FFD Feminist Food Detector

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1. Feminism and food

1.1 Feminist = ethically correct

Based on the discussions and literary inputs reviewed during the Seminar Feminist Food Landscapes and Kitchen Countercultures, a correspondence emerged between the term Feminism and a broad concept of equality and fairness. This value embraces the social, environmental and economic spheres in their complexity.
As a starting point in our artistic research we have therefore taken the term Feminism, as a synonym of ethical correctness.

1.2 Ethically correct food

The second theme of the Seminar was food. We questioned what it meant to consume food in an ethically correct way. This issue emerges particularly today, since we have easy access to almost any kind of food at any time of the year.
We started with our first hand experience here in Weimar, Germany to analyse in a broader way the social and economic phenomenon of this uncontrolled availability. In order to provide a theoretical basis for our speculative project, we researched information on environmental, social and economic impact.
For this reason we divided the feminist view on food consumption into three macro areas: food processing and labelling, environmental and eco-social issues and authenticity.

1.3 Food processing and labelling

Based on the assumption that the food we buy and consume every day is highly processed and industrialized, packaging, labels and preparation methods have a strong impact on the buyer. We then analyzed the component of industrial food design in its role of processing food and packaging.

The information sought comes from scientific studies ("'") and anthropological research (survey and boh), which show that it is almost impossible not to process food to make it edible and how distorted is the public's perception of the terms processed food.

1.3a Definition

"The short definition of 'real' food is food that doesn't have a Nutrition Facts label. If it has a label, something's been done to the food. If it doesn't, nothing's been done, it's 'real.'"
-Robert Lustig, MD

"Real food is food that comes directly from the earth or is kept as close to that state as possible. Real food nourishes with the shortest, most pronounceable ingredients list—it's safe to eat, but when left to its own devices, it can rot away."
 -Trinh Le, MPH, RD

1.3b Level of processing

"Natural" Foods
The term does not have a regulatory definition. The FDA informally defines "natural" foods as foods without anything artificial or synthetic included or added, including color additives. The U.S. Department of Agriculture (USDA) policy is that a natural product should not contain any artificial flavor or color, chemical preservative, or any other artificial or synthetic ingredient, and the product and its ingredients are not more than minimally processed Natural foods score high in vitamins, minerals, amino acids, (the good) carbohydrates, water, fiber, fatty acids, and much more. These are all essential to optimal human nutrition.

Minimally Processed Food
Food that is processed but retains most of its inherent physical, chemical, sensory and nutritional properties. Many minimally processed foods are as nutritious as the food in its unprocessed form. The term refers to any food that has undergone minimal processing, whose ingredients come from natural sources, and contains little or no artificial additive or preservatives before consumption.

Processed Foods
The term stands for any food that has been purposefully altered in a "food lab" in some way or the other before consumption. This is done for four main purposes: (1) to postpone spoilage, (2) to make our lifestyle easier, (3) to increase food lifespan, and most importantly, (4) to make more money for the food manufacturer—which is the driving force in most cases. As a rule of thumb, processed foods have more than one ingredient. Food companies

usually rely on artificial sugars, dyes, preservatives, bad fats such trans and saturated fats, and other harmful dietary chemicals in the everyday production of
processed foods.

1.3c Equation for processed food

Processed foods can be placed on a continuum that ranges from minimally processed items to more complex preparations that combine ingredients such as sweeteners, spices, oils, flavors, colors, and preservatives, with many variations in between. The chart below gives some common examples.
In our project the food analyzed has to be placed in between five categories, taking as a reference the scheme. The food obtains a score between 1 and 5.
Decimal numbers are added according to an estimate of the psychological perception of the level of processing and presence of packaging on the food. The result is related is to a scale from one to one hundred, contributing to one third of the final percentage in one hundred percent.

Type of Food	Examples
Foods that require little processing or production (also called "minimally processed").	Washed and packaged fruits and vegetables; bagged salads; roasted and ground nuts and coffee beans
Foods processed to help preserve and enhance nutrients and freshness of foods at their peak.	Canned tuna, beans and tomatoes; frozen fruits and vegetables; pureed and jarred baby foods
Foods that combine ingredients such as sweeteners, spices, oils, flavors, colors, and preservatives to improve safety and taste and/or add visual appeal. (Does not include "ready-to-eat" foods listed below.)	Some packaged foods, such as instant potato mix, rice, cake mix, jarred tomato sauce, spice mixes, dressings and sauces, and gelatin
"Ready-to-eat" foods needing minimal or no preparation.	Breakfast cereal, flavored oatmeal, crackers, jams and jellies, nut butters, ice cream, yogurt, garlic bread, granola bars, cookies, fruit chews, rotisserie chicken, luncheon meats, honey-baked ham, cheese spreads, fruit drinks and carbonated beverages
Foods packaged to stay fresh and save time	Prepared deli foods and frozen meals, entrées, pot pies and pizzas

Figure 1: Data from "Understanding Our Food Communications Tool Kit © International Food Information Council Foundation"(2010)

1.4 Environmental and eco-social issues

Since the preservation of the natural environment is a prerequisite for a well-functioning economy and fair society, we need to evaluate how environmental sustainable our daily life is. The impact on the environment depends also on our consumption habit and on the food we decide to buy and consume.
In order to evaluate the level of sustainability of products, in this case of food, methodologies and ISO standards has been developed: in this way a tool is provided for industry and consumers to make products comparable.
We took into consideration existing assessment tools (LCA and SAFA methodologies) and based on them we developed a simplified scale, that ranks the food in a broad way, showing the complexity that lays behind food production, consumption, disposal and resulting waste.

1.4a LCA and SAFA methodologies

The LCA is a tool based on standard parameters that analyses the emissions and resource used through a products life cycle, starting with the production, distribution, consumption and disposal of it. The LCA is a sustainability assessment method that is based on the three parameters necessary to ensure sustainability, i.e. control of environmental impact, use of economic resources and maintenance of human and animal welfare.
This method can be applied to any product, while SAFA indicators, developed by the FAO, have been created specifically for edible products. The SAFA indicators embraces the three parameters of sustainability, but for the purposes of the project we have mainly taken into account the data concerning the guidelines for the containment of environmental impact.

1.4c SAFA Environmental sustainability indicators

Sustainability Dimension E: ENVIRONMENTAL INTEGRITY		
Themes	Sub-Themes	Default Indicators
E4 Biodiversity	E 4.2 Species Diversity	E 4.2.1 Species Conservation Target
		E 4.2.2 Species Conservation Practices
		E 4.2.3 Diversity and Abundance of Key Species
		E 4.2.4 Diversity of Production
	E. 4.3 Genetic Diversity	E 4.3.1 Wild Genetic Diversity Enhancing Practices
		E 4.3.2 Agro-biodiversity in-situ Conservation
		E 4.3.3 Locally Adapted Varieties and Breeds
		E 4.3.4 Genetic Diversity in Wild Species
		E 4.3.5 Saving of Seeds and Breeds
E5 Materials and Energy	E 5.1 Material Use	E 5.1.1 Material Consumption Practices
		E 5.1.2 Nutrient Balance
		E 5.1.3 Renewable and Recycled Materials
		E 5.1.4 Intensity of Material Use
	E 5.2 Energy Use	E 5.2.1 Renewable Energy Use Target
		E 5.2.2 Energy Saving Practices
		E 5.2.3 Energy Consumption
		E 5.2.4 Renewable Energy
	E 5.3 Waste Reduction and Disposal	E 5.3.1 Waste Reduction Target
		E 5.3.2 Waste Reduction Practices
		E 5.3.3 Waste Disposal
		E 5.3.4 Food Loss and Waste Reduction
E6 Animal Welfare	E 6.1 Animal Health	E 6.1.1 Animal Health Practices
		E 6.1.2 Animal Health
	E 6.2 Freedom from Stress	E 6.2.1 Humane Animal Handling Practices
		E 6.2.2 Appropriate Animal Husbandry
		E 6.2.3 Freedom from Stress

Sustainability Dimension E: ENVIRONMENTAL INTEGRITY		
Themes	Sub-Themes	Default Indicators
E1 Atmosphere	E 1.1 Greenhouse Gases	E 1.1.1 GHG Reduction Target
		E 1.1.2 GHG Mitigation Practices
		E 1.1.3 GHG Balance
	E 1.2 Air Quality	E 1.2.1 Air Pollution Reduction Target
		E 1.2.2 Air Pollution Prevention Practices
		E 1.2.3 Ambient Concentration of Air Pollutants
E2 Water	E 2.1 Water Withdrawal	E 2.1.1 Water Conservation Target
		E 2.1.2 Water Conservation Practices
		E 2.1.3 Ground and Surface Water Withdrawals
	E. 2.2 Water Quality	E 2.2.1 Clean Water Target
		E 2.2.2 Water Pollution Prevention Practices
		E 2.2.3 Concentration of Water Pollutants
		E 2.2.4 Wastewater Quality
E3 Land	E 3.1 Soil Quality	E 3.1.1 Soil Improvement Practices
		E 3.1.2 Soil Physical Structure
		E 3.1.3 Soil Chemical Quality
		E 3.1.4 Soil Biological Quality
		E 3.1.5 Soil Organic Matter
	E 3.2 Land Degradation	E 3.2.1 Land Conservation and Rehabilitation Plan
		E 3.2.2 Land Conservation and Rehabilitation Practices
		E 3.2.3 Net Loss/Gain of Productive Land
E4 Biodiversity	E 4. 1 Ecosystem Diversity	E 4.1.1 Landscape/Marine Habitat Conservation Plan
		E 4.1.2 Ecosystem Enhancing Practices
		E 4.1.3 Structural Diversity of Ecosystems
		E 4.1.4 Ecosystem Connectivity
		E 4.1.5 Land Use and Land Cover Change

