept of exoevolution. The thesis concludes with a chapter in which I discuss the result of the thesis.

Chapter 1: This was the future - This 'is' the future

Late 1950s towards 1960s is referred to as the golden age of futurism. This was an effect of the launch of the Sputnik satellite in 1957 and the starting point of the so called space race, where nations tried to outperform each other with space travel programs. Space tourism was believed to be the future, a future that Elon Musk work towards today with SpaceX, launching a Tesla car into space to test the possibilities of commercial space travel. Because of the space race in the 1950s and 1960s and the moon landing in 1969, food companies started to use this space hype in order to promote sales, commercialising their products as the foods of the future. 13 Companies tried to develop food that was reminding people of space food, space travels and the life of an astronaut. Space Food Sticks and Tang are two products that were developed from the interest in the future and space during this time, a commercialisation of space, if you will. Space Food Sticks was first developed by Pillsbury in collaboration with NASA, to create a new space food. This chocolate energy bar was brought on Skylab 3 to space. Pillsbury later decided to commercialise this space food to the American public as Space Food Sticks, segmenting them towards people with an active lifestyle, to be eaten in between meals. ¹⁴ Tang is a product that is still around today, especially in Asian countries. It is a powder that you mix with water, much like Huel, in order to get at an orange juice drink. In the 1950s Tang commercials showcased the wholesome family by the dinner table, this changed in the 1960s when they started to ride the space age wave. The commercials incorporated astronauts on space travels drinking Tang. This was after NASA had brought Tang on the Gemini 4 spaceflight, thus turning Tang into space food, a rewarding sales point during the space age.

As mentioned in the introduction the image of the pill, the bar and the powder as the future of food has been around for a long time. This was part of the image for humanity's future, living in space, and the fascination of the astronaut life. If it were not for the lack of gravity, astronauts would sit down by a table eating regular food on their space travels. It all comes down to making solutions in order for astronaut's to eat whilst in space. There are actually food tutorials by astronauts placed on space stations posted on YouTube, that show how they deal with their eating situation every day.

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¹³ H. Dixler Canavan, 'From Tang to Dippin' Dots, How Retro Food (Incorrectly) Predicted the Future', *Eater*, [website], 15 sep. 2015, https://www.eater.com/2015/9/15/9323127/tang-dippin-dots-astronaut-ice-cream-space-food (accessed 28 May 2018).

¹⁴ N. Rose, 'Inside the Rise, Fall and Stoner Rebirth of Pillsbury's 70s Space Food', *Munchies*, 7 Oct. 2016, https://munchies.vice.com/en_us/article/nzk74q/inside-the-rise-fall-and-stoner-rebirth-of-pillsburys-70s-space-food (accessed 28 May 2018).

So why did we have to eat pills, powders and bars back in the comfort of our homes back on earth? Well, one thing this may be set out to change is the cooking of a meal, to make life more time efficient and productive, not wasting time on cooking a meal, to make more time to live life, in the end it seems to be all about efficiency. This leads us to what the futurist Filippo Tommaso Marinetti imagined the future of food to be.

The Futurist Cookbook

Filippo Tommaso Marinetti (1876-1944) wrote *The Futurist Cookbook* in 1932. He was an Italian-French poet and artist and the founder of the ideology of Futurism. ¹⁵ *The Futurist Cookbook* is part artistic manifesto and part cookbook. The purpose of the futurist cooking is to get the Italian people's eating habits to benefit their productivity, speed, heroism. The recipes in this book range from 'roast lamb in lion sauce' to 'fruit gathered in Eve's garden', although the most cited is probably 'ice cream on the moon'. As an artistic movement, the futurist cookbook proclaims an artistry in cooking. The book begins with a story where Marinetti and his futuristic friends create food sculptures in order for its beauty to convince his friend to not commit suicide. Food is considered to be the matter of which to create an artwork with in this particular book.

In this thesis the most interesting part of this cookbook is through the abolition of pasta. Marinetti argue that pasta is 'completely hostile to the vivacious spirit and passionate, generous, intuitive soul [...]' of the Italian people. He write about how the 'massive heaviness' of the pasta is bad for the Italian people, and that it makes the people slow and heavy. This goes against the futuristic belief for an agile way of living. Instead Marinetti proclaim a varied and original diet, also, he calls on chemistry to develop powders and pills, that contain all the calories, proteins, fats and vitamins the man needs. This is not suggested as a solution to the absence of pasta, rather it is suggested to reduce living costs, as the pills will be provided for free by the state. Machines will reduce workhours and this will according to Marinetti provide more time for people to study the arts. 17

The futurist movement was not only an artistic and literary one, it was an ideological movement that started with Marinetti's Futurist manifest in 1909. It centred around, speed, exhilaration, power, energy, vitality and change of mechanics and the modern life. Marinetti discarded the arts

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¹⁵ 'Filippo Tommaso Marinetti', *Britannica Academic*, Encyclopædia Britannica, 2017, https://academic-eb-com.ludwig.lub.lu.se/levels/collegiate/article/Filippo-Tommaso-Marinetti/50955 (accessed 26 July 2018).

¹⁶ F. T. Marinetti, *The Futurist Cookbook*, trans. S. Brill, London, Penguin Group, 2014, p. 34.

¹⁷ Marinetti, The Futurist Cookbook, pp. 36, 92.

of the past along with past tradition, culture and societies. He wanted to see cultural institutions such as museums, theatres and libraries destroyed. Marinetti proclaimed a replacement of the current society to a new society of change and innovation, this should be done through violence, conflict and speed. The Italian Futurism movement was through Marinetti closely connected to Benito Mussolini and Fascism. Marinetti called Fascism a 'natural extension of Futurism'. Marinetti's celebration of technology and the aesthetic of the machine developed into a desire to integrate art with the most advanced technologies, among them the technologies of warfare. The destruction of the bourgeoisie sphere would happen with the help of war, to Marinetti war was a 'great purification' of tradition. The Futurist Cookbook show Marinetti's desire to break down tradition.

Marinetti is by far not the first artist who work with food. Some artists use it in still life, some to compose a portrait like Renaissance painter Giuseppe Arcimboldo, others to create cheese sculptures like Dieter Roth. Some used it as a feminist statements like Judy Chicago's 'The Dinner Party' and others as part of relational art by cooking food in galleries like Rirkrit Tiravanija. The Futurist Cookbook is an artistic manifesto part of an artistic, political and ideological movement showing the political dimension of food. Marinetti is said to be the first artist to think of food preparation and food consumption as art. Although I argue that there have been chefs before this that experimented with food in an artistic way showing signs on food creativity and food art.

Today's future

With a rise in population all over the world and climate change we stand in front of a food crisis. By 2050 the world population is expected to reach 10 billion.²³ The problem is located in the food supply chain, and how we go about feeding the whole world's population after we have exhausted the current food system. As the ecosystem change (as a result of rising temperatures,

https://www.smithsonianmag.com/travel/food-art-cultural-travel-180961648/ (accessed 5 Aug. 2018).

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¹⁸ 'Futurism', *Britannica Academic*, Encyclopædia Britannica, 2017, https://academic-eb-com.ludwig.lub.lu.se/levels/collegiate/article/Futurism/35727 (accessed 26 July 2018).

H. Honour & J. Fleming, A World History of Art, Rev. 7th. edn. London, Laurence King, 2009, p. 790.

¹⁹ 'Filippo Tommaso Marinetti', *Britannica Academic*, Encyclopædia Britannica, 2017, https://academic-eb-com.ludwig.lub.lu.se/levels/collegiate/article/Filippo-Tommaso-Marinetti/50955 (accessed 26 July 2018).

²⁰ B. H. D. Buchloh & R. Krauss, '1909' in H. Foster et. al., *Art Since 1900: Modernism, Antimodernism, Postmodernism*, 2nd. rev. edn., London, Thames & Hudson, 2011, p. 96.

²¹ S. Butler, 'A Breif History of Food as Art', Smithsonian, 13 Jan. 2017,

²² Butler, 'A Breif History of Food as Art'

²³ FAO (UN), The future of food and agriculture – Trends and challenges, Rome, 2017, p. x.

deforestation and spoiled soil) the agriculture might not follow. Because we depend too much on agriculture for our food supply today, this forces us to change the food system as we know it. Today we have an abundant amount of food and we still cannot feed the whole population of earth. In 2017 800 million people suffered from malnutrition, yet the world's population is getting more overweight and during 2014 we throw away a third of our food.²⁴ There is a misallocation in the food system, where it is not able to provide food security for everyone.²⁵ One of the main reasons for this development is the profit oriented food companies that contribute to the climate change while using fertilisers and vast transportation routes. Summed up by Ivan Stefanić, professor at the Faculty of Agriculture in Osijek, Croatia and Filip Stefanić, undergraduate in International Relations: 'Considerable proportion of customers consume food which travels vast distances to get to their tables: naturally, off-season, and regardless of sustainability'. 26 They call for a paradigm shift, both in the economic and technological systems and a decentralisation in order for this to change. Today's economic paradigm is globalization which consist of trade, investments, migration and diffusion of knowledge. Corporations want cheap labour and consumers want to pay low prices for products and services. Although Štefanić and Stefanić argue that the future of food supply is not as easy as a question about supply and demand. They ask the long and complex question:

'Could we sustain the eating habits of those who have the money while feeding the exploding population in developing countries, in a deteriorating environment, dedicating considerable areas to produce energy plants while destroyed arable land is replaced with new one originating from deforested areas, while depleting the planet's non-renewable resources?'.²⁷

There is not enough food to feed the world's population, or more accurately, there are enough food for now, but not where it is needed. And it will get more difficult as the world's population increases. Where there is an excessive supply of food people develop food related disorders like obesity, diabetes, cardiovascular disease, intolerances and food allergies to name a few. Some of these health effects originate from single food products. Our dependency of the agricultural growing of crops has led to biotechnical solutions like GMO crops, where genes of viruses and bacteria are inserted into the crop to help the crop to produce its own pesticide. Because of the health risk that are believed to be connected to these crops many European countries have

²⁴ FAO (UN), The future of food and agriculture – Trends and challenges, pp. xi, 112.

²⁵ The World Food Programme defines food security as when all people have availability and access to food that are nutritious, safe and sufficient to live a healthy life. For more information see: *World Food Programme*, [website], https://www.wfp.org/node/359289 (accessed 29 Aug. 2018).

²⁶ I. Štefanić & F. Štefanić, 'Future agriculture and food supply chain - not even doomsday preppers got it right', *Scientific journal of the European Ecocycles Society*, vol. 3, no. 2, 2017, p. 17. Available from: ResearchGate, (accessed 27 February 2018).

²⁷ Štefanić & Štefanić, 'Future agriculture and food supply chain - not even doomsday preppers got it right', p. 19.

prevented GMO crops to reach the dinner tables.²⁸ Meanwhile the Food and Drug Administration of the US argue that GMO crops are safe and will not cause future health problems.²⁹

To get good quality food that is nutritious is fundamental for our survival. But with a decrease of arable land this becomes more and more difficult. As a result, to erosion and pollution a third of arable land has been lost since the 1970s according to a study made by University of Sheffield's Grantham Centre for Sustainable Futures in 2015. The most common measure taken here is deforesting, this provides arable land in the short term, but in the long run this cause severe damage to the planet's ecosystem. To measure the quality of future agriculture and food supply chain Štefanić & Štefanić make a calculation on arable land per person. This study shows that available arable land per person have been cut in half in the last 50 years. They also stress the regional differences in money available for food, the foods nutritional properties, traditions and habits and finally the food availability. They make a rather good summary of the problematics accounting for positive and negative trends for future agriculture and food supply chain:

Positive	Negative
New technologies in food production and processing	Population on the brink of the food sustainability
Decreased population growth rate (Figure 1)	Damaged ozone layer
	Increased concentration of greenhouse gases
	Increased average temperatures
	Increased pollution
	Intense loss of arable land
	Decreased quality of arable soil
	Heavy dependence on non- renewable resources
	Intense deforestation
	Lack of consensus regarding

²⁸ There is constant debate within the scientific field whether GMO are safe or not. Many scientists argue that there is not enough evidence to answer that question yet.

