

D E S I G N I N G F O R

FUTURES
OF FOOD

*Evoking collective speculations on
aspirational food practices*

By Sara Abraham, M.Des Human Centered Design

SARA ABRAHAM

Capstone/Dissertation 2018
(Postgraduate Professional Program)

Srishti Institute of Art, Design and Technology
Bangalore - 560064 Karnataka

Copyrights 2017-2018

Student Document Publication
(for private circulation only)

All Rights Reserved

No part of this document will be reproduced or transmitted in any form or by any means, electronically or mechanically, including photocopying, scanning, photography and video recording without written permission from the publishers namely Sara Abraham and Srishti Institute of Art, Design and Technology, Bangalore.

Written, edited and designed by
Sara Abraham
Printed at
Kolor Kode, Bangalore



I would like to thank my mentor, Kshama Nagraj for the guidance, support and willingness to always be there to help. I also thank my professor and tutor Dr. Naveen Bagalkot, whose guidance and timely eye-opening conversations that made it possible for me to work through this capstone project. I could not have asked for a better guidance.

I thank all the participants who graciously agreed to participate in my research activities without whom this thesis would not have been possible.

Thanks to my friends and classmates at Srishti for all the good laughs and inspirations in the last two years and also for being there and helping to get through the last six months.

To my family, thank you for your unconditional love, support and prayers.

And to God almighty for all the blessings.

ABSTRACT

FUTURES OF FOOD:

*EVOKING COLLECTIVE SPECULATIONS ON
ASPIRATIONAL FOOD PRACTICES*

*KEYWORDS: Human Food Interaction, speculative
design, aspirations, care, food culture*

Food is a central part of our lives. As technology is becoming increasingly intelligent and pervasive in our daily life, it is crucial to consider its presence in our mundane food practices. Our interactions with food, is one of the most significant factors in our own and environment's health.

This project proposes to use the '**Research Through Design**' approach informed by the theory of '**Capacity to Aspire**' to understand the cultures of different collectives toward their interaction with food as well as evoke collective speculations of their aspirational futures of food.

An array of work done in the intersection of Human and Food Interaction through pragmatic problem-solving or showcasing speculative future dystopias, to reflect and change our present practices is acknowledged. This project, however identifies a scope for researchers and design practitioners to engage with much more attention to the people and the ways in which they interact with food in a desired manner, rather than the efficiencies and novelties new technologies may provide to solve certain problems or fears and threats presented by the future.

This project imagines and re-imagines food futures through peoples aspirations, hopes and dreams rather than fears and threats about the future.

CONTENTS

ABSTRACT	01
INTRODUCTION	04
BACKGROUND	01
0.1 Human-Food Interaction	
1.2 Theory & Methodology	
0.3 Research Questions	
0.4 Design Approach	
PART 1: UNDERSTANDING & DEFINITION	01
1.1 Food practices	
1.1.1 Foundational Research	
1.1.2 Rural collective	
1.1.3 Urban collective	
1.2 State of the Art review	
1.3 Definition - Problem statement redefined	
PART 2: ETHNOGRAPHIC EXPLORATION	01
2.1 Research through making	
2.1.1 Rural Collective	
2.1.2 Urban Collective	
PART 3: SYNTHESIS & OUTCOMES	01
PART 4: REVISITING AND REFLECTION	01
CONCLUSION	01
REFERENCES	04

INTRODUCTION

Living in an adopted culture, chances are that the food we consume today are quite different from what our forebears had on their dinner plate. Food and water is important to sustain life and to meet our body's basic needs for growth and function. Malnutrition is the largest contributor to disease in the world. Good health starts with nutrition. Without regular and nutritious food, humans cannot live, learn, fend off diseases or lead productive lives.¹

However, do we really know what is it that we are eating nowadays? How healthy and sustainable are the lifestyles that we lead?

Originally in India, farming was the only prevalent profession. Farming was for self-sustenance and the farmers respected the soil. Hence the farming methods exercised by the people were unintentionally sustainable. The methods embraced farming practices that mimic natural ecological processes. During the 1960s India went through an era of Green Revolution where chemical-industrial model of agriculture was adopted. It was

the need of the time to fulfil the food requirement of the growing population and to become self-sufficient. This system, with its reliance on monoculture, mechanisation, chemical pesticides, fertilisers and biotechnology, has made food abundant and affordable. However, it left an ultimate legacy of a toxic food environment that's degrading the health of the people and the planet.

Growing up in a farm I was only exposed to food that was healthy, natural and grown on the farm. But as I moved to the city, I had to naturally shift my eating habits to accommodate the city lifestyle. Every time I have a chicken on my plate, I consume it knowing that it is not chicken anymore; it is just hormone infused pretentious chicken. Eating habits of people have changed drastically that it can no more be ignored.

When I was a kid I used to spend my time outdoors, climbing, plucking and eating fruits from the trees. My father would tell me to eat all the fruits that I want leaving the last two for the birds. This attitude

of my father towards the environment he lived in benefited me to still live in an environment with an abundant presence of birds. *'Human beings engage their own futures'* (Appadurai, 2001).²

Our interactions with food, is one of the most significant factors in our own and environment's health. Making the right choices not only benefits us but also the world that we live in today and for the future generations.

It is my personal journey from the village to the city, the changes I faced with respect to my interaction with food as well as the growing global concerns about the future of food and the environment we live in that motivated me to take Food as the design context for my project.

This project proposes to use the *'Research Through Design'* approach informed by the theory of *'Capacity To Aspire'* to understand the culture of different collectives toward their interaction with food as well as to evoke imaginations of their aspirational futures of food.

Can thinking about alternative desirable futures of food today help us prevent the undesirable futures from happening?

BACKGROUND

THIS SECTION GIVES A BACKGROUND STUDY OF THE CONTEXT OF FOOD PRACTICES AT THE INTERSTICES OF TECHNOLOGY, FOLLOWED BY AN INTRODUCTION TO THE THEORIES THAT DRIVE MY RESEARCH AND THE METHODOLOGY I INTEND TO USE IN MY EXPLORATIONS.



Figure 1: Uninvited Guests

0.1 Human-Food Interaction

Food is a central part of our lives, we need food to survive. Socially food brings people together. Culturally, food-practices reflect our ethnicities and nationalities. Given the importance of food in our daily lives, it is important to understand the role of technology in our food practices, in this technologically-driven digital era.²

There is a growing and diverse field of HCI researching and exploring the precinct of Human-Food Interaction (HFI) where HFI is the interstices of food, technology and everyday food practices.

A quick analysis of the currently offered market products and the food practices around it suggest gaps and opportunities in theorising for alternative futures of human food interaction that operate across a digital and physical realm.

Technology design is increasingly contributing to people's food consumption practices and offers promising yet questionable futures. Our mundane food practices include shopping, cooking, dining, dieting and sometimes growing

food. All of these have been colonised by an array of electronic devices, apps and sensors such as diet trackers, food sharing apps and smart kitchenware for convenience and efficiency.

I discuss a few examples here. If you are cooking and if you are stuck, a simple **Google search** gives you recipes of any dish you want to make (Figure 2: Google search). **Freshmenu** promises chef made meals, from across the world, using fresh healthy ingredients delivers where you want it (Figure 3: FreshMenu). The **SmartPlate** is Wi-Fi and Bluetooth-enabled dish that comes with three mini cameras and weight sensors. It watches what you're eating and doling out proper portions (Figure 4: SmartPlate). **'Drop scales will have you baking like Mary Berry (known to be Britain's greatest cook) in no time'** they say. You select your chosen dish from a companion app's recipe book and these connected scales will help you put together the exact ingredients to make your bake a great success (Figure 5: Drop Scales).

Some of these practices have already pervaded our daily lives, while others are soon to make their entry. While a lot of us in India make use of Freshmenu and other apps to contribute to our food practices a majority of others living in the non-urban area are strangers to them. For some they are of immense convenience that they can't do without it while for others they might be **'uninvited guests'**.³ As an outcome of human food interaction at the intersection of these one-size-fits-all smart objects, there might be messy unintended human behaviours.

Technology has taken human food interaction to a whole new level.

Are there shortcomings to these smart technology with respect to data privacy, cognitive overload, detached experiences and our health safety itself?

What is the culture of these smart objects? What are the values it imbibes in us?

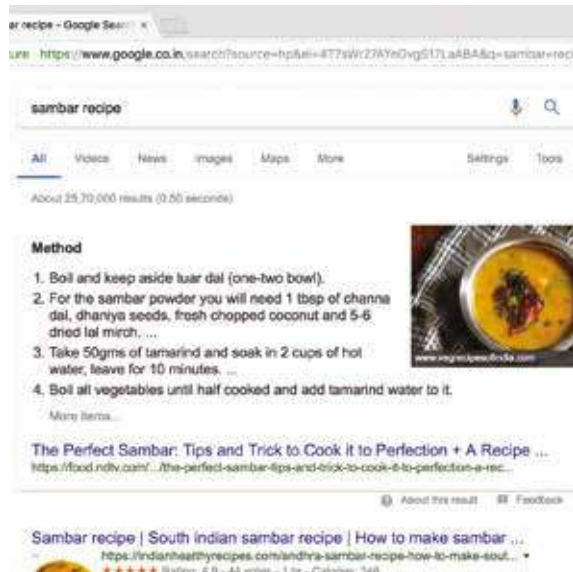


Figure 2: Google search



Figure 4: SmartPlate



Figure 3: FreshMenu



Figure 5: Drop Scales

0.2 Theory & Methodology

Choosing the right theory is very important in any ‘**Research Through Design**’ project. I did an extensive literature review on various theories such as the Theory of material engagement and behaviour change that focused on an individual and the theory of Capacity to aspire and Logic of Care that focused on a collective of people and things.

The emerging understanding in design that human beings don’t exist in isolation, they are always a part of the system in which they exist, prompted me to take the latter theories to guide my research. Also its orientation towards the future turned out useful for my vision of the project.

Arjun Appadurai’s paper The capacity to aspire: Culture and the Terms of Recognition was the predominant theory of this project.

Here I go on to discuss few concepts and definitions, Arjun Appadurai’s paper provisioned to embark my research.

The author informs, strengthening the

capacity to aspire especially among the poor people where the deeper capacity to aspire can only empower the poor to be partners in the battle against poverty. *‘Aspirations are never simply individual. They are always formed in interaction and in the thick of social life.’*⁴

This concept of the author is also supported by **Annemarie Mol**, the author of ‘**The logic of care**’. She suggests the importance of collectives where *‘collectives comprises of humans and non-humans that are similar to one another and belong together.’* When trying to improve the eating habits of an individuals it is important to look at the collective to which the individual belongs to because the individuals behaviour might not be wholly individual, there might be other stakeholders and artefacts that provokes the behaviour such as peer pressure, traditions to which you belong, family habits, infrastructure etc.

Therefore, in order to understand and strengthen the capacity to aspire it’s

important to consider the participation of a collective, keeping in mind to have the people take an active role in changing their situations for the better expressed in terms of actions and performances, which have a local cultural force.⁴

Capacity to aspire is also not evenly distributed in our society. Relatively rich and powerfully invariable have a more fully developed capacity to aspire.

My personal journey from a village to the city, the experiences I had and continue to have in the two spaces and the theories of capacity to aspire and logic of care prompted to direct my research in a village and a city. The division between people living in urban areas and people living in rural areas are growing in India. Furthermore, the people living in the cities find it hard to sympathise with the values that are practiced in the rural areas and vice versa.

The research space of this thesis was directed to understand the different values

of the culture inherent to the two spaces and sketch out a future driven by the values. The intend of the research is not to question which set of values are better but to understand and theorise on the cultural map of the values and their capacity to aspire in the two spaces, their contrasts, patterns and tensions.

The capacity to aspire is a condition to desire, dream and hope. Therefore it is first important to understand the cultural map of aspirations of people, broaden the horizon of aspirations by strengthening the capacity to aspire of the poor and there by facilitate the collectives to imagine the future.

Dunne & Raby in their works on **Speculative Design** informs about a space between reality and the impossible, a space of dreams, hopes, and fears. They say it’s an important space, a place where the future can be debated and discussed before it happens, so that, at least in theory, the most desirable futures can be aimed for and the least desirable avoided.

The present is caused by the past, so it is also to think of it being shaped by the future, by our hopes and dreams for tomorrow.³ It is when one has the capacity to aspire that one can dream, hope and desire.

For theorising through practice, it is necessary to position and re-position the context at hand in order to establish new knowledge. Joachim Halse, Eva Brandt, Brendon Clark & Thomas Binder has collaboratively formed a set of guidelines and framework for theorising through the practice of **Rehearsing The Future**. The idea of rehearsing the future collapses the front and back end. Design works by staging that which it wants to make.¹³

I used these guidelines as well as the speculative design methodology to drive my design explorations.¹²

0.3 Research Questions

How to strengthen the capacity to aspire amongst the collectives?

How to evoke collective imaginations of speculative desirable food cultures through situated and collaborative making with an on-going dialogue between theory and design context?

Can I understand the role and possibility of technology amongst the collectives in the context of food?

What are the implications of living with these technological artefacts? How will they influence the rhythms and routines of our lives, and ours to theirs, and how will this in turn change our cultures, beliefs and practices?



0.4 Design Approach

THIS PROJECT BROADLY WENT THROUGH FOUR STAGES OF 'RESEARCH THROUGH DESIGN' TO FIND ANSWERS TO THE RESEARCH QUESTIONS WHICH IS EXPLAINED IN THE COURSE OF THIS PAPER.

UNDERSTANDING AND DEFINITION

In the first stage, I built a foundational understanding of the human-food-interaction in the context of interaction design, design philosophies and design methodologies. I also interacted with the two collectives of Urban and Rural to understand the context for further explorations. Understanding helped me define my research space for further interventions.

DESIGN EXPLORATION

I applied the theory of capacity to aspire to explore the two different collectives of Urban and Rural through the methodology of 'Research Through Design' at the intersection of speculative design. Through activities such as design games, making, doll-play and enactments I facilitated the participants to imagine aspirational food futures.

SYNTHESIS & OUTCOMES

In this stage I synthesised data collected from the interventions, theorised about the patterns, tensions and contrasts seen between the two collectives. The synthesis helped draw out various food futures which I represented in a tangible artefact of a traditional Tamil Nadu game for ease of understanding as well as knowledge generation while engaging with it.

REVISITING & REFLECTION

On revisiting, the design explorations resulted in the emergence of a range of patterns, idea's and dialogues with the theory of Capacity to Aspire, in view of their aspirations for future food practices for new knowledge. In this stage I also reflected on the entire process of the thesis.

PART 1 UNDERSTANDING & DEFINITION

1.1 Foundational Research

This chapter explores to understand the prevalent food practices today through secondary research and understanding the food practices of the two collectives through various activities.

Do food practices of the collectives fall in the different categories of food practices derived from secondary research? Are there any other practices unique to the collective?

1.1.1 Food Practice

There are different kinds of food plates that differ based on the production methods of its ingredients. Our mundane food practices include shopping (procuring), cooking, dining, dieting and sometimes growing food. When we go shopping for groceries in the market we are faced with the options of organic and non-organic predominantly today. When we decide on one, that is a lifestyle choice of what kind of food we want to eat. When we make a lifestyle choice it is important to first understand the choices, what we eat, where it came from etc. in order to lead a healthy lifestyle.



