FROM FARM TO PLATE
COMMUNICATING INFORMATION ABOUT THE
FOOD ON OUR PLATES

VISUAL COMMUNICATION PROJECT II VCPR- 356

BY SHYAMA V.S. 146250008

GUIDE: PROF. RAJA MOHANTY



INDUSTRIAL DESIGN CENTRE
INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
2016

INGREDIENTS

1. Introduction(1)
2. Literature Survey & data collection(5)
3. Analysis(13)
4. Design Concepts(17)
5. Final concept(23)

Introduction

THE FIRST TASTE

I chanced upon an old facebook post in a IIT- Bombay cultural group about 'alarming levels of formalin' in the milk that was being served at the hostel mess. The post had been deleted and hence I decided to meet the student. who is doing his Phd in the Aerospace department. As he had found a lot of students falling sick in his hostel, he wanted to enquire and decided to start with milk. He used the chemistry lab to carry out lab test on the hostel milk. He found evidence of formalin in the milk and decided to inform students and other stakeholders about this.

He went about writing a blog post and sharing it in the online mess forums. He soon discovered that he was treading on a challenging path. He faced threats and well meaning advice asking him to give up on his query on milk.

The most surprising thing about the whole story according to him was how people responded to the situation. People constantly questioned him on why he was asking questions about milk that was served and inviting trouble.

These questions concern the food we eat. Food is essential to sustain life on this planet and food also causes the largest number of deaths around the world.

Why do we not talk about the food on our plates? Why

conversations about

what is really on our

do we not have

dinner table ?

LIMITLESS WAYS, LIMITED TIME

Human race has created this modern world where we (a few of us) live in big splendid cities where we could be anything we want to be. We could be a designer or a runway model, we could have any lifestyle we desire. We could be anything and we could do anything. Everything we could possibly imagine is out there in the market, waiting to be bought. Every piece of information we could dream of is being made available at our finger tips. We live in a world which offers limitless possibilities. But our time here is limited. We don't have the time to hunt and gather food or to grow vegetables, to cook or to even buy food. We definitely dont have the space to grow our own food.

THE FUTURE OF FOOD

India has succeeded in preventing famines since independence but, although the country grows enough food for its people, India is home to about a quarter of the world's hungry and 43 percent of children under the age of five are malnourished. But the country must boost yields if it is to feed nearly its 1.2 billion people a fifth of the world's population - on just 4 percent of global land. India is already the world's top importer of edible oils and ranks among the biggest producers and consumers of wheat, rice, cotton and sugar.

Growth in India's grain output has fallen back in recent years, slowing steadily from a spectacular jump of 50 percent. In a country where one out of five Indians goes hungry, the government has had to focus on foods that fuel or fill. The cost of that undernourishment is high in terms of healthcare, lost productivity and poor quality of life.

At the same time, a growing urban middle-class is consuming more higher-value, high protein foods, which is stoking food price inflation as well as changing business and farm models in rural India. A dietary transformation is underway in the country and demand for high value, vitamin and protein rich food such as fruit, vegetables, milk, eggs, poultry, meat and fish is increasing. Farmers are finding it ever more difficult to make ends meet. The introduction of high-yielding seed varieties and increased use of fertilisers and irrigation spawned the Green Revolution in the 1960s that allowed India to become self-sufficient in grains. But experts say agriculture innovation and

efficiency has stalled in recent years and farmers are getting squeezed by rising costs & inefficient agronomy.

Since the mid-1990s, an estimated 150,000 small farmers have committed suicide, according to the Center for Human Rights and Global Justice at New York University, most of them over debts. In this context take a look at Monsanto's claims

"With growing populations, increasing incomes and new health recommendations, the demand for a wider variety of high-quality vegetables will continue to increase, causing an immediate need to harvest more quality, nutritious food from each unit of land, water and energy. Product stewardship is something as a company, Monsanto takes very seriously. Whether it's ensuring environmental standards are not only met, but exceeded or protecting the safety of our people and communities-"
Monsanto, http://www.monsanto.com

Gmos are still a much debated technology. To feed the predicted population of 9 billion people in the next 10 years, we might need technology on our sides. In India, there was once a 30,000 rice varieties. Now only a dozen remain due to the industrial nature of farming. The biggest argument towards industrial farming has been that it is necessary to solve world hunger. The world is still hungry.

ETHICS OF EATING

You face a difficult moral decision every time you decide what to eat. What influence should concerns about animal rights have on your decision? Is the suffering involved in meat, egg and dairy production bad enough that you should go vegan? How do your food choices affect the economy and the environment? Should you become a locavore? Should you eat only sustainable, organic "farm-to-table" food? Or is industrial ("factory-farmed") food more efficient and ultimately better for the environment? Do the conditions endured by farmworkers who pick vegetables make a vegetarian or vegan diet equally problematic? How hard is it for poor to access healthy food and what are the consequences for a society when part of its population is either eating poorly or not enough? We all face difficult food-related questions at the political-social level, too. Should states restrict their citizens' food choices so as to encourage healthy eating? Should governments grant patents on genetically modified crops? And how do we, as a society, implement effective food policies for a rapidly expanding world population?

Eating is a political act. The word political as in- not just having to do with voting in an election, but to mean- 'of pertaining to all interaction with other people- from family to school to neighbourhood, to the nation and to the world. Every single choices we make about food matters, at every level. And the right choices can make the world better. If you are neutral in situations of injustice, you have chosen the side of the oppressor goes the saying.

In the next 24 hours 10000 preschool children would die due to world hunger and malnutrition. It is not God given that this imbalance need to exist. It is created by existing institutions and policies and we all contribute to maintaining those (by not challenging them). As long as we acknowledge a person's right to sustain his life, we implicitly recognise their right to food. The planet has limited resources and the unequal distribution of resources, including food, is a major cause of deaths related to food.

Food companies have stakeholders to please, shareholders to satisfy, and government regulations to deal with. It is nevertheless shocking to learn precisely how food companies lobby officials, co-opt experts, and expand sales by marketing to children, members of minority groups, and people in developing countries.

When it comes to the mass production and consumption of food, strategic decisions are driven by economics—not science, not common sense, and certainly not health. There are several health adivce coming from various people and places, out of them how do we decide which to adhere to?