²⁹ K. Hart, *Eating in the Dark – America's Experiment with Genetically Engineered Food*, Vintage books, New York, 2003, p. 6.

³⁰ O. Milman, 'Earth has lost a third of arable land in past 40 years, scientists say', *The Gaurdian*, 2 Dec 2015, https://www.theguardian.com/environment/2015/dec/02/arable-land-soil-food-security-shortage, (accessed 12 July 2018).

³¹ Štefanić & Štefanić, 'Future agriculture and food supply chain - not even doomsday preppers got it right', p. 20.

future agriculture and food security
Severe reduction of biodiversity in agricultural GMOs
Mankind is counting on future but yet non-existing technologies

Table 1. From I. Štefanić & F. Štefanić, 2017.

Looking at this table we have a dark future in front of us. Climate change is a fact and we have to find solutions that can improve, if not change the current food system. In the next chapter, we will look at three different future foods and see how these relate to the food crisis and climate change.

Chapter 2: Case studies

Before we go into to the empirical material I want to clarify how I will look at images in the following discussion. Just like the French philosophe Roland Barthes in his book *Image, music, text*, I look at images as communicative in the sense that they carry meaning. Barthes talks about the rhetoric of images through the example of advertisements. He uses the example of advertising as the message is fully intentional and most of the times easy to read.³² I will go one step further and look at the hidden meaning behind the image that may not be intentional, following visual culturist Nicholas Mirzoeff definition of visuality. Mirzoeff treat visuality as an authority of power based on the French philosopher Jacques Rancière's idea of 'division of the sensible', which treat politics as a form of aesthetic in the sense that politics determine what we can and what we cannot see. 33 Visuality to Mirzoeff are ideologies and discourses that is regulated and controlled by the authority, visuality are regimes of visualisations, used to impose authoritarian messages. Mirzoeff defines critical visual studies as the extraction of that which the authority behind visuality wants to keep hidden.³⁴ The authority in this case is the capitalistic system and I will look at the hidden messages of these images to find the discourses and narratives behind them. As W.J.T Mitchell says, visual culture 'aspires to explain, not merely the 'social construction of the visual field,' but the visual construction of the social field.'35 Our understanding of the world is mediated in images, but the world is also mediated and constructed through the way we see and perceive images. To study images is therefore an attempt to understand the world we live in. In this study I will look at images of future food to try to understand what narratives and discourses they are part of, I argue that food, in this case future food carries an existentialistic meaning and that they are inevitably part of the discussions of the survival of the humans and earth, and the discourse of climate change, I will elaborate on this through the next chapters.

Gastropolitic foodart - 'The Next Menu'

Bad Taste is an experimental project in Brooklyn, New York, run by chef and artist Jen Monroe. Here she brings forward new mind-sets around food preparation and food consumption, '[...] approaching food as fantasy and as a transportive medium.'.³⁶ With her conceptual pop-up dinners, monochromatic dinners and experimental food she challenges our understanding of

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³² R. Barthes, *Image, music, text,* London, Fontana, 1977, p. 33.

³³ N. Mirzoeff, An Introduction to Visual Culture, 2nd ed., London, Routledge, 2009, pp. 19-20.

³⁴ N. Mirzoeff (ed.), *The Visual Culture Reader*, 3rd ed., London, Routledge, 2013, p. xxx.

³⁵ W.J.T. Mitchell, *Image Science*, Chicago, The Univerity of Chicago Press, 2015, p. 9.

³⁶ Bad Taste [website], 'About', http://www.badtaste.biz/about/ (accessed 6 Apr. 2018).

food, in a visual, philosophical and political sense, "The Next Menu" is an example of the latter. Presented by the Bellwether creative collective, Monroe, and author Alexandra Kleeman, elaborates on what seafood dinners will look like in 30 years. The dinner in itself is a comment on climate change and the consequences this will have on our seafood eating habits. As Kleeman puts it 'imagine dystopia with a flavor'. In this dinner Monroe incorporates species that responds well to the rising sea levels and rising temperatures of the oceans in order to start a conversation around this subject. She also uses species that can be part of sustainable productions in the future. One of the dishes contains octopus because of their fast adaptations to environmental changes, it has been speculated whether the octopus' population rather have flourished because of the climate change. As a replacement for caviar Monroe use finger lime in this dish, an Australian citrus fruit with a substance that looks like caviar. The colourful one biters in this dish looks like something served in an haute cuisine restaurant. Without the explanation of the ingredients there does not seem to be anything special or different about the ingredients of the dish. The same goes for the other dishes in the menu, something we will have to go deeper into another time.

This brings us to the study material chosen for this thesis, called 'Five futures: jellyfish buttermilk granite, mini apple pie, his 'n' hers jelly, honeycomb gold leaf fig, salt crystal shell'. This is five bites of five possible futures, these five speculative forecasting's create 'an edible choose-your-own-adventure story'. Number 1 demonstrates how 'Fine dining'' culture adjusts to the loss of familiar foods, and elevates formerly undesirable foods'. ³⁹ The spoon contains a jellyfish buttermilk sorbet. Jellyfish is another species that benefits from the changing climate, although it is still new as an ingredient in western cooking. ⁴⁰ Number 2 is an apple pie, used here to demonstrate how the farm-to-table principle can become a necessity instead of a trend used as a selling point, as a result of the failing food chain we know today. Number 3 is the His 'n' hers jelly. This is a comment on how the future unpredictability of food sources '[...] leads us to sever our eating habits from the environment. People consume vitamin-enriched nutrients supplements and gels.' The blue part is the 'his' part, it is bacon flavoured and contain omega-3 to improve brain function. The 'hers' part is strawberry flavoured and pink, it contains biotin to improve hair, nails and skin. Monroe invite the diners to pick a side or eat both sides. From a gender

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³⁷ R. Nuwer, 'A Dystopian Dinner Imagines How Climate Change Will Change How We Eat', *Edible Brooklyn*, 22 Sep. 2017, https://www.ediblebrooklyn.com/2017/dystopian-dinner-climate-change-bellwether/ (accessed 27 July 2018).

³⁸ Bad Taste [website], 'The Next Menu', http://www.badtaste.biz/the-next-menu/phf8h9a0v81zsv21wnyx1jabv84vvs (accessed 10 Apr. 2018).

³⁹ Bad Taste [website], 'The Next Menu', http://www.badtaste.biz/the-next-menu/z6rtjws88lefpscns14fw5tbb8br3r (accessed 11 Apr. 2018).

⁴⁰ Bad Taste [website], 'The Next Menu'.

perspective this number is very interesting. Using the stereotypes of blue and pink and including vitamins that improves the inside for him and the outside for her. Moving on to number 4 she presents a piece of fig with cheese, honeycomb and a gold leaf. This is a representation of the hierarchy caused by food, where food products that we take for granted today will become so rare that only the wealthy will be able to enjoy them. Creating a 'class-based food economy' where 'Scarce foods are increasingly fetishized. Single strawberries sell at auction' Monroe equate this number to swallowing a dying ecosystem. With the dying bee population, honey and honeycombs will become harder to come by. She elaborates on the shrinking wasp populations and figs, explaining that 'Figs are pollinated by wasps, many of whom die inside and are digested by the ripening fruit, so to eat a fig is to eat the wasp itself and its labor. To eat it alongside honey is to swallow a dying ecosystem'. Finally, number 5 is an empty mussel shell covered in sea salt. She calls this 'A blank. Failure to adapt. [...] A shipwreck, a prehistoric fossil, a futuristic relic. [...]'⁴² This is a suggestive image of what the future might look like if we do nothing, 'an ocean devoid of life', just empty shells.⁴³

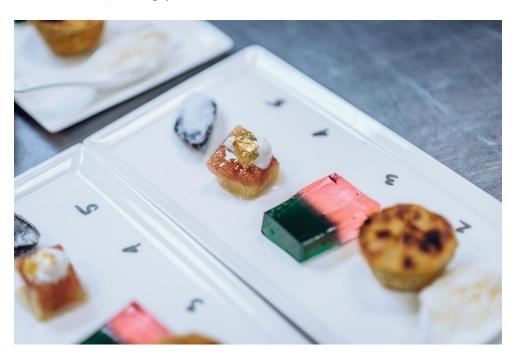


Fig. 1. 'Five Futures' part of the 'The Next Menu'.

Our relationship with the changing environment is a difficult matter. Behind the idea of the 'Five futures' dish Kleeman explains, was the frustration of 'having to choose one of the sociocultural possibilities out of many different ways in which society might adapt to a shortage or to

⁴¹ Bad Taste [website], 'The Next Menu'.

⁴² Bad Taste [website], 'The Next Menu'.

⁴³ Bad Taste [website], 'The Next Menu'.

scarcity'. 44 She compares it to a story written by Japanese science fiction writer Sakyo Komatsu called Choose your own future, where a man is told to choose one of the futures shown behind three different doors. This dish is a representation of that same problem, where we will be faced with the decision of what future we want. The difference here is that this decision must be made collectively. The five different futures served in this dish show just that, five different futures. The first, a kind of best case scenario, a new approach to formerly unwanted ingredients within western 'fine dining', where new ingredients are elevated to a new status. The second, a future where farm-to-table becomes a necessity rather than a trendy approach or niche within restaurants and food companies. This future suggests us to go back to how humans used to live before capitalism. Where hunting, gathering and growing was the building blocks of food supply. The third future is the one that is most reminiscent of past futuristic science fiction images as discussed earlier, where food is abandoned for pills, gels, powders and other supplements. Explained by Edible Brooklyn magazine as 'the only objectionable item served throughout the meal-stood in for a Soylent Green-type culinary dystopia'. This 'His 'n' hers' jelly square is divided into one part for women and one part for men, as explained earlier, the 'hers' side is pink, strawberry flavoured and improve hair, nails and skin. The 'his' part is blue, bacon flavoured and improve brain function. The idea behind this Monroe explains, was to try to come up with how this kind of food product would have been marketed in a future where everything would be produced in the laboratory. 46 With this piece they make fun of gender marketing, where focus for women is put on their appearance and focus for men is on their achievements. I cannot help but think that the omega-3 component that is supposed to improve brain function could also be interpreted as suggesting that men are stupid. The fourth future is the most 'Hunger Gamesyoption as Monroe calls it, where a 'class-based food economy' is created due to the rarity and the price level of some food products that we are used to today. Monroe uses the gold leaf as a 'nod to fetishism and exploitation', marking this piece an edible currency.⁴⁷ Also combining ingredients that will become a rarity if things evolve as they do today. Kleeman explains 'You can imagine that something familiar and comforting and normal, like a strawberry, becomes extremely scarce, and our tastes don't really move on from things that we know. So, it becomes a competition to get the last strawberry, pay more for them, put more and more of our resources into finding

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⁴⁴ 'Once and Future Food', *Smarty pants*, [podcast], The American Scholar, 29 Sep 2017, https://theamericanscholar.org/once-and-future-food/#.W2BYQdgzYUF (accessed 31 July 2018).

⁴⁵ R. Nuwer, 'A Dystopian Dinner Imagines How Climate Change Will Change How We Eat', Edible Brooklyn, 22 Sep 2017, https://www.ediblebrooklyn.com/2017/dystopian-dinner-climate-change-bellwether/ (accessed 1 Aug 2018).

⁴⁶ 'Once and Future Food', Smarty pants.