MODERN

Modern food comprises of those that are produced from industrialised farming and are highly synthesised.

ORGANIC

Minimally synthesised with fewer artificial and more beneficial properties.

NATURAL

Produced by natural regenerative systems and is not synthesised at all, preserving all of its nutrients and beneficial properties.

RAW-FOOD

It is a variation of the natural food where the natural ingredients are consumed uncooked. It is a scientifically designed diet, fresh and wholesome.

FOOD COMPUTERS

An open agriculture initiative by the MIT media lab to end food crisis by growing food in computers by simulating atmospheric and soil conditions.

1.1.2 Rural Collective

A VILLAGE IN THE HIGH RANGES OF KERALA NAMED UDUMANCHOLA, MY RURAL COLLECTIVE CONSISTED OF WORKERS AT THE ESTATE, PEOPLE LIVING NEARBY, SHOPS AND THE ENVIRONMENT.



DAY IN A LIFE & IMMERSION

I interacted and shadowed workers of the estate, participating in their work as well as conversing and understanding a day in their life.



CARD SORTING

The cards consisted of food products that were natural as well as industrially produced. The participants had to arrange the cards in the order of priority. This helped me get an idea of the consumption patterns of people. I also used these cards to further delve in conversation on where they procure what they consume, why they consume what they consume etc.



PLATES OF PAST, PRESENT AND FUTURE

Participants had to visually or verbally represent the 3 plates to help understand their aspirations for the future, what prevents them from acquiring the future aspirational plate and the similarities between the plate of the past and future. Although I had prepared to facilitate the participants to make the three plates using art materials, there was hesitation from the participants, and I got to only get them to talk about it. Participants also showed a lot of hesitation when it came to the discussion of a future plate. They all stopped by saying they just want to continue their current consumption patterns.

This was my cue to go back and prepare activities from their cultural resources to engage them for further explorations.



PARTICIPANT	TRADITIONS	BEHAVIOURS	PRACTICES	STORIES	HOPES & ASPIRATIONS
<p>Participant 1 25 years old, married and pregnant. Grew up in Coimbatore, worked in Chennai and now living in the village after marriage with in-laws in their self-owned house.</p> <p><i>Technology: Smart-phone, feature phone, laptop, internet, tech savvy.</i></p>	<p>Celebrates festivals like Pongal & Diwali predominantly. Invites guests over for the festival days. If the invitees are 10 in number, food cooked will be for 20 people.</p>	<p>PAST(Coimbatore): Disciplined lifestyle, participated in family chores; cooking and cleaning without fail.</p> <p>PAST(Chennai): Busy lifestyle, hectic work, congested living, careful expenditure, office and hostel food.</p> <p>PRESENT: Follow a lazy lifestyle, no housework to be done as mother-in-law does everything. No work and no entertainment. Spends time on the laptop and phone talking to friends.</p>	<p>PAST: Disciplined and conventional family</p> <p>Compulsarily participate in family chores; Cooking and cleaning.</p> <p>Housework is done only by women.</p> <p>PRESENT: Everybody here has healthier lifestyle because of what they eat and the kind of work they do. I just eat like them but no work.</p>	<p>Memories of Coimbatore:</p> <p>Own farm with the cow giving milk, vegetable's were from the backyard.</p> <p>Once a week used to eat out with siblings.</p> <p>Once a week used to have non-veg.</p>	<p>Buy a house.</p> <p>Get a job.</p> <p>Make money.</p> <p>Consume home grown food.</p> <p>Live like in childhood.</p> <p>Perform physical exercises if the daily work doesn't involve physical labour.</p>
<p>Participant 2 30 years old, housewife, grew up in the next town, got married and came here.</p> <p><i>Technology: Not tech savvy, owns a feature phone but uses husbands smart-phone occasionally.</i></p>	<p>Annual festival in the church is a big event. Tradition to invite family members living elsewhere.</p> <p>Cook a lot of non-veg and extravagant cooking for church festival and other days like Easter and Christmas.</p>	<p>Indulges in consumerism for the sake of children. (chocolates and chips especially)</p> <p>Used to cultivate tapioca, jack-fruit and other vegetables at home.</p> <p>Now due to the lack of space and invasion of pigs its difficult.</p> <p>Have to buy everything from the shop.</p>	<p>Rice and Tapioca are predominant.</p> <p>Chapathi is rare as its labour intensive and difficult to satisfy the big family.</p>	<p>'People say eating in hotels are not good, so prefer eating at home.'</p> <p>Priority are kids and husbands health.</p> <p>In laws are becoming older and demanding. Cooking for them is difficult.</p>	<p>Cultivate vegetables and whatever possible like olden days.</p> <p>Would like to eat more chappathi's in the future.</p> <p>("In Bangalore everybody will be eating chapathi?")</p>
<p>Participant 3 42 year old, estate worker, lives in the estate with husband. Children studying in Tamil Nadu.</p> <p><i>Technology: Not tech savvy, owns a feature phone, television</i></p>		<p>Grows chicken and vegetable in the little space available.</p> <p>Does extravagant cooking of non-veg when children visit.</p> <p>Otherwise consumes simple meals of rice and a vegetable.</p>	<p>Cooks with what is available from the surrounding as that's what she's used to doing.</p> <p>Cannot live without rice.</p>	<p>Often works as house maid involving a lot of cooking.</p> <p>Good exposure to various kinds of food and their making.</p> <p>Sometimes make it for her children.</p>	<p>Continue like how it is currently.</p> <p>Own land as its a must for everybody.</p>

Table 1: Synthesis of the understanding of rural context

PARTICIPANT	TRADITIONS	BEHAVIOURS	PRACTICES	STORIES	HOPES & ASPIRATIONS
<p>Participant 4 30 years old, lives in the estate with husband, works in their own family land where an own house is under constructions Children studying in Tamil Nadu.</p> <p><i>Technology: Owns a feature phone but uses husband smart-phone occasionally, television</i></p>	<p>Make a desert for birthdays.</p>	<p>Cannot live without rice.</p> <p>Do not like yams, though its easily available in the surrounding.</p>	<p>All the things required for cooking are available in the nearby shop, but travels to the next town to procure things at a cheaper rate.</p> <p>Occasionally uses husbands phone to take recopies and cook something different.</p> <p>Also cook the recopies they show on cookery shows on the television.</p>	<p>Never used to eat non-veg. After marriage started eating non-veg as husband and his family likes.</p>	<p>Continue like how it is currently.</p>
<p>Participant 5 55 years, estate worker, retired husband, lives independently</p> <p><i>Technology: Feature phone, television</i></p>	<p>Annual festival in the church is a big event. Tradition to invite family members living elsewhere.</p> <p>Cook a lot of non-veg and extravagant cooking for church festival and other days like Easter and Christmas.</p>	<p>Make a lot of fish as it does not go bad in the absence of refrigerator.</p> <p>Cannot live without rice.</p> <p>House is in the estate but carries meal to work as its habitual and eats with the other workers.</p> <p>Will not indulge in the consumption of industrially produced food but if given will be happy to eat, like chocolates, biscuits, chips etc.</p>	<p>Cooks with what is available from the surrounding as that's what she's used to doing.</p>	<p>After the roads developed waste has increased. People who travel via these roads just mercilessly throw chip packets on the roads.</p>	<p>Built a house for the son.</p>
<p>Participant 6 22 years old, daughter in law of estate worker, unemployed, pregnant and lives in a joint family.</p>		<p>Rice is very important. But will eat anything given, like to try new things.</p> <p>Gets attracted to eat the fancy-looking food shown on media but don't get a chance.</p>	<p>Never eat out, as everyone thinks its not good.</p>		

Table 1: Synthesis of the understanding of rural context

The traditions, behaviours, practices, stories, hopes and aspirations of the people unfolded a collective culture.

Understanding the culture was important as it is in the culture that resources to strengthen the voice of the poor to enable them to aspire exist.⁴

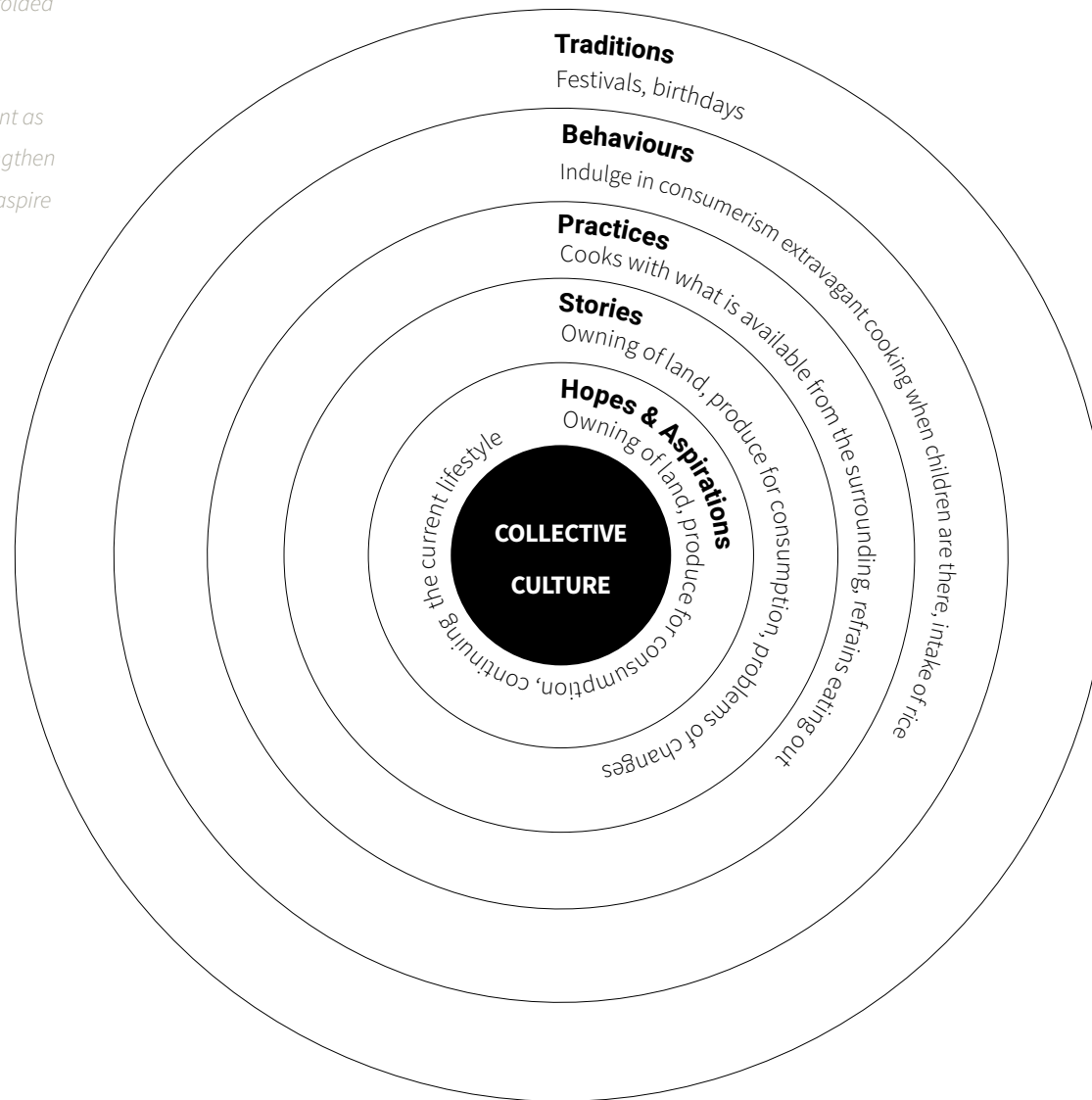
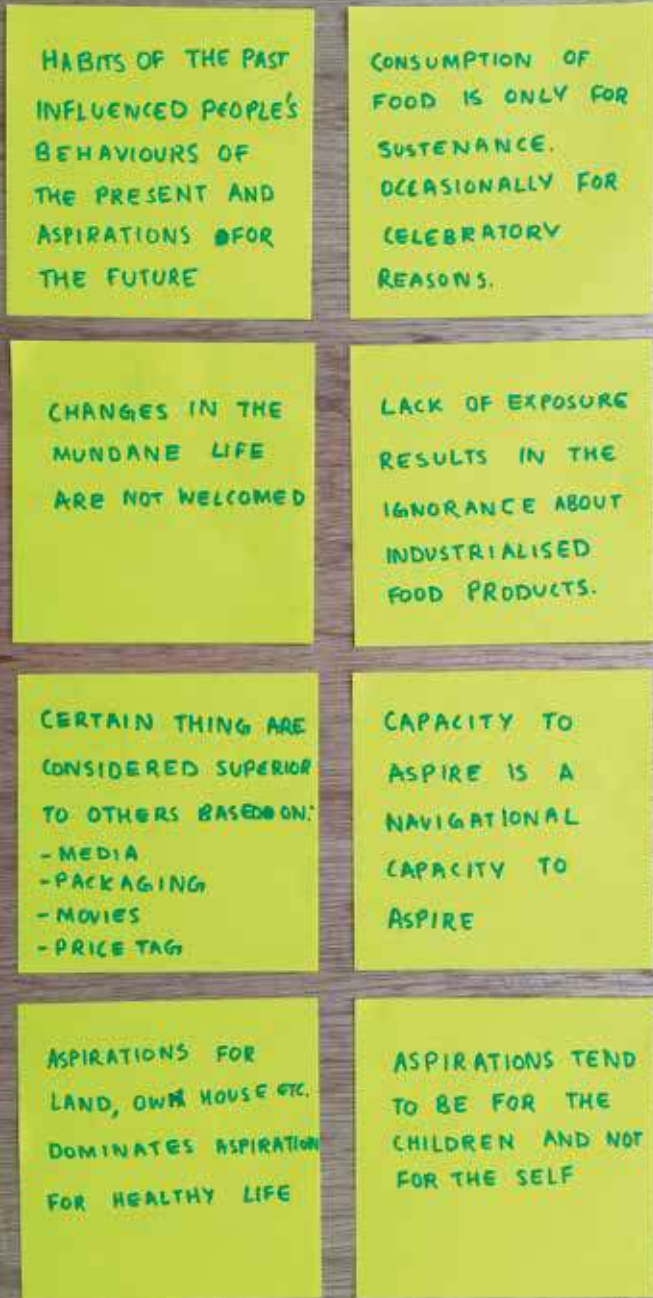


Diagram 1: Collective culture of the Rural space



ETHNOGRAPHIC SNIPPETS:

PATTERNS AND DIFFERENCES THAT EMERGED OUT OF THE INTERVENTION, FOR FURTHER INFERRING AND INTERVENTIONS.

As it was my initial primary intervention, I had a bit of a starting trouble and there were barriers with the participants that existed in the form of language differences and power relations between them (workers of the estate) and me (daughter of the estate owner). I felt like they were constantly thinking in their mind if what they are saying is right or wrong and felt the need to please me, assuming that all the interactions would be reported back to my father (estate owner) and would affect their work.