Every single choices we make about food matters, at every level. And the right choices can make the world a better place

THE FIGHT SO FAR

World Health Day 2015 is an opportunity to alert governments, manufacturers, retailers and the public to the importance of food safety and the part each can play in ensuring that the food on peoples' plates is safe to eat.

The WHO campaign aims to spur governments to improve food safety through public awareness campaigns and highlight their ongoing actions in this area. The campaigns also encourage consumers to ensure the food on their plate is safe (ask questions, check labels, follow hygiene tips).

Timbaktu collective is a national award winning film which discusses questions surrounding sustainable farming and food culture. Several films, campaigns and communication programs over the decades have sent the same message of safe food.

Despite the fact that millions have been spent globally on food safety research; thousands of training programmes having been done, food safety remains a significant public health challenge. Why is that? Food safety is as much a behavioural problem as a training or education problem. For example, here are the most common causes that make food unsafe. Chemicals, pesticides, bacteria, nutrition. Sources of food contamination include improper holding temperature, inadequate cooking, contaminated equipment, poor personal hygiene. These issues have little to do with massive training programs and information campaigns which reduces contaminants at a consumer level.

An approach to curb this problem is called the source reduction. In this method, cooking meat for the right amount of time or boiling water at the right temperature will not be the only priority point to keep food safe. Keeping the source of water clean would be important. The consumer being aware of what they are eating, the consumer becoming an active participant of the food system, the consumer beginning to ask questions is of prime importance.



Literature survey

IN A NUTSHELL

The way we eat has been changing. My grandmother speaks of how she used to wait for the monsoon to come so that the cashews which were sealed under soil would be dug out and roasted. It was a month when nothing grew. They had to save food to survive monsoons. She used to fast during certain months. Now the only remnants of fasting in my life are the fast food that I indulge myself with more frequently than I would like. To a section of India, food is available across all seasons, across all adversities. Travelling light is easy and very much possible because there are trusted brands of food available around the world in packages which can be preserved for long periods.

FOOD PRODUCTION

Early men used to be hunter-gatherers who would hunt and gather food for themselves. Then men started settling down in communities and doing agriculture for the whole community. When food was produced in surplus, division of labour became possible, There was free time for people to do other specialised jobs and thus occupations started evolving. Soon the land started becoming scarce. But technology started making increased production and lower prices possible. From there the complex web or food business started evolving with multiple players from the chemical supplier, farm equipment manufacturer, transporter, finance team, marketing team, processing team, wholesalers, retailers, service establishments and the consumers. And above all food started becoming a global process. This resulted in the consumer being far removed from the source of production.

Eating anything, anywhere, anytime was made possible through chemical engineering & food processing technology.

According to the AIChE, Chemical engineering innovation in food production, 2009

"Chemical engineering know-how can be credited with improving the conversion of raw foodstuffs into safe consumer products of the highest possible quality."

Yet when you think about all the 'harmful chemicals' in our food that are revealed frequently to us, you begin to look at these claims with a pinch of salt. It is ironical that the cornerstone of modern medicine as well as ancient wisdom and Ayurveda has been –

"let food be thy medicine and medicine be thy food"

yet we, for many reasons and many vested interests, have come so far away from it that we have forgotten food is for nourishment, and physical, emotional, spiritual health and happiness.

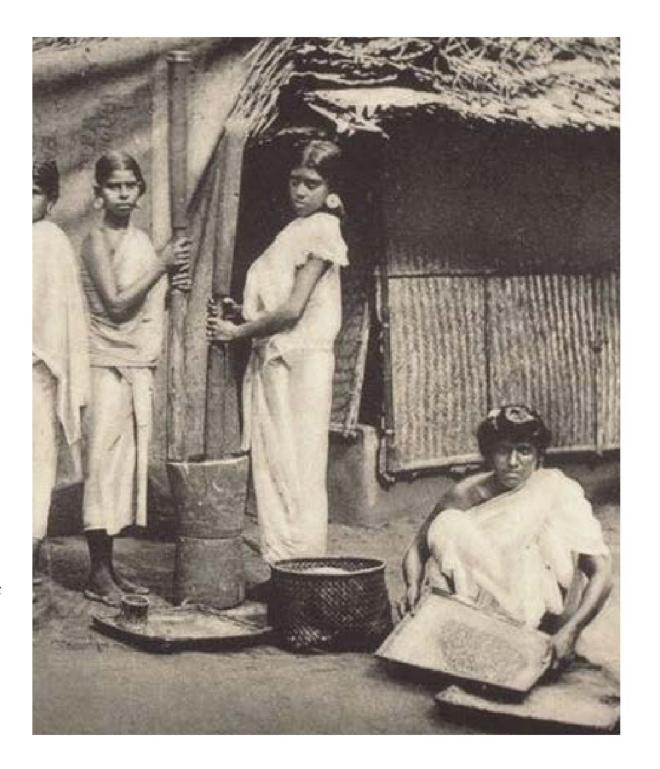
FOOD CULTURE

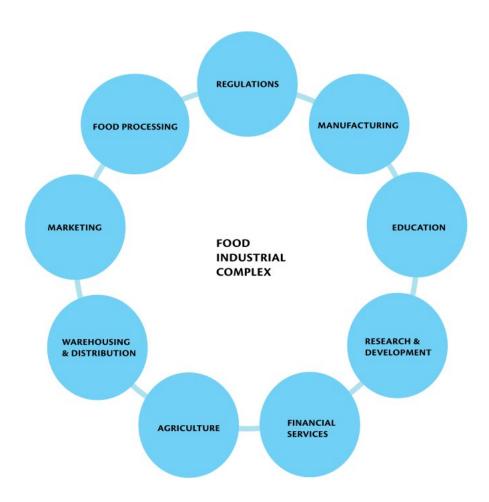
When I was younger I used to wish for the food to walk into my room to avoid getting out of my bed on a lazy sunday morning. We now have reached a point where there are enough apps to get the food to walk right into our rooms and our mouths. We have the possibility of dining in the dark for a sensory experience. We have the possibility of googling to find out how to prepare any exotic dish in our kitchens. We have the tool to share what we are eating with the rest of the world through micro blogging platforms.

Cliver, 1990, states that an average adult consumes 75000 meals in an average lifetime. Initially most meals were prepared at home. But as our lives got busier with two parents working on full time jobs, more & more meals started being consumed from outside. This meant more possibilities for contamination & a greater chance at the ingredients in our food remaining anonymous.