Figure 1: Diagram from "SAFA, Sustainability assessment of food and agriculture systems indicators", FAO (2013)

To sum up, the parameters of the SAFA assessment bases on 5 so called *Themes,* which are as follows:

1. **Atmosphere**: target of greenhouse gases (GHG) and air pollution reduction are established.
2. **Biodiversity**: compass ecosystem, genetic and species diversity, which has to be conserved.
3. **Land and Water**: soil quality and land conservation and rehabilitation; ground and surface water conservation of quality and cleanliness.
4. **Materials and Energy**: material consumption practices (intensity of raw material use/ renewable / recycled materials): energy consumption, saving energy practices and renewable energy.
5. **Beings welfare**: health and handling practices, freedom for stress practices

Each macro area as we can see in the chart is subdivided in a complexity of *Sub-themes,* which are *output* or *input resources* involved in the life cycle of food production and consumption. The *Sub-themes* are analysed and decomposed in single elements: for each enterprises goals and improvement targets for the environment are developed by the Safa indicators.

1.4d Environmental sustainability equation

For the aims of our project it is relevant to focus and get to the point of these parameters, in order to be able to rank food in a simplified way, still basing on existing assessment analysis, which shows the complexity of food and of its production, consumption, disposal and waste.

In order to simplify the complexity of this parameters, for which in real life research teams are needed, we decided to consider the macro areas as whole and underline when in the life cycle of a given product the SAFA guidelines are most likely not respected.

The rank goes from 0, which is the base level of food production where the input (resources) and output (emissions to air\soil + waste) limits are respected, to 100, which indicates a heavily polluting product. The result is contributing to one third of the final percentage in one hundred percent.

0 SUSTAINABLE - 100 HEAVILY POLLUTING

O : the parameter is most likely not respected	20
**** : not clear information / at the limit	10
# : the parameter are respected or the effort are high	0

1.5 Authenticity

In this modern global world, we have the greatest variety of choice of foods than we have ever had in our history. It is possible to buy anything from avocados to coconuts no matter which corner of the globe you are in. Yet despite this never seen before variety of foods authentic food to a region remains king and is now sought out more than ever, and is used as a way to brag or prove to others that you live an authentic life. Authenticity or authentic food is in itself a broad, and very vague idea. What makes a food authentic? Why are certain foods authentic and others not? Why is authentic food deemed better than supposedly inauthentic foods.

In order to answer these questions one must look at authenticity from two perspectives, the the ingredients involved in the production of said foods and the method of producing the food and if this food has a culturally significant history in a country or region.

"Authenticity is the holy grail of popular food writing and foodie culture; it undergirds tourism and attendant ideas about region, race, class, and culture"
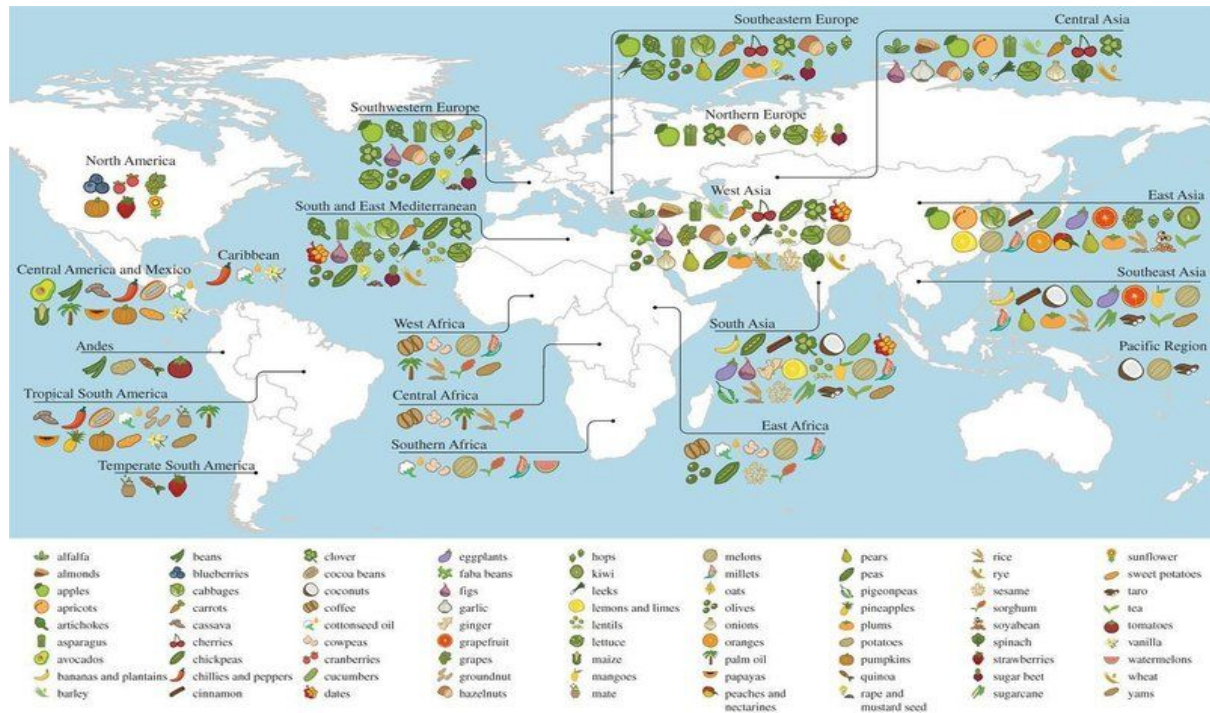- Monica Perales

1.5a Ingredients.

A large source for our data on the original, or authentic, origins of the ingredients of the foods we examined was the extensive research done by the Center for tropical agriculture in collaboration with the global crop diversity trust as well as a large number of universities. The research covers 151 crops and 177 countries covering 94.1% of the world's population. The research looked at a large number of parameters to determine the origins of a crop including, the diversity level of a crop grown naturally in a specific region. The paper concludes that 68.7% of national food supplies as a global mean are derived from foreign crops. This paper shows the absurdity of authenticity and highlights how vague and flawed this concept is. For example this research concludes that such staple as tomatoes in italy are not actually italien or tha potatoes do not originate in Ireland despite the fact that both of these foods are synonymous with these regions and are determined to be authentic foods for these regions.
"If you're eating tomatoes in Italy or chillies in Thailand, you're consuming foods that originated far away, and that have reached those places relatively recently."
- Colin K. Khoury.

Using this paper we hoped to highlight and show firstly how authentic certain foods are but also to show how absurd it is to try to measure how authentic certain foods are. The cause of this dispersal of foods could be put down mostly to large historical events such as colonisation and trade, which did play a big factor in introducing new ingredients and new dietary ideas to us. However the paper also points out that this changing and use of foreign crops is steadily on the rise over the past 50 years due to changing dietary preferences, globalisation, urbanisation and many other factors. Our country's natural or national crops

are changing more and more and so should our ideas and notions around what authentic food is and the value we place on it.

Legend: alfalfa, almonds, apples, apricots, artichokes, asparagus, avocados, bananas and plantains, barley, beans, blueberries, cabbages, carrots, cassava, cherries, chickpeas, chillies and peppers, cinnamon, clover, cocoa beans, coconuts, coffee, cottonseed oil, cowpeas, cranberries, cucumbers, dates, eggplants, faba beans, figs, garlic, ginger, grapefruit, grapes, groundnut, hazelnuts, hops, kiwi, leeks, lemons and limes, lentils, lettuce, maize, mangoes, mate, melons, millets, oats, olives, onions, oranges, palm oil, papayas, peaches and nectarines, pears, peas, pigeonpeas, pineapples, plums, potatoes, pumpkins, quinoa, rape and mustard seed, rice, rye, sesame, sorghum, soyabean, spinach, strawberries, sugar beet, sugarcane, sunflower, sweet potatoes, taro, tea, tomatoes, vanilla, watermelons, wheat, yams

1.5b Methodologies.

The second key factor in authenticity we explored the methods of producing these food. We looked at whether this food has a historical and culturally significant history in a region as well as looking at how it is and was produced. This can be a very difficult topic to look at scientifically as it is very emotionally weighted, and differs person to person. Because of this we decided to look at it at a more broad scope seeing if this region in general has a history of producing and consuming these foods and if this food is culturally significant to this region. Again like the ingredients this is a very difficult parameter to determine with ever changing dietary preferences, ideas and access to ingredients.

"Without interrogating what we mean when we look for authenticity, we miss the opportunity to understand the larger historical processes of politics, labor, race, and gender and we overlook people as adaptive and responsive to their own needs and, dare I say, hunger."
   -    Monica Perales

1.5b Equation.

Using the above approach and research we created an equation in the hopes of determining a way to tell how authentic a specific food using all of the broad and vague parameters that

go into What makes a food authentic. We wanted the equation to be simple, legible but most importantly be able to be applied to a wide variety of foods including both single ingredients such as a cucumber as well as meals such as Instant noodles or Mate tea soft drink.

The equation is then defined as.

$$\left(\frac{\left(\frac{Circumference\ of\ the\ earth}{2}\right)-\left(\frac{Distance\ of\ ingredient\ country\ of\ origin\ from\ consumption\ country}{number\ of\ ingredients}\right)}{Circumference\ of\ the\ earth/2}\right) Authentic\ method$$

This is then put into a percentage of 0 to 100:

0 Authentic - 100 Inauthentic

2. The *Trans*medial Project

The Feminist Food Detector is a speculative Transmedial Project, based on the concept of ethical correctness and food authenticity.
The device is designed and produced by the Ethic Industries, a company founded by three scientists (an *authenticologist, eco-sociologist and a naturologist*), in order to calculate, on behalf of the human being, the "feminist" (synonym for ethical correct) level in food. The calculation is based on three pillars: environmental sustainability, food processing and authenticity level.
The machine is thought to be an aid for human beings to discern ethical food choices. Our aim is to make the confused public aware of the topic of conscious and equal food production and consumption.

2.1 Topic and issues

On the basis of the research carried out and the papers read, one of the topics that inspired us most was "A Cyborg Manifesto: Science, Technology, and Socialist Feminism in the Late Twentieth Century," by Donna Haraway, in Simians, Cyborgs and Women: The Reinvention of Nature (New York; Routledge, 1991). In it the author explores the definition of man and machine, and later of man-machine, of cyborg. This dualism has structured the dialogue between materialism and idealism: a relationship based on the double dependence of man on the machine and of the machine on its creator. Therefore this tight bound links humans to machine, its survival on theirs. There is an overall ubiquity of cyborgs in everyday situations, it is normal to observe a co-living of the machine and the man (double need, the machine needs it's creator which then becomes dependent from it).
Machines do not move or design themselves, they are not autonomous. The machines of this end of the century, however, have made totally ambiguous the difference between natural and artificial, mind and body, self-development and external design as well as many other distinctions that applied to organisms and machines.

2.2 Useless machine

Nowadays we are surrounded by useless machines that we regard as extremely necessary and we are used to rely unconditionally on them. We have permanent access to our contacts and the network, and we tend to abandon ourselves to the information that comes with it. We believe that machinery that carries out the most futile actions is absolutely essential and we stop to exploit its potential to the full. At the same time we lose the skills of the human being, we lose the sensitivity and the ability to decide, to do it alone, to find other solutions.

In the same way, the Ethic Industry decides to compensate the human difficulty of making ethical choices in front of the wide choice of food in grocery shops. This fake company understands the human weakness and the economic, social and environmental flaw created by the system of food always available in any place. For this purpose, we created another machine that mankind can no longer give up: a tool that quickly and clearly guides us in one's choice.

This is also the case with the choice of food to eat and buy. Being completely immersed in a culture of consumption that provides us with all kinds of consumer goods at all times of the year, we can no longer discern which is the best choice, not only for us or for our personal taste, but at a broader level, ethics, environment and issues of socio-economic equality.

2.3 Irony and absurdity

"Our machines are disturbingly lively and we ourselves frighteningly inert."
A Cyborg Manifesto, by Donna Haraway

Irony and absurdity: Machine are able to perform complex task, which humans are not anymore able/willing to do (too lazy or addicted to technology?).
For our project we decided to make this inability of the human being to make decisions regarding food consumption. We have the on consumption of food. The whole project plays on the absurdity of replacing the machine with the human being, in an ethical choice, one of the bases of the human essence.
Who is the human and who is the machine? Who is shaping who?

# 3. FFD Feminist Food Detector

The Feminist Food Detector is a speculative Transmedial Project, based on the concept of ethical correctness and food authenticity.
The FFD machine is able to calculate, on behalf of the human being, the "feminist" level in food. The number is given, by a complex triangulation of three parameters: Environmental sustainability, Food processing and Authenticity level. The "feminist" is then estimated on a base of scientifically experimental equations.
The result is printed in the form of a label, to be applied to packaging. The machine is thought to be an aid for human beings to discern ethical food choices. Our aim is to make the confused public aware of the topic of conscious and equal food production and consumption.

3.1 Sketch

In one of our first meeting we sketched a brief idea and the three main concepts. We already knew we wanted to work with useless machine which could be stabbed into food to obtain mathematical results, calculated on purpose. We also set a time schedule to proceed in the best way.
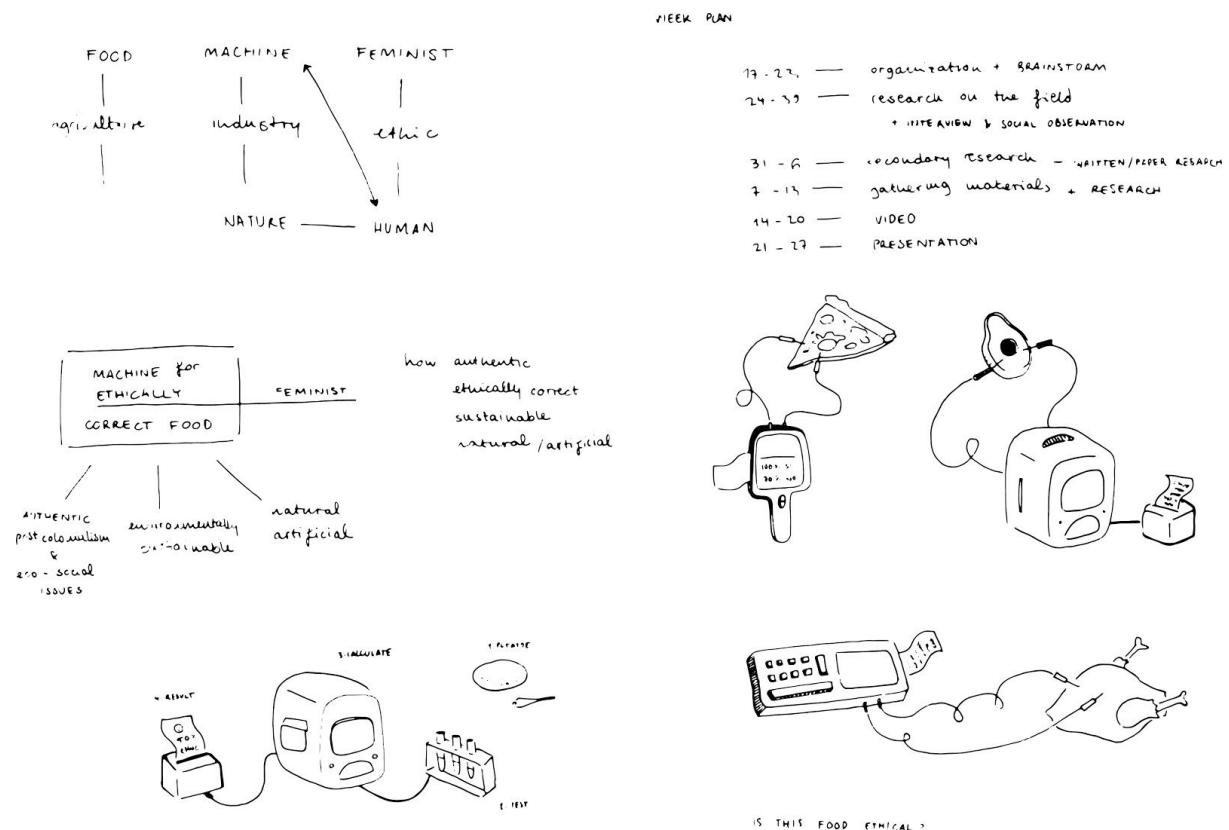
3.2 The diagram