Therefore I realised I had to further intervene with the participants and involving them in activities that will help break the barriers and proactively engage them.

Never the less, it helped me understand the rural context. Since it was a small close-knit village, lot of repetitions in the consumption patterns was evident. Where there were slight differences, there were differences in the age, education, exposure (which they get working get working in house in the city) and the past of the participants. For instance the 26 year old participant and the 20 year old participant had shifted to the village recently after marriage. While the former came from a family of disciplined values aspired the same for the future, also the education and exposure reflected in her food preferences of eating what's available in the environment as synthesised food is unhealthy. Where as the latter participant desired industrialised food if given a chance.

The elder participants who had grown old living in the village watching the changes, aspired to go back to how it was, however they wished for their children to move out of the village, pursue education and have non-labor work.

1.1.3 Urban Collective

FROM THE CITY OF CHENNAI, THE URBAN COLLECTIVE COMPRISED OF A GROUP OF 8 PARTICIPANTS WHO WERE UNIFIED BY ONE COMMON THREAD OF WORKING IN THE SAME COMMUNICATION DESIGN FIRM.

DAY IN A LIFE & IMMERSION

I interacted and shadowed the participants as well as conversing and understanding a day in their life.

Participant 1& 2 were unmarried, locals to the city, living with family in different parts of the city which means they spend a lot of time traveling to and from work.

Participant 3 was also unmarried, a local to the city but due to long commute to the work place, shifted to a rented apartment closer to the workplace. She goes back home every weekend.

Participant 4 was unmarried, from Kerala, living and working in Chennai temporarily in a rented studio apartment close to the work place.

Participant 5 & 6 were mother and aunt (housewives) to participant 3 living as a joint family in a self owned house.

Participant 7 & 8 were migrants from Kerala, working and living with families in self-owned apartments.



CARD SORTING

The cards consisted of food products that were natural as well as industrially produced. The participants had to arrange the cards in the order of priority. This helped me get an idea of the consumption patterns of people. I also used these cards to further delve in conversation on where they procure what they consume, why they consume what they consume etc.



PLATES OF PAST, PRESENT AND FUTURE

Participants were asked to arrange magazine cut-outs and drawings of food items into plates of past, present and future. The activity helped in understanding their stories about the past, practices and behaviors of the present, aspirations of the future, correlation between past, present and future and the reasons disabling people from achieving their aspirations.



WHAT-IF CARDS

What-if scenarios were derived from the futures of food I came across during the secondary research. They were meant as conversation starters. It helped probe into people's beliefs, values, ideals, hopes, fears and spark reactions.



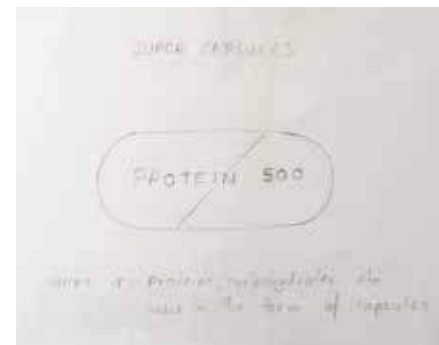
What if supermarkets were transparent to show where the vegetables were grown and its nutrition?

"I will still buy what is cheap, i'm sure more nutrition will mean more expensive just like how organic food is."

"How will I believe if they are right?"

"If know this healthy then I don't mind paying extra buying it because otherwise that money I have to spend it on hospital."

"This might help the farmers by eliminating the middlemen."



What if proteins, carbohydrates and fats were in the form of capsules?

"I think I wont mind doing this if it comes to that, I'll be that grandmother who fondly be telling the kids about the time when we had doughnuts!"

"I hope this is healthy, if it is its the best way to feed the children."

"It will deduce the experience of eating food with friends and family and the taste, smell and look of delicious food made by the mother."

"This is the future: Colourless, odourless, tasteless."



What if food is grown with technology simulating the climate and the soil?

"Might die out, considering affordability etc."

"Everything we are doing currently is against nature, so high chances that this is where we will end up."

"If it is technology then there will be some problem like mobile phones emit radiations."

"I like the fact that you can keep it at home, when you need vegetables take it right out of your backyard and you know what goes into it."

PARTICIPANT	TRADITIONS	BEHAVIOURS	PRACTICES	STORIES	HOPES & ASPIRATIONS
<p>Participant 1 26 years old, video assistant by profession, freelances at free time, lives in a rented house with mother and brother, away from the office which means he spends a lot of time traveling to and from work.</p> <p><i>Technology: Smart-phone, computer, very tech savvy</i></p>	<p>It was a tradition to have a family brunch on Sundays after church. However now due to busy schedules that doesn't happen.</p> <p>Christmas and Easter are times when we really indulge in extravagant cooking.</p>	<p>Eats out most of the time, due to the nature of work (Travelling around all the time).</p> <p>Eats out sometimes with friends just to spend time with them.</p> <p>Likes to eat dinner alone somewhere on the roadside.</p> <p>Meals at home are fed by mother by hand, it increases the taste.</p> <p>If food is not tasty, doesn't eat.</p>	<p>Its a practice to cook non-veg on weekends as consuming non-veg everyday turns out to be very expensive.</p>	<p>My eating habits were formed when I was small. My grandmother raised me feeding non-veg mostly and I continue that practice.</p> <p>If vegetarian dishes taste as good as the non-vegetarian I don't mind, like how it was for a wedding I attended recently.</p> <p>I'm losing the taste for chicken. It feels rubbery and bland as if constitutes of nothing.</p>	<p>I hope to consume more mutton in the future for which the prices has to come down.</p> <p>I want to stop eating chicken.</p> <p>Eat more seafood.</p> <p>Form a balanced diet of food and physical activities.</p> <p>Stop the habit of being fed by mother.</p> <p>Eat more vegetables and fruits.</p>
<p>Participant 2 28 years old, illustrator by profession, lives in an own house with parents a little far from work, bikes to work everyday.</p> <p><i>Technology: Tech savvy, smart-phone, laptop</i></p>	<p>Traditionally we used to eat 'Kanji' (rice porridge) and dhal.</p> <p>Payasam for birthdays of anyone in the family.</p> <p>Making of snacks for festivals.</p> <p>Making prasaad.</p> <p>When menstruating not allowed to cook.</p> <p>Eat a lot of curd, making it difficult to be a vegan.</p>	<p>Doesn't like to eat out a lot but tend to eat out because likes to hang out with friends and where else to hang out but restaurants and at roadside food stalls.</p> <p>Eat snacks from office canteens because I like to take breaks from my work desk and take a walk.</p> <p>Eats a lot of dhal because that's the protein equivalent for vegetarians.</p>	<p>Father is always the one who goes shopping for the kitchen.</p> <p>He is a habitual shopper.</p> <p>Looks out for discounts, attitude and behaviours of people at the counter etc.</p> <p>Try our best not to buy dosa batter and ready-to-eat chappathi.</p>	<p>Eating healthy is from what people tell me, reads somewhere.</p> <p>Attracted to diets like vegan food and seeds, nuts etc.</p> <p>In my childhood on emergencies, mother would borrow dosa batter from neighbour.</p>	<p>Cut down on eating out as its not good for your own health and the environment.</p> <p>Take deadlines lightly, spend more attention on the food.</p> <p>Go back to roots, eat raw, take stuff from the trees.</p> <p>Can people always be friendly with one another, borrow and lend food items?</p> <p>Give up dairy products (vegan).</p>
<p>Participant 3 22 years old, from Kerala, living and working in chennai in a rented studio apartment close to the work place</p> <p><i>Technology: Tech savvy, Smart phone, laptop</i></p>	<p>Family brunch on Sundays after church. However now due to busy schedules that doesn't happen.</p> <p>Non-veg was staple. Chickens at home provide eggs.</p> <p>Refrain from non-veg during lent</p>	<p>Simple food as living alone and not much income.</p> <p>There is no time, energy and money for a disciplined food practice.</p> <p>Consume a lot of snacks.</p> <p>Indulge in outside food once a week.</p>	<p>Cost over health.</p> <p>Make rice daily.</p> <p>Mother sends pickles etc. from home which makes taste better.</p> <p>Don't have the time and equipments, so buys ready-to-eat food products.</p>	<p>Mother cooks really tasty food. Bakes a lot.</p> <p>When siblings and guests come make a huge spread of food.</p>	<p>Eat all meals.</p> <p>Reduce eating junk food.</p> <p>Eat home food made by mother.</p>

Table 2: Synthesis of the understanding of urban context

PARTICIPANT	TRADITIONS	BEHAVIOURS	PRACTICES	STORIES	HOPES & ASPIRATIONS
<p>Participant 4 25 years old, local to the city but due to long commute shifted to a rented apartment close to work. Goes home every weekend to a joint family.</p> <p><i>Technology: Tech savvy, Smart phone, laptop, wacom, ipad from work</i></p>	<p>Celebrating birthday with pooja and some sweet prepared at home.</p> <p>As a family eat out once a month.</p> <p>Mother and aunt used to make snacks for festivals and send it to all the relatives.</p>	<p>Bread and eggs for breakfast for ease of making.</p> <p>Currently eat out a lot as staying away from home.</p> <p>Dinner is mostly ordered on swiggy but eat light as lunch from office is very heavy.</p>	<p>Visit home every weekend.</p> <p>Consume good home food and sometimes pack some for the week.</p> <p>Consume ready-to-eats, but make sure its a trusted brand.</p>	<p>My mother and aunt are all the time in the kitchen. Sometimes I wonder if they didn't have to cook, how will they spend their time?</p> <p>As they are their we all eat healthy and tasty food.</p>	<p>Re-use left over food like bread pieces etc.</p> <p>Reduce junk food.</p> <p>Eat at home more and reduce eating out.</p>
<p>Participant 5 & 6 Mother and aunt (housewives) to participant 3, living as a joint family in a self owned house.</p> <p><i>Technology: Moderately Tech savvy, smart phones</i></p>	<p>Festivals, Pooja's</p> <p>Living in a joint family calls for a lot of cooking all the time.</p> <p>Relatives used to visit a lot but now everyone is busy.</p>	<p>Eats home food all the time.</p> <p>Morning itself makes breakfast and lunch as everyone needs to carry lunch to work.</p> <p>Sometimes we see cookery shows and try some new dishes.</p> <p>Otherwise mostly fixed menu.</p> <p>Rarely eat out. Its very difficult to come to consensus on where to eat with such a big family.</p> <p>Eating out is better than ready-to-eat food.</p>	<p>Never use industrialised food products.</p> <p>Always have Dosa batter at home.</p> <p>Takes turns and goes for shopping for the kitchen.</p> <p>Meals are like a cycle, the menu keeps rotating.</p>	<p>When we were younger shops were smaller, better quality products.</p> <p>Now a lot of the products we see in the market, we don't even know what it is.</p>	<p>We hope our kids also cook at home and eat.</p> <p>Use less industrialised food products.</p> <p>We hope the kids continue to keep the traditions and culture of festivals and family ties going.</p>
<p>Participant 7 35 years old, from Kerala, working and living with family in a self-owned apartment.</p> <p><i>Technology: Tech savvy, Smart phone, laptop</i></p>	<p>When guests come mother used to cook a lot, still trying to continue that.</p>	<p>Maid cooks, I just cook when guests come.</p> <p>Only ready-to-eat products we buy is parotta and bread.</p> <p>Behaviours change after marriage depending on the partners preferences.</p>	<p>Green tea every morning.</p> <p>Prior planning to what to cook on the previous day night itself.</p> <p>Terrace garden for vegetables for the self consumption.</p>	<p>The previous generation is so particular about taste and textures.</p> <p>They always have their fridge stocked with food.</p> <p>Batter bought in the shop is fool proof but sure has additives.</p>	<p>I wish all these empty spaces around the apartment were vegetable patches.</p> <p>Eat more salads, reduce rice.</p> <p>Stop drinking milk as its all synthesised.</p> <p>Kids to follow our behaviours like how we followed our mothers.</p>

Table 2: Synthesis of the understanding of urban context

The traditions, behaviours, practices, stories, hopes and aspirations of the people unfolded a collective culture.

Understanding the culture was important as it is in the culture that resources to strengthen the voice of the poor to enable them to aspire exist.⁴

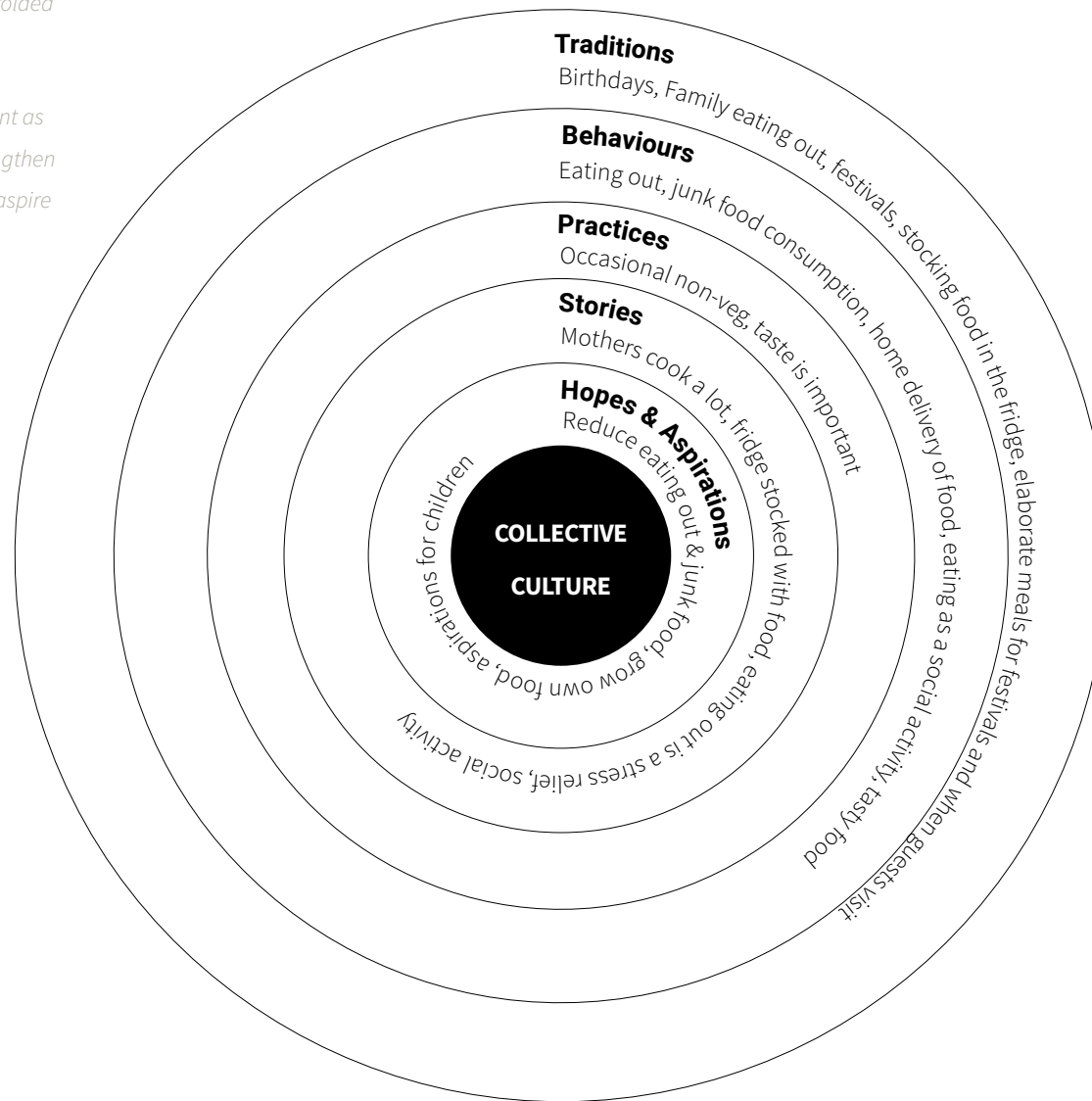


Diagram 1: Collective culture of the Urban space

EVERY HOUSEHOLD
HAS THEIR OWN
PRACTICES AND
WAY OF COOKING

TASTE, SIGHT,
SMELL ETC. PLAYS
AN IMPORTANT
ROLE IN THE
CONSUMPTION OF FOOD

THE SURROUNDING,
SOCIAL CIRCLES
ETC. PLAY A
SIGNIFICANT ROLE
IN PEOPLE'S
CONSUMPTION
PRACTICES

ASPIRATIONS OF
MOTHER'S REVOLVE
AROUND THE
CHILDREN AND NOT
AROUND SELF

HABITS OF THE
PAST INFLUENCED
PEOPLE'S ASPIRATIONS
FOR THE FUTURE

CIRCUMSTANCES,
HECTIC WORK LIFESTYLE,
SITUATIONS
PLAY AN IMPORTANT
ROLE

CONSUMPTION OF
FOOD IS NOT JUST
A FUNCTIONAL ACT
BUT ALSO SOCIAL
AND CULTURAL

FOOD COOKED BY
MOTHER'S PLAY
PREDOMINANTLY IN
STORIES OF THE
PAST.