⁴⁷ Smarty pants.

foodstuffs that feel like food to you'. 48 This can be compared to when Hostess Twinkies were about to disappear in 2012 due to bankruptcy, Twinkies were sold on eBay and Craigslist for thousands of dollars. 49 Kleeman continues, 'Or you could imagine that we find other things to attach to emotionally, and we have completely new foods that take that place in our hearts.²⁵⁰ This can also be compared to the zombie apocalyptic narrative as discussed by Cammie Sublette, were the sudden scarcity of food make for a food hunt in the struggle of survival. Junk food is here often portrayed as a hedonistic pleasure as she calls it and an expression of nostalgia.⁵¹ Fetishizing the food that people once took for granted. As Monroe mention, this is a version of The Hunger Games universe, where food function as a divide between the rich and the poor, between the powerful and the powerless. Food has the ability 'to both connect and divide people on a social level' say Lori Parks and Jennifer Yamashiro and it is encoded in a certain way in society. In The Hunger Games food is used as a tool to enact power upon the body.⁵² In this future the same power relations between food and people and consequently between people and people would evolve. The fifth and last future is the empty mussel shell covered in salt crystals, symbolising a 'Failure to adapt', symbolising a 'what if it's too late' or as Kaitlyn Tiffany and Lizzie Plaugic call it 'a take home reminder of the possibility that we might all mess it up and die'.53

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⁴⁸ K. Tiffany & L. Plaugic, 'A night at a dystopian dinner party, eating like it's the end of food', *The Verge*, 19 Sep 2017, https://www.theverge.com/2017/9/19/16326666/the-next-menu-dystopian-dinner-party-alexandra-kleeman-jen-monroe#comments (accessed 1 Aug 2018).

⁴⁹ Hostess could return put of bankruptcy in July of 2013 so that Twinkies could return to the market.

⁵⁰ Tiffany & Plaugic, 'A night at a dystopian dinner party, eating like it's the end of food'.

⁵¹ Sublette, 'The Last Twinkie in the Universe: Culinary Hedonism and Nostalgia in Zombie Films', p. 170.

⁵² L. Parks & J. Yamashiro, 'Consumed: Food in *The Hunger Games*', European Journal of American Culture, vol. 34, no. 2, 2005, p. 139. Available from: EBSCO:host (accessed 5 April 2018).

⁵³ Tiffany & Plaugic, 'A night at a dystopian dinner party, eating like it's the end of food'.



Fig. 2. 'Five Futures' part of the 'The Next Menu'.

Depicting climate change

By critiquing the food chain and discussing climate change through food 'The Next Menu' is an expression of gastropolitics. Fabio Parasecoli argue that food has become a political issue. This is a result of the increase importance of food as an expression of identity, both individually and culturally.⁵⁴ The politics of food is also apparent in Marinetti's *The Futurist Cookbook*, where eating habits is incorporated as a part of a political ideology. 'The Next Menu' is a form of gastropolitic foodart that question climate change through the art of cooking and the aesthetics of food. Looking at the food on the plate of 'Five futures' we see small bite size food bits, some look just like the food we are used to, like the apple pie, the little piece of fig and the jellyfish sorbet, some look different, like the jelly square and the mussel shell covered with salt crystals. At first glance there does not seem to be anything different with these foods, some are more experimental than others. On closer look, you see the numbering on the plate, this is reminiscent of something you would see in a lab, this suggests that there is something different with this plate. The white surface make a clinical impression in combination with the numbers written on the plate. The numbers could be interpreted as a suggestion for the diner to try each of them individually and preferably in order. I argue that there is a connection to science fiction from just one piece on this plate, the his 'n' hers jelly, here we see the minimalistic aesthetic that is connected to science

⁵⁴ F. Parasecoli, 'Foie Gras: Tradition And Gastropolitics', *Huffpost*, 9 Dec. 2016, https://www.huffingtonpost.com/fabio-parasecoli/foie-gras-traditions-and-b-11970438.html (accessed 19 Aug. 2018)

fiction and futuristic representation. This little square change the whole expression of the plate and gives the impression that there is something else behind this plate. This jelly square combined with the salt covered mussel shell suggest that there is a story behind this plate. I would say that this is an example of a visual gastropolitics, where the plate alone tells the diner that there is a message behind this plate of food. The numbers in combination with the eye-catching jelly square and the mussel shell all collaborate to give this impression.

'The Next Menu' demonstrate an understanding of the problems we face today as climate change effect our food supplies. With the help of cooking and visual presentation, Monroe and Kleeman tries to pin point some of the problems that are caused by climate change in our food system. Together they spread knowledge and start a conversation about this issue through the taste of food and the visual and literal presentation of the food. The visual appearance of 'Five futures' and the presentation of the food in this dish suggests that there is a message behind this dish. 'The Next Menu' is not only an example of how food and art can be combined, it also joins art with climate change, using the creative expression of art and literature in order to bring forward the issue. This is something discussed at the Art Meets Science conference at Skissernas Museum in Lund in April 2018. Where it was discussed if and how art can help bring forward questions about climate change and an understanding of the problematics surrounding it. The sciencefiction writer and researcher at the University of Sheffield, Paul G Raven, views climate change as a narrative that can be told by everybody; scientist; authors and film makers. The difference is how the narrative is being told.⁵⁵ Climate change can play an active part in a narrative or it can be the backdrop of a story. Looking at the science fiction film Soylent Green, where climate change is an active part of the narrative. Or the HBO series Handmaid's Tale where climate change function as the set for the story being told. Raven says that climate change forces us to understand that we are the villain of the story, by we he of course refers to people in the western countries. Everybody is the villain and hero, meaning, everybody is the villain, but everybody can be the hero. This to Raven is the bedrock of how western culture is written.⁵⁶ Here Raven talks about the literal representations of climate change, Monroe takes a visual approach to it, a creative and aesthetic representation of climate change through both vision and taste, the literal expression of climate change is brought by Kleeman's stories. 'The Next Menu' is an artistic project that uses art as a way of bringing climate change questions up on the table, some would argue that this is not real food as it is part of an art project, I would argue that this is gastropolitical foodart that bring forward questions regarding climate change, but most

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⁵⁵ P. G. Raven, Art Meets Science [conference], Skissernas Museum, Lund, April 2018.

⁵⁶ P. G. Raven, Art Meets Science [conference], Skissernas Museum, Lund, April 2018.

importantly experiment with what future food can look like, taste like, be like. This is an art project, but I believe it is an art project that are so close to a possible reality that it qualifies as real food in this study. I would also argue that this food is made from a chef's point of view primarily and an artist's point of view secondarily, based on the efforts put on finding the right ingredients for the different dishes, this food is made to taste good, not to solely create a reaction.

Cultural food identity

This whole meal is a dystopic story, with these five futures Monroe and Kleeman plays on the bad conscious of the consumption of them, pointing out foods that we possibly will lose in the future. The whole point of the 'The Next Menu' is to find a solution to how we can eat in a similar way as we do today, using sustainable ingredients that will work in the long run and that could possibly change the food system. In this quest of finding sustainable ingredient, Monroe turned to Asian cooking traditions, trying to push the boundaries of western cooking and western taste buds. This is not an easy transition though, Monroe speaks about the difficulties in changing the cultural perception of what food is and what it is not, 'Cultural divides are slow to shift. And we still see a lot of what we call 'food racism.' This is visible in the idea of eating insects, as discussed in the introduction of this thesis, it has been used as a ridicule and entertainment, suggestive of something far away from western food tradition. Throughout the menu Monroe tries to balance 'new' ingredients with 'old' ones. In the 'Five Futures' dish the most eye-catching of the 'new' ingredient is the jellyfish. One that is not as prominent is the use of cricket flour in the apple pie. Including this in a dish that is so closely connected to the national identity of America can be translated into a provocation. It can also be translated into a challenge of the tradition. Although this does also symbolise that 'farm-to-table locavorism.'58

Generally speaking, the Italian people identify much with their food tradition. Marinetti is an example of the opposite. He wanted to move away from tradition, towards a new ideal society where speed and technology are celebrated. According to Marinetti's gastropolitical statement of the 'abolition of pastasciutta' the weight and volume of pasta makes the Italian people lazy, slow, pessimistic and brutish. This 'passéist' patriotic food was to be abandoned and futuristic cooking would 'renew totally the Italian way of eating [...] to produce the new heroic and dynamic strengths required for the race.²⁵⁹ presumably the race of fascism and the expansion of Italian territory. By declaring the destruction of tradition, and the patriotic food of pasta, Marinetti

⁵⁷ Tiffany & Plaugic. 'A night at a dystopian dinner party, eating like it's the end of food'.

⁵⁸ Nuwer, 'A Dystopian Dinner Imagines How Climate Change Will Change How We Eat'.

⁵⁹ Marinetti, *The Futurist Cookbook*, p. 30

somewhat contradicts his fascistic beliefs. Fascism stands for nationalism and to preserve the national heritage. What is Italian identity then? Roland Barthes did a semiotic analysis of Italianess in an advertisement for the brand *Panzani*. In this image, he found Italian identity in the syntagm of the spaghetti, the tomato sauce, the cheese together with tomato, bell peppers, onions and mushrooms. This is only one opinion on Italian identity from a non-Italian person. But pasta is connected to the Italian identity, no one makes pasta like the Italians do, which means that Marinetti lost the battle against pasta. This is an example of how meaningful food can be to the cultural identity. Monroe's post-apocalyptic food calls for a change in food cultures, for cultures to stop defining themselves by what they eat and do not eat, but to start crossing the boundaries of food and cultural food identities.

Fast food - Huel

Huel is a powdered food product that is developed as an option to ordinary food. Today the consumer can choose from a selection of powders, bars and granolas, the main product though, is the powder product. Huel started as a programme called Bodyhack to tackle a society with increasing overweight and obesity. The founder Julian Hearn, wanted to find an alternative to the easily accessible and unhealthy fast food option, an alternative that was healthy and could give the body all the nutrition's it needs in a society where time is scarce. This view is very different from the view of future food in the 1960s, were health and sustainability was cast aside in order to conquer space while eating 'edible propaganda for the US Space Programme', like Space food sticks. 61 Huel is a product that is developed to make life more efficient and healthier, with the intention to revolutionise the way we eat food. Although this is what motivated this product the website stress that the products have more applications and benefits than that, their mission is stated to be 'To make nutritionally complete, convenient, affordable food, with minimum impact on the environment and animals'.62 On a list of benefits of Huel on their website benefits listed is that it saves money and time, that it is '100% complete nutrition', that it is simple, the no food waste due to the portion ration and the shelf life of one year and finally the fact that it is vegan make it a humane product. On another page, they also list ethical benefits with Huel, again they stress that it is a vegan product that it is made from sustainable and ethical resources. Here they also state that they give a percentage of the profit to a charity called Vitamin Angels, who help

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⁶⁰ 'Fascism', *Nationalencyklopedin*, https://www-ne-se.ludwig.lub.lu.se/uppslagsverk/encyklopedi/1%C3%A5ng/fascism (accessed 6 Aug. 2018)

⁶¹ Rose, 'Inside the Rise, Fall and Stoner Rebirth of Pillsbury's 70s Space Food'.

⁶² Huel [website], 'About Us', https://se.huel.com/pages/about-us (accessed 27 July 2018)

mothers and children who struggle with malnutrition. Explaining why we need Huel they emphasize that we live in a food crisis, Huel is presented as an alternative food in order to save the planet's resources.

