

Designing with Empathy: Implications for Food Design

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Abstract: A broken food system has resulted in a wide disparity between food producers and consumers, undermining the perceived link between food and nature. It is therefore important to re-create the relationship with food when co-designing future solutions. This requires new tools and a new set of skills among food designers. Designing with empathy is well known from design processes as a way to respect human experiences. We therefore question if empathy for food can be used when co-designing the food system of tomorrow? The purpose of this paper is to explore what empathy means in food design, and how empathy for food can be created among users and stakeholders involved in the design process. The aim is to contribute to strengthening food design as a field that can contribute to tackle future food-related challenges in a responsible way.

Keywords: Design Empathy, Empathy for Food, Organic Food, Sustainable Food System

1. Organic worldview for solving future food challenges

1.1 Challenges within a broken food system - call for a paradigm shift

Many high income, as well as low- and middle income countries, are experiencing a dramatic growth in diet-related non-communicable diseases, such as heart disease, diabetes and cancer. While 795 million people went hungry in 2014, 39% of adults globally were overweight and 13% were obese (WHO, 2015). In 2050, the United Nations predict that there will be 9.7 billion people on this planet and according to the Food and Agriculture



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Organization of the United Nations (FAO), food production has to increase by 70% to feed around 9 billion people. Yet, expanding current food systems would cause enormous environmental, health and economic risks. Instead, opportunities lie in making food supply chains better, not bigger. For example, by increasing efficiency and reducing waste, as approximately one third of the food produced for human consumption in the World gets lost or wasted every year (United Nations Environment Programme, 2015). With urbanization, globalization, and the centralization of the food distribution, this has increased both physical and mental distance. For consumers, it is not clear who produces the food, how it is produced and what efforts and energy are needed to produce it. The need for an integrated agenda on food, health and sustainability is urgent. As argued in Eat (2015) food industry leaders need to realize that investing in their own long-term growth means investing in sustainable and healthy food. Furthermore, the United Nations call for a paradigm shift in agricultural development: From a “green revolution” to an “ecological intensification” approach (UNCTAD, 2013). Similarly, Organics International (IFOAM) call for solutions focusing on holistic empowerment and true value from farm to final consumer, which would move societies into the third phase of the organic movement - Organic 3.0¹. Organic 3.0 is about bringing organic out of a niche market into the mainstream and position organic systems as part of the multiple solutions needed to solve future food challenges. IFOAM further calls for solutions focusing on holistic empowerment and true value from farm to final consumer (Arbenz, Gould, Stopes, 2015). Ingebrigtsen and Jakobsen (2011) argue that in order to cope with contemporary challenges a paradigm change is needed. Not just from a mechanic to an organic view, but also from the economic to the ecological man. Ingebrigtsen and Jakobsen (2011) further point out that the mechanical worldview does not leave much room for ethics or aesthetics. “It is a shift that requires us to expand our thinking from the head to the heart. It is a shift from an ego-system awareness that cares about the well-being of oneself to an eco-system awareness that cares about the wellbeing of all, including oneself” (Scharmer and Kaufer, 2013, p. 1- 2).

1.2 Design empathy as a tool for Food Designers

The disciplinary combination of food and design, the field Food Design as a research area has been explored for the last 10 years (Hermannsdottir, Poulsen, Fisker, 2013, Olsen, 2015 & Zampollo, 2015). It still lacks theoretical foundations for having a sole definition of what Food Design is. In this paper we use the definition by Dr. Berry Kudrowitz, member of the International Journal of Food Design. Food Design: Designing with the medium of food and/or designing items, services, spaces and systems related to food. Zampollo (2015) thus argues that there is a scope for design methods developed specifically for creating food products, food services or food systems. In this paper, we explore how design empathy can

¹ *Organic 1.0* was started by our numerous pioneers, who observed the problems with the direction that agriculture was taking at the end of the 19th century and the beginning of the 20th century and saw the need for a radical change. *Organic 2.0* started in the 1970s when the writings and agricultural systems developed by our pioneers were codified into standards and then later into legally-mandated regulatory systems.