ETHNOGRAPHIC SNIPPETS:

PATTERNS AND DIFFERENCES THAT EMERGED OUT OF THE INTERVENTION, FOR FURTHER INFERRING AND INTERVENTIONS.

The first 3 activities conducted with the participants helped in the understanding and mapping out of a Day In a Life Of (DILo) each of the participants as well as to understand the behaviours, practices, traditions, hopes, aspirations and stories of the participant.

Mapping of DILo helped understand a standard day, interactions with artefacts, people, food consumption patterns, allocation of time for the various activities of the day, factors affecting decision-making etc.

Overall it helped me understand the urban context for further intervention. In the urban collective participants were from different parts of the city and some from other states, these differences were evidently seen in the interactions with the. Despite the fact that the participants belonged to the same collective, there were changes in their behaviours, practices, traditions, hopes, aspirations and stories.

But the differences and similarities unfolded a unique culture of the collective.

The urban collective also had people from different age groups. There were evident differences seen in mothers and bachelors.

1.2 State of the Art Review

REVIEW OF THE ARRAY OF WORK BEING DONE AROUND HUMAN FOOD INTERACTION.

FOOD COMPUTERS

(Figure 6) Food Computers - Open Agriculture Initiative at the MIT Media Lab envisions a future where food system undergo a change in order to connect growers with technology. The Open Agriculture initiative (OpenAg) has begun growing basil in “personal food computers.” Their big picture mission is building new tech tools to be used by a billion new farmers.⁵

THE TABLE FOR LIVING

(Figure 9) A concept kitchen of the future envisioned by IDEO for Ikea. The future enables to place any object on the table and a camera recognises it and projects recipes, cooking instructions, and a timer directly onto the table’s surface. Set the timer for how long you want to spend preparing the meal, and the table suggests recipes that can be completed in

the window you have available.⁶

Some other designers intersect food with speculative design to draw out futures around food that provokes viewers to critique the present practices and prevent the future before it happens.

FORAGERS

(Figure 7) Anthony Dunne and Fiona Raby design for an overpopulated nation; Foragers a dark future scenario where a group of people take their fate into their own hands and start building DIY devices. They use synthetic biology to create “microbial stomach bacteria”, along with electronic and mechanical devices, to maximise the nutritional value of the urban environment, making-up for any shortcomings in the commercially available but increasingly limited diet.⁷

THE GUIDE TO FREE FARMING, BY 5.5 DESIGNERS

(Figure 10) It is a handbook to sourcing nutrition in the urban environment in a future where there is scarcity of food. It is aimed to restore a close relation between consumers and the natural environment,

creating a shorter link to guide people who live in cities to take on the role of farmers in their urban environment. The book includes recipes like street flower salad and grilled rat, along with instruction guides to, for instance, plucking a pigeon or a starling just as we once plucked chickens, tips for collecting dandelion greens, snails and honey, as well as guides to mushroom picking and uses for expired food is also included.⁸

Food has received multitudinous attention in HCI in the recent years where scholars seek to expand the body of Human-Food Interaction (HFI) research in HCI. From a pragmatic problem-solving approach and projection of dystopian futures these scholars have realised a room for a more experimental and playful HFI work envisioning futures of food that is socially and culturally robust.

THE PARLOUR OF FOOD FUTURES

(Figure 8) The parlour of Food Futures by Markéta Dolejšová at CHI’ 18 is a speculative oracle that explores possible food futures through the 15th-century game of Tarot. Visitors are invited to ‘read’ the futures over a bespoke Food tarot card

deck presenting 22 speculative diet tribes whose appetite has been radically altered by bio/technological innovation. The tribes and their food habits are both optimistic and dystopian, depending on your reading. Instead of suggesting any answers or solutions, the Parlour aims to raise questions and provoke the players to speculate: What, where and how would we eat in the near future?⁹

Some designer’s also intersect science with food in speculating futures.

THE HUMAN HYENA PROJECT

(Figure 11) A speculative design project from artist Paul Gong from the Royal College of Art in London was done in view of tackling the increasingly serious problem of food wastage. Inspired by the hyena species, they use synthetic biology to create new bacteria, and make use of three new tools to modify their digestive system to be like that of the hyena – with its different sense of smell and taste. The “Human Hyenas” are able to consume and digest rotten food like the scavenger hyena.¹⁰



Figure 6: Food Computer

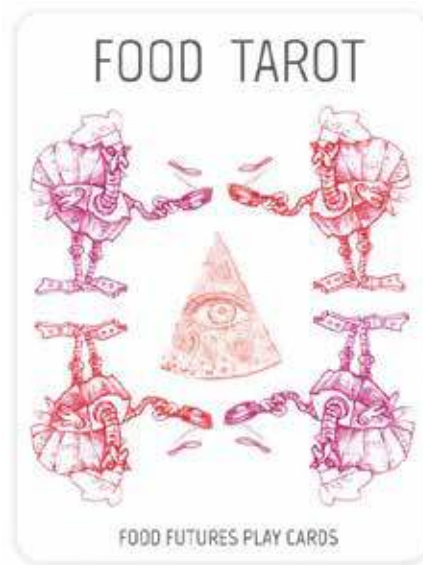


Figure 9: The Table for Living



Figure 7: Foragers

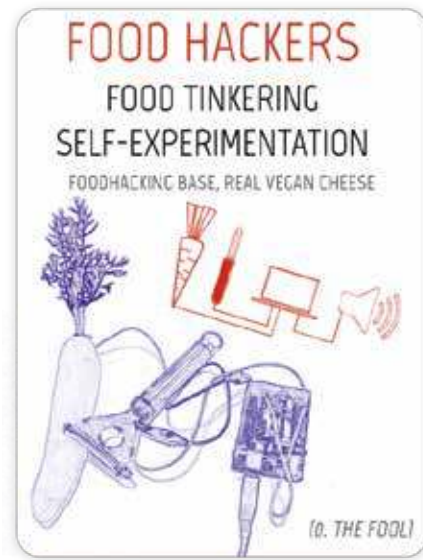


Figure 8: Parlor of Food Futures



Figure 10: The Guide to Free Farming



Figure 11: The Human Hyena Project

Technology and science has taken human food interaction to a whole new level. However technology that we often envisage as future food technology often seems to be out of reach or in Bell and Dourish's (2007) words in the 'proximate future'.

A quick analysis of the current work on futures informed their nature to be either pragmatic problem solving or projection of horrifying dystopian futures.

While these research endeavours for the future are relevant and important, suggested by the theory of capacity to aspire, I found a scope of exploring futures of human food interactions sketched from people's hopes, aspirations and desires of the future instead of fears and threats. Human-food interaction requires much more attention to the people and the ways in which they engage with food in a desired manner than efficiencies and novelties new technologies may provide to solve certain problems or than by projecting dystopia's to warn people about the future to provoke people to adopt alternative actions today to prevent the dystopian future from happening.

Food has had a celebratory vision for years, through the interventions, can this project imagine and re-imagine celebratory food futures through people's aspirations, hopes and dreams about future?

1.3 Redefined Design Intention

Through speculative ethnomethodology, strengthen the capacity to aspire of the participants to evoke imaginative speculations of aspirational futures of food which is rooted in the culture of different collectives.

What are the contrasts, patterns and tensions among the speculated futures?

Can these possible futures, their contrast, patterns and tensions give access to a new type of data?

PART 2

ETHNOGRAPHIC EXPLORATION

2.1 Research Through Design

*ACTIVITIES TO ESTABLISH AND EXPLORE A CREDIBLE AND MEANINGFUL PRACTICE AROUND FOOD IN THE ENVIRONMENT OF AND BY THE PEOPLE IT ADDRESSES, BEFORE THE IDEA IS FULLY DEVELOPED.*¹¹

In other words It is a particular participatory approach to exploratory design that unfolds the creation of design opportunities that evolve around lived experiences.

The following section, explains the various design activities performed with the participants of the rural and urban collective informed by the tools of Speculative Design and Rehearsing the Future.

Where, Speculative Design is an approach that enables us to think about the future and critique current practice.¹²

It is a kind of design that is used as a tool to create not only things but ideas. It is used to imagine possible futures through 'what if' questions that are intended to open debate and discussion about the kind of future people want (and do not want).¹⁴

The design activities were formulated to intervene in the conditions of the context of participants, unfolded from the first round of intervention for understanding and definition. All the activities were designed to eventually uncover the aspirational futures of food practices.

2.1.2 Rural Collective

DESIGN GAME

Intention - proactively understand the behavioural and aspirational map of the participants with respect to the consumption of food.

Brief - A contextual adaptation of the game Monopoly, the board game has three parts to it:

1. An inflow and outflow of money as one traverses through the board. This is the reality in everyone's life. There is unforeseen and foreseen income and expenditures happening all the time.
2. Construction of a meaningful aspirational future living with the available things and money. Not always do they have accessibility of a variety of things. This part of the game was intended to broaden the horizon of aspirations.
3. Role-play cards where one needs to enact/talk about a situation mentioned on the card. This was meant to strengthen the voice of the participants in situations they otherwise have not thought about or refrain from voicing.



Planning & Execution - The first part consisted of various occasions the participants can relate in their context where there is an inflow and out flow of money.

For the second part the participants had access to a variety of things like farm animals, tree's, vegetable plants, vegetables, fish, packaged food items, dairy products and electronic kitchen appliances. Most items were picked from their context and few others like frozen vegetables, microwave etc. were picked from outside the context to understand peoples behaviours towards it. Each item had certain rules attached to it which was similar to its real life rules. For example, the tree's would require 3 turns to start giving fruit, the fishes would last for 2-3 days whereas the fresh vegetables from the market would last only for a day though they are cheaply priced. However if one has a refrigerator, shelf life increases. The packaged food items would last much longer even without a refrigerator.

Third part of the game had situations that would provoke them to imagine beyond

their current situations but relatable to their context.

Outcome & Reflection - The participants were very anxious about what they will be asked to do, when they came but the game helped ease the tension amongst the group. In no time they got comfortable with each other and the game and my existence was nearly forgotten.

The game helped understand the *'possible futures'* the participants aspire for. It was interesting to understand the configurations created by them on the board. Considering each game move to be a tangible gesture, it helped understand what the person finds important and interesting. The move of one player became something for the other players to reflect upon.

In the first part, given the money and the resources it was interesting to understand their behaviours in priority. After a couple of rounds, the game had to be brought to an end. So as a final round I told them that the game has ended, but with the remaining money in hand what are the things that you would like purchase. It was

interesting to realise that while the game was happening, they were very careful with their expenditures, they spent less assuming that whoever had more money in hand are likely to win the game (I never mentioned anything about winning nor have they played monopoly before). I figured that was a real-life assumption that they made. However when they were told that the game has ended they wildly spent their money firstly in purchasing more land as previously they were hoarding a lot of things in their one piece of land.

Third part was the serious part, which the participants were hoping they won't land there. But after few rounds they eased on the enacting. One of the cards had a situation of the government taking over ones land for development and relocating them to the suburban, for which a 17 year old girl first replied saying *'if the government asks to shift we have to shift, what else can we do?'*. After enacting it she realised how cowardly it sounded and immediately re-enacted it by saying *'I will fight until the government changes its decision or they give me a better option than the land in which I was living'*.

Another card had a situation of one being a potato and enacting as a potato, its reaction when exposed to deadly chemical fertilisers. Here the participant who got the card at first had trouble thinking to be a potato but when she connected the potato to having life like us human beings, she enacted as how she would react to chemical fertilisers being poured on her, which she said is the same a potato would also be feeling.

Some of the enactments turned out to be a group discussion. In game also, like real life people's decisions were sometimes based upon other peoples lives or suggestions.



Participants playing the board game and the aspirational future they built through the game.



SKETCHING OF FUTURES

Intention - To provoke participants to reflect on the present and imagine the future.

Brief - The participants were presented with a blank paper, a lot of art materials and collectively asked to fill out the possible future, an alternative desirable future and the food plate of that future.

Planning & Execution - I introduced the activity by telling them that we are going to collectively sketch the future of our village. Seeing their blank faces, I thought it was first necessary to make them consciously think and realise the changes that had occurred till now and there from think how the future would be. This approach worked.



I had memories of visiting the place as child so I started by drawing the biggest change I've seen over the years, development of the roads. To which they added all the other things that came with the development of roads i.e. dumping of waste on the roadside by travellers, vehicles, houses, buildings, shops. After which the participants were probed to think about the changes they can think of in the coming years. The discussions and sketching resulted in a future where the village was superseded by urban elements of shopping malls, apartments, bigger house. The youngest participant also added a KFC and a 'pizza' to the sketch!

They were also probed to think about the food plate in such a future. I asked them if they can imagine a time where vegetables are grown by machines. They responded to say *'that is already happening in all the ready-to-eat food items so why not for vegetables also in future'*



Following this, they were given another blank paper for the sketching of an alternative desirable future and a desirable food plate of that future.

For the alternative desirable future they all wanted calm and peaceful place with chirping of the birds and rustling of the leaves. They also aspired for land of their own, where they would build their own house, grow own vegetables and farm animals. They didn't want the houses to too close by. They would live collectively by give and take of what one has and another doesn't.