"I have been thinking about food culture for a while and recently, I heard Magnus Nilsson say something that completely aligned with my thoughts: "After one generation there will be no one left who knows what to do with their hand. After three generations, we might have photos [of meals]...but you can't go back to see how people did something with food like you can with art or sculpture. Food culture is very special- [it is the] very most important cultural manifestation that we have because we [all] have to eat"-

- Chef's Table (documentary film), 2015.





CHALLENGES

STORAGE & DISTRIBUTION

Indian road system is clogged and underdeveloped, while railway freight turnaround times are slow with limited availability of refrigerated freight vans. Cold storage of about 24 million tonnes is woefully inadequate for the world's second-biggest producer of fruit and vegetables. All of this means availability of fresh produce is highly regionalised. It's not unusual to see wooden flatbed carts loaded with vegetables and fruits right on the doorstep even in big cities very convenient for shoppers but it does increase the mileage and moves for produce & raising the chance of damage.

CHEMICALS IN MY FOOD

Some of the banned pesticides are now part of our diet, such as Cypermethrin, Heptachlor, Quinalphos, Aldrin, Chlorodane, Dichlorvas, Cypermethrin.

We cannot live without eating these but we must be cautious and follow certain guidelines like washing fruits and vegetables thoroughly, about five to six times under running water. Blanch fruits and vegetables after washing. Always peel the fruits and vegetables (if possible) before eating and cooking. Do not go for those shiny and extra clean fruits, vegetables, cereals and pulses. Buy small vegetables rather than large ones.

Chemical pesticides are known to pollute the environment. While their intended effects are often short-lived, studies have shown that chemical pesticides linger in the atmosphere, the ground and in our waterways long after the job is over. Chemicals have been used on fields across

the world for almost 100 years, creating a buildup of adverse pollution in our environment, which continues to grow with every application. Unfortunately, when pesticides are applied onto a surface, they travel outside their intended area of use by air, soil or water. This is one common way in which chemical pesticides cause collateral damage, beyond their intended use.



Brinjal: Chemical found is Heptachlor, 860% above the legal limit



Cabbage: Chemical found is Cypermethrin, 95.5% above the legal limit



Apple: Chemical found is Dichlorvas, 140% above the legal limit



Cauliflower: Chemical found is Aldrin, 320% above the legal limit



Banana: Chemical found is Chlorodane, 54% above the legal limit

THE WOMEN WHO FEED

Women's immense contribution to household food security in India remains largely invisible. Yet, the Food and Agriculture Organization estimates that "women produce between 60 and 80 percent of the food in most developing countries and are responsible for half of the world's food production." Although the majority of the female workforce in India is engaged in agriculture, most women don't have land rights. Women are also the primary seed keepers, conserving and managing an incredible variety of India's vital food crops. But industrial agricultural growth threatens to place these seeds in the hands of seed companies, including large multinational corporations that are motivated primarily by profit. Enabling women farmers worldwide to be more productive, by giving them the same access to resources as men, they could increase total agricultural output by 2.5-4%. Gains in agricultural production alone could life 100-150 million people out of hunger, according to estimates by the UN's Food and Agriculture Organisation. Moreover, empowering women will also help end the cycle of food shortage and poverty from generation to generation.

PSYCHOLOGY

Everybody eats and everybody eats everyday, so food industry becomes a multi dollar sure shot success industry. And if the government tries to make the citizens by saying eat this or eat less or eat that, it is not going to be beneficial for the business. 245 million dollars was spend on advertising Classic Cococola just in the United states. The budget allocation on health in

India is 4.81 billion dollars. And for a state like Kerala, which has the highest health indices, the health budget allocation is just 81 million dollars. This could make one understand the gravity of the problem.

When you eat while doing something else, it short circuits our normal thinking process due to behavioural structures because our eating behaviours aren't conscious or deliberate. This is why we tend to eat more and more than we require while watching television or while eating from a large packet.

Addiction and drug use regulations are there to protect people from harming themselves or others. Psychology states that it is a mistake to view us as capable of making decisions which are 'good' for ourselves. We only feel the need to respond to situations which require immediate attention.

Because food production has gone from the direct farm to plate approach, to farm to food processing unit to somewhere and to somewhere before plate, it has become hard to over see these aspects of what goes into the making of it; the stake holders, the sweat shop farming, the banks, business involved. And when more meals are consumed outside home, it becomes hard to verify these aspects of the anonymous ingredients in your food.

DOCTOR'S TALE

I interviewed Dr. Sivaraman, Peadiatrician, Government Health services, Kerala to understand food related diseases. He described to me the structure of the food safety department in India and how it operated through units like the Asha worker, Anganavadi worker. How it conducts awareness campaigns for catering units, street vendors, restaurant associations, Science and health clubs in schools. He threw some light on the major causes of food related illnesses in a literate state like Kerala. He said a lot of these diseases occur due to myths about food and on handling food.

For example, in Kerala, diabetic patients used to be advised to avoid rice and eat roti instead. The Doctor's aim is to make people eat less by asking them to eat something that is not part of the staple diet. Similarly, the advice regarding safe drinking water is to use boiled water. After boiling, people add unboiled water to cool the hot water. It takes away the purpose of boiled water and a lot of mass diarrhoea at wedding parties occur due to this and through the usage of welcome drinks which uses ice. Generally even when care is taken to boil water, ice used in juices are rarely prepared using boiled water.

Foodborne illnesses are usually infectious or toxic in nature. They can be caused by bacteria, viruses, parasites or chemical substances entering the body through con-taminated food or water. Foodborne pathogens can cause severe diarrhoea or debilitating infections including meningitis. Chemical contamination can lead to acute poisoning or long-term diseases, such as cancer.

Foodborne diseases may lead to long-lasting disability or death. Examples of unsafe food include uncooked foods of animal origin, fruits and vegetables contaminated with faeces, and shellfish containing marine biotoxins. Globally, more than 582 million people fall ill and more than 350,000 die annually from food-borne illnesses, including salmonellosis, gastrointestinal disease, Escherichia coli infection. These illnesses result from eating unsafe foods such as undercooked meat, fruits and vegetables contaminated with faeces or pesticides, and raw seafood containing marine biotoxins. Research has linked exposure to pesticides to increased presence of neurological disorders, Parkinson's disease, childhood leukemia, lymphoma, asthma and more. Progressing to organic repellents is a logical step to potentially help reduce the chances of disease or disease acceleration.