be applied when designing solutions, that address current societal and ecological challenges of the food system, and help stimulate an organic one. Such societal design is motivated by social goals rather than profit maximization (Mulgan, Tucker, Ali and Sanders, 2007), and is among others, inspired by Victor Papanek's ideas that designers have a responsibility; are able to cause change in the world through design; and should design for people's needs rather than their wants (Papanek, 1984). We will look into empathic design as it has proven to be useful in addressing increasingly large systemic challenges, such as education and healthcare (Brown, 2009). Empathy is the ability to be aware of another person's feelings and thoughts without having had the same experience. Empathic design focuses on the role of experiences, desires, moods and emotions in human activities (Mattelmäki, T., Vaajakallio, K., & Koskinen, I., 2014). In human-centred design (Buchanan, 2001), empathic design can be described as an interpretative and respectful attitude, process and creative tools for exploring, discovering and imagining with people focusing on subjective and emotional dimensions, and on what is meaningful. It is about abilities and willingness, it is about immersion, it is about designing for experiences (Battarbee, Sure, Howard, 2014). Empathic design first appeared in business literature in the late 1990s, and researchers hailed the importance of emotion being crucial to design research (Dandavate et al., 1996). It was identified as a way to uncover people's unspoken latent needs and then address them through design (Leonard & Raport, 1997). Latent needs are those that people are not yet aware of. They are needs that become realized in the future. Tacit knowledge is knowledge that people can act upon, but cannot readily express in words (Polanyi, 1964). Sanders (1999) has worked with different ways in user research to uncover latent needs and tacit knowledge. She divides user research into three areas according to the focus and the kind of information that can be acquired with the methods: say, do and make. Say and do relate to interviews and observations. The make-tools are physical or visual aids to allow people to visualise and describe their expectations and dreams. According to Sanders these categories should be explored simultaneously to achieve an empathic understanding of the users. Research shows that empathy not only helps designing better and more human centred solutions. It is also a powerful drive in the design process as it motivates to solve design challenges. This is due to the fact that putting ourselves in someone else's shoes increases our so-called field-dependent thinking (Decety & Ickes, 2011).

1.3 Designing with empathy for food

Now, how is it possible to apply design empathy in food design? How can it be useful when addressing current challenges of the food system, and help stimulate an organic one? The food system has resulted in a wide disparity between food producers and consumers, undermining the perceived link between food and nature. We believe empathy is necessary to help recreate this link, as the strengths of design empathy lie in exploring, discovering and imagine with people focusing on subjective and emotional dimensions. In food design this does not only mean involving people, but also involving food, through engagement with nature, food and the people involved in the food production. We believe food literacy is one

of the fundamentals for being able to create empathy for food. Vidgen and Gallegos (2011) define food literacy as understanding the nature of food as a response to the lack of knowledge of food production, processing, cooking and tasting. Inquiring into food literacy can help illuminate the complex dimensions of food production, that is rarely captured by existing industry and mechanical processes incentivized by profit. Grow It Yourself (GIY) is an emerging global community of domestic food growers, which started in Ireland. The GIY movement brings people together in homes, schools, communities and online to inspire and support each other to grow food. According to GIY the real potential of the home grown food revolution is not just in the actual food grown - but the empathy created by the process of food growing (Kelly, 2013 & 2015). Agency of own food production can be compared to art-making practices and approaches with a tremendous potential to impact people and places (Sommer, 2014). While artists may lack the technical skills and tools to systematically transform urban communities and the lives of residents, their approach is a critical dimension to bring us back to having empathy for food production. Gaining empathy for food means gaining respect and understanding of what food actually is. This involves how it nourishes and sustains us and how much time, effort and resources it takes to grow it and make it in a way that is sustainable for both our health and the health of the planet. This understanding can be related to Arne Næss philosophy about deep ecology, where the core principle is the belief that the living environment as a whole should be respected and regarded as having certain inalienable legal rights to live and flourish (Næss, 1989). Empathy for food can imply how food feels, as in the study of Temple Grandin (Lynch, 1998), the ability of feeling the same as the animals feel. The perspective we take in this paper is not the ability to know “what would the vegetable feel about this”, but to understand the relation of food and nature, what it takes to sustain it and grow it. This for example entails what the different types of plants need in order to grow and thrive, to become nutritious, and how to make full use of the important resources that they provide. We believe this is important in order to change our attitude towards food, and realise that it is not only about our own desires and tastes at any given time. If successful, this can lead to change our actions and choices when it comes to which food we choose to grow or buy, and how we make full use of it. In this paper we explore designing with empathy for food, as being the act of designing with respect, understanding for, and engagement with the food and the people involved in its production. As saying, doing and making should be used simultaneously to achieve an empathic understanding, we will focus on creating empathy for food through engagement and experimental learning when co-designing with users and stakeholders.