Participants were also asked to co-create a food plate of this future.



Aspiration Food Plate

Outcome & Reflection - Since the sketching had to take place between a designer and non-designer's, I started sketching with doodles because they are open and divergent and possibly less overwhelming for the participants. The youngest person in the group passed comments on how the car looked funny but however it helped in getting the participants on board for sketching.

Even without eating fast food (KFC, Pizza etc.), they were sure they don't like it. Part of them wanted to taste how it was and part of them was sure they won't like it. Was it a self consolation that what they cannot get, they will not like it?

The activity helped unleash their reflections on the present and imaginations on the future.

Sketching of the alternative desirable future helped understand the collective aspirations with respect to production and consumption methods of food items when not bound by money and other limitations. Building one's imagination on paper.

For the future food plate, it became more like an activity where they pick the material they found interesting and relate it to a food item.



GENERATIVE PROTOTYPING

Intention - To provoke participants to imagine meaningful technological interventions in their aspirational future and imagine the implications of living with these artefacts.

Brief - Participants were asked to imagine the use of technology in the Utopian future they previously created. They were given a variety of materials as well as a pre-made paper prototype. After enacting with the pre-made artefact, they were asked to imagine other desirable forms for which they may also take the help of they art materials spread out in front of them.

Planning & Execution - Considering the fact that the collective had minimal usage of technology, it first seemed important to discuss about the role of technology. Understanding from earlier interventions, the only technological artefacts present in the context were phones (mostly feature phones and very few smart phones), television sets (in almost every house) and computers (only in the houses comparatively well off and have college-going youngsters). We started the day's

activities by discussing about how these artefacts have changed our lives and how these have been woven into our everyday life so seamlessly. The participants were asked to talk about the changes these artefacts had brought to their lives.

After which I introduced a paper prototype of a technological artefact that seemed familiar in its appearance and unfamiliar in its functions. It was also important to clearly signal an unreality so viewers are aware that they are looking at ideas not products.

Taking into account people's bodily comportment, social relations, cultural preferences and technological ability, the prototype I made resembled the television set they are so used to using on a daily basic. The question to them was *'What if you had access to such a piece of technology? What would you do with it? Where would you keep it?'* Functions of the prototype, I left it vague for them to figure out. They first said they will use it to watch movies! Which made me realise that the familiarity aspect worked. But at that point I also got concerned if the familiarity

aspect would narrow their minds to think of it only as television. I gave them a tomato also to interact with the artefact and that probed them to imagine beyond using it as a television.

Following this the participants were facilitated to imagine other forms and functions for the artefacts with all the art materials provided to them or by using anything in the surrounding.



The artefact can be used to find recopies. If there is no rice in the local store, the artefact can find which is the next nearest place to get rice.

The artefact can be a mirror which tells the credibility of the vegetable/fruit.



Can we talk or see through the vegetables? So that instead of asking the shop keeper about its credibility, we can find on our own.

Outcome & Reflection - 'Problems seldom stand out clearly and unambiguously before a solution is in sight'. Introduction of open ended technological prototypes into the scenario probed discussions about problems otherwise not thought of. While the participants enacted using the first prop, they were amazed by the fact that they can now so easily find healthy solutions to their health and food concerns, an idea that they themselves came up with. It was interesting because till that point they never spoke about any concerns they have about health and food and this opened up the discussion about their concerns.

The incompleteness and vagueness of the prototype helped in creating opportunities for re-shaping it in more desirable ways. It provided flexibility for interpretations. Each one had a unique use for the artefact. And this turned out crucial for continuous engagement and participation.

Another success of the sessions were how they connected each other. While discussing technology they remembered a conversation from the previous day where in their desirable future any vegetables that is not grown by them they will verify with the shopkeeper about its credibility, what if with technology we can directly verify with the vegetable to verify its credibility?

The session was getting really interesting, but the time I had asked of them was running out and the activity had to be brought to an end. I felt if more time was permitted, the session could have totally gone deeper.

As the session was coming to an end, the eldest person in the group who was mostly quite during the session announced that 'whatever said and done, I prefer life without the presence of any 'robo's' (a tamil movie reference for robots). Which I thought was natural for her to feel towards an alien artefact just like how she would have felt when she first got a mobile phone.

2.1.2 Urban Collective

DESIGN GAME

A contextual adaptation of the game Monopoly to proactively understand the behavioural and aspirational map of the participants with respect to the consumption of food.

Brief

The board game has three parts to it:

1. An inflow and outflow of money as one traverses through the board. This is the reality in everyone's life. There is unforeseen and foreseen income and expenditures happening all the time.
2. Construction of a meaningful aspirational future living with the available things and money. Not always do they have accessibility of a variety of things. This part of the game was intended to broaden the horizon of aspirations.
3. Role-play cards where one needs to enact/talk about a situation mentioned on the card. This was meant to strengthen the voice of the participants in situations they otherwise have not thought about or refrain from voicing.

Planning & Execution

The first part consisted of various occasions the participants can relate in their context where there is an inflow and out flow of money.

For the second part the participants had access to a variety of things like farm animals, tree's, vegetable plants, vegetables, fish, packaged food items, dairy products, electronic kitchen appliances, industrialised food products etc. In short, in the game they had access to things that they are familiar with in the daily life, some that they purchase regularly, some that they see just on the shelves of the shops. Each item had certain rules attached to it which was similar to its real life rules. For example, the tree's would require 3 turns to start giving fruit, the fishes would last for 2-3 days whereas the fresh vegetables from the market would last only for a day though they are cheaply priced. However if one has a refrigerator, shelf life increases. The packaged food items would last much longer even without a refrigerator.

Third part of the game had situations that

would provoke them to imagine beyond their current situations but relatable to their context.

Outcome & Reflection

Since I came back to the context after a break to conduct my next set of activities, this game mainly helped to get the participants back on board. It also provoked interesting conversations around ones aspirational future.

One of the participant's first reaction after starting to play was that *'this game goes against my philosophy that one should not be holding land for oneself. Land should belong to the nature.'*

All my participants had different ideologies and philosophies which involved the participants in interesting debates amongst each other. One of the participant was a non-vegetarian and other were vegetarians. The non-vegetarian participant aspired to own land to grow animals for the purpose of consumption. In his defence that was a healthier lifestyle than consuming the industrially produced chicken. On the

other hand the vegetarians considered that as a barbaric act. Here, I had to involve in the debate as well to side the non-vegetarian participant as he was singled out. Not as a designer but as a participant I voiced out my opinion which was killing of animals after their prime life is better than leaving them to grow old in difficulty. We were able to conclude that discussion by agreeing that there is no right or wrong at this point when we don't have valid information.

One of the role-play cards had the situation of *'the government banning domestication of plants and animals'*. The participant's initial reaction was *'Oh wow! Finally, the government is doing something good'*, however in further retrospection she was actually imagining a future around it where if the government bans domestication, people are left with industrialised food products which is not very healthy however if a plant happens to grow wildly in your land then that should be alright for the government and people can still acquire some healthy food.

Another card had a situation of one being

a potato and enacting as a potato, its reaction when exposed to deadly chemical fertilisers. Here the participant who got the card dramatically acted out shouting *'oh no! I'm dead! I thought its water!'* followed by discussions around it.

Over all, the game helped understand the 'possible futures' the participants aspire for. It was interesting to understand the combinations created by them on their piece of land. Considering each game move to be a tangible gesture, it helped understand what the person finds important and interesting. The move of one player became something for the other players to reflect upon.

It also helped to understand the values of people towards their own life and towards the environment they live in.





What if food of the future looks, tastes, feels and smells all the same?



What if artefacts enabled us to talk to plants?



WHAT-IF SCENARIOS

These scenario's were derived from the discussions from the first set of interventions with the participants.

The scenario's were intended for the participants to experience what the dystopian food futures may be like with enactment of scenario's and doll-play and thereby provoke them to reflect on it.





What if cultivations have crept into domestic and urban lives just like how urbanisation crept into cultivation?



What if artefacts help recreate the experience of eating traditional tasty food while eating modern processed food that tastes, smells, looks and feels the same?



What if artefacts enabled us to talk to plants?

None of the participants liked the idea of talking to them and then eating them. One would tend to be friends or of acquaintance when you start talking to the plants, you would not want to eat them afterwards as that will be mean. *'But it would be fun to have them as your friends and talk to them! Even the cow and the goat should be able to talk!'* *'What would milk say to me?'* Participants starting imagining and questioning, in this future, even if they could talk what would they want to say to us? Even if the plant says its a risk eating it I would eat it? But if it says you are going to die eating the plant then I will stop. *'I would not even know if the plant is fooling me.'* The vegetarian participants also suggested that it would be a good idea to ask the cow and the goat if they are in their age to be killed before actually killing it.

What if food of the future looks, tastes, feels and smells all the same?

The material of the play-dough engaged them into the situation, at once

participants began their hands in the different colours of play-dough, taking the colours they liked and that go together.

They started to read the labels on the bottle. *'Oh its from artificial sources'*, vegetarians felt if its artificial then it shouldn't matter if its fish and chicken. The first preference for vegetarians, however was seeds and nuts. Participants were unconsciously trying to make a balance between proteins, carbs and fats on their plate. Into the enactment, value's of traditional food started emerging.

A lot of questions emerged around it, *is this is the future, is there a prescribed quantity? What kind of a diet would evolve from this? Can this be food as art? What would be the trend around it? Like how there's high-end chaat and road side chaat there would fancy look play-dough plates and simple ones.*

The concluded that it won't be bad experience, if taste and other senses can be continued to be experienced.

What if artefacts help recreate the experience of eating traditional tasty food while eating modern processed

food that tastes, smells, looks and feels the same?

Since the participants suggested they wouldn't mind a play-dough future if the senses could be recreated, the next enactment was tried with simple paper artefacts imagined to recreate the senses of taste, touch, sounds and smell. It was clear between the participants and myself that these artefacts were just suggestive.

'There will be an entirely new culture formed around this. There will be industries formed around this future.'

'I'm not going to question this future if that is the only option in front. If you tell me this is dosa I will not eat it, but if you tell me I need this for sustenance then I'll eat it.'

They also felt that it doesn't feel like meal though it looks cool and fun. If given a dosa and play-dough with the goodness of dosa, one would still eat the dosa.

What if cultivations have crept into domestic and urban lives just like how urbanisation crept into cultivation?

I intended this future to be a dystopian

one, but some of the participants considered it as utopia.

Firstly they were amazed by the objects in the doll-play scenario and started playing with it. One participant was very enthusiastic about this kind of a future. I tried to probe them to think about the negatives such as worms and flies these plants would attract. But the participant was okay with it, she said *'I'll just try to find some pest control methods for it or just let them be.'*

'When relatives who you dislike visit, we can scare them with the worms!'

Same way one can also have a freshwater aquarium, so when one needs to eat fish, one can just fish of the aquarium and cook it. The creepy crawlies would be the only problem in this future. But you can get used to it. I like the fact that I have control over what I eat and it makes life so much easier.

If there are crickets I'll probably buy cats and dogs to chase the crickets. Or light a fire sometime. This is going to change fashion, productivity time, weather you choose to go out or stay home

SKETCHING OF THE FUTURES

The last activity conducted was to sketch food futures the participants aspire for.

Brief

The participants were given paper and other art materials and asked to sketch aspirational future's of food.

Outcome & Reflection

During the 'what-if scenarios' activity, they were already in a position of thinking about 'what could be, instead of this'. The discussions during all the activities reflected on their imagination of the 'Food Futures'. One of the participant's who favoured the future where plants are living inside the house, while sketching utopian future said, 'As much as I like that idea, I also like the idea of shopping in a supermarket', and thereby she drew a future of a super market in the wild.

The super market in the world would have a shopping cart, weapons to gather and hunt (instead of shop) what you want from the forest. There would be a lifestyle change around this, people would have

to take classes to hunt and gather. Each time you get something you lose money from your digital wallet which is connected to the weapons. There will also be many implications like wastage go time. 'I'll probably be thinking about going to the supermarket all day long, even while at work!' Said the participant. This is for the people who are concerned about what they eat and more importantly the environment. Lot of people are going to disapprove of this. The participant also spoke about how the popular culture of drinking and smoking would be in the scenario. Cultures might be formed around it where health freaks will have healthy food and youngsters can openly acquire weed growing in the forest. There will continue to exist groups of young, older, poor, rich, healthy eater, careless eater etc.

Another participant sketched a future where people could analyse the soil to know what crop grows best in that soil.

Today most of the youngsters living in the city does not know much about farming, soil and plants. So this would motivate and help such illiterates to cultivate their own vegetables.