NUTRITIONAL LITERACY

Years of eating an oil-rich, sugary diet high in carbohydrates have left many Indians with a paunch and a health problem. India has the world's largest diabetes population at just below 51 million people, while heart disease is the single-largest cause of death. Yet, hunger is endemic among the country's 500 million poor.In a country where 270 million people live below the 'poverty line', India is just behind the US and China in this global hazard list of top 10 countries with highest number of obese people.

ENVIRONMENT

Food production is central to risks related to human health and environmental sustainability. Agriculture alone occupies more than 35% of Earth's terrestrial surface, the largest use of land on the planet, yet an estimated 33% of global food production is wasted. That is a depressing consequence of how unsustainable our current production and consumption pathways are.

As India stares at the fourth consecutive drought year, the prospect of a negative growth in food grain production seems real for 2015-16. This is the first time in over 100 years that India faces four back-to-back drought years even as the Met department has further lowered the monsoon coverage to 16% below the long term average for this year. Large parts of Maharashtra, Karnataka and Andhra are already reeling from severe drought and recent estimates show even Eastern UP having over 45% below average rainfall.

At this rate the food production is expected to fall by as much as 20% in some areas. This has serious consequences for the farm economy as well as for rural demand, which has a profound effect on economic growth.

TECHNOLOGY

GM crops are controversial all over the world. Questions have been repeatedly raised against this technology being introduced in food and farming. When Bt Brinjal was introduced, it was the first GM food crop proposed for commercial cultivation. There was public opposition from all sections of society, including the fact that the bio-safety assessment on Bt Brinjal was not satisfactory.

Gm crops are introduced with the idea of increased food production through GM technology. While the area under Bt cotton cultivation has certainly gone up over the last decade, data analysis shows productivity has not significantly increased, nor has pesticide use markedly decreased. In fact, cotton productivity has been on the decline in the last five years — a period when Bt cotton covered the majority of the cotton cultivated area in the country.

Far from being a technological solution to rural poverty, Bt cotton has only increased the distress of those dependent on farming, and acutely so in the semi-arid cotton belt. Costs have increased due to the appearance of new pests and others developing Bt resistance, higher water and fertilizer requirements, and no major benefit

in the output. The main beneficiaries of this transfer to Bt Cotton seem to be multinational seed companies like Monsanto which have profited through patents and royalty.

THE PUBLIC

For the last several years the "local food movement" has focused on telling stories to create an emotional connection between consumers, farming and products. Green rolling hills and picturesque farmlands relate to consumers that a product is pure, while tales of farmers and their families assure us that a farm is sustainable. The Centre for Study of Developing Societies (CSDS), based in Delhi, found that given an option majority of farmers in the country would prefer to take up some other work. Poor income, bleak future and stress are the main reasons why they want to give up farming. They would prefer to be employed in cities because of better education, health and employment avenues there. Repeated losses because of unseasonal rains, drought, floods and pest attack are further making their life difficult. On top of all this, middle men create financial insecurity to farmers. It is no surprise that despite years of "storytelling", the public remains largely ill-informed about the food system. Producing local food remains

logistically – and financially – complicated for the majority of the world's farms, even if the public now views it as more wholesome. And "knowing our farmer", sadly, does not necessarily mean we understand the practices used on the farm. The problem is that there continues to be little understanding as to what terms like "local", "sustainable", or even "organic" mean, or why they might be important.

What this means is that, solving none of these challenges will be possible unless people everywhere demand that food be put on the public policy agenda. Therefore we must first ensure in creating a culture where consumers are aware of their food, how it is produced, how far it travelled, what environmental impact it created, how the workers are treated so that they learn to ask the right questions about food. We need to engage young people on food security and agriculture.

Analysis

A BEAUTIFUL TOMATO

On July 23rd, I interviewed a grocery shop owner, Pradeep, from Calicut who started in business in 1978. My aim was to understand how vegetables are in the retail space. Most of the vegetables in Kerala come from Tamil Nadu. The product travels a minimum of 1 day before reaching the retailer. They have a shelf life or one to two days at the shop. With his help I was able to trace the vegetables in my local shop all the way back to its source. He mentioned how vegetables are also sold to canteens and hotels at a reduced price once they begin to decay. According to him there is definite reduction in sale after the propaganda on pesticides especially on fruits like watermelon, grapes and apple. According to him, customers now tend to ask for the chemical free products.

The perfect looking vegetable is very likely to be the one that has been sprayed with most chemicals. A lot of media campaigns went on in 2014 against chemicals in food in Kerala. Further, I did a pilot study to understand consumers buying habits. A set of questions were asked to 9 randomly picked customers at a grocery store in Calicut interestingly the appearance of the product mattered to the customers more than what was put in the product to create it the perfect appearance.

In daily life you would return a plate which has something dirty visible on it, but what about the invisible? It seemed to me that we were trapped under perfect images

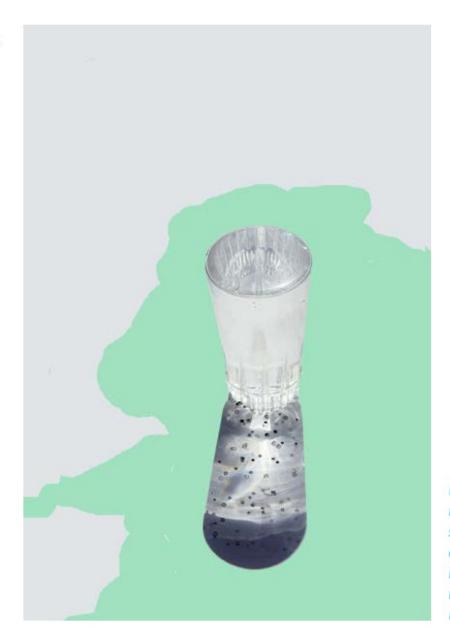
THE INGREDIENTS OF MY TEA

The miserable mill from Lemony Snickets series of unfortunate events describes a fictional world where 3 children work at a lumber mill where the only food the workers are given all day is a casserole for dinner and gum for lunch. They are paid in coupons. The Tea plantations in Assam describes conditions which are quite similar to this, if only worse. Tea is widely glorified. I began to wonder if anyone knew what went into making a real cup of tea.