In comparison with Bad Taste's 'The Next Menu', Huel represent a more ascetic approach, where food have been reduced to its basic nutritional elements in a white powder. Where 'Five futures' stands for creativity, expression and taste, Huel stands for minimalism and efficiency. This reduction of a meal into one component is the same idea as the meal pills, bars and powders of early twentieth century science fiction of futuristic food and the 1950s and 1960s space food. Like Time magazine put it: 'Food of the future wasn't supposed to be concerned with *good* carbs or trans fats. Instead, the act of eating was itself supposed to go away, replaced with taking a pill.'63 In the case of Huel however, the act of eating (or rather drinking) is still here, but the act of cooking is eliminated. Looking at the Space Food Sticks of late 1960s, this high in sugar energy bar was supposed to function as a supplement to food with no concern for the health. With this idea, there is also a sentiment here to liberate women from the kitchens. This is evident in General Motors Corporation commercials, showing future kitchens. One from 1956 showcase a kitchen that bakes a cake almost by itself. A woman is dancing and singing, pressing buttons. While the kitchen bakes the cake she sings 'tik tok tik tok I'm free to have fun around the clock." Post-war advertisement marketed the kitchen as a woman's domain, but the new kitchen gadgets that came with the technical innovation meant that she could find time for other things than cooking, the same goes for processed food such as canned food and TV-dinners.⁶⁵ The idea of the meal pill is said by BBC to have come out of the 1893 World's Fair in Chicago and the feminist movement at the time. In relation to this people were asked to imagine what 1993 would look like by the American Press Association. Suffragette Mary Elizabeth Lease submitted an essay how the food of 1993 would be synthetic food that liberated women from the kitchens, saying that people will eat 'condensed form from the rich loam of the earth[...]' that will '[...]furnish men with substance for days. And thus, the problems of cooks and cooking will be solved.'66 No more planning, cooking and no more dirty dishes to clean up.

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⁶³ M. Friedman, 'Top 10 Failed Futuristic Predictions', *Time*, 12 Oct. 2010, http://content.time.com/time/specials/packages/article/0,28804,2024839_2024845_2024807,00.html (accessed 12 June 2018)

⁶⁴ 1956 3 of 5 – Designing the Future-Technicolor GM Film, [online video], 2008, https://www.youtube.com/watch?v=hZG36dhhbx0 (accessed 2 Aug 2018)

⁶⁵ E. L. Maurer, 'How Highly Processed Foods Liberated 1950s Housewives', *National Women's History Museum*, [website], 2017, http://www.womenshistory.org/articles/how-highly-processed-foods-liberated-1950s-housewives (accessed 2 Aug 2018)

⁶⁶ M. Novak,' Meal-in-a-pill: A staple of science fiction', *BBC*, 18 Nov. 2014, http://www.bbc.com/future/story/20120221-food-pills-a-staple-of-sci-fi (accessed 5 Aug. 2018)

Today there are several products like Huel. Soylent and NonFood are two of them. Just like Huel they aspire to make eating a quicker and efficient activity that you can do on the run to some other activity. Compared to these two Huel is the one where the most preparation is required before eating. Soylent is a liquid meal replacement, much like Huel, the difference here is that you buy it as an already mixed drink. NonFood, or more specifically NonBar is another example. The NonBar is a nutrition bar made primarily out of algae it is a product that aspire to change the way we eat today:

'Nonfood started as a way to change the culture that contributes immense waste in our current ecological climate, and to cultivate a conversation around the aesthetic experience of food. Nonfood makes new food products from algae, believing that food isn't just about calories – food can be delicious, nutritious, sustainable and interesting.'67

Both Soylent and NonBar make a clear wink to the sci-fi movie *Soylent Green*, the 1973 movie staring Charlton Heston. Soylent with its product name and NonBar with their look of green squares. This type of food is made as an alternative to the food that we eat today or at the least as a supplementary food, Huel is definitely in this category as well. The name 'Huel' is a play of the words 'human fuel'. Looking at the appearance of these different bars, powder drinks and liquid drinks, they all have one thing in common, they are meals reduced to one element, to one specific product, whether it is a square green food bar or an off-white liquid drink.

Huel do not only offer powder drinks, they also sell bars and granola. Looking at the packaging of the Huel products they are very simplistic bags and wrappers, completely white with Huel written on them with big bold black letters. Comparing these packaging's to military food, otherwise called MRE (Meal, Ready-to-Eat) they use the same type of packaging. MRE, used as a convenient food to bring on the road and quick energy while in combat. Huel are in some ways made with the same intention, it is a crisis food, it serves as an alternative food in a time of crisis. Similar to military food are space food, the packaging look almost exactly the same. The difference between the two is that astronauts can inject water into their packaged food with the help of a specific tool in order to rehydrate and re-create the dish. On Huel's Instagram there is an image (Fig. 3) of the Huel products laid out on the floor in a similar way as MRE and space food packaging usually is portrayed, Huel is here depicted as a survival kit.

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⁶⁷ Nonfood, [website], https://eatnonfood.com/pages/why (accessed 4 Aug 2018)

⁶⁸ What is the Diffence Between the Army's MRE Food and NASA Astronaut Food?, [online video], 2006, https://abcnews.go.com/Technology/video/difference-armys-mre-food-nasa-astronaut-food-42065365 (accessed 4 Aug 2018)

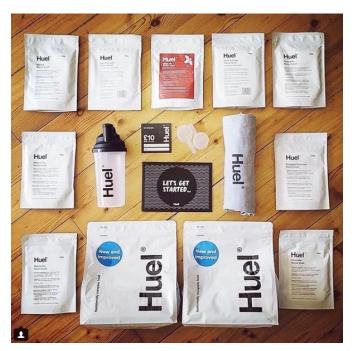


Fig. 3. Instagram picture of Huel products.

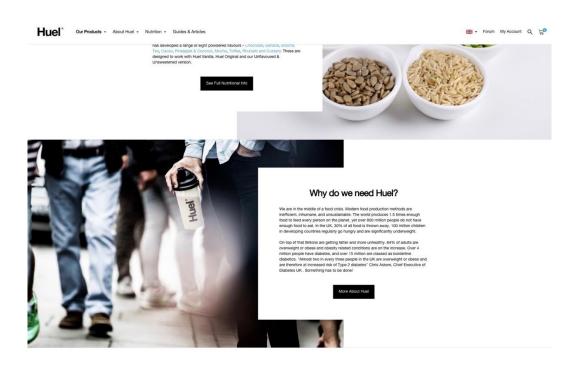


Fig. 4. Image from the Huel website.

The future is time efficient and fit

Huel is quick and efficient food to eat on the go, concurring the activities of daily life. This belief in efficiency can be compared with Marinetti's suggestion of the powder and the pill as a

substitution of ordinary food to save time and money. This fits in well with Huel's business idea and intentions as listed before. Marinetti wants people to study art during their time off from cooking and eating, Huel on the other hand, have a clearly stated intention to change people's food choices, stating that 'Instead of eating only what we can find, we now eat what we want, when we want, with the only limiting factors being time and money. Obesity, convenience food and tasty but nutritionally limited diets are commonplace, with 64% of adults in the UK now being overweight or obese.'69 Looking at the imagery on the website Huel seem to want people to stay active and outdoorsy. On two of the images on the website, there is a container filled with the liquid made from the Huel powder mixed with water, the container looks like a protein shaker or a blender bottle, of course, the shaker has Huel written vertically with big black letters. On one of the images there is a man holding the shaker in his hand whilst standing amongst people on a busy sidewalk (Fig. 4). The other image show a man sitting down on a park bench overlooking the city (London) with his shaker on the bench beside him. The connotation of this is an active lifestyle, people who like to go outside and activate themselves. On Huel's Instagram account this promotion of an active lifestyle is evident, most images feature people drinking Huel outside, just sitting in the park, doing exercise or hiking. But it is not just the outdoorsy lifestyle that is featured here, there is also the 'work-hard ethic' to achieve your life goals. In Roland Barthes semiotic readings, he believes images have a predetermined dictum, in this case the symbolic meaning of the shaker, which have the same appearance as a protein shaker people would take to the gym, makes for a connotation of activity and exercise. Even though we do not see any activity in these images the dictum of this image is a healthy and active lifestyle. On Huel's Instagram feed there is a balance between work and leisure, the important thing seems to be to stay active. One image show a person sitting in front of the television with an episode of The Simsons, with one leg on the table and a Huel shaker beside the leg. The caption on this image is 'Kick back today Huelers, you deserve it'. Another image show two girls and one guy sitting in the sofa from behind, the guy to the left is holding a video game controller in his hand, the girl in the middle is holding her phone, the girl on the right is holding a Huel shaker. The caption says 'Time is precious, waste it wisely'. Both of these images stand out amongst the images of people working, exercising, going on adventures and of course all the images of the Huel products. These two images seem to suggest that you can sit down and relax, assuming that you have already been active. The second caption say that you should not waste your time on meaningless activities in the long run, but you should use your time wisely, get on with your day and achieve your life goals. There are binary opposites in these two images between leisure and

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⁶⁹ Huel, [website] https://se.huel.com/pages/about-us (accessed 27 July 2018)

work, relaxation and activity, laziness and productivity. In both images the Huel shaker symbolises activity and health. By incorporating the shaker in the images it becomes a sign for the binary opposition that we see in the image. Looking at Huel's Instagram feed, there is a constant interaction of binary opposites, again with leisure and work, relaxation and activity, laziness and productivity, but also calm and explosivity, aimlessness and determination, indulgence and restrain. What this seem to symbolise is an active and healthy, but not boring or restrained lifestyle, happiness and a content seem to penetrate through all images. People should develop a healthy relationship to exercise and healthy eating and incorporate it into their lives. But there is a duality with Huel as a product. It wants people to stay active and live a healthy lifestyle. But a product like Huel is easy to subscribe to if you are a person who just hates cooking food. There is this duality of activity and laziness that Huel seem to ignore.

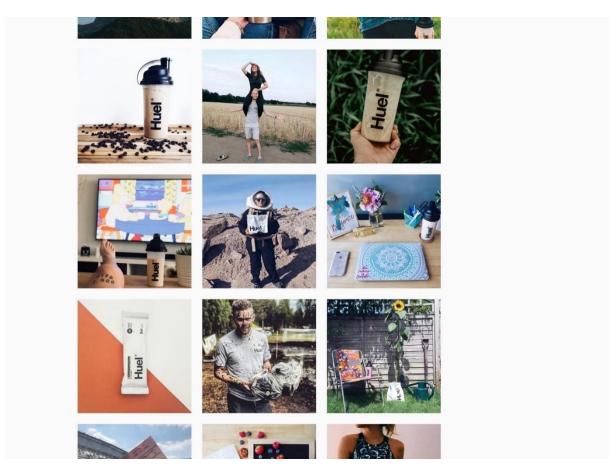


Fig. 5. Instagram feed of @huel



Fig. 6. Instagram picture 'Kick back today Huelers, you deserve it.'



Fig. 7. Instagram picture 'Time is precious, waste it wisely.'

Under the tag 'About Huel' there is a video where you get to hear four people, three men and one woman, talking about why they started using Huel, what they like about it, how this have changed their lives and the community that they have become part of because of it. They are all successful and active people, one is a business developer, one is an architect, one is a personal trainer and one is a yoga instructor. The business developer tells us that he is an adventurer and a 'running enthusiast'. The only one who does not say anything about physical exercise is the

architect, he says that Huel saves him a lot of time at work and prevents him from eating unhealthy snacks. The yoga instructor emphasises the time you save on shopping, not having to think about what you are getting for dinner, preparations and so on. She also points out the low carbon emission and smart packaging, pointing to the environmental benefits. The personal trainer is used as a well-informed consumer and like a nutrition expert in the video, he talks about the ingredients and that you get all the carbohydrates, proteins and fats that you need.

As has been established above, staying active, time efficient, staying healthy, being productive and being adventurous are all values Huel represents. All the people who are in the pictures on the Instagram feeds and in the video are skinny and 'healthy looking'. The community of Huel is strong and this is something the company like to point out, it is almost like a health movement. Fat used to be looked at as a sign of wealth and health, in today's society it symbolises laziness, lack of discipline and control. This is not just a result of changes in aesthetic and moral values Alexandra Neagu argue, factors that have been part of this development is food availability, the difference in energy intake and energy expenditure in traditional and in modern occupations, changes in ethical, political and ideological beliefs and lastly the predominating culture ideal. Today there is the cultural ideal of 'normative discontent towards the real body.' Neagu refer here to plastic surgery. But the same ideal I argue is visible in exercise, you can of course exercise solely to improve your health, but many people exercise to get more slim and happy about their body. Today there are more and more people speaking out about the unrealistic body image we strive after and call for acceptance (both individual and collectively) and realistic body images.

Huel is a form of bodyhacking, all the ingredients the human body needs to function have been mapped out and are accounted for in the product of Huel. In that way Huel has cracked the code of what a human body needs, much like a computer. But it is not only the human body Huel have hacked, it has also hacked life, making eating a not-time-consuming-activity to gain more time to do other things in life. In fact, Huel is a form of anti-food, a non-food, an ascetic food. To use another aspect of futurism, we could call it kinaesthetic food. In the futuristic movement kinaesthesia is when the body in motion and the body at rest is indistinguishable, there should be an experience of fluidity, simultaneity, temporality and motility in everything.⁷¹ This notion is implemented in the time efficiency and eat-on-the-go idea of Huel, reducing the activity of eating into an activity in motion.

⁷⁰ A. Neagu, 'Body Image: A Theoretical Framework', Romanian Academy, vol. 17, no. 1, 2015, p. 30.

⁷¹ Buchloh & Krauss, Art Since 1900: Modernism, Antimodernism, Postmodernism, pp. 90-91.

The Huel ingredients depend on a working agriculture. On their website they list the ingredients of oats, pea protein, flaxseed, brown rice protein, MCTs from coconut, sunflower oil, a vitamin and mineral blend, vanilla flavour and sweetener. 72 These ingredients have to be produced somehow, today that is agriculture. In The Guardian article food writer Joanna Blythman looks at these ingredients with scepticism, she say 'There is almost nothing in there in its natural form. These are very, very technologically altered hi-tech ingredients. They are the opposite of what whole, natural foods are.' She continues 'The minute I hear 'the food of the future', I groan. It's something big venture capitalists get very excited about, like all the failed lab meat that never quite caught on. Food is about more than food. It's culture and civilisation and small moments of happiness in otherwise bad days.'73 Blythman points out the importance of appetite and to treat yourself when you have had a bad day, she cannot see how products like Huel could be beneficial from that point of view. To many people food is a big part of their identity. Huel removes the art of cooking and the creative expression that can be accomplished with food, as we can see in 'The Next Menu'. Instead Huel as a product show a more dystopic image of food, where food has been reduced into a white powder. Referred to by The Guardian as a product 'that are tapping into the idea that food is old fashioned, inconvenient and boring'. ⁷⁴ Instead Huel see that we should turn to their ascetic food product. Going from variety in food to repeated consumption of what some people describe as flavourless and disgustingly sweet liquid. 75 Even if Huel ticks many boxes of Marinetti's view of future food, this is where they differ, Marinetti called for a varied and original diet, a view Huel does not live up to, this is something that 'The Next Menu' can deliver. Huel provides their customers with recipes and inspiration on how to vary the blend, adding fruit and flavour packages into the mix. But it will always be a liquid of some form unless you buy the bars and granolas. Reported by a first time user of Huel, he says that he really missed chewing on something during the first period of exclusively consuming Huel. ⁷⁶ Compared to 'The Next Menu', that tries to find alternatives to future eating, Huel is more of a crisis food, it is not hard to imagine humans sipping on Huel in a dystopian future, similar to Soylent Green. Huel is called by many users and non-users 'the food of the future.' As

⁷² Huel, [website] https://se.huel.com/?gclid=CjwKCAjwwJrbBRAoEiwAGA1B_VYtuzNpzHVc6-RB_u599-6l6vMg1uhBMYmuNbV2INc9pQeBQIgzPBoC7eMQAvD_BwE (accessed 5 Aug. 2018)

⁷³ C. Cadwalladr, 'Could you stomach Huel, the food of the future?', *The Guardian*, 31 July 2016, https://www.theguardian.com/science/2016/jul/31/huel-human-fuel-hi-tech-food-powder (accessed 5 Aug. 2018)

⁷⁴ Cadwalladr. 'Could you stomach Huel, the food of the future?'.

⁷⁵ Cadwalladr.

⁷⁶ J. Hill, 'A Week on Huel: One Small Step for Man, One Giant Leap for My Bowels', *Medium*, [web blog], 14 Sep. 2016, https://medium.com/@jamchiller/one-week-on-huel-one-small-step-for-man-one-giant-leap-for-my-bowels-a9026a48d94d (accessed 5 Aug. 2018)

⁷⁷ Cadwalladr, 'Could you stomach Huel, the food of the future?'.

been stated several times already, Huel is a time saving product, a product that make life more time efficient. But what will we do with all this extra time? Is the future for Huel a time where we do not eat real food? Is this future filled with workaholics and 'workoutaholics'?

Sensory food - Project Nourished

Project Nourished has developed a way for people to keep track of their diet using virtual reality, fooling the user into thinking it's eating a delicious meal. This 'gastronomical virtual reality experience' involves a 3D printed food cube, a virtual world and a range of sense elevating gadgets. The point of Project Nourished is for people to '[...]experience eating and drinking in a whole new way by hacking vision, gustation, olfaction, audition and touch—with or without caloric intake.'78 The project is based in Los Angeles, and started at the Kokiri Lab in Silicon Valley, the founder is Jinsoo An, who work together with a team of 30 employees to develop this product. The diner puts on a virtual reality headset placing her or him inside of a virtual reality, a digital world in 3D, simulating Kyoto for example, transporting the diner into another place. A pair of headphones or a 'bone conduction transducer' as they call it, transmits sounds of chewing and vibrations into the diners' ears when it chews. To trick the nose into smelling a food that the mind is told it is eating there is an aromatic diffuser that spread a sent that is communicating with the image. A gyroscopic utensil helps translate the diners' movement into the virtual reality and is used to pick up the food cube. To create a sensation of intoxication, the virtual cocktail glass has built in sensors that is transmitted into the virtual reality, meaning that when you take a sip of the non-alcoholic drink the virtual reality reacts as if you are drinking alcohol, mimicking intoxication. Lastly, we have the 3D printed food cube, which is a utilization of algae, yeast and insects, the goal is to create a concentrated cube of flavour. The gadgets are all white and they have a geometric shape that resemble paper origami or glacier ice blocks. What inspired this project was on the one hand a scene from the movie Hook where Peter Pan (Robbie Williams) learnt how to use his imagination to imagine food that was not there. The second thing that inspired the project was Jinsoo An's diabetic stepfather. The intention was to create something that could allow An's stepfather to eat some of the food that he is no longer able to eat.⁷⁹

⁷⁸ Project Nourished [website], http://www.projectnourished.com/ (accessed 12 Apr. 2018)

⁷⁹ J. Flaherty, 'Forget Virtual Realiy. Are You Ready For Virtual Sushi?', *Wired*, 28 Jan. 2015, https://www.wired.com/2015/01/forget-virtual-reality-ready-virtual-sushi/ (accessed 5 Aug. 2018)



Fig. 8. Virtual reality of Project Nourished.



Fig. 9. Woman in white with at the dinner table.

Initially on Project Nourished website you are faced with moving imagery of a woman sitting down at a table, completely surrounded by white, a white background, a white table, the products are white, even the woman's dress is white. A man in a white robe is serving her a drink, or rather he is pouring smoke into the glass. Project Nourished explain how the human senses perceive food and how they go about recreating this:

'Our perception of a meal relies upon different sensory input derived from the visuals, flavors, scents, textures, consistency and auditory feedback of what we eat. By isolating various flavor compounds and recreating their taste

and textural profiles — coupled with virtual reality, aromatic diffusion and auditory sensation — we can mimic a surprising amount of eating experience'.⁸⁰

On the website they also have a video that shows some of the work behind Project Nourished. The video starts off with shots of different meals, food cooked on an outdoor stove, a party eating at a restaurant and ready-made meals going by on a moving tread. A mother and a child on the carousel and a close-up of a woman's face in profile, focusing on the ear. The voice over is calm and confident. It sounds like a mix of a computer generated, a futuristic voice and the voice over from the American TV-show Desperate Housewives. The static voice talks about 'the fundamental role of a meal' as sustaining, an art and an 'act of memory, imagination and emotional experience woven through the senses'. 81 The next shot is of the feet of a woman in heels. She walks in from the right, sitting down at a white table as the camera pans up to her face, everything in the woman's surrounding in this medium shot is white. She looks straight into the camera and proceeds to put on the virtual reality headset on her head as the camera zooms in to a close-up of her face. The camera switches to a point-of-view shot, showing what the woman sees in the headset. The surroundings presented in this shot we later learn is a reconstruction of Kyoto. Back to the mid shot there is a man in a white lab-coat serving white smoke from a tall glass container into the woman's glass. The subsequent shot is a close-up of the aromatic diffuser, spreading a white smoke from the pipe. Cutting to a point-of-view shot of the woman picking up the glass in the virtual reality, bringing it up to her face to drink. Followed by a shot of her drinking in reality from the audience perspective again, still in this shot the woman picks up the white food cube, cutting to virtual reality and a point-of-view shot again, showing how she picks it up in virtual reality. Still in a point-of-view shot, although this time in reality, showing the food cube being brought up to the woman's face followed by a still frame of the food cube. Fading to a white background with the text 'Project Nourished – a gastronomical virtual reality experience'. The voice over to these shots are saying: 'Why can't a meal provide a more pleasurable experience? Beyond simple sustenance, without the negative consequences? Imagine you can eat anything you want. Without regret. The future is here. Project Nourished – a gastronomical virtual reality experience.' It then goes on to explain the different components of the 'system' accompanied by images of the different parts of it. The music over this introduction is reminiscent of something you can hear in the yoga studio or a spa.

⁸⁰ Project Nourished [website], http://www.projectnourished.com/ (accessed 12 Apr. 2018)

⁸¹ Project Nourished: A Gastronomical Virtual Reality Experience, [online video], 2016, http://www.projectnourished.com/ (accessed 12 Apr. 2018)

The following sequence of the video is an introduction to the team and the different position, contributions and work assignments they have within the project. Here they explain how they have developed the audio, the scenery of the virtual reality, the hardware and so on. Jinsoo An, who is the founder of the project explain that the point of the project is to allow people to eat whatever they want, for those people with food allergies for example, without the consequences.



Fig. 10. Project Nourished food cube.

Synaesthesia in the simulacrum

Compared to Huel and 'The Next Menu', Project Nourished offer an experience, an illusion, all to trick the mind into thinking it is eating something that it is not. This is not about indulgence or to be a fast and time effective food. Project Nourished is about tricking and convincing the mind to think that you eat that special something you crave or you wish you could eat, whether the thing that stops you from eating this is diet or allergies. The sentiment here is quite straight forward, to allow people to eat whatever they want, the execution however is quite complicated. Using different gadgets, a 3D printed food cube and to enter the virtual reality where the illusion is created. Similar to Huel, the actual food is ascetic, although the virtual reality is there to spike the imagination, compared to the colourful food of the 'Five futures' dish, everything is very minimalistic in this virtual reality. Trying to emulate reality, it is still just an imitation of it, meaning it cannot be as vivid and interactive as reality. The simulation that Project Nourished create is what Jean Baudrillard would call a real without a reality, he argues that simulation is the

constitution of '[...] a real without origin or reality: a hyperreal.'82 In Simulacra and Simulation (1981) Baudrillard questions whether there is a reality at all through the concept of simulation. By combining virtual reality with sensory experiences through taste, smell and sound Project Nourished is creating a simulacrum, an in-between of reality and the imaginary, where nothing is real nor imaginary. 83 The idea of Project Nourished is to create the perfect state of simulacrum, where the person eating will lose sight of what is real and what is a simulation. Project Nourished elaborate with the perception of a meal through recreations of visions, smells, sounds, tastes and feels of textures and consistencies. In other words, they try to recreate reality through a combination of food and technology as well as food and imagination. The idea of fusing all the senses together in a meal is something Marinetti elaborated with in his futuristic dinners. He wanted the diner to use all the five senses of touch, taste, smell, sight and hearing throughout a meal. He explains how this would work in a dish called Aerofood. The air would be infused with perfume attuned to every course, spread via electric fans to enhance the gastronomical experience. The sound of poetry and music would fill the room, accentuating the flavours in the dish. The tactile experience would be achieved through a tactile device which the diner would touch with the middle and index finger on their left hand, this device was made with red damask fabric, black velvet and small piece of sandpaper.84 The visual sensation would be achieved with the artistic dimension of the food. This fusion of the senses is part of the futurists emphasis on synaesthesia. 85 This correlation of the senses is also visible in Arab optics in 1000 CE, starting with Arabic scholar Abu Ibn al-Haytham, where fragmental sensory perceptions like vision, touch, sound create a 'view' from which we understand the world. Mirzoeff defines vision as a 'mixed mode of perception', 86 which can be compared with Mitchell's understanding of all media as mixed media, to him 'Media are always mixtures of sensory and semiotic elements, and all the so-called "visual media" are mixed or hybrid formations, combining sound and sight, text and image'.87 Project Nourished show how vision and perception is mixed, by incorporating all senses, the illusion could not be accomplished without one or the other or the 'view' could not be accomplished without all the senses. Project Nourished emphasizes the importance of all the senses to create perception in its recreation of the sensory experience of the human body. The idea of Project Nourished is to recreate the experience of eating using simulated visions, and presenting the diner with smells, tastes, sounds, textures and consistencies specific for the food

⁸² J. Baudrillard, Simulacra and Simulation, Ann Arbor, University of Michigan Press, 1994, p. 1.

⁸³ Baudrillard, Simulacra and Simulation, p. 6.

⁸⁴ Marinetti, The Futurist Cookbook, pp. 95-96

⁸⁵ Buchloh & Krauss, Art Since 1900: Modernism, Antimodernism, Postmodernism, p. 90.

⁸⁶ Mirzoeff, An Introduction to Visual Culture, p. 4.

⁸⁷ W. J. T. Mitchell, *Image Science: Iconology, Visual Culture, and Media Aesthetics*, Chicago, The University of Chicago Press, 2015, p. 14

that it is imaginatively eating. In the video food scientist Brad Kent talks about choosing the right smell connected to the right food, for example the smell of cinnamon is more likely to make people think about apple pie rather than cinnamon spice. 88 When working with sound they explain how they had to reengineer the internal sound of chewing as your jaws meet the texture and consistencies of the food. Recreating the sonic features of eating, creating sonic food in a sense.

Reproduction of taste and visuality of food and eating

When moving through the topic of food there is a fundamental element, sometimes forgotten by some researchers, this is the understanding of taste. Luca Vercelloni, an interdisciplinary philosopher from Italy study the subject of taste in the book The Invention of Taste – A Cultural Account of Desire, Delight and Disgust in Fashion, Food and Art. Vercelloni speak of taste as something acquired as well as something natural and biological, acquired in the sense that it is connected to habits, traditions and the civilising process. Gastronomic and aesthetic tastes are both believed to be rooted in an ambiguous relationship of the basic sensation of hunger and the seduction of value.⁸⁹ Taste is also connected to our culture as we discussed earlier. Even though 'The Next Menu' present itself as an artistic project of a conceptualised dinner from a political and ethical point of view, taste is of importance, Monroe uses the seduction of both aesthetics and taste to convey the issue of climate change, climate friendly food, but not on the expense of taste. Huel does not focus on taste, instead they focus on including all the components the human body needs, taste seem to come secondary. Taste is very important for Project Nourished, the food cube is essentially just a cube of flavour and not food, singling out the tastes that make a sushi taste like a sushi and the taste of apple pie, the difficulty here is to just create the flavour without the ingredient.

It is not only the sensory perceptions that is being experimented with here, also the recreation of food into 3D printed food. In an article from 2015 Jinsoo An explain how Project Nourished have worked with the faux food to be distinguishable from the food in the virtual reality. Back then the food was colourful jelly-like shapes of a steak or a pie. This is explained by An as a measure to not end up in the uncanny valley, also to 'ensure that users don't expect the foods to

⁸⁸ Project Nourished: A Gastronomical Virtual Reality Experience, [online video], 2016, http://www.projectnourished.com/ (accessed 14 Aug. 2018)

⁸⁹ L. Vercelloni, The invention of taste: a cultural account of desire, delight and disgust in fashion, food and art, London, Bloomsbury, 2016, p. 1

taste and feel in certain way, because it won't be 100 percent." There is something childlike about Project Nourished, inspired by the imagined meal scene in *Hook* and the eating of playdough like fake food. Although the food cubes look a bit more sophisticated today, a white coloured cube, the concept of eating imaginary food is something we all did as children. More importantly the user is encouraged to use their imagination, just like a child.

Looking at the gadgets used in this simulation, they too are very simplistic in their appearance. The structured white surface of the gadgets is reminiscent of paper origami, almost like prototypes rather than finished products. One of the designers explain that the point of the design of the physical products is to 'brings the user into a world before they enter the virtual world.' The intention was to 'break away from the traditional aesthetics you would see at a dinner table. A more abstract representation of how our taste is multifaceted.' To sit down at a Project Nourished dinner table should be a new experience, with the white gadgets, it is almost like a blank canvas to start the simulation from. These white minimalistic gadgets have something very conventionally futuristic about them, this minimalistic, streamlined shape of the future is something we can see over and over again in futuristic science fiction and representations of the future.

Fantasy and memory

Suggested by the name Project Nourished, the product is first and foremost a product that will nourish people but without the unnecessary splurge, calories and food related reactions. That being said there is not much said of nutrition on the website. On the website Project Nourished list the applications of this gastronomical virtual reality experience. There are eight different applications listed here:

- Weight loss people who are overweight 'can learn to eat less by associating certain foods to unpleasant memories.'
- Allergy + diabetic management people can eat whatever they want without any consequences.
- Eating therapy people with eating disorders 'can build regular, healthy eating habits by receiving virtual psychotherapy.'
- Elder + disability care 'Stroke patients or elderly who are unable to chew or swallow food [...] can experience eating in virtual reality.'

⁹⁰ Flaherty, 'Forget Virtual Realiy. Are You Ready For Virtual Sushi?'.

- Kids eating habituation Improve children's eating habits by 'encouraging them to eat undesirable foods in fun ways.'
- o **Remote dining** People can eat together in virtual reality cross the world.
- O Alternate reality dining enjoy food of the imagination and in places of fiction.
- Space food astronauts can enjoy a wider range of food in space while 'boosting morale and minimizing payload.'

Some of these applications strike me as questionable. For example, the elder and disability care, even if Project Nourished create the illusion of eating something pleasurable, there is still the empty sensation of the food cube after, essentially it is not 'real' food. The benefit of avoiding allergic reactions are used as another benefit. Meaning that you could eat something even if you have food allergies, intolerance, diabetics or diets. Although I would not know why someone would want to imagine to eat a peanut, when your brain is giving out signals of danger? Most of the benefits mentioned above is suggested as tools to help solve different problems, whether it is eating in space or helping people to overcome different mental or physical obstacles of eating. A benefit that is not mentioned by Project Nourished, but that is mentioned in an article⁹¹ about Project Nourished is the financial benefits with a virtual reality meal. Technically you could eat at any fancy restaurant you want through your VR headset.

Despite these benefits listed, Project Nourished seems to be a diet gadget more than anything else, a tool that can be used to teach self-control. This is something suggested by their website, one of the first illustrations is of a slice of pizza with donuts 'floating' around it, symbolising unhealthy eating, accompanied with a subheading that says 'Enjoy pleasures of food without calories'. Beneath this subtitle they describe Project Nourished's redefinition of dietary consumption. The focus on dietary eating is also evident in the video from before, where the voice over ask why the eating of food should be followed by negative consequences and why it cannot be pure pleasure, saying 'Imagine you can eat **anything** you want. Without regret.' I would say it is obvious that healthy eating and diets are something that Project Nourished prioritise the most, this future eating device is not primarily a device that will prevent climate change, although it will prevent you from getting fat or to have food related health issues. Climate is only mentioned as the third thing on the website, second is the aspect of imagination and the dream state you are in when using Project Nourished. This is mentioned under the subheading 'Eat food that you can only dream of' together with an illustration of a dinosaur skeleton in front of

⁹¹ 'Eating without the calories? Welcome to Project Nourished', *BT*, 26 Aug. 2016, http://home.bt.com/tech-gadgets/tech-news/eat-anything-you-like-in-virtual-reality-using-project-nourished-11364072423038 (accessed 5 Aug. 2018)

some floating building blocks. The third heading is 'More sustainable and nutritious foods' with an illustration of an algae plant surrounded by scientific calculations, though the only thing connected to sustainability and nutrition mentioned here is the combination of algae, yeast and insects in the food cubes. Instead they go on to say that 'The technology can even be used to preserve foods for the future generations by creating chemical and digital carbon copies; in case of overfishing or natural disaster." This means that Project Nourished can be used as a memory tool in the future. The thing with memory though and the idea of saving memories for future generations, is that it presupposes human existence. What if humans are extinct? What if the human race dies when we have exhausted the food chain system of today. I do not believe humans will turn to Project Nourished as a way of nourishing themselves in their last days of existence. If the human race live to experience the memory bank of foods of the past that Project Nourished have built, it would rather be as a form of entertainment to reminisce of days past not to help humans survive. This would create a form of hyperreality, hyperreality is a society without reality only reproductions of the past. 93 Baudrillard not only question the existence of reality with the hyperreal, he is also questioning the future through this idea by claiming there is no current reality, only versions of the past remediated. Project Nourished idea of the memory bank can be combined with 'Five futures' future number four, where food products that are scarce will be consumed only by the wealthy, if at all. Project Nourished virtual reality could be an alternative for the less wealthy here, to be able to experience the sensation of eating a strawberry again.

Looking at the website, the gadgets, the overall impression of Project Nourished it seems that technology is what is being explored with this prototype, bringing food and technology together. Exploring how we can change our eating patterns, to make it more interesting and how we can bring virtual reality into our eating situation. It is a product for the individual pleasure and experience rather than the environment. The memory banks that Project Nourished suggest show that they are expecting an environmental disaster rather than preventing it. The product is made to show of technical advances rather than a solution to the food crisis we face in the future, unless you would settle for fake food cubes in the future. Even if the actual food of Project Nourished is created to *not* be a food of indulgence and pleasure, Project Nourished focus on the sensory experiences and the pleasure of the eating experience. Huel on the other hand focus on nutrition without sensory experience, where the pleasures of the eating situations are removed into an on-the-go activity. 'The Next Menu' wants people to stop and think about what they put into their mouths by experimenting with new ingredients, focusing on both the sensory and

⁹² Project Nourished [website], http://www.projectnourished.com/ (accessed 20 June 2018)

⁹³ Baudrillard, Simulacra and Simulation, p. 12-13

pleasurable experience of eating and the nutritional aspects through the concept of conscious eating for the climate. Of these different future foods 'The Next Menu' seems to be most concerned about how to solve the future food supply, meanwhile Huel and Project Nourished focus more on creating food that can be eaten without a concern of the consequences of food.

Chapter 3: Man vs. nature - body vs. climate change

Looking at the visual aspects of the food presented in the previous chapter, we see the reappearance of food cubes and powders of the early and mid-twentieth century. These minimised, streamlined and reduced food products was believed to be the future and it appears that this image has not changed, especially when considering the aesthetics of Huel's powder, Project Nourished food cubes and 'Five futures' 'His 'n' hers' jelly. Project Nourished presents a reappearance of the 1950s and 1960s image of a gadget dense society. The 'Five futures' dish presented by Bad Taste present a more modern view of the future, where food actually looks like food we are familiar with eating today. By incorporating the 'His 'n' hers' jelly it once again become apparent how much of an impact past views on future have had. This retro futurism is visible in all examples in this thesis, showing a futuristic iconography if you will. Although one cannot forget the fact that this retro futurism could just be intentional recreations of past views of the future. The image of the future we have today can just be a constant recreation of the same image. In the futures presented in the previous chapter there is a sentiment of selection, where one can select what dinner they would like from their VR experience or out of five futures. This can be connected to the futuristic kitchens of the 1950s and 1960s, where you could choose your dinner from a screen and just press a button for it to be cooked or the selection on what meal pill you would like to eat. This notion of selection is removed in the Huel powder, again you can choose some different flavours, but you still eat the same powder drink.

Let us take another look at the meal pill, to get all the calories of the day we would have to eat around 300g of pills. Science show that there is no way to fit all the nutrients that humans needs into a pill. It looks like the meal pill is far from becoming a reality at this moment. Although there are other pills that are believed to be included in our diet in the future. On one of the many lists of what food we will eat in the future the Nootropics is listed, Nootropics are pills that boost your brain capacity, this is the 'drug of choice for the age of capitalism.' And let us not forget the diet pills, the pill that supposed to make you skinny faster. There is a connection here between the meal pill and the diet pill that cannot be ignored, the idea of the meal pill is to get the exact nutrients we need, nothing more, nothing less, this idea is intertwined with the idea to be skinny and beautiful. In the 'techno-utopianism' of the 1960s the meal pills were the 'triumph

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⁹⁴ M. Friedman, "Top 10 Failed Futuristic Predictions", *Time*, 12 Oct. 2010, http://content.time.com/time/specials/packages/article/0,28804,2024839 2024845 2024807,00.html (accessed 12 June 2018)

⁹⁵ E. Schwartz, 'The Futuristic Food We'll Be Eating in 2018', *Garage*, 10 Jan. 2018, https://garage.vice.com/en_us/article/mbp5ga/the-futuristic-food-well-be-eating-in-2018 (accessed 5 Aug. 2018)

of man over nature.⁹⁶ Just like the meal pill, Huel and Project Nourished showcase a correlation of future food and dieting, man vs. nature.

Anthropocene and the capitalist system

Due to the strains of human actions on earth, the Anthropocene marks the age of man, the concept was suggested as a new geological era by geologist Paul J. Crutzen and Eugene F. Stoermer in 2000. The concept has been challenged by many scholars, Christophe Bounneuli and Jean-Baptiste Fressoz question that humans are treated as an undifferentiated unit within the Anthropocene. Meaning that responsibility for climate change for example is put on *all* human beings, they argue that this is a simplification of the problem and that there are different degrees in which different people can be said to be responsible for the planets environmental changes. This is a view shared by Andreas Malm and Alf Hornborg, they further critique the Antropocentric notion that humans as a *species* is responsible for climate change. They argue that this undermines the social history of human beings and its effect on climate change, it is not the species that have caused climate change, but the social history of this particular species. Donna Haraway and Jason W. Moore have elaborated on the concept of Anthropocene, both use the term Capitalocene, which focus specifically on the capitalist contributions to the environmental change in the Anthropocene.

Dipesh Chakrabarty emphasizes the recognition of human begins as a species, he calls this *species thinking*. Chakrabarty is sceptical to critique directed towards the Anthropocene that focuses only on global capitalism, saying that 'these critiques do not give us an adequate hold on human history once we accept that the crisis of climate change is here with us and may exist as part of this planet for much longer than capitalism or long after capitalism has undergone many more historic mutations.' Through this statement Chakrabarty show the distinction of nature and culture. He further points to the importance of looking at both sides to understand the crisis of climate change, consequently to critique capitalism and use *species thinking*. In her essay 'Food

⁹⁶ Novak, 'Meal-in-a-pill: A staple of science fiction'.

⁹⁷ P. J. Crutzen & E. F. Stoermer, 'The "Anthropocene", in *IGBP Newsletter no. 14* (The International Geosphere-Biosphere Programme), 2000, p. 17,

http://www.igbp.net/download/18.316f18321323470177580001401/1376383088452/NL41.pdf (accessed 7 Aug. 2018)

⁹⁸ C. Bounneuli & J Fressoz, The Shock of the Anthropocene: The Earth, History and Us, London, Verso, 2016, p. 4.

⁹⁹ A. Malm & A. Hornborg, 'The geology of mankind? A critique of the Anthropocene narrative', *The Anthropocene Review*, vol. 1, no. 1, 2014, pp. 64-67. Available from: SAGE Publishing (accessed 15 Aug. 2018)

¹⁰⁰ D. Chakrabarty, 'The Climate of History: Four Theses', *Critical Inquiry*, vol. 35, no.2, 2009, pp. 212-213. Available from JSTOR (accessed 7 Aug. 2018)

Futures: Speculative Performance in the Anthropocene', Shelby Brewster study three examples of art performances featuring future food. In her study, in addition to Chakrabarty, she turns to Timothy Morton's ideas of thinking ecologically and hyperobjects. Ecological thinking is the inclusion of human begins in the global ecological system, 'humanity does not stand outside the environment'. The interconnectedness of the ecological system Morton refers to as the mesh. Mortons concept of the hyperobject is something that is so big that it is withdrawn from humans, climate change is an example of an hyperobject. A hyperobject like climate change or global warming are detected in 'interobjectivty', in a space of interrelationships. 101 This can be the extreme heat wave we have had this summer or the scarcity of food products that we will have because of it. Based on these theories Brewster recognises that 'thinking ecologically, a recognition of the interconnectedness of humans as a species within the global ecological mesh, and apprehending hyperobjects, entities with spacetime scales so massive that they cannot be directly encountered, can be achieved through art.' She continues 'Through their particular aesthetic characteristics [they] enact ecological thought and reveal the hyperobject of climate change." This idea can be applied to 'The Next Menu', which showcase different ways of how we can reformulate the Anthropocene. Brewster conclude that the art performances in her study shows a possibility of rewriting the future and opens up to a future where humans both as individuals and as species might view the world differently in the Anthropocene. This is achieved through criticising capitalism and by pointing to a coexistence in the mesh. This view is compatible with the view 'The Next Menu' seem to convey. By presenting an alternative menu of foodstuffs that are sustainable and by telling the story of a planet in a food crisis 'The Next Menu' both treasure human survival and the planet's survival from the perspective of species thinking and ecological thinking. By presenting five different futures in 'Five futures' that we may be part of they also uncover the hyperobject of climate change and food crisis. By doing this Monroe and Kleeman contribute to the eco-centric concept of global health as defined by Remco van de Pas, equating the health of people with the health of the planet and understanding the interconnection between all life forms on this planet. 103 I would say that here is where species thinking comes into play.

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¹⁰¹ S. Brewster, 'Food Futures: Speculative Performance in the Anthropocene' *The Journal of American Drama and Theatre*, vol. 29, no. 2, 2017, http://jadtjournal.org/2017/05/15/food-futures-speculative-performance-in-the-anthropocene/ (accessed 7 Aug. 2018)

¹⁰² S. Brewster, 'Food Futures: Speculative Performance in the Anthropocene'.

¹⁰³ R. Van de Pas, 'Global Health in the Anthropocene: Moving Beyond Resilience and Capitalism: Comment on "Health Promotion in an Age of Normative Equity and Rampant Inequality", *International Journal of Health Policy and Management*, vol. 6, no. 8, 2017, p. 482. Available from PMC (accessed 15 Aug. 2018)

Even though 'The Next Menu' is showing examples of species and ecological thinking and looking at humans as part of the global system and the mesh, 'Five futures' is part of what Mark Fisher call capital realism. This is the belief that 'capitalism is the only viable political and economic system', but most importantly, that in today's society it is impossible to imagine an alternative system. 104 I would say that all the five futures presented in 'Five futures' are rooted in the capitalist system. This is especially visible in the His 'n' hers jelly, where gender marketing is still around in a dystopic future of food exclusively made in a lab, it is also visible in the dying ecosystem and the class-based food economy of future number 4. The only future that could be an example of an alternative future, or should I say retrospective example, is the farm-to-table idea, although this would still be part of an economic system. The future that seems farthest away from the capitalistic system would be future number five, where we failed to adapt, where there are no commodities to exchange any more only fossils. This particular future is an effect of capitalism, a death of capitalism. 'The Next Menu' have the intention to show species and ecological thinking by trying to find alternative foods that can benefit not only humans but all living organisms on the planet, the goal is planetary survival. But this capital realism, show how we are stuck in the capitalistic system. Fisher refers to Fredric Jameson and Slavoj Zizeks phrase: 'it is easier to imagine the end of the world than the end of capitalism.' This goes to show that not even the ones who try to imagine an alternative, non Anthropocentric worldview, end up in the same pot, a world where human beings and human convenience is prioritised. One of the most important aspects with the 'Five futures' dish in relation to the Anthropocene is that it is the human who choose what the planets future will look like from these five different futures. Not only that, it is the western society that make this decision. Which on the one hand might be right, as western exploitation of nature is the reason why we are in the situation we are in today, perhaps it is only right that the western society take responsibility for it and try to find a solution to the mess we made. On the other hand, change cannot be achieved with parts of the planet's population, I believe change can only be achieved through a collective effort from the world's entire population.

This brings us to the question: who are these products for? Who can eat these meals and who are exposed to these ideas? Monroe's meals are served to a secluded group of people within the art context. The people who hears about it will have to be in contact with this context. Project Nourished is another example of a project that a very small group of people can access. Imagine if this product would make it to a commercial market, with all the gadgets that you would need, a

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¹⁰⁴ M. Fisher, 'It's Easier to Imagine the End of the World Than the End of Capitalism', in N. Mirzoeff (ed.), *The Visual Culture Reader*, 3rd ed., London, Routledge, 2013, p. 307.

VR-headset, a 3D printer, a smell diffuser, and so on. This would cost a fair amount of money, meaning not everybody could get a hold of one. You would have to get maintenance on both hardware and software. Then there is the issue with the ingredients for the food cubes, will you make it at home? Will you order it? This is not specified on the website or the promotion video. There is a lot of work involved, just to get a new food eating experience. Also, who are the people who get the privilege of choosing what they want to eat? The ones who have food, meaning, this product is made for a western society, where there is an abundance of food and where people are used to almost limitless choose what food they want to eat. Accessibility improves when we look at Huel, the powder is cheap and it is supposed to have a long shelf life, this makes it accessible for many people. As mentioned before, they also provide mothers and children with malnutrition with Huel as part of their charity work.

With species thinking Chakrabarty point to the human realisation that we are animals in the face of climate change and world destruction, he wants to emphasise the connection people feel to each other and to our species at this moment unlike any other crisis, capitalist crisis for example. Malm & Hornborg argue against this interconnectedness of human beings in the face of climate change. Referring to the inequalities and different vulnerabilities visible in effects of climate change around the world, e.g. hurricane Katrina in 2005 and hurricane Sandy in 2012. They say 'If climate change represents a form of apocalypse, it is not universal, but uneven and combined: the species is as much an abstraction at the end of the line as at the source.' Looking at the accessibility of these future foods the indifferences between humans are apparent. Future food has to be working in the long run. This means that it has to be adopted by large groups of people, if not the whole world. Here we once again can see the irregularities in the social field of the Anthropocene, showing that there is no species thinking in the face of climate change. To save the planet social differences have to be erased, only then can we talk about species thinking and ecological thinking, although this is just an utopian image at this point.

Looking at Huel and Project Nourished I would say that instead of questioning contemporary capitalist consumption these two examples are reinforcing the Anthropocene through capitalism. This means that they too are an expression of capital realism, both are products of the capitalistic society, where diet and human wellbeing is prioritised over other animals and the planets wellbeing, showing the absence of ecological thinking and representing a future where the human body as a capitalistic being is shown. Huel shows a consciousness about the climate and take measures to seem to be invested into the environmental question, but as discussed before, their

¹⁰⁵ Malm & Hornborg, 'The geology of mankind? A critique of the Anthropocene narrative', pp. 66-67.

main focus is still to get people fit and to stay active, focusing on their work and exercise, these are all creations of the capitalist society. Obesity is a capitalist disease and by fighting this Huel is both discouraging and encouraging the capitalistic system. The same can be said about Project Nourished that is definitely encouraging the Anthropocene through capitalism. Showing next to no regard to the environmental issues of the future, instead they focus on making the eating experience a more imaginative and stimulating experience for the human being. In the middle of a food crisis this seems almost silly. Capitalising on people's desire for innovation, but also the desire for a slim body and the possibility to eat whatever they want without the consequences of getting fat or getting food reactions. In the case of Project Nourished it is mostly technological innovations that is showcased, which brings us to the next segment.

Exo-evolution

By looking at these different examples of futuristic food one thing has become clear: the need for technology. The most obvious case is Project Nourished, whereby technology is used as a means to reengineer and recreate the sensory experience already existing in the human body. Huel uses technology and science to hack the body, figuring out what the human body needs and then incorporate these ingredients into a powder. 'The Next Menu' use molecular cooking techniques to create the dishes in their 'Five futures' dish. We rely on technological development to survive, as discussed before, our future has had a close connection to the technological evolution. Technology is believed to bring us into the future, a sentiment that is very much related to the view of the Italian futurism.

Peter Weibel's idea of the exo-evolution is an external evolution, brought on by the technological revolution, Weibel explain:

The industrial revolution was clearly machine-based. From the steam machine to automobile and film projector, it was dominated by a technology based mainly on the technical principle of the wheel. These machines were, on the one hand, accelerators; but, as artificial tools, they also assumed, in improved form, the tasks of natural organs: What the leg couldn't achieve, the wheel did; what the eye couldn't achieve, the telescope did; what the voice couldn't, megaphones and microphones achieved. The machine-based industrial revolution and the information-based postindustrial

revolution have created the technical prerequisites for a development we may call the »exo-evolution.«¹⁰⁶

The idea of the exo-evolution comes from a transhumanist perspective, where technology is used to enhance human capacities. This is the belief that we can become whatever we want, a morphological freedom, breaking free from the restrictions of being a human and Darwin's human evolution. Some transhumanists tend to go one step further by denying death of humans and believing in technology to make humans invincible. 107 Transhumanists do not strive for ecological equality as posthumanists do, instead they believe that every life form has the possibilities to be whatever it strives to be. The intention is to break down the barrier between human and machine. Posthumanism on the other hand look at humans as a system, that is part of other systems, they believe there is no difference between humans and animal, not even between humans and machines, all discrepancies are blurred out. For posthumanists 'human exceptionalism is dead' as Kevin LaGrandeur put it. 108 Posthumanists are 'humbling' people to the point where it is almost becomes misanthropic according to Steve Fuller and Veronika Lipinska, breaking down the borders of both human and nature, organism and machine. 109 A view shared by Donna Haraway, in A Cyborg Manifesto she proclaims that we are all hybrids between organisms and machines, or as she calls it – cyborgs. The cyborg is a creature of a posthuman, postgender, postracial world. 110 This is true in the relation to both Huel and Project Nourished, where the body have been hacked like a computer to understand the human body and in a sense improve it. Project Nourished enhances the pleasures of eating, also it has solved the problem for humans of not being able to eat 'whatever they want' by hacking the sensory system, tricking the mind into thinking it is eating something pleasurable. In the case of Huel the body has been hacked in what it needs to function, Huel provides the body with the fuel it needs to function, here also without the consequence of becoming fat. The human body is here treated as cyborgs that can be improved.

¹⁰⁶ P. Weibel, 'Peter Weibel: Introduction to the exhibition – Exo-Evolution', ZKM, [website], 2015, para. 1, https://zkm.de/en/peter-weibel-introduction-to-the-exhibition (accessed 23 March 2018)

¹⁰⁷ V. Lipinska & S. Fuller, *The Proactionary Imperative: A Foundation for Transhumanism*, Palgrave Macmillan Ltd, 2014, pp. 1-3. Available from: Library catalouge (LUBcat), EBSCOhost (accessed 16 Aug. 2018)

¹⁰⁸ K. LaGranduer, 'What is the Difference between Posthumanism and Transhumanism?', *Institute for Ethics and Emerging Technologies*, [web blog], 28 July 2014, https://ieet.org/index.php/IEET2/more/lagrandeur20140729 (accessed 15 Aug. 2018)

¹⁰⁹ Lipinska & Fuller, The Proactionary Imperative: A Foundation for Transhumanism, p. 3.

¹¹⁰ D. J. Haraway, *Manifestly Haraway*, Minneapolis, University of Minnesota, 2016, p. 8. Available from: ProQuest Ebook Central (accessed 7 Aug. 2018)

According to Weibel's exo-evolution the human being and the planet are 'unfinished project' that will be transformed by constant industrial, technical and digital revolutions. exo-evolution to Weibel is man's 'stepping out of the process of natural evolution.'111 He here explains an entrance to a new world where man is not prohibited by biology. In Michel Serras' definition of Exo-Darwinism, he explains how the human body loses qualities to physical functions like the wheel or the hammer. But also to intellectual functions like memory, through writing and photographs. 112 With Project Nourished one could say that the human body loses its sensory capabilities to technology. But Weibel emphasise technology as an extension of the human body, an 'outsourcing of natural physical organs and functions' both physical and mental, to technology and mechanics. He describes this transformation from organ to tool as an organology, he continues 'this is the idea of mechanics: an enhancer of human ability, or a compensation for lacking natural abilities. Technology is thus nature humanized by humans; in short: Technology is humanmade nature.' Weibel also refer to Sigmund Freud and his understanding of mechanics and technologies as perfecting not only the physical body but the sensory body and further removing 'the limits to their functioning.' 113 Freud mention spectacles, photography, microscope, telescope, gramophones and telephones as inventions that have extended human capabilities and human perception. Weibel calls this the apparatus-aided perception. Project Nourished is an example of apparatus-aided perception, not only does it extend the human perception into a world of the imaginary but it stretches beyond the limits of human perception, by challenging the mind, making reality and the imaginary inseparable. Does Project Nourished extend human capabilities though? Not really, it is still a recreation of what the human body already can do, a recreational organology. This shows Project Nourished's obsession of technological advancement rather than solving the problem of climate change. Again, showing the obsession of human bodies and the interconnectedness of humans and machines and by doing so showing the superiority of humans to nature.

Huel could be translated into an outer exo-evolution or an outer organology. Technology is being put upon the body to expand the human bodily capabilities and performances, meaning exercise and work. Tweaking the human biology to fit the capitalist societies expectations. Huel have an

¹¹¹ Weibel, 'Peter Weibel: Introduction to the exhibition – Exo-Evolution', para. 5.

¹¹² M. Serres, *Michel Serres, philosophe imagess. Une documentaire de Benjamin Pichery*, interview in Regards sur le sport, Paris, Insep, 2009, cited in P. Weibel, 'Peter Weibel: Introduction to the exhibition – Exo-Evolution', *ZKM*, [website], 2015, para. 7, https://zkm.de/en/peter-weibel-introduction-to-the-exhibition (accessed 16 Aug. 2018)

113 S. Freud, *Das Unbehagen in der Kultur*, 1930, cited in P. Weibel, 'Peter Weibel: Introduction to the exhibition – Exo-Evolution', *ZKM*, [website], 2015, para. 10, https://zkm.de/en/peter-weibel-introduction-to-the-exhibition (accessed 16 Aug. 2018)

ideology of speed and human advance both physically and mentally through exercise and work. Once again focusing on the human being as the centre of the universe. While Huel say they take measures for the environment they still have an Anthropocentric view on the world, focusing on the human performances and human success.

This obsession with technology, efficiency and speed of Project Nourished and Huel is again a reminder of Marinetti's vision of future society. Focus is here put on the human body as the leading organism of the earth and technology is believed to be the saviour of human existence. In the sense of transhumanism and Peter Wiebel exo-evolution, technology is just an extension of the human body. Consequently, it is the human being who will become the saviour of their own existence on earth, or maybe on another planet? This shows the tandem where humans on the one hand looks at themselves as the universal dominance, with all the power to transform the planet. At the same time technology is considered as an external force that will save us.

Conclusion

What is the aspiration behind these examples of futuristic food? Is it to find a way for human's food supply to be more sustainable and kinder to the environment? Or is it merely a way for people to get healthy and to find pleasure in their eating experience? What do these different approaches prioritise? Our world or our body? Body or technology? Man or nature? Both Huel and Project Nourished show an emphasis on the human body and its appearances, consequently focusing on human beings rather than nature. By using these essentially diet products, people are rather changing their biological nature to fit into the mould of what is socioculturally considered to be beautiful in a capitalist society. This study shows that there is a relationship between future food and diet in an unexpected way. To eat healthy food is implemented into our way of life, therefore the future of humankind is the future of the body, it is the preservation of the human body. There is another dimension here were the future of human begins is co-dependent on the future of earth, these two futures are intertwined, no future of the earth means no future for human beings, the focus on climate change is therefore essential in the continued human existence. The preservation of the world applies to the preservation of the human being and consequently of the human body as well. The discussion shows that there are two types of future food in these materials. It is the future that focus on the survival of the earth and that take measures to 'save' the world like 'The Next Menu'. The second future is the future that focus on the human body and human health like Huel and Project Nourished. These two futures seem different, where one is essentially posthumanist, focusing on the ecological system as a whole and one is transhumanist, focusing on the human body and technological advances, as discussed before. But these are all controlled by the capitalist system as the image of a world without capitalism is impossible to imagine. The hegemony of capitalism is fundamentally turning every action into an action 'for the sake of humans' and 'for the sake of capitalism', even if it is intentionally made from an ecocentric perspective. The study shows that future food is fundamentally, replacement food. They are presented as solutions to different problems. Climate change, obesity or lack of imagination in the eating experience. Or in the case of Huel futuristic food for obesity disguised as for the climate.

Through this thesis I have talked about the future as a representation, this is because we can only imagine what our future will look like, our projections are only speculative depictions of the future. To imagine something is to produce pictures of that something. It is these images I have tried to find in my analysis, the depiction of future food. By comparing these three representations of future food we see that 'The Next Menu' shows an example of a more optimistic, creative and aesthetic future, whereas Huel represents a

more pessimistic and ascetic future where we must abandon food as we know it, harnessing all the pleasures of eating into drinking a powder drink for efficiency. The food cube of Project Nourished is another example of an ascetic food for the future, although with the recreation of the sensory pleasures of eating this has an aesthetic dimension to it. The pleasures of food are something that 'The Next Menu' and Project Nourished have in common. Indulgence in food, in reality or in the simulacra. Huel on the other hand eliminate pleasure to self-control, making the health obsession we live in visible, as do Project Nourished by encouraging people to simulate pleasures of food without the real pleasure of food.

This thesis shows that there is an ambiguity between human and nature in the Anthropocene. Humans believe they have the power to change the planet to the better (with or without technology), adopting the role of the hero. At the same time, they are stuck in the capitalist system, focusing on diet, body image, appearances, health, pleasures, achievements and all the other things of human life in the capitalistic society. In a way, we know that our existence might soon be over and we like to be the hero in all this, but at the same time we are both victims and villains in the fairy tale of climate change. Victims in the sense that we are victims to both capitalism and climate change, like numb creatures following the rules and the forces that are being imposed on us. We are villains as we exploit nature in our pursuit of happiness through capitalism. Just like Paul Raven says, we can both be heroes and villains in the narrative of climate change, the choice is up to the humans. Or else empty shells of mussels will become a constant reminder of our 'failure to adapt', man's failure to adapt to nature.

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