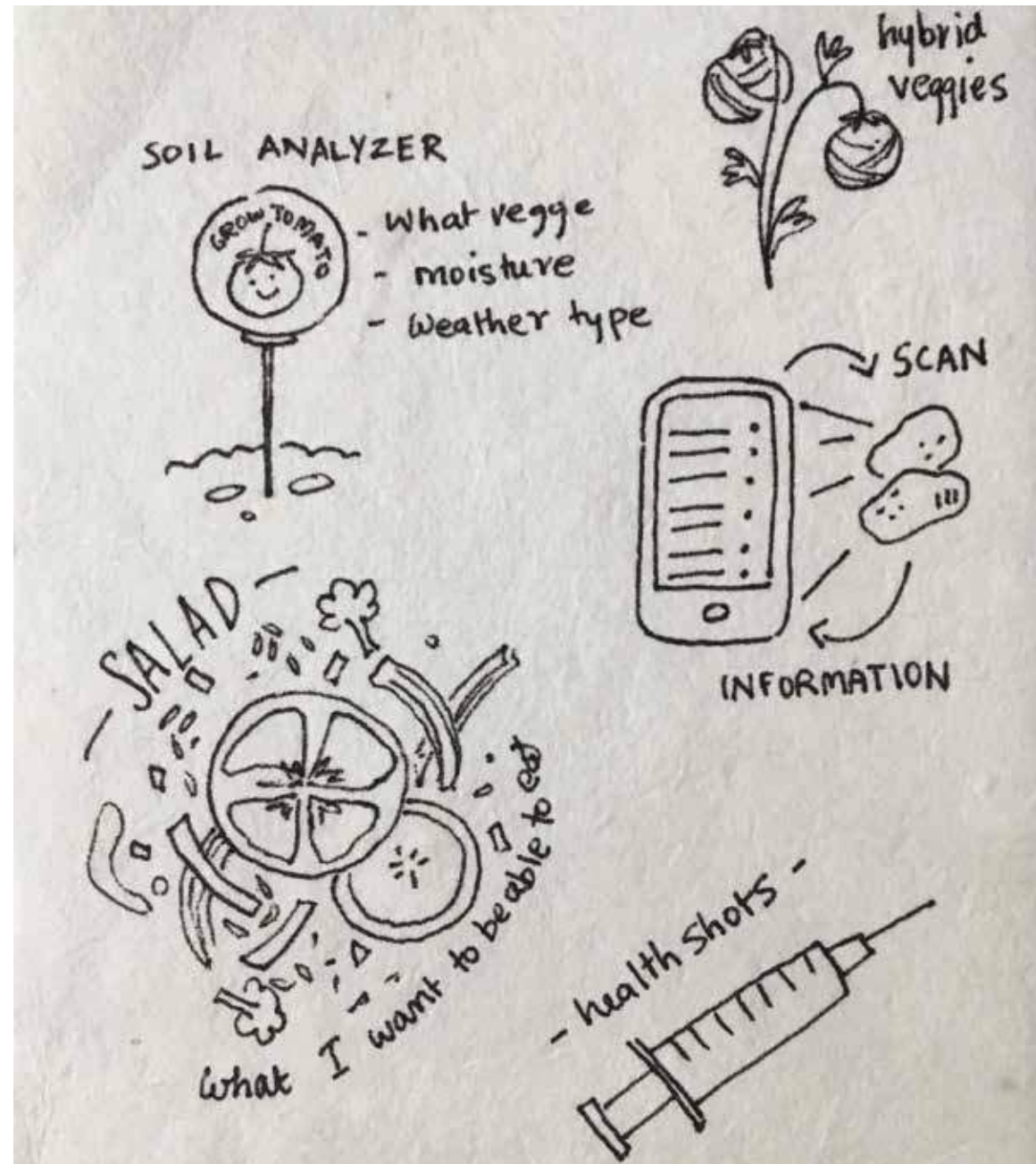
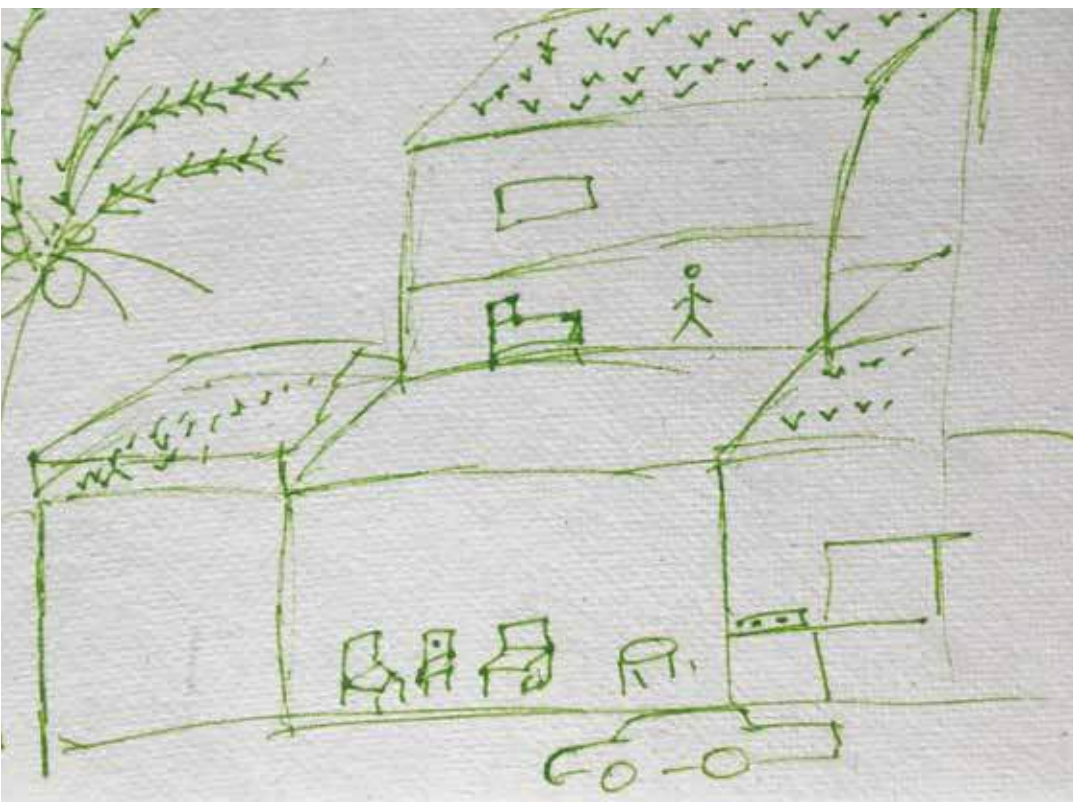
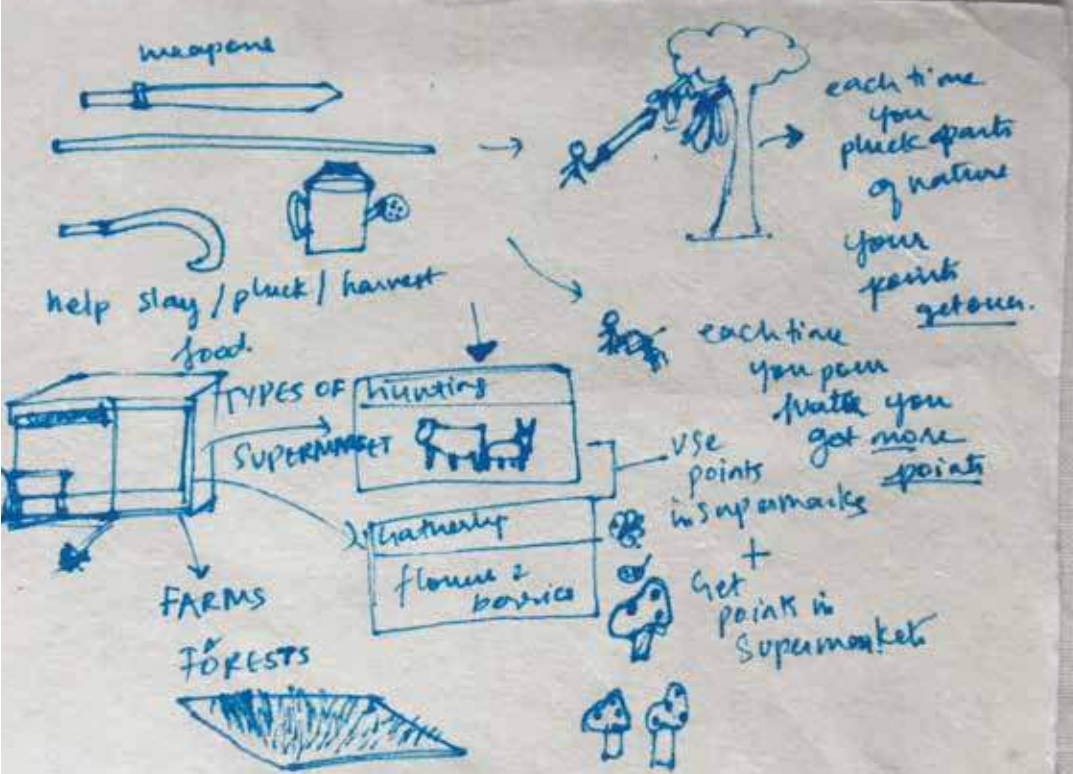
However one must be empathetic to the people who won't like this. That group of people can take health shots. It will make one energetic and helps people who just need nutrients and don't really care about the whole experience of eating food.

With enhancement of technology in genetics and modifications we can also grow hybrid vegetables by preserving the DNA of the traditional ones and using it to form hybrid ones. In a situation where there are no more onions, there will be DNA of onion which you which you inject to get new onions which have the goodness the traditional onions had.

In this future one can also buy DNA of vegetables in shops and make yourself at home.

With respect to the food, the participant suggested that she looks to continue eating what she eats current but more healthier, fresh and transparent.

The third participant imagined a future of barter system. That was also an extension of the What-if future of plants creeping into urbanisation. In his future inside house farming is not allowed but on top and around the house there will be vegetable patches animals growing. Whatever I don't have, my friend if she has more space in the house will make and we will barter our produce.



PART 3

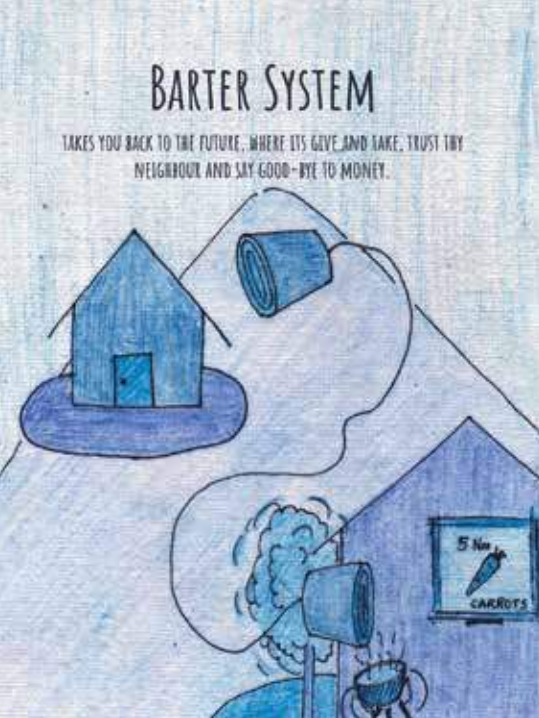
SYNTHESIS & OUTCOMES

*IN THIS CHAPTER ALL THE ACTIVITIES AND
EXPLORATIONS WERE SYNTHESISED FOR
FURTHER INFERRING AND REFLECTIONS.*

The ethnographic design activities unfolded credible and meaningful practices of the future around food in the environment of and by the people it addresses, before the idea is fully developed.

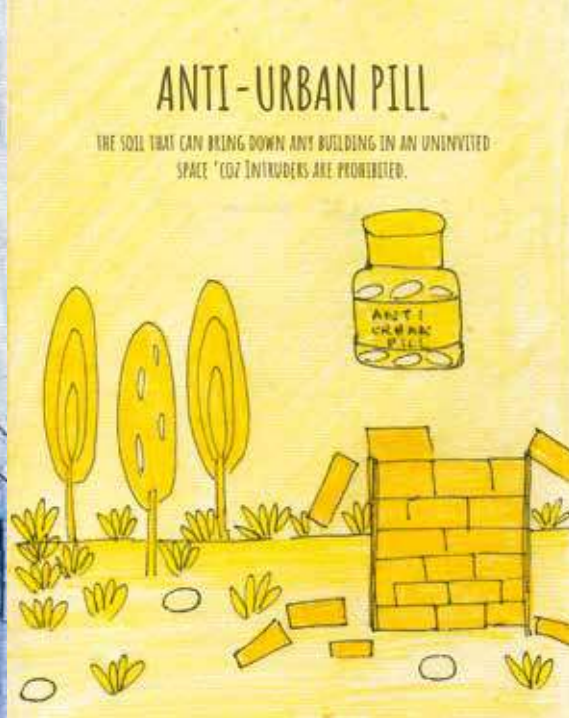
These ideas about future food practices formed eight utopian food futures.

Micro-utopias like these serve as inspiration, encouraging not mega-utopias defined from the top down but seven billion little utopias emerging from the bottom up, facilitated by, not determined by, design.¹⁴



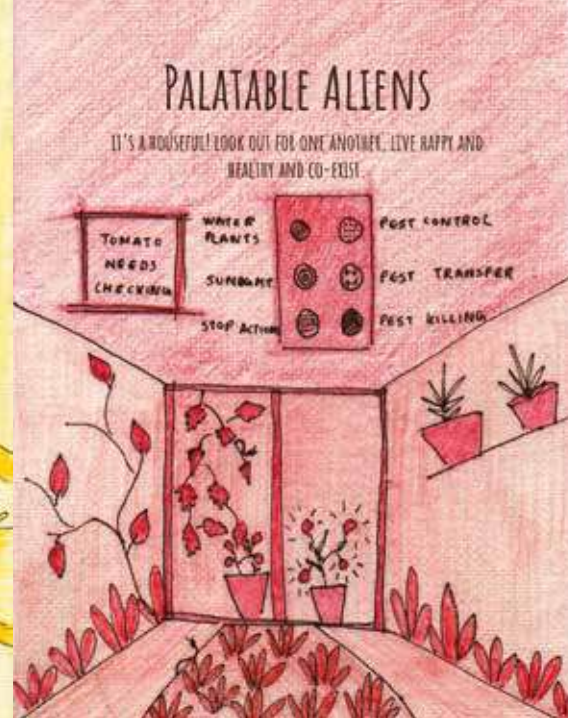
BARTER SYSTEM

TAKES YOU BACK TO THE FUTURE, WHERE ITS GIVE AND TAKE, TRUST TWY NEIGHBOUR AND SAY GOOD-BYE TO MONEY.



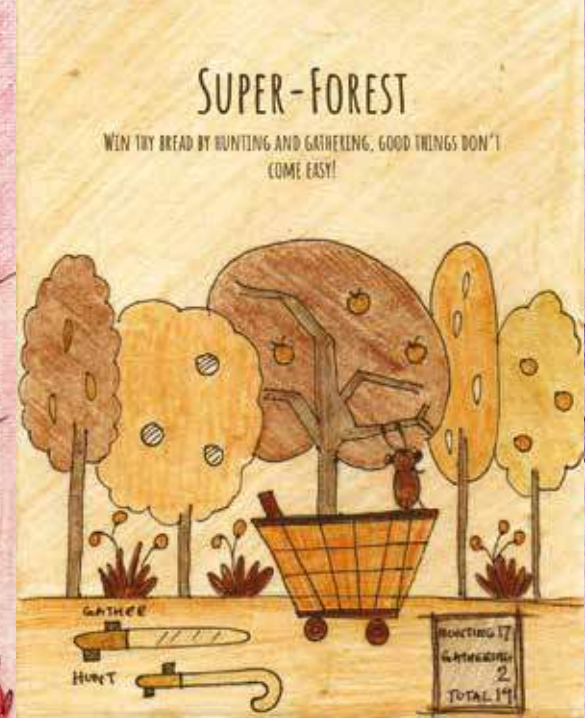
ANTI-URBAN PILL

THE SOIL THAT CAN BRING DOWN ANY BUILDING IN AN UNINVITED-SPACE. CO2 INTRUDERS ARE PROHIBITED.



PALATABLE ALIENS

IT'S A HOUSEFUL! LOOK OUT FOR ONE ANOTHER, LIVE HAPPY AND HEALTHY AND CO-EXIST.



SUPER-FOREST

WIN TRY BREAD BY HUNTING AND GATHERING, GOOD THINGS DON'T COME EASY!

Barter System takes you back to the time of our ancestors. A system of bartering where you give what you have and in return take what you need.

Barter System technology allows to communicate with one another and measures what are the equivalents in a barter transaction.

However at the end, its all a matter of trust. By trusting the person you barter with, healthy relationships will be formed. By saving money on food, you can use it for other matters.

An industry of food providers will die, but when you think about it where they not just feeding us poison?

Barter System gives everybody a chance to farm, try getting your hands dirty and you will not regret it.

There has to be a limit to urbanisation taking over farmlands. What if people have the power to not allow urbanisation to creep into 'uninvited spaces'?

Anti-urban pills consists of a sensor which senses when intruders creep in and enables the soil to prevent buildings from being constructed. These pills that imitate seeds have to be sown in areas the owners have secured.

Nothing makes one superior to the other.

Now when everybody gets to exercise power, everybody is equal. It's an efficient and easy way to say 'no' to the wrong things.

However some people are afraid if politics will emerge around it. Giving money can buy you anything.