Over the Summer I had the opportunity to work with Dr. Mohammed Asheel who was part of the small team of Doctors from Kerala who spoke at the 2011 Geneva Convention and managed to ban the pesticide called Endosulphan which was destroying the health of a whole community in Kasargode. It is banned in 68 countries in the world and the tragedy has already struck India once, in Kasargode. So as I was reading through 'The more things change, The World Bank, Tata and enduring abuses on India's Tea plantations, 2014, I was shocked to see this, "...he further stated that spray workers using Endosulfan do not receive any protective equipment, or training in precautionary measures.

Yes, so we live in a time where a perfect tomato is judged not by its nutritional qualities of health benefits, but by how perfectly aesthetic it is. Fashion is always shunned as being superficial and being a product of sweat shops and unethical labour. Fashionistas are shunned for consuming something that is a result of someone's extorted sweat and blood. Coming back to tea, isnt the

same thing as buying a fur coat or the perfect leather bag or a cheap Rebok Shoe? Isnt it glorious and pleasurable the same way? Wasn't it produced the same way? Why aren't we hearing about this?



In daily life you would return a plate which has something dirty visible on it, but what about the invisible? It seemed to me that we were trapped under perfect images

Urban life

Dreams Choices Possibilities

Food

INGREDIENTS

Anonymous

Personal

Sensory School lunch Appearance Memories

Cultural

Identity Pschycology Lost traditions

Social

Politics -Economics Workers Access Hunger Poisoned food

Global

Change IFS Chemicals GMO Pesticides Restuarants

Above : Anonymous ingredients of food

The study I did as a part of the project made me wonder if there are enough conversations happening around food in India. I found it difficult to access studies, research, figures and campaigns which were surrounding food in the Indian context. During the conversations I conducted during the project I was surprised at how little people cared about what really went into their food. Food was more about personal stories and memories and relationships than about the making.

From the interviews the main concepts which emerged where how appearance matters and how it builds a sort of false trust in people. It was interesting to find out when various students had the first insight into how food, hunger and money were connected. To some, it occurred when they saw a hungry person, to some it was a personal event where they were left hungry and without money or to some it was a memory where they first went and bought food from a shop. It was interesting to see how people responded to nutrition information, labels and packaged goods. But above all, food is really personal. The way each person looks at it changes entirely. During the interviews, I would ask the same questions to different people and the response sometimes wouldn't even have any similarities.

It was understood that ingredients of my tea was the most interesting topic to me about food. Hence I attempted to create a set of videos on conversations over tea, hoping to bring out the idea of what really goes on into making of a plate of food. I soon realised how hard it was to handle the camera, sound recording and conduct a natural

conversation at the same time. Hence I only went ahead with sound recording. Through these interviews I was able to understand the topics that were of importance to me. And further through a process or writing and rewriting the topic of food and my understanding of it was distilled further and further to reach this distilled form of my project topic.

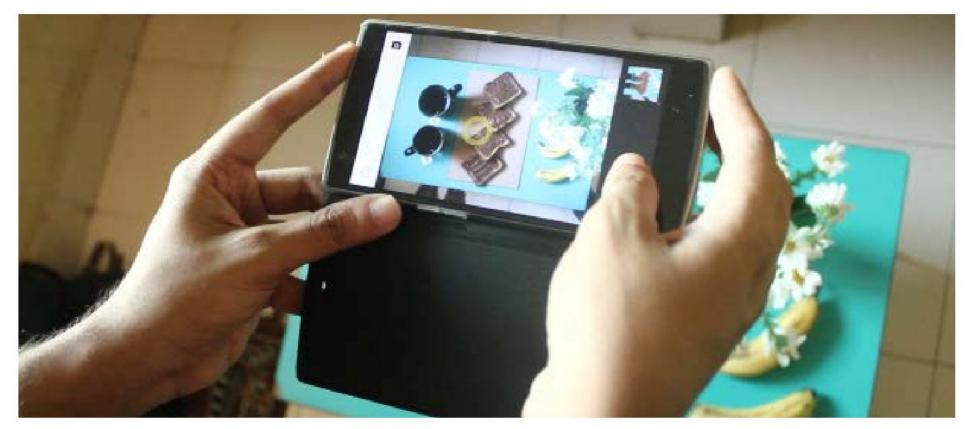
Because food production has gone from the direct farm to plate approach, to farm to food processing unit to somewhere and to somewhere before plate, it has become hard to over see these aspects of what goes into the making of it; the stake holders, the sweat shop farming, the banks, business involved. And when more meals are consumed outside home, it becomes hard to verify these aspects of the anonymous ingredients in your food.



Design concepts

Project started as an attempt to create design solutions which can enhance the safe food campaigns of the world health day 2015. To facilitate this initial research was done through interviews with an experienced paediatrician, mass media officer of directorate of health services. assistant director of health (in charge of communicable and lifestyle diseases) about food safety issues and myths. Some posters and campaign ideas were worked out for the mass media department of the Directorate of Health services, Kerala at their request. So initially I decided to focus on designing materials for training or education of safe food in a persuasive manner to change behaviour or to design an interesting training programme for a food safety class. Several low cost food adulteration tests exist which can be done at home. I thought of coming up with campaigns where the grocery stores, restaurants who wanted to participate in the safe food campaign provided these tests at their shop.

Food is a very vast topic with several dimensions. To further understand what it was that I was deeply moved by, what were the values I wanted to communicate, I started simultaneously exploring the feasibility of some of the ideas . And food is extremely personal. So I tried to explore more concepts to communicate what I learned.







Stills from the attempt to make films

EXPLORATIONS

1. Local history lesson

The concept of safe food is a mix of the process of making food, the economics, equipments and people involved And because of this, rather than food safety programmes, its important to develop safe food cultures. Schools are a good place to start setting the culture. I designed a local history lesson for Class 7 students to understand the history of their local food and to be able to analyse the components of what goes into making the food in their plates. Local history lesson for class 7 children of Malabar area about the nature of food.

Its an investigative collaborative classroom learning with 3 chapters where they discover the historic influences, cultural influences, technological advancements, the people, the struggles which helps them trace food from their plate all the way back to its source. Here is the web address of the history lesson

https://medium.com/@shyamanift/the-food-we-eat-482e1380b799

2. Illustrated children's book

Once upon a time there was a girl who hated mustard. She used to pick it out and throw a fit if she found her food to have it. But mustard was one sneaky evil thing, it used to constantly find its way into her food. One day as she was examining her food to see if mustard had sneaked in or not, she accidentally falls into her food. Inside the food world she meets the ingredients of her food one by one. She meets a tomato who blushes every time she asks him where he is coming from. He tells her about the distance he travelled to make it into her food. She meets onions which make her cry by telling her how they always have to pay the ultimate price. She meets an extremely fat & big brinjal who is a super vegetable with an identity crisis. She soon begins to see how her food is made up of more than these vegetables. She sees how it is made of their stories, the distances they travelled, the people who made them and the chemicals they carry within them. At the end of her journey she realises how complex her food really is and how it is not just made up of all the stuff she has seen in her mother's kitchen. She ends up realising how she is a major ingredient of this food world and she begins to see how she changes the food world with every bite she takes.

3. Haute Couture food: a reflection

Kaiseki is an haute couture Japanese food tradition. Deep rooted in the philosophy of kaiseki is the belief in seasonality and locality. You will be hard pushed to find a kaiseki menu which stays the same for longer than a week if not a day, as kaiseki is focused on eating what is in season at that moment and from what is grown where you are at that time.

At the heart of this philosophy is the fact that ingredients are always at their tastiest, most vibrant, most flavorful, most aromatic and most nutritious when they are in season, also that the nutrients you receive from ingredients which are in season are most suited to your body's requirements for that time of year and for the place you are in.

Interestingly, the village I once stayed in Shillong had a simple way of eating where the food was found from the surroundings which was quite similar to the haute couture food system. I thought of cooking and making a recipe book about seasons and simplicity



4. Movie idea

NOTES

Thought of a short film which just talks about the anxiety of a person who has to cook for a guest. But it was difficult to bring out multiple layers of the nature of food.

STORY

How do you guys deal with panic attacks?

It depends on the type of panic

I go for Long runs Watch a funny show

Picture a worst case scenario and put things in perspective Rant fest with a friend who has the capacity to listen without preaching

Along with Icecream

Vodka

Well, my niece is coming to stay over meet me. She is 4. What do I cook for her?

Let it all out
Drink water
Mumble a song for myself
Riding out my motor cycle
fresh air, breathe, stand under a warm shower
Read. Anything

What do I cook for her? Air sickness bag Medications Figuring out why its there

Call a friend in front of whom you gotta pretend, act normal the fight helps in self preservation

Eat good food

Picture the worst case scenario

I cannot be calm What do I eat?

Should I Order food? May be I should cook. But hmm what do I cook?

Is she vegetarian? is she vegan?

Her parents are very analytical? They break things down to its basics.

hmm Not a good idea. She mayn't like the food I cook

Should I order pizza? Is she gonna break down the calories? Her mother reads too much. What if she only gives her organic? Was this produced ethically?

Maybe I should just have fruits. Ethylene. What fruits can I get? Aaarg seasons. I don't even know what is in season. Maybe I can google. I am not sure if a mango is supposed to look like this. Neither does she.

Aaah panic attacks. what do I wear? Should I fix a restaurant? Is she gonna want a nice cosy place or a big place?

Maybe I should just let her pick. Yeah, let the four year old take decisions. I don't want to be blamed. cut the call. hmm but he hmm

5. Narrative for a documentary film STORY

Alu ka paratta, , pyas ki kachori, mysore masala dosa, macaroni and cheese, dates, mangoes, lassi Bengali food, Punjabi food, Gujarati food, home food, hostel food, late night food, break up-comfort food.

Food is beauty.

It is memories, stories, secrets, myths and heartbreaks. Humans have always lived by the principle of least effort. Between being a hunter gatherer and knowing whether we are gonna eat tomorrow or not . We chose agriculture. Between being farming your food and the opportunity to wait for food to grow and reach our homes . We chose business. Between that and waiting for the mangoes and fruits season to occur. We chose all year, the facilitator was technology.

Now we chose silence because having to closely examine what we are eating means making an effort towards something that doesn't affect us any time soon.

Our food consists of more and more processed items. There are chemicals in there whose names are hard to decipher. And if we were to avoid the processed and the outside food we still don't know how the ingredients are made. You decide to eat fruits and vegetables, it has got other sort of chemicals.

We are told that this is the only way to grow food for a growing population of a staggering 10 billion. But do we still manage to feed the whole population? In the next 24 hours

a child under the age of 4 is going to die of hunger. There are billions of organisations working to prevent this. But we still fail. We fail every child who dies of hunger. We fail the soil and the water. We fail the people who ultimately makes us food. We fail our own bodies.

(World obesity rates are on the rise and surprisingly india is catching up)

No one is born wanting to eat a piece of KFC. These are acquired tastes. We are scared of exposing our children to the murky depths of internet. Yet, we allow them to watch all the commercials out there which tell them what to desire, what taste is supposed to be. We are scared of the evils of addiction. Don't you drink. Don't you smoke. Don't you do drugs. Yet, we constantly overlook the power of the biggest addiction of them all. The addiction to food. And to the food of today which is slowly beginning to not resemble food at all. But is food dangerous? Food kills more people than any other causes in this world.

And yet we are beautifully ignorant. We say we are indifferent. Impartial. The power of wilful ignorance cannot be overemphasised.

For once it is possible that we need to relearn how to eat when we are hungry and how to eat what is around us, what the earth is capable of giving us. According to seasons, taking its time. When we were young our mothers decided what we ate and how much we ate and how much sugar, how much carbs, now we grew up. Who is taking these decisions for us?

Final concept

Personal narrative

Story

My grandfather was the one who taught me there there is no single story, no single truth, no single reality. There would always be several ways of looking at a story. Every vacation was spend at his village. He had this curious habit of eating in a painfully slow manner. According to him, each plant that took millions of years for the soil to set, for the wind to benefit it, for the seasons to ripen, and it was atrocious to not let our senses connect to this billions years of past without experiencing it. To the horror of parents I came back from vacation mastering the art of mindful (read slow) eating.

My parents were busy doctors. They barely had time to eat. To hunt. To cook. They had lives to save. My grandfather was a farmer, to him, time was the most precious ally too. So was the case with my grandmother. She was a cook. My earliest memories of their place is of the rice being boiled. The taste of that rice was in being cooked, in being watched as it boiled, in being involved. My grandmothers world was the kitchen. Just like all grandmothers before her, she had the magical ability to transform anything, anything at all into a delicious dish.

Like I mentioned before, busy parents kept moving forward from our tiny village, to bigger villages, to smaller towns, bigger towns and finally bigger cities. Most of our family time was spent on our dinner table. But of course there were things which we never discussed. Evil things that affect the way your children think. Things like advertisements. Things that the government would ban to avoid post traumatic stress disorder due to prolonged exposure to desirable things because they should constitute child abuse.

The city was huge. Everything was colourful, smooth, nice, sparkling, clean- or so it would seem. Everything made me want it. I had shiny toys in the city.

Now believe me, my mother was doing the best she could handling 2 jobs, raising a kid, commuting for 4 hours a day and trying hard to achieve the work life balance. Back then, we dint have refrigerators. So she was forced to serve 'fresh food'. Fresh however, never meant tasty. Weekdays would start with the dreaded idyls and loathsome upmas. Her idlys had alternate uses. They were unbreakable.

Upmas were served with sugar, I soon developed an unnatural and unreasonable phobia of upma and sugar. With time, our dinner table started to change, so did the conversations. Technology revolutionised my life when a refrigerator walked into my home. At 17, I moved away from home to live in a metro and to achieve my 'destiny'. I was welcomed with a lot of unfamiliar questions. Just like them, I had my own curiosities about them. There were questions I wanted to ask. How do you not know how to cook? How do you not know what a mango tree looks like? How can you spend so much money eating bad food outside?

But I never did ask these questions. I kept mum. I had learned to keep my silence. Just like most things in life, this skill too was beaten into me at the dinner table.

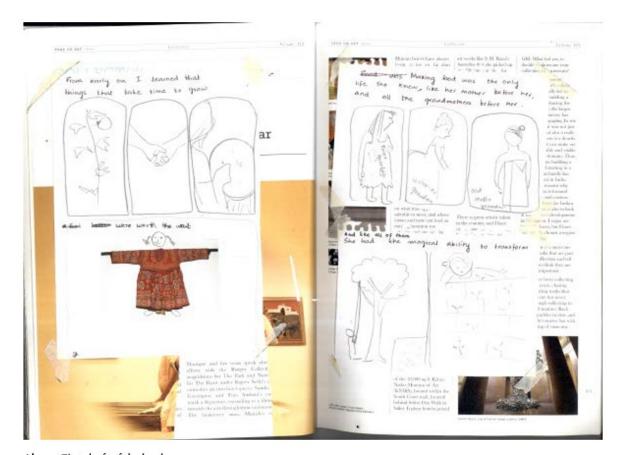
I had slowly learned to keep quiet no matter what was found in my food. I never uttered a word when my grandfathers land was sold in for constructing flats. The power of wilful ignorance cant be overstated. No matter what I found , knew or saw, I kept looking the other way.

As I moved further and further away from that boiling pot of rice, I learned new food pyramids according to the changing identity, changing pressures. I learned to talk about food. People who have little money thinks a lot more than most of us before spending it. But I leaned to think hard about food and bigger questions in life.

When I was young my mother decided what I ate and how much I ate and how much sugar, how much carbs, now I was in control (?)

Internet brought with it, infinite possibilities, choices, infinite paths to greatness. Infinite paths to saving the world. And yet, of infinite ways of going wrong.

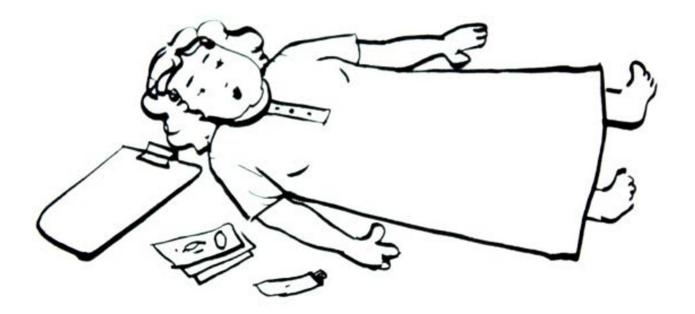
In a world where food kills more people than natural disasters and terror attacks, most grand moms have now retired from our kitchens, and yet I wish they would sneak back in, to claim control & to add that extra magical flavour.



Above: First draft of the book

Characters & Styles

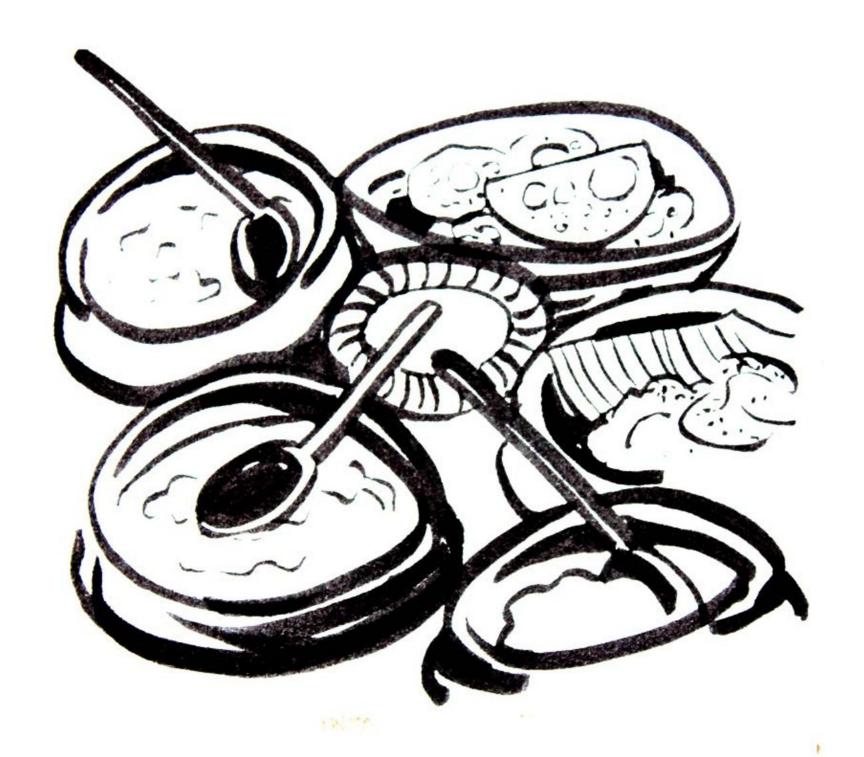








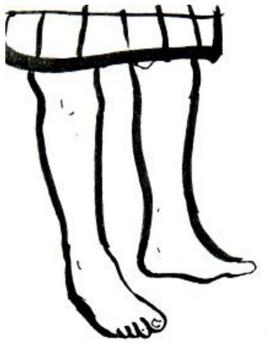








Layout





My earliest memories of that place is of rice being boiled



The taste of that rice was in being boiled outdoors







I had learned to keep my silence



Like most things in life, this skill too was beaten into me at the dinner table

References

Web & news articles

- 1. AIChE, Chemical engineering innovation in food production, 2012
- 2. WHO, World Health day toolkit, 2015
- 3. FSSAI, food safety training & management systems
- 4. http://www.thehindu.com/news/national/kerala/more-than-60-pesticides-banned-in-other-countries-in-use-in-in dia/article2339998.ece
- 5. http://devinder-sharma.blogspot.in/2015/04/all-pesti cides-listed-by- who-as-cancer.html
- 6. http://www.ncbi.nlm.nih.gov/pubmed/19151435
- 7. http://www.carbonfootprint.com/calculator.aspx
- 8. David Foster Wallace, Consider the Lobster
- 9. The Food Trust "The Grocery Gap
- 10. Marion Nestle, "Ethical Dilemmas in Choosing a Healthful Diet"
- 11. Benjamin Powell and Matt Zwolinski, "The Ethical and Economic Case Against Sweatshop Labor: a Critical Assessment"
- 12. Brian Wansink, "Environmental Factors That Increase the Food intake and Consumption of Unknowing Consumers
- 13. http://ninindia.org/DietaryguidelinesforIndians-Finaldraft.pdf
- 14. http://travel.cnn.com/mumbai/life/imagine-liv ing-rs-32-dayin-india-081690
- 15. http://marketrealist.com/2014/12/investing-coca-co la-worlds-larg- est-soft-drink-company/
- 16. http://dathathreya-ayurveda.com/treatment/critical-dis ease-management/ProjectSanjeevini/WhatistheKasar god-Endosulfandisaster/default.html
- 17. bacteria-spell-out-dutch-food-safety-education-campaign
- 18. http://www.ibtimes.co.uk/world-food-day-2015-female-farmers-hold-key-food-security-ending-poverty-1524167
- https://theconscientiousomnivore.wordpress. com/2013/01/24/bourdieu-food-space-updated/
- 20. http://mediashift.org/idealab/2014/08/can-a-laser-cut-vegetable-tell-a-story-about-food-security/

- 21. http://www.gastronomica.org/bourdieus-food-space/
- 22. http://www.re-thinkfood.org/
- 23. http://www.ibef.org/industry/indian-food-industry.asp
- 24. http://www.reuters.com/article/2015/06/25/research-and-markets-idUSn
- 25. http://in.reuters.com/article/2010/06/03/idINIn dia-49016720100603
- 26. http://www.localhistories.org/food.html
- 27. FSSAI, Indian food code, 2012
- 28. http://www.codexalimentarius.org

Papers

- 1. Green food through green food: A human centred design approach to green food technology
- 2. http://www.voanews.com/content/world-food-day-rural-poverty/3010241.html
- 3. HCI and sustainable food culture: A design framework for engagement
- 4. Domestic food and sustainable design: A study of univer sity student cooking and its impacts
- 5. Lunchline: Using Public displays and mobile devices to encourage healthy eating in an organisation
- 6. Redesigning & reimagining the recipe for more sustain able food systems
- 7. What can user experience learn from food design?
- Belize Agricultural Health Authority, Report on cam paign to increase food safety awareness among consumers in Belige, 2005
- 9. Columbia Law school, The World Bank, Tata and Endur ing Abuses on India's Tea Plantations, 2014

Books

- 1. Aseem Shrivastava & Ashish Kothari, Churning the earth, 2012
- 2. Arvind Gupta, Danger School
- 3. Arundhati Roy, Broken Republic, 2013
- 4. Susan George Nigel Paige, Food for beginners, 2007
- 5. Auroville universal township, organic farming
- Yiannas, Frank, Food Safety Culture, Creating a Be haviour- Based Food Safety Management System, 2009
- 7. M. Ellin Doyle, Carol E. Steinhart and Barbara A. Cochrane, Food safety 1993
- 8. Veena Jha, Environmental regulation and food safety: studies of protection and protectionism, 2006
- 9. Postmodernism or, The Cultural Logic of Late Capital ism, Fredric Jameson (1991)

Talks

- What's wrong with our food system? BIRKE BAEHR
 The Food System Documentary, Lecture, Talk
- 2. The Future of Food: Josh Tetrick at TEDxEdmonton
- 3. George Carlin advertising and bull shit
- 4. Al Gore Global Warming in 10 min
- 5. [Plenary Lecture] Hans Rosling: Food Security Chal lenges For a Changing World Population
- 6. Louise Fresco on feeding the whole world YouTube
- Ron Finley: A guerilla gardener in South Central LA -YouTube
- Dead stuff: The secret ingredient in our food chain -John C. Moore - YouTube
- 9. TEDxOttawa Natasha Kyssa Let Food Be Thy Medi cine YouTube
- 10. The food we were born to eat: John McDougall at TEDxFremont YouTube
- 11. The killer American diet that's sweeping the planet | Dean Ornish | TEDxPenn YouTube
- 12. Nathan Myhrvold: Cut your food in half YouTube
- 13. Pamela Ronald: The case for engineering our food -

- 14. chimamanda_adichie_the_danger_of_a_single_story
- 15. hans_rosling_on_global_population_growt

16. Movies

- 1. The Timbaktu Collective
- 2. Food inc
- 3. A place at the table
- 4. Chef's table, Niki Nakayama
- 5. Color of pomegranates
- 6. Coffee and cigarettes
- 7. My dinner with Andre
- 8. Letters from Korlai
- 9. No 5, Chanel, For the first time
- 10. vandana-shiva-why-we-must-respect-and-support-ourorganic-farmers-sea-to-seed
- 11. when-it-comes-to-food-security-the-question-is-where-do-we-want-to-go-from-here
- 12. free-range-child-raising-children-connected-to-theearth and-their-food-film-sneak-peek