The diagram derives from an existing graphical representation that basis on three parameters, the so called *Life Cycle Sustainability Triangle*.
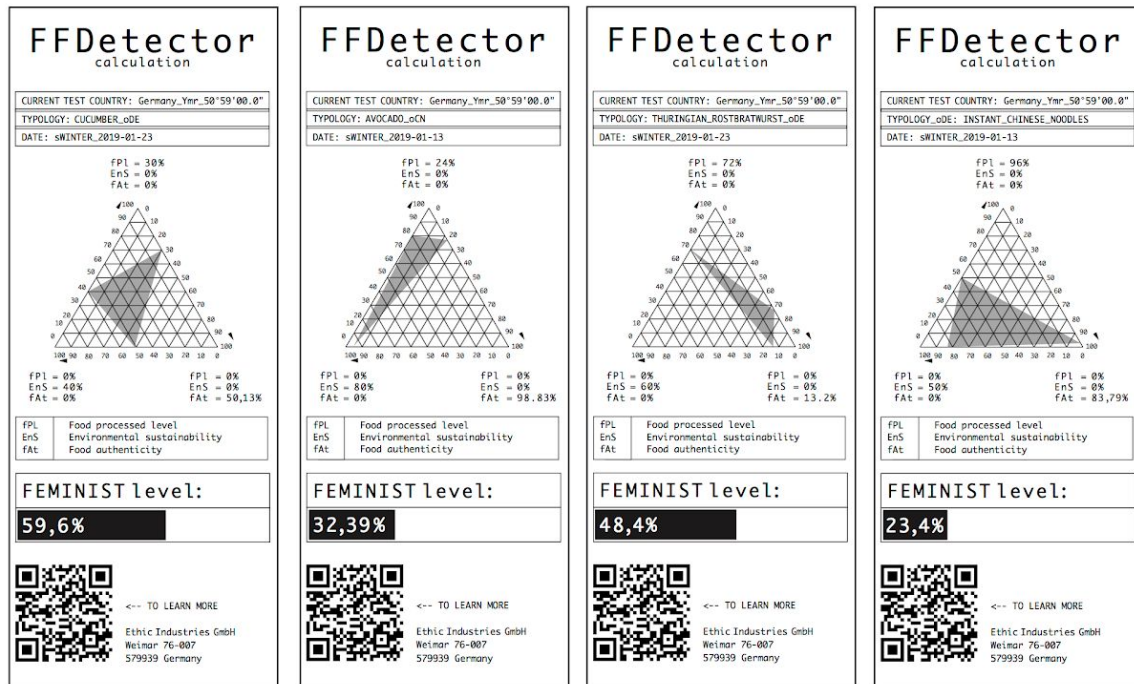

Figure 1: Mockups of the FDD labels, showing the resulting Feminist level

We adapted the graph for our aims referring each vertex to the three pillars of our research, fPl (Food processing level), EnS (Environmental Sustainability) and fAt (Food Authenticity). At the top we indicate the place where the test is taking place the food detected and the season and date.
The FEMINIST level is the result: the percentage derived by the total of the three parameters' ranks.

List of the ranked food

FOOD	PROCESSING GRADE	ENVIRONMENTAL SOST. GRADE	ECO-SOCIAL SOT. GRADE	PERCENTAGE
Cucumber	(1.5) 30	40	50.13	59,6
Avocado	(1.2) 24	80	98.36	32,39
Thuringian bratwurst	(3.6) 72	70	13.2	48,4
Instant chinese noodles	(4.8) 96	50	83.79	23,4
Super Dickmanns	(4.5) 90	90	41.84	26,6
Club Mate	(3.2) 64	30	63.5	40,84

3.3 The machine

After several discussions in the attempt to understand which was the most effective device to translate our concept, we decided to summarize it in a small machine, apparently trivial and simple.

Figure 1: The device (left) and the pins, our design for the machine (right)

This choice stems from the need to exasperate the absurdity of man's inability to have the right of choice, due to the lack of transparency of information behind the production of food. A small, colourful and cheap machine is in fact able to calculate a complexity of elements and parameters, which correspond to years of human scientific research.
To adapt this device to our purposes we have designed a sticker that contains the information necessary for our calculations: the country in which the test is taking place, season, name of the tool and the fake company.

3.4 Visual storytelling

To complete the process we decided to create around the machine a visual storytelling through images. Following the colours and atmosphere of our moodboard (Figure 3), we recreated an ironic and absurd setting, where we could demonstrate the functions of our machine in action.
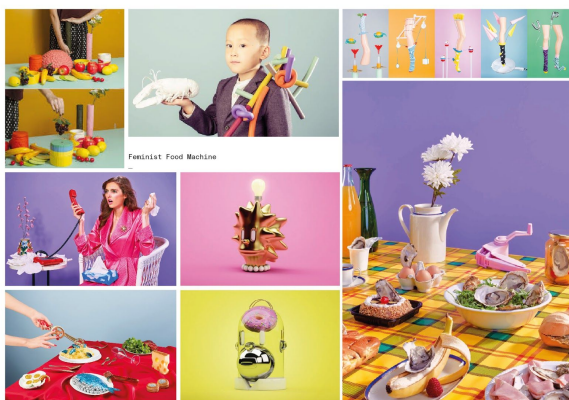

Figure 1: Moodboard from Studio Matery's works (Italy)

The various stages and uses of the FFD were recorded in simple and artificially designed gestures, to stress again the theme of absurdity and inhumanity of the machine made choice. The only human figure completely present are presented with no facial expression, as if they were emptied of their humanity (no choice, no human).
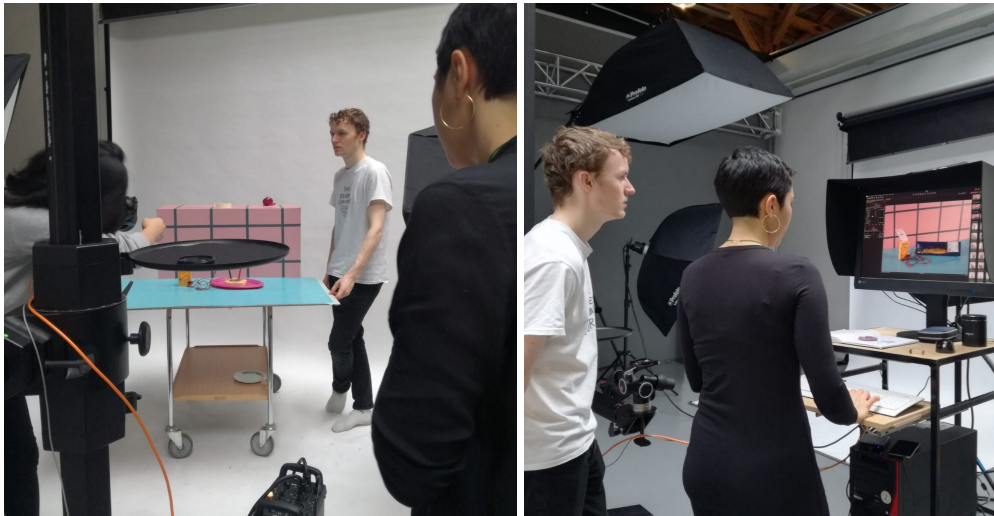

Figure 2: Work in the Photo studio

The pictures are set into a promotional website, designed on purpose (https://chiarazardi.wixsite.com/feministfooddetector). In it one can find information about the project, the machine, the equation, the team and some users' experiences. The information given sell the FFD as a finished product, ready for being purchased and used.
The service is offered by Ethic Industries GmbH, a "creative agency" based in Weimar DE. The description in the website says: "We're masters in our craft, focusing on Ethical problems, solutions, food design, Feminist theories & practice. We invent machines to overcome the human modern struggle and our inability to distinguish between right and wrong in our daily lives. As visual storytellers, we're determined to transform any concept into a pure authentic solution."
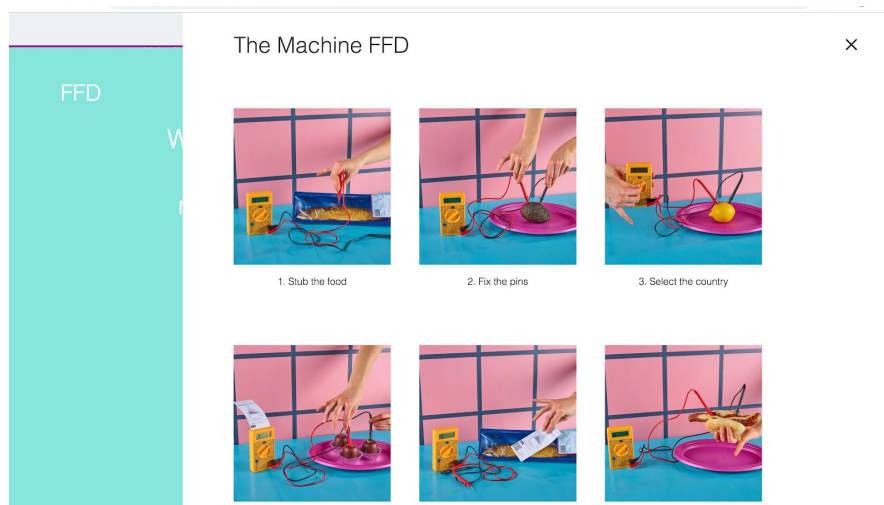

Figure 3: Screenshot of the website https://chiarazardi.wixsite.com/feministfooddetector

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