2. Exploring empathy in food design through three cases

What follows is a discussion of three co-design (Sanders & Stappers, 2008) cases based on food design projects carried out by the authors of this paper. The cases explore the role of nature as a physical context and the role of food as a tangible tool.

2.1 Case 1: Creating empathy through co-designing in nature

How can food designers create respect and understanding for food through co-designing a meal experience together with foragers and farmers in the physical context of nature? Food Studio, an interdisciplinary expertise team of food specialists and food designers in Norway, arrange four seasonal *Get Aways*² as workshops and dinners throughout the year, where the participants take part in the entire process in order to create a meal out in the nature. They forage, harvest and cook together with the Food Studio crew - to create a closed circle that people can understand from beginning to end. This is done in close collaboration with knowledgeable and passionate people ranging from foragers to farmers to influence food literacy and empathy for food among urban citizens. From 2013 Food Studio has arranged 11 Get Aways (one in Paris, one in Melbourne, one in Tokyo, one on Awaji Island and seven in the Oslo-area). This concept builds on the experience from different versions of the concept that all together is carried out in 50 events over 5 years from 2011 - 2016.

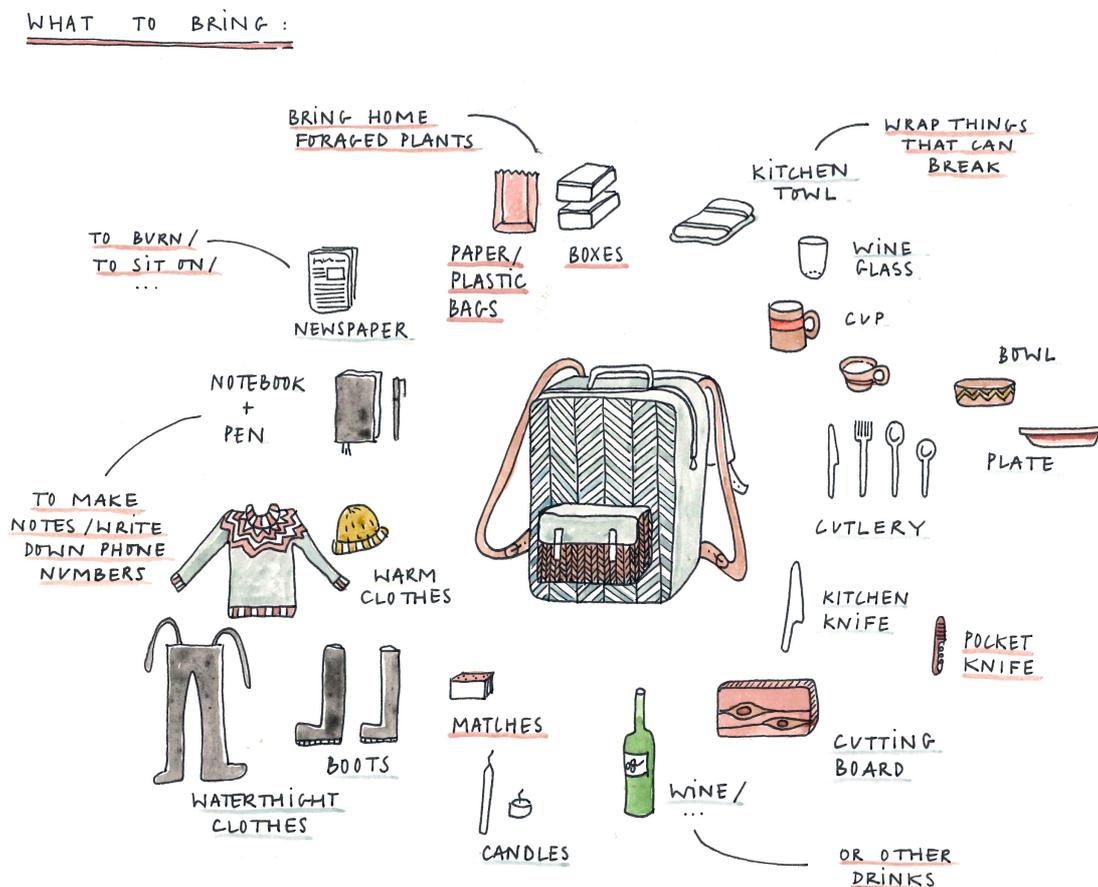


Figure 1 This is participant's instruction manual for preparing for Spring Get Away by the shore.

² <https://foodstudio.no/past-events/get-away-spring-by-the-shore/>

Experiences from the Get Aways show that when relating to nature, the producer and the way of producing comes together. It creates respect and understanding for the effort, natural interconnectedness and fine balances of the systems that lie behind the food we eat, creating empathy for food among participants. Every situation is different - a different forest, a different climate, a different season. The event setup is therefore always on the premises of nature, co-designed by a team consisting of Food Studio, forager/farmer and participants. Together they have to find out which quality the harvest has at the time that it is used. Although there are certain overall parameters known based on geography, season and weather report, the process is full of uncertainty and has to be adjustable to nature. There is no guarantee for being able to harvest enough food and to be able to cook successfully in a non-controlled environment. For example, making cheese in the woods where the temperature is not optimal for achieving the right consistency. The only back-up plan is a piece of bread, which makes the experience stronger as both arrangers and participant are solely dependent on nature, and dependent on the forager/farmer of knowing how to harvest and how to be able to utilize the harvest in the best way possible. Active involvement of participants and food producers has therefore been one of the keys to create empathy for food as the act of harvesting or foraging food for eating makes participants vulnerable and respectful for nature. This also creates respect for the forager/farmer, which has strong respect for food as his livelihood is reliant on nature - weather, seasons etc. This case explored Get Aways as a co-design activity to create empathy for food among participants. What implications does this have for the role of the food designer, and how does this strengthen design of the food systems of tomorrow? As mentioned above, empathic behaviour motivates us to solve design challenges. As research has shown putting ourselves in someone else's shoes increases our so-called field-dependent thinking. In this case participants put themselves in the shoes of being dependent on nature and natural harvest, and thus we believe this can help motivate and help food designers to design food systems that are dependent on this. Co-design in this case helped experiencing the value of knowledge and practice in the extreme context of being immersed and dependent upon nature with its limitations. Being a tactile experience in a new environment gives the participants ways to learn and internalise knowledge in a manner that is rarely available to most audience today. The key to success here was giving participants the possibility of being a part of co-designing the food experience step by step based on the premises of nature gradually develop empathy for food through saying, doing and making.



Figure 2 Participants in Spring Get Away by the shore fishing in Oslofjord. Photo by Svein G. Kjøde.



Figure 3 Edible greens that participants have harvested by Oslofjord in Spring Get Away by the shore. Photo: Svein G. Kjøde.

2.2 Case 2: Creating empathy through food as tangible tool

How can food designers create respect and understanding for food through co-designing, using food as a tangible tool? Is it possible to transfer context and tools from Get Aways, for creating empathy for food far away from food production and nature? This was explored in an interdisciplinary workshop involving leaders from supermarket chains, food producers and academic researchers in developing future solutions for solving a broken food system. The task given was to design a retail concept for the future consumer that requires transparency and relies on sustainable value chains. The aim was to see if it was possible to create empathy for food through involving newly harvested biodynamic vegetables as tangible tools for bringing participants closer to food and nature. Tangible is a well known tool to use in the design process to assist the conversation and interactions with participants involved. It primarily focuses on the use of three-dimensional mock-ups, so-called “things-to-think with” which enable reflective conversations (Brandt, 2009). They serve as boundary objects (Star and Griesemer, 1989 & Star, 2010) that span the gap between the different competencies and interests of participants in the design process.



Figure 4 Co-designing with broccoli as a tangible tool. Photo: Alexander Benjaminsen.

Each group, consisting of one researcher, one producer and one leader from supermarket chain were given one vegetable, one knife, one grater and one pen. The vegetables were organically produced, irregular and still containing dirt, showing that they had just been harvested. This brought participants closer to food production and nature through being able to feel the texture, smell and freshness of nature. Participants had different ways of approaching this, some groups could not break out of expressing through writing (ex. using red beets to write), while others used them as “things-to-think with”. Throughout the workshop participants gradually engaged more and more with the vegetables as the workshop became more solution oriented. Participants started taking their gloves off and borrowing vegetables across the groups. They used the vegetables to explain when discussing value chains, and always discussed with the food product as a reference point. The solutions created in the workshop range from an app helping customers matching their organic values to the values of the food product, to systems cutting out the middle man to bring the value food product closer to the customer (figure 5). These solutions reflect respect towards the food product as they focus on highlighting the real values of the food product, being a natural harvest. What actually happens among participants when using vegetables as tangible tools? And how does it become a “things-to-think with” which enables reflective conversations based on respect for food? The process showed that the food product was always at the centre of the discussion, helping idea generating solutions taking point of departure in the organic premises of the product. Having not solely to rely on words helps participants interact with this systemic challenge, as it becomes possible to show the abstraction through building with the physical elements. But how does the tactility stimulate the process of generating new ideas and solutions? By getting their hands dirty, touching food, working with food, it helped participants stay focused on the organic connection of food. Food is not just the end product in a restaurant or a store. It is not all the different food products you can buy, often heavily processed. For achieving a sustainable system, food should first and foremost be the ingredients you find and grow based on natural premises. The case shows that involving food product as a tangible tool has several potentials for helping participants stay focused, reflect on the topics and think outside the box, and seeing the bigger picture. That there is a need for solutions that are based on organic worldview, and not a mechanical one.



Figure 5 ØkoLOGISK - concept for an organic shop connecting producers and customers more closely.
Photo: Alexander Benjaminsen.

2.3 Case 3: Empathy for food throughout the value chain

As the aim of this paper is to find ways to design the food systems of tomorrow, we question: What is a successful result of a design process where empathy, respect and understanding for food throughout the value chain has been utilized? Røros is a small municipality in the mountains of Norway, far from the ocean both in distance and in altitude. Visiting Røros you might not understand just how small it is though, because it has an urban vibe and lots of Røros-owned businesses and well established brands. Some of this success may come from being fairly isolated at times, due to its location far up in the mountain. Perhaps it is possible to trace it back to Røros' early days as a copper-city, a place of production and increasing wealth (Wolden, 2010). And perhaps it is possible to trace it back to something that has to do with empathy - for each other as well as for food? Let us take a look at one particular example: Rørosbryggeriet [e. Røros brewery] and Smaken av Røros [e. Terroir Røros], two companies owned by Røros Food & Beverage Group AS. The companies work with food and product development with high respect and empathy for food. We have already mentioned how we view empathy for food as something that is more about understanding the produce and how to grow and treat food. But there is another aspect to this that our case from Røros highlights. It is about respecting the resources enough to want

to use them to the fullest. This perspective is also known from the philosophy of nose-to-tail, brought forward by the renowned chef Fergus Henderson saying that if you are going to kill the animal, it is only polite to use the whole thing (Henderson & Bourdain, 2004). The way they do this in our case is that they - in order to make use of the local resources at Røros - engage have a wide variety of people who pick and deliver berries to them. These people are both school children and seniors, as well as foreigners coming to Røros to work - because Terroir Røros pay them a wage considerably higher than a lot of other berry manufactures do. This means that each berry is more expensive for the company, so they need to get as much out of every single berry as possible, using all the resources the berry provides. They do not waste a single drop, or a single edible part of the berry. Take the crowberry: After squeezing it to make juice for their crowberry jelly (figure 6), they take the pits and the skin, still bursting with taste. What would normally be considered waste is therefore used by Røros brewery to flavour a particular type of porter. Now you might think there is nothing left, but there is still one more thing to extract from the berry: the aroma. As flavoured water becomes increasingly popular, but very few of these waters in Norway are flavoured with local flavours, Rørosbryggeriet started a project together with the technical research institute SINTEF, among others, to try to catch the aroma when they boil the berries for their crowberry jelly.



Figure 6 Organic Crowberry jelly by Terroir Røros.

Another aspect of this empathy that we believe is integrated in the thriving local food environment in Røros, is the way the different producers collaborate and make use of each other's knowledge as well as facilities. Terroir Røros, once again being a perfect example, share their space with both the Røros brewery and Gaute, a food company that recently moved their production from a bigger city, Trondheim, to be a part of the passionate food environment in Røros. Because they want more of the food resources at Røros to be both harvested and processed at Røros, they decided to use leftover eggs from a local farmer to

make a rich, luxurious mayonnaise. Lacking proper processing and packaging-machines, they would have had to make an artisan product that would easily have a cost of 70-80 NOK (7,5 - 8.5 EUR) in the stores. Though they do value their way of doing things, and are not afraid to claim the costs of their operation through the pricing, they realized that with Gaute's facilities they could reach a better price. They could make their premium aioli/mayonnaise, consisting of 30% egg yolk, not the 12 % industry standard, at a price that would make this product a true alternative in the everyday shopping, for the average consumer. The product is now priced just below 30 NOK (3,2 EUR) at the store, making it an accessible alternative for the everyday shopper. This case described design and development of commercial food products where respect and understanding for food and nature has been utilized throughout the value chain. Having such respect forces new way thinking, resulting in three different food products based on one raw material, and a food product exceeding technical quality limitations. This shows that there is great potential for reaching solutions that strengthen sustainable food systems when involving empathy for food in the design process.

3. Discussion – design as an actor in food crisis

Can empathy for food be used as a tool to simulate better food system? It will take time before a scientific research gains big enough data set for politicians to rely on and create top down shift. Therefore, food designers can play a big role in shifting to organic society through a market driven change. Motivations for driving the change can be hard for consumers to navigate in due to the complexity of the wicked food system challenges. After a dominant food system based on top down rules, labelling, and advertisements' it is time to equip food designers and industries with the right tools for being able to take decisions based on organic values. Therefore, empathy for food can play a crucial role for food designers when involving industries and users in design processes for co-designing solutions that can position organic systems as part of the multiple solutions needed to solve future food challenges. It motivates and allows participants to take decision based on understanding and respect for food, and it allows industries to be able to stay ahead of competition through paradigm shift. According to Henderson (2015), the paradigm shift means that three of which industries investing in environmental sustainability are likely to be a significant source of competitive advantage. The key is to build deep cultural and emotional commitment to change. Beyond the business model, it is important to focus on the human values that come from the heart (Henderson, 2015).

4. Summary

The paper addresses food consumption and food systems. It focuses on studying if empathy for food can support in the process of developing sustainable food systems. It looks into

designing with empathy for food as the act of designing with respect for, and engagement with the food and the people involved in its production. The cases discussed in the paper show how empathy for food can be created through engagement and experimental learning when co-designing with users and stakeholders. The first case shows this through using nature as context and design material, the second case shows this through using food as tangible tool, and the third case shows how empathy for food can be translated into commercial food solutions. The ability to respect and understand through engagement with the food and the people involved in its production informs and inspires the food design process. Such field-dependent thinking for the relation between food, food production and nature motivates and helps food designers deal with sustainable food system challenges. The food system is complex and it is important to note that empathy is only one of many tools that can be useful in the food designer's toolbox. When working with such complex challenges food designers collaborate with experts within food literacy, sustainability, sensory etc. We will therefore continue questioning and exploring ways to involve empathy for food in co-design processes involving different types of actors with different sets of expertise. If successful, this can strengthen the food design field to tackle future food-related challenges in a responsible way.

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