Press Release

Food Revolution 5.0 – Design for Tomorrow's Society

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Andrea Staudacher, Andrea's Future Food Lab
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Food is a symbol of life itself, giving us an identity, a home, and many of the cultural rules we live by. For the ethnologist Claude Lévi-Strauss, cooking food was human beings' first cultural act and thus marked the beginning of civilization and craftsmanship. In today's affluent society, food has evolved into a creative means of self-expression and almost an ersatz religion. At the same time, the explosive growth of the world's population, along with climate change, resource scarcity, hunger, and poverty, are placing increasing demands on human health and hygiene, and geopolitical crises are causing us to rethink our methods of food production, packaging, distribution, consumption, and disposal. In the exhibition *Food Revolution 5.0,* the Museum für Kunst und Gewerbe Hamburg (MKG) sheds light on one of the most pressing issues of the 21st century: What will we eat in the future? *Food Revolution 5.0* presents answers to that question in the form of pioneering visions, ideas, and designs contributed by over 30 international designers. Some of the proposals can be regarded as best practice examples for the here and now. Others are more speculative, showcasing possible future scenarios that ask the question: What if …? The MKG commissioned several designers, among them Werner Aisslinger, Martí Guixé, Isabel Mager, Andrea Staudacher, and Marije Vogelzang to develop new projects specifically for the show. The exhibition design was entrusted to the renowned Dutch design studio Makkink & Bey. *Food Revolution 5.0* introduces a variety of viewpoints while raising awareness of the fact that the future of humankind will depend largely on the future of nutrition. The MKG tackles this complex subject by way of the four narrative strands *Farm, Market, Kitchen*, and *Table*. In the *Laboratory*, international universities have been invited by the MKG to present projects revolving around the theme of food that were specially developed for the exhibition. Also on view to supplement the show will be design objects for the kitchen from the collection of the MKG. In a competition held during the exhibition, Hamburg canteens and caterers will show new and meaningful ways they have conceived to connect traditional knowledge with new discoveries. Exhibition visitors will have a chance to select their favorite innovative solution. And visitors who want to immediately take action to make a difference can find practical suggestions in the *Do-it-Yourself* section.

Farm

Industrial farming is today responsible for one third of greenhouse gas emissions and 70 percent of fresh water consumption. According to the World Agricultural Report, three quarters of the biodiversity that still existed in 1990 has now been lost due to monocultures. 75 percent of the world's food supply comes today from only twelve plants and five species of animal. It is not only dwindling biodiversity that is upsetting the balance of our ecosystem, however; factory farming, high-performance breeds, nitrate pollution of soil and water, and overfishing of the oceans represent ongoing threats. Against this backdrop, a new model of farming is being called for today that is actually based on time-honored traditions: small-scale, labor-intensive farming focusing on diversity as a guarantee for an environmentally, socially, and economically sustainable food supply with resilient cultivation practices and local distribution systems.

The exhibition section devoted to the *Farm* presents alternative cultivation models ranging from an indoor farm developed for the exhibition by the Fraunhofer Institute UMSICHT, to an apiary for the urban public space conceived by the designers from the Bee Collective, to the household insect farm proposed by Katharina Unger & Julia Kaisinger from Austria. The

Dutch Studio Makkink & Bey is showing a design for an innovative cattle farm, while the model *Greenhouse Pigs* uses the excess heat, electricity, CO2, and nutrients produced by a pig farm to supply an adjacent greenhouse where tomatoes are grown, along with integrated environmental technologies. In this way, Gottlieb Paludan Architects propose separating livestock completely from open farmland.

These best-practice examples are joined by speculative design projects such as the *Foragers* by the British design duo Dunne & Raby: If neither governments nor industry are able to solve our food problems, then it's up to humanity to find its own solutions. What if we were able to extract nutrients from non-human foods with the help of synthetic biology and a novel digestive apparatus? Another question worth considering, according to Austin Stewart in his project *Second Livestock*, is whether chickens in factory farms might be happier if they wore virtual reality glasses that simulate idyllic farmyard surroundings. Designer Paul Gong from Taiwan takes the vision of future livestock farming to its logical conclusion in *The Cow of Tomorrow*, proposing that the dairy cow be replaced by biotechnology.

The prototype of the *Near future algae symbiosis suit* by the London design studio Michael Burton & Michiko Nitta could revolutionize our food supply: in a mask, the carbon dioxide breathed out causes algae to grow, which is then returned directly to the individual as a form of food. In her project *In Vitro Me*, the Dutch designer Chloé Rutzerveld asks how far consumers are willing to go if meat becomes scarce. A bioreactor jewel worn directly on the chest enables the exchange of heat, nutrients, oxygen, and waste products to cultivate the body's own muscle tissue as a personal meat supply.

Market

Today's global food market is marked by a strong concentration of power, a lack of transparency, and an unfair distribution of resources, along with frequent scandals. A handful of multinational corporations drives increasing industrialization along the entire value chain, from field to shelf, and determines worldwide what comes onto the market, into the supermarkets, and from there onto our plates. Price pressure along the global supply chain is one of the main causes of poor working conditions and poverty in the countries of production. At the latest since the financial crisis of 2008, excessive speculation in agricultural commodities has become a profitable business. So-called "land grabbing" (purchasing and reselling fertile ground in developing countries) further aggravates the situation. The rich industrialized nations sell off their agricultural surplus as highly subsidized exports, thus lowering prices on the world market. This then hinders the development of local production structures that would ensure people in poorer countries a sufficient income and food supply. The ongoing rural exodus all over the world is making hunger an ever-greater problem in the slums and suburbs of megacities. People living in these areas must today spend up to 70 percent of their disposable income on food, leading to increasingly frequent food riots in the cities of Asia, Africa, and Latin- and South America. Historically, the food trade has always been seen as a symbol of globalized capitalism. The supermarket in turn embodies the prime aesthetic principle of the victorious capitalist world, as a showcase for the constant availability of food.

In the *Market* section of the show, the visitor will discover a wealth of data and facts on today's market for food. In the work *Intimacy of Food and War*, developed especially for the exhibition, the German designer Isabel Mager deals with how the context of war affects power relations and thus control over the food industry. The Dutch photographer Henk Wildschut exposes the invisible side of food production in his illustrated reportage *Food*, showing conditions that are far removed from the bucolic ideal of farm life. What he discovered in the process is that organic production, which makes do without antibiotics, has become even more technical and sterile as a result.

The Chinese designer Xiaofeng Dai juxtaposes in a work developed expressly for the exhibition, *Beyond the news – revealing social media comments*, competing live feeds from the most popular websites with the most-discussed online articles, thus putting consumer experiences and the facts they have uncovered on public display. In his new production *Digital Food*, the Spanish designer Martí Guixé envisions the food of the future, which has been divorced from any global supply chain and can be produced individually. This nutrition system gathers the user's physical and medical data to determine the type and quantity of nutrients, vitamins, and proteins that are necessary for a balanced diet. Based on this data, the system then offers a menu featuring various forms, flavors, and textures, printing out the food using a 3D printer.

Kitchen

The *Kitchen* forms the vital interface between food supply and consumption. It is a reflection of current cultural and socio-economic issues and developments and brings together the whole world of food on just a few square meters. This section shows designers' ideas for the kitchen of the future and explores what they say about our knowledge of nutrition, our everyday lives, and our appreciation of food. The kitchen is not only where we prepare our food but also a showcase for changing lifestyles, taste trends, and social status. On TV shows and in magazine apps and social media foodblogs, food is celebrated today as a prominent part of our lifestyle. We are thus experiencing a growing trend toward seeing the home kitchen as a stage and status symbol, where the latest technology is showcased. The high-tech or smart kitchen can be seen here as a metaphor for our alienation from our food, which we consume these days mostly in the form of convenience food. Where our food really comes from, how it is produced, how much labor and resources go into it all remain hidden from us as consumers. At the same time, we've also lost touch with the knowledge of how to prepare, preserve, and store food properly. This ignorance leads to one in eight food products that we purchase ending up in the household waste. Furthermore, our globalized and industrialized food system is also extremely susceptible to toxins and pollutants that can lead to new health risks and disease syndromes. The kitchen as both the real and symbolic locus of human nutrition is therefore uniquely suited for the innovative practices of do-it-yourself or do-it-together as ways to achieve transparent and sustainable self-sufficiency. The goal is to sensibly conjoin the latest technologies with our age-old knowledge of nutritional resources and their prudent cultivation, preparation, and storage. In the new kitchens, which ideally operate according to the principle of sustainable energy and waste management, the consumer becomes producer.

The *Free-Range Sink* by the Dutch designer Ton Matton uses autonomous supply technologies such as solar energy and rain water that has been purified via an internal treatment system. Also integrated into the kitchen counter is a compost system for kitchen scraps and a hay box that functions as an oven. The *Fridge on Ice* keeps food cool using a block of ice instead of electricity. A layer of insulation ensures that the ice box stays cold for up to one week. The plants growing atop the refrigerator pull the melt water upward with their roots. The German designer Werner Aisslinger emphasizes with the *Communal cooking landscape* he designed for the show the symbiosis between active analogue cooking and the social benefits of communal preparation, cooking, and eating of food, accompanied by conversation. His installation is a hybrid of arena, steps used as seating, and floor-level cooking zone, bringing together the cook, viewers, and eaters based on an archetypal model.

Swiss designer Andrea Staudacher slaughtered a domestic pig expressly for the exhibition. As meat eaters, we know that an animal has to die for our culinary enjoyment, but we still tend to block out the process of industrial slaughter. Staudacher wants to make us aware of this process again through a subjective sensory experience. The global livestock industry is in fact a major contributor to environmental pollution through CO_2 emissions. Hanan Alkouh from Kuwait has therefore developed a meat alternative in her project *Sea-Meat Seaweed* consisting of a kind of seaweed known as dulse. Fried, the algae tastes something like bacon, and it is full of minerals, vitamins, and antioxidants. The "superfood" can be processed like meat and would thus preserve the traditional profession of butcher.

Along with algae, insects are another important protein source for the future, but are associated in Europe and elsewhere with dirt and revulsion. German designer Carolin Schulze reflects on our dietary habits and preferences with her project *Falscher Hase oder Bugs' Bunny*. In an effort to enable a more positive experience with insect meat, she processes mealworm paste with a 3D printer to create dishes with cozily familiar names. The Dutch designer Chloé Rutzerveld likewise combines new technologies with natural, healthy, and sustainably produced food in her work *Edible Growth*. With a 3D printer, she produces multiple layers of edible agar, seeds, spores, and yeast, out of which photosynthesis and fermentation generate small plants and mushrooms within five days.

The Jihyun David design studio, which has branches in Italy, South Korea, and the Netherlands, interviewed people to collect traditional knowledge on the proper storage of food and then reconstruct it for today's use. This resulted in the product series *Save Food from the Fridge* for the sustainable storage of food. These objects are designed to help reduce personal food waste. The Italian designer Maurizio Montalti has rediscovered the versatile capabilities of fungal cultures. With his

Amsterdam-based design studio Officina Corpuscoli, he examines in his installation *The Growing Lab – Mycelia* how fungus-like organisms can be used to produce an alternative to plastic that is biodegradable and recyclable.

Table

In the *Table* section of the exhibition, designers apply discoveries made in behavioral research, look at the culture of eating in our mobile society, and draft future scenarios. Food plays a central role as a social and communicative event, serving to establish and affirm a sense of community and interpersonal relationships. Our eating habits and table manners reflect cultural codes and social structures. Culinary culture underwent a radical transformation in the course of the 20th century, with far-reaching consequences. As society becomes increasingly mobile, shared meals are often replaced by food consumed on the go, alone, and at all hours of the day. With this loss of tradition, we find ourselves asking: How can we make sure to eat right? Most people have no in-depth knowledge of nutrition and therefore tend to go along with constantly changing trends in what is supposedly healthy eating. Nutrition has become associated with negative experiences such as overweight, eating disorders, or food scandals. Along with our eating habits, our taste buds have also been culturally and socially conditioned from childhood by the excessive consumption of industrially produced food. If we want to sensitize them again and to make culinary knowledge an elementary component of education, we need to be open to food products that may be considered disgusting in many cultures.

Some of the projects shown in the *Table* section look at food from the point of view of behavioral research. The London designer Marina Mellado raises awareness of the eating disorder orthorexia nervosa with her project *Neurogastronomy*. This paradoxical behavioral disorder is expressed in a pathological compulsion to eat a healthy diet. Mellado has designed tools that help sufferers to develop new eating habits. With *Forks of excess*, José de la O responds to the excessive consumption of very sweet, salty, or greasy foods. The tableware devised by the Mexican designer forces people to eat slowly and thus to become aware more quickly of when they're satiated. The cutlery series *Stimuli* by Jinhyun Jeon from Korea is likewise designed to train the brain's cognitive perceptual capacity, promoting a more intense taste experience and mindful eating. The Dutch designer Marije Vogelzang is also interested in outsmarting the brain. Behavioral research shows that the brain signals fullness based on the amount of food we see, and not when the stomach is actually full. If inedible objects from her *Volumes* series are added to oversized plates or glasses and the food arranged around them, the amount of food seems the same to the eye and we end up eating less.

The computer, the internet, and smartphones have given us many new ways to communicate. At the same time, meals have to some extent lost their original function as shared social act. Louisa Zahareas questions in her installation *Screen Mutations* the growing influence of digital apps such as *Skype* and *Facetime* on our daily lives. The Greek designer has devised a backdrop of props – cups, teapots, utensils – that look distorted unless seen on a screen. That many city dwellers today tend to eat alone is documented by Miho Aikawa of Japan in her photo reportage *Dinner in NY & Dinner in Tokyo*. In his work *Human Hyena*, Paul Gong speculates on a strategy to prevent food waste: so-called transhumanists unite to create the group *Human Hyenas,* whose members will in the future use synthetic biology to be able to eat spoiled food without getting sick. The Austrian Klaus Pichler highlights the problem of food waste by arranging spoiled food products into opulent still lifes in his photo series *One Third*. And Johanna Schmeer proposes in her project *Bioplastic Fantastic* bioplastics that can be optimized and made edible with the help of enzymes. On the basis of seven biological components (water, vitamins, fiber, sugar, fat, proteins, minerals) and by means of photosynthesis, they would be able to produce all of the food and energy we need to survive. The complete reduction of food to the essential nutrients needed by the human body is proposed by the Taiwanese designer Pei-Ying Lin. Her *Minimal Nano Diet* is a speculative eating culture meant to purify the body and relieve it of the burden of digestion and metabolism.

Laboratory

In a fifth thematic section, the *Laboratory,* various universities present projects revolving around the theme of food that were specially developed for the exhibition at the invitation of the MKG. Represented here are the Weißensee Academy of Art Berlin, Department of Design, Experiment, and Product Design; Leibniz Universität Hannover, Institute of Design and

Urban Design; HafenCity University Hamburg, Department of Urban Planning and Regional Development; Hamburg University of Applied Sciences, Department of Oecotrophology; HAS University of Applied Sciences in 's-Hertogenbosch (NL), Department Packaging and Design; and FIPDES, Joint European Master in Food Innovation and Product Design.

The renowned Dutch design studio Makkink & Bey has designed a special narrative exhibition scenography for the exhibition *Food Revolution 5.0*.

Exhibition website: http://food.mkg-hamburg.de/en/

Designers: Miho Aikawa, Werner Aisslinger, Hanan Alkouh, Michael Burton & Michiko Nitta, Xiaofeng Dai, Dunne & Raby, Paul Gong, Martí Guixé, Jinhyun Jeon, Pei-Ying Lin, Isabel Mager, Ton Matton, Marina Mellado, Maurizio Montalti, José de la O, Gottlieb Paludan Architects, Klaus Pichler, Chloé Rutzerveld, Johanna Schmeer, Carolin Schulze, Andrea Staudacher, Austin Stewart, Studio Jihyun David, Studio Makkink & Bey, Marije Vogelzang, Henk Wildschut, Louisa Zahareas

Catalogue: A catalogue will be published with Kettler Verlag to accompany the exhibition, in German and English, edited by Claudia Banz and Sabine Schulze, with essays by Maxim Altenburger/Helena Bernhardt/Tilmann Keller/Christine Ritter/Leona Schubert/Bodo Slomski, Irene Antoni-Komar, Marina Beermann, Wilfried Bommert, Elisabeth Budke/Ilkan Civelek/Aileen Kardel/Kawa Qhdeer/Siawosch Rahman/Laura Schauppel/Nathalie Schmidt/Juliane Wentzke/Onur Yalcin, Sascha Diedler/Jessica Wieczorek/Nils Wieczorek, Toya Engel/Victoria Mutzek, Barbara Friedrich, Martí Guixé, Sarah Hartmann/Jörg Schröder, Stefan Hermsen, Volkmar Keuter, Jörg Knieling, Harald Lemke, Jörg Petruschat/Projekte Kunsthochschule Weißensee (Berlin), Katharina Riehn, Sonja Stummerer/Martin Hablesreiter (Honey & Bunny Productions), Gilles Trystram, Jessica Wurwarg, 224 pages, color illustrations, ISBN 9783862066452, available for 24.50 EUR in the museum shop and 32 EUR in bookstores.

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KULTURSTIFTUNG DES BUNDES

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Press images: download at www.mkg-hamburg.de
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