Who likes the idea of plucking fresh vegetables and cooking that day's meal? **Palatable aliens** exists for those of you who do not mind the creepy crawlies. Good things come with a price, in return you get fresh and nutrient rich produce for cooking and eating.

If you are also feeling lonely, these aliens are there to give you company. Try not to be too friendly and get attached as it later becomes difficult chopping them.

Using '**Palatable Alien**' device you have control over everything except for the multiplying aliens. But trust me, you will never have enough as you are growing and so is your food requirements.

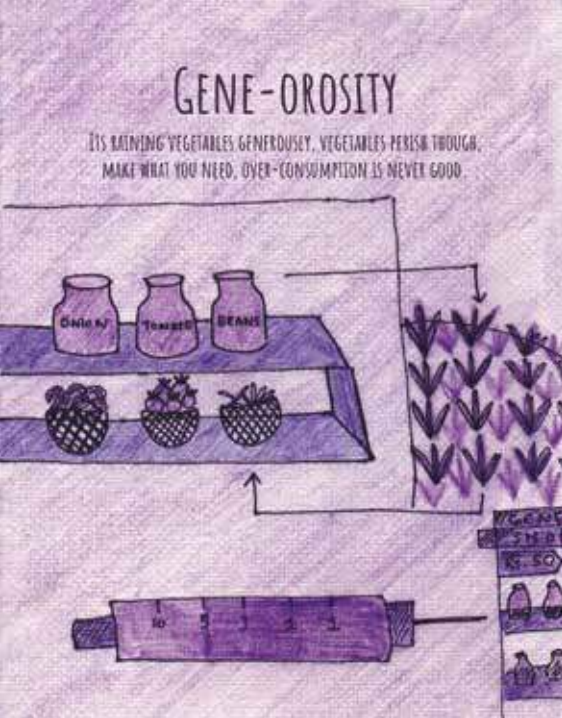
The device also lets you know of updates and notifications with respect to caring of the plants. In fact, the device talks for the plant.

Grocery shopping does not seem that easy anymore. But who doesn't like to have some fun? And of course what you get in return is precious.

If we like to live in the comfort of our homes, shouldn't animals and plants be allowed to live in the comfort of their homes while they are alive? Future seems to be empathetic to all living forms.

In **Super-Forest**, one needs to hunt and gather for groceries with the help of weapons. These weapons are very user-friendly and comes with tutorial, one can use to easily understand the system.

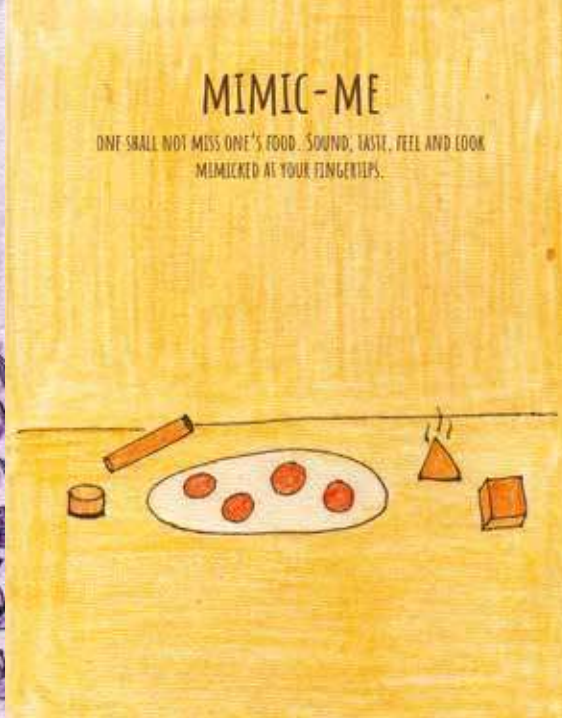
In no time you will be a pro hunter and gatherer! Forget going to the gym, this pays off or that also.



Species of plants are getting exist before we even know it. **Gene-orosity** tries to preserve these species by conserving their genes in bottles, multiplying it and selling it in the local shops from where one can procure it.

With **gene-orosity**, production of vegetables becomes easy and efficient and right in your backyard. Your vegetable baskets will be full all the time with the vegetables that has the goodness and taste of its traditional counterpart.

'Is it good for health?' Doubts critics. Can you tell me what is good today? Wouldn't you might as well eat something that is familiar looking and tasting and from your back yard than these other modern pretentious food?



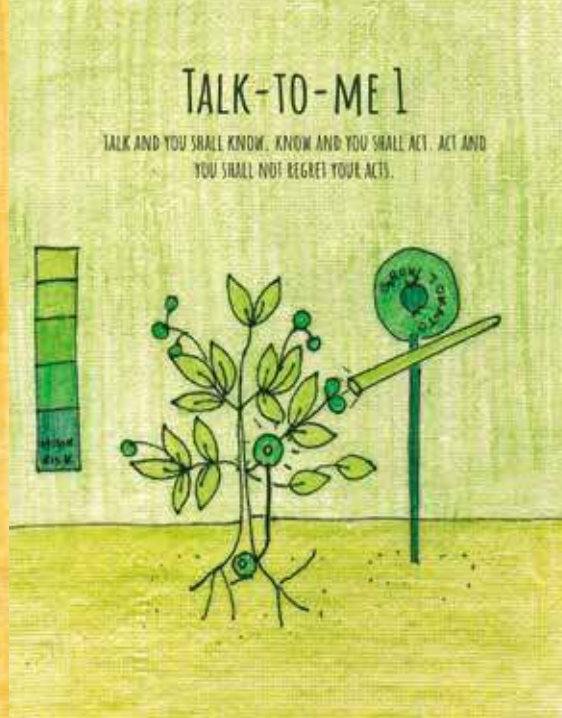
As a result of increasing complains and disappointments about the unavailability of traditional food, **Mimic-Me** was created.

It recreates your eating experience using artefacts. Artefacts at your fingertip, provide smell, taste, feel and look of the food that you were so used to eating. Yes, dosa can still taste the same.

It's not just you, even I cant sacrifice taste for anything.

How has this been done is a common question. Knowledge of science is a wide expanse, one can find solutions for anything.

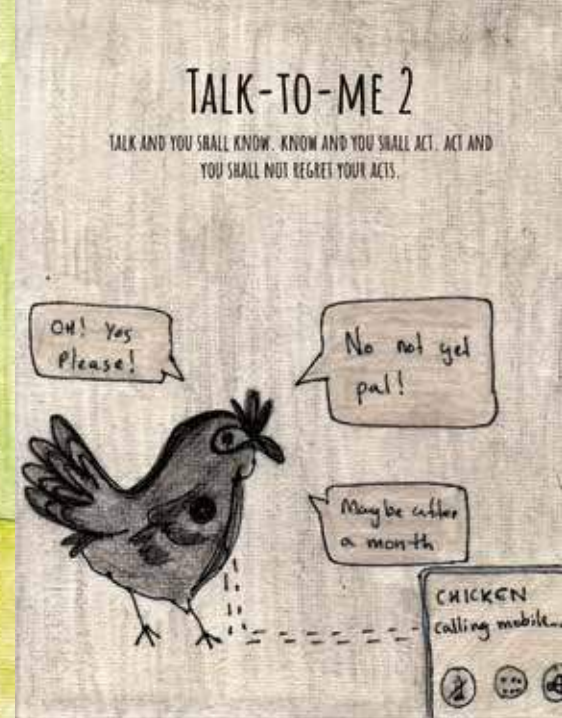
These artefacts are also compact and comes in a box, easy for one to carry around and use anywhere.



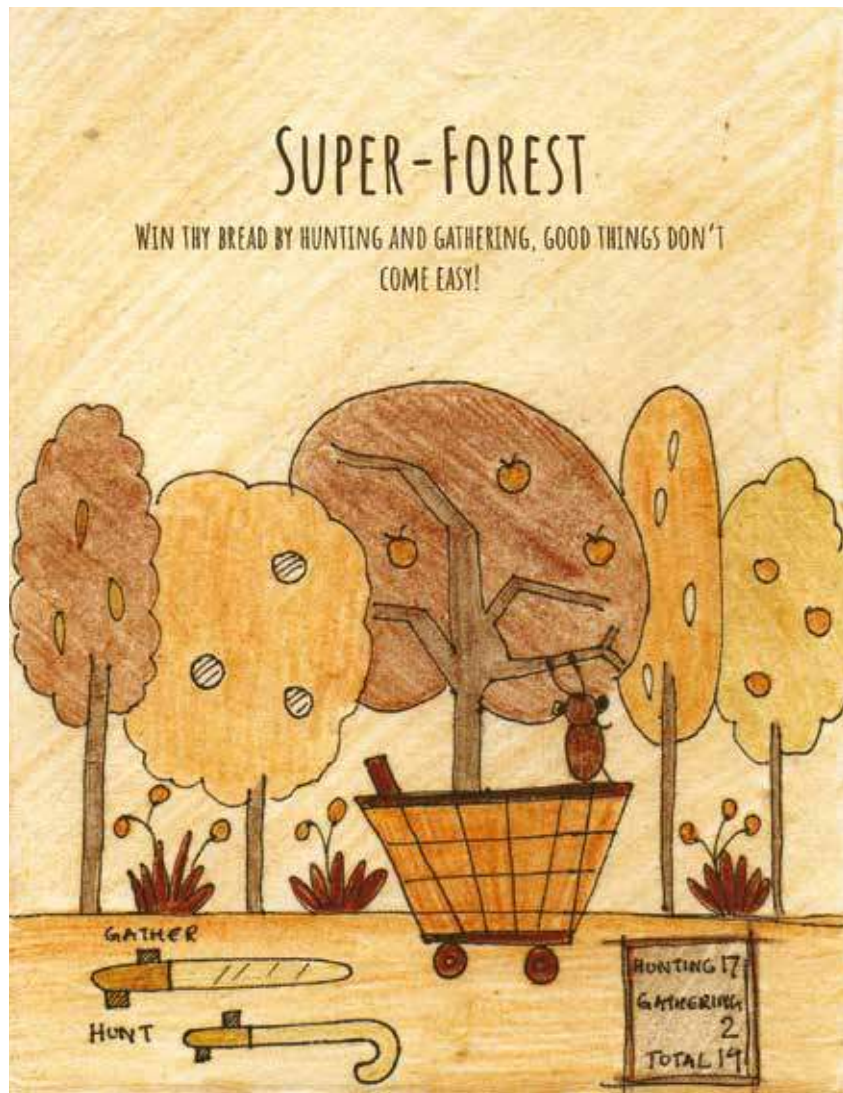
Food and water is important for sustenance. However how many of us know what is it that we eat nowadays? Where did it come from? When was it made? Doesn't that apples that doesn't go bad for months scare you?

Talk-To-Me 1 enables you to take to the plants before you cook or consume it. You have the right to knowledge, exercise it.

It also has the feature to talk to the soil to find out which vegetable grows best where. This makes life for the next generation easier as they barely have any knowledge about farming. If farming is the future practice, they better invest on a **Talk-To-Me 1**.



Talk-To-Me 2 is similar to Talk-to-me 1 but allows you to talk to animals. Like phoning a friend you can now phone your chicken, cow etc. Consumption of chicken is not a new practice, it is not brutal also. But be a little empathetic and consume it when it is ready to give up its life.



LET'S GO WILD!

Wild is the new way, what is your 'wild' style?

If we like to live in the comfort of our homes, shouldn't animals and plants be allowed to live in the comfort of their homes while they are alive because that's what they would like too?

The time to be empathetic to all living forms is here, before we lose all the living forms required for the harmonious living in this environment. In fact it's a bit too late, but better late than never.

Introducing to you is Super-Forest. One would say it's going back to the future. Pastness of hunting for your food with the modernity of technology and efficiency characterizes Super-Forest.

Grocery shopping does not seem that easy anymore. Well, good things do not come to you that easily. The Super-Forest also allows one to have some fun. Yes, shopping now seems to be just another game that you play for real instead of behind a screen.

In Super-Forest, one needs to hunt and gather for groceries with the help of

weapons. These weapons are very user-friendly and come with tutorials one can use to easily understand the system. In no time you will be a pro hunter and gatherer! Forget going to the gym, this pays off or that also.

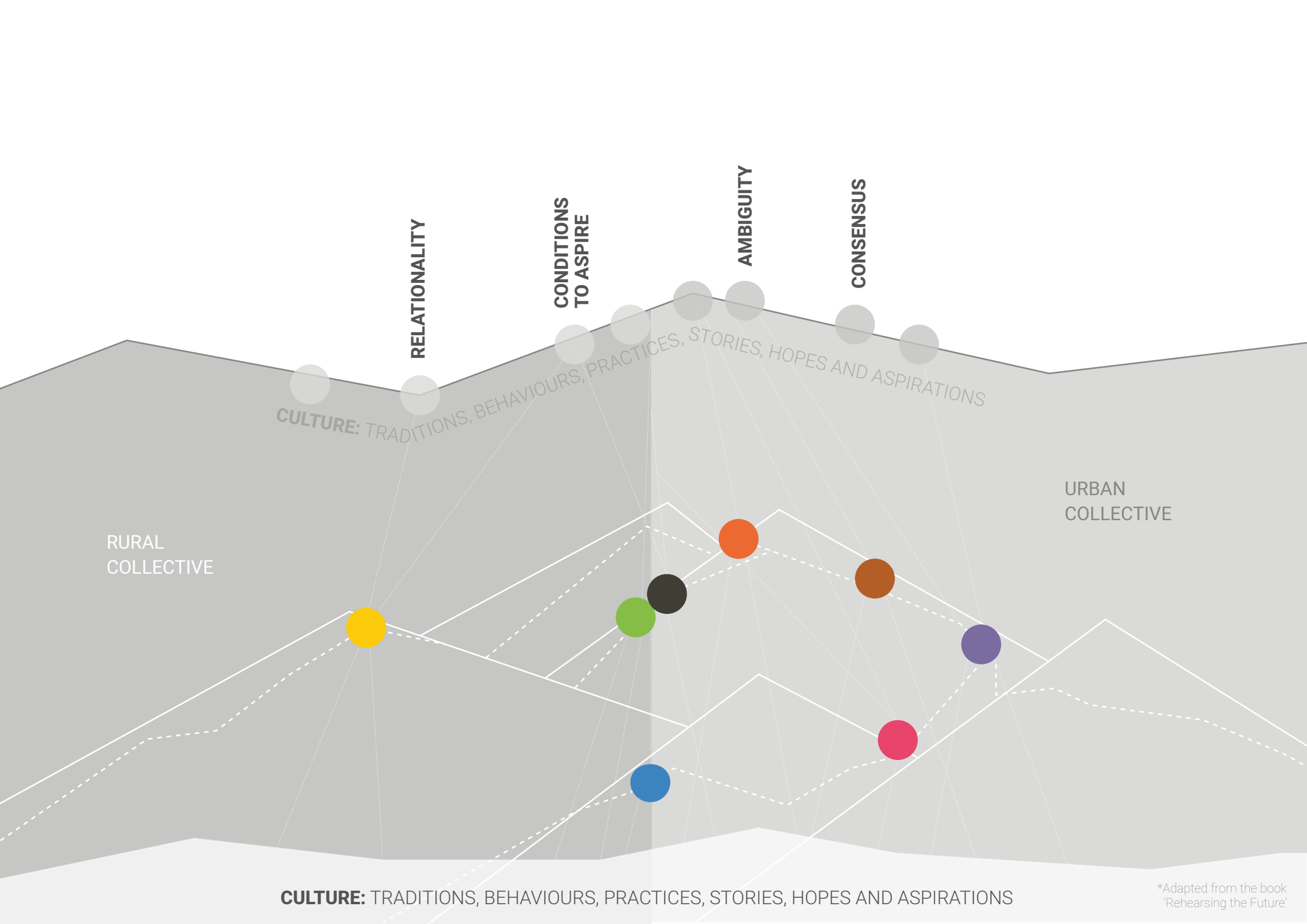
Are you concerned about the risk factors involved?

Don't be. Nature doesn't harm anybody who does not harm the nature.

Lifestyle is the first shop to introduce the collection of 'wild' clothes. Sources speculate other brands also to soon release their new collections.

Can there ever be equality? Farmers are quick and brisk with their skills at hunting and gathering, urban folks are lagging way behind. Is this going to lead to lesser food availability again for one section of the population?

However the differently abled population are given levy which turns out to make their accessibility better.



CULTURE: TRADITIONS, BEHAVIOURS, PRACTICES, STORIES, HOPES AND ASPIRATIONS

*Adapted from the book 'Rehearsing the Future'

DESIGN SPACE

The concept of design space is the space of constraints and possible solutions that constitute to any given design situation. In practice one can work with the concept of design space as way of making explicit the encountered constraint³

Aspirations are constraints. If people didn't have aspirations one could operate in an imagined cognitive freezing to rationally explore the space of possibilities in its entirety.¹³

The exploratory design activities in the project were occasions for trying to articulate the features of this imaginary place, the place of possible futures of food practices. The participants gradually generate experiences with their collective imaginative horizon of the futures of food practice.

The colourful circular out-posts on the map represent the various aspirations around food practices unfolded by the participants. These aspirations are placed on the landscape based on its degree of ambiguity. As one traverses through

the landscape aspirations on the closer valley might be recognisable and easily described. The ones further away might be more difficult to understand in detail. Each of these marked aspirations opens up to more stories and experiences.

These aspirations are connected by lines to the horizon indicating broader collective patterns and contrasts formed by the individual traversals. These patterns on the horizon suggest the possibilities of future work around desirable human and food practices.

Once the beyond is articulated a new horizon emerges and with it a new beyond. The dialectic between openness and closure is central.¹¹

There are also conditions that limit the imaginations. Conditions exists in imagining what lies between us and the horizon. While traversing through the landscape the design activities were designed to try to overcome the conditions and create a space for free flow of thoughts.

This concept of design space is for researchers and design practitioners intending to work in the intersection of human and food interaction.

CRAFTING CATEGORIES

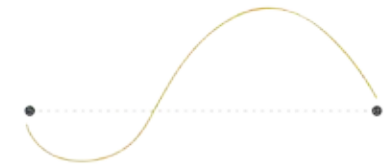
RELATIONALITY

1. People who aspire to to be self sufficient in food production and consumption
2. People who aspire to have transparency in the food they consume
3. People who hope for food to look and taste like food
4. People who sympathise to living forms

CONDITIONS TO ASPIRE

1. Poverty
2. Behaviours of the past
3. Culture
4. Illiteracy
5. Infrastructure
6. Exposure
7. Environment
8. Health

NAVIGATING AMBIGUITY



NAVIGATING CONSENSUS





PALATABLE FUTURES

An adaptation of the traditional game of Tamil Nadu, '*Pallanguzhi*'. Like the original game it is played between two people to capture the contents of the cups you desire. In this adaptation, each cup consists all the elements of a future food culture. There are totally 8 cups consisting of 8 different future food cultures imagined by the rural and urban participants. As you play the game by the rules of the traditional '*Pallanguzhi*', these elements get mixed up and the players have to try to capture the elements of their desired future using their mathematical skills or the players will end up with assorted elements forming an entirely new future.

This game is articulated to tangibly represent the aspirational food futures imagined by the participants of the research in a representational form that is commonly from the two collectives I intervened with. The game represents the '**new knowledge**' derived from the '**Research Through Design**' approach as well as act as a platform for generating more '**new knowledge**' as people engage with it. As people engage with it, what would be interesting will be to see what people think about the existing imagined food cultures, the newly derived food cultures at the end of the game as well as other alternative food cultures they can envision.

Through the game I also wanted to embrace the notion of aspirational, desirable, hopeful food futures amidst the uncertainty of it. Invite reflections on food cultures and issues. Gather feedback, including criticism as well as celebratory visions of these cultures.

Instead of giving a finished output, I wanted to make it a generative space for more knowledge creation as people engage with it.

PART 4

REVISITING & REFLECTION

ON REVISITING THE DESIGN EXPLORATIONS UNDERTAKEN IN THE TWO COLLECTIVES OF A CITY AND A VILLAGE RESULTED IN THE EMERGENCE OF A RANGE OF PATTERNS, IDEAS AND DIALOGUES WITH THE THEORY OF CAPACITY TO ASPIRE, IN VIEW OF THEIR ASPIRATIONS FOR FUTURE FOOD PRACTICES THROUGH A CONTINUED INTERACTION AND ACTIVITIES OF CARD SORTING, DESIGN GAMES, MAKING, ENACTING, AND DOLL-PLAYS.

Through speculative ethnomethodology, the exploratory activities helped to strengthen the capacity to aspire of the participants in order to evoke imaginative speculations of aspirational futures of food which is rooted in culture.

What are the contrasts, patterns and tensions among the speculated futures?

The possibilities speculated by the people were way into the future except for a few such as **'Barter system'**, **'Palatable Aliens'** and **'Gene-rosity'**. These were also probably the first idea's that came up. As one traversed through their aspirational map, imaginations were becoming more fantastical and dream-like.

The urban collective in hand consisted of participants from multi-cultures, with different exposures, social circles and backgrounds, united by commonalities of profession and the city in which they all lived. This resulted in the emergence of multiple futures of different values from the different participants.

Whereas the rural collective was very close knit and the futures they imagined were

similar to one another's except for minute details like one participant didn't want people living close-by while the other wanted as a precaution for times of need. This resulted in the emergence of futures with similar values.

The rural participant's were capable of having a dialogue with the environment without actually conversing, they know when it's time to harvest a plant, texture of the soil, ripeness of a fruit, the smell and feel of a vegetable also tells them if it is fresh and nutritious. **'Talk-to-Me 1'** was suggestive of their concern about losing out on this scientific knowledge. As the world is changing, they were also concerned if their knowledge is going to be obsolete.

While **'Talk-to-me 1'** belonged to the rural collective, **'Talk-to-me 2'** was an adaptation of it from the vegetarian participants in the urban collectives for their non-vegetarian friends. There is a growing concern among a large number of youngsters regarding the butchering of animals for consumption, while there is another set of people who

people. It is one of the futures that was common to both the collectives and it is the closest possibilities of all the possibilities. It comes from the past as well as a common gesture people do, borrowing something from your friendly neighbour. When one is about to cook something and find that an ingredient is missing, instead of rushing to the shop goes to a neighbour.

The urban participants were very aware about the aftermath of their actions toward the environment. **'Super-Forest'** is suggestive of this as well as in one of the initial interventions one of the participant mentions that *'one should not even own land, land belongs to the nature.'* Also **'Palatable aliens'** was an extension of a dystopian what-if scenario presented to them to them in an activity. I was surprised by their response of having loved the idea of living with plants irrespective of the problems that come with it like the invasion of pests, flies etc. The urban participants had knowledge and awareness, but due to the kind of the infrastructure of the city in which they live, it makes it difficult for them to stand out for

think its natural. Can we ask the animals themselves?

'Anti-Urban Pill' is also a dramatic imagination suggesting the concern of the rural participants about their changing environments. The working class people in the village often feel powerless when it comes to interactions with the government. Through role-play cards in the design game conducted in the second round of intervention, the voice of the poor was tried to be strengthened.

'Barter System' is a dream for many people. It is one of the futures that was common to both the collectives and it is the closest possibilities of all the possibilities. It comes from the past as well as a common gesture people do, borrowing something from your friendly neighbour. When one is about to cook something and find that an ingredient is missing, instead of rushing to the shop goes to a neighbour.

The urban participants were very aware about the aftermath of their actions toward the environment. 'Super-Forest' is suggestive of this as well as in one

of the initial interventions one of the participant mentions that *'one should not even own land, land belongs to the nature.'* Also 'Palatable aliens' was an extension of a dystopian what-if scenario presented to them to them in an activity. I was surprised by their response of having loved the idea of living with plants irrespective of the problems that come with it like the invasion of pests, flies etc. The urban participants had knowledge and awareness, but due to the kind of the infrastructure of the city in which the live, it makes it difficult for them to stand out for their values.

The urban participants also had certain notions about the proximate dystopian futures. Part of their aspirations were around these dystopias, for example, **Mimic-me** and **Gene-osity**.

Can these possible futures, their contrast, patterns and tensions give access to a new type of data?

The aspirational futures co-created with the participants provide a new type of data. Since the research from the beginning involved understanding two different collectives, cultures and

their aspirations, the outcome is a rich comparative analysis of the strong differences people/collectives showcased. In the beginning of the project we saw many *'one-size-fits all'* problem-solving technological artefacts. It then is important for us as designers to re-think about the meanings and values of our designs.

People have a lot of values. This was evidently suggested by the interventions undertaken in both the collectives, for instance, the participant who said *'land should belong to the nature'*. As designers can we think of adding value to these values of people? Can we re-think about the design of apps that helps one in cooking at ease. Are we just impoverishing our human senses by following a computer while cooking as opposed to how it used to be when cooking was an art. An art where alterations in the ingredients would lead to inventive food.

I started this project with a certain knowledge-base, at the end of it, some of it was reinforced while others underwent change, I go on to explain this.

Individuals Vs Collectives

In the book **'The logic of care'** the author, **Annemarie Mol** suggests a notion of collectives where collectives comprises of humans and non-humans that are similar to one another and belong together. Arjun Appadurai also says, *'there is no self outside the social frame'*.

In 'Participation in Design things'

the author **Pelle Ehn** informs the *fundamentality of objects and things to design at par with people*. He defines objects and things to be characterised as *'Collectives of humans and non-humans'*.

The collectives I intervened with was two; Urban and Rural collective. The urban collective comprised of the participants, their families, the technological artefacts they own and use, the environment they live and work in, the people they mingle with, the food they eat and so on. Rural collective comprised of the participants, their families, relatives, neighbours, the environment, animals, technological artefacts, transportation, shops and so on. All these different things that formulates a collective co-exist and ofcourse thats

why they are termed *a collective*. Here people's individual behaviour is not wholly individual, there are other stakeholders and artefacts that provokes the behaviour such as peer pressure, traditions to which you belong, family habits, infrastructure etc.

For instance one of the urban participants wanted to stop eating chicken and start eating mutton as he heard chicken is infused with hormones whereas mutton is still safer. However his love for non-veg, the lower price of chicken over mutton and the ease of cooking of chicken which in his busy work schedule is important leads to his continuation of consumption of chicken. Here his 'preference' for non-veg, 'work-timings' etc. belong to the collective and are important *'things'* to consider.

Similarly, another urban participant aspired to change her food diet to the consumption of seeds and nuts because she heard from elsewhere that is good for the health. While inquiring further, it was revealed that the habitual behaviour of eating rice everyday makes it difficult to give up rice for anything else. Here habitual behaviour becomes and import

'thing' for design.

Poverty in the human body

Poverty is many things and all of them are bad. From my understanding and interpretation of the theory of capacity to aspire and the authors definition of poverty, applying it to the context in hand, I define one aspect of poverty around food practices of people as:

The lack of capacity to aspire, in the given context of food practices where one's capacity to aspire for food is hindered by external factors such as material deprivation and desperation where material deprivation is the inaccessibility of the food that one considers healthy and desperation is the state of despair one experiences in the paucity of food.

Given the above definition of poverty, I identify the urban participants to be poorer than the rural participants with respect to healthy food practices.

Acknowledging Appadurai's work to be very significant and relevant in the face of welfare and poverty reduction of the urban poor in Mumbai, he formulated an extensive framework for the use

in similar development projects and researches. I use this framework in my own understanding and interpretation to understand a much more nuanced but yet relevant context of food practices.

Poverty is a strong word to be used here. The poverty I address in my project is not the worst poverty either. As much as it is important to know what goes into your body and access healthy food, not only for ourselves but also for the environment, there are many other bigger problems at the grassroots level. Millions of people around the world die without food. However, if we reconsider the way we look at food, can there be less burden on the monetarily and materially deprived poor people? If our over consumption and wastage are put to control, could there be food for everyone in the world? If we don't exhaust the nature off its ability to provide us healthy and nutritious food, could there be a reduction of malnutrition?

Cultural Capacity

Culture in the broad sense, for centuries have been viewed as a matter of one or the other kind of pastness such as habit,

tradition, heritage, custom. Whereas in Appadurai's paper, in counter-conception to the conventional definition of culture he focuses on one dimension of culture which is its orientation towards the future. In this project I try to formulate a dialogue between this opposition of the past and the future. In the understanding stage of this project, through the various activities to map behaviours, stories, tradition, values, hopes and aspirations, the culture of the collective emerged. And it is in culture that resources to strengthen the capacity to aspire exist. Hence understanding the culture suggested the resources to rightly orient the collective towards imagining and aspiring the futures, i.e. a future from the past.

Culture is opposed to development as tradition is opposed to newness.

A collective horizon is shaped constituting the basis for collective aspirations which may be regarded as cultural.

"Aspirations about the good life, about health and happiness exist in all societies. Yet a Buddhist picture of good life is different from an Islamic one." Through my project two different yet similar pictures

of aspirations about future food was emerged. They are similar because both the collectives aspired for a healthy life (bringing back to the notion of relationality in cultural worlds) locating them in a larger map of local ideas and beliefs about healthy eating, they are different because the ways in which they aspired to lead a healthy life was different for both the collectives.

Many a times aspirations quickly dissolve into more densely local ideas such as this food for that, this diet for that. This tends one to lose sight of the intermediate and higher order normative contexts within which these wants are gestated and brought into view. There is often a confusion between individual wants and collective aspirations.⁴

Uneven Distribution of Capacity to Aspire

Arjun Appadurai informs '*Capacity to Aspire is not evenly distributed in any society, relatively rich and powerful invariably have a more fully developed capacity to aspire*'.

The two collectives I intervened with belonged to two entirely different societies. However the uneven distribution of Capacity to Aspire was experienced within a collective as well.

In every collective there are differences between its people that comes from the individual cultures and values of the person. These individual differences add on to form a collective culture.

CONCLUSION

In short, in the course of the project, I have tried to intervene with two different collectives of people from the city and the village with the vision of evoking aspirations about alternative futures of food. Considering the celebratory vision of food from historical times to now and deviating from the problem-solving space that most of the current work takes, deviating also from the space occupied by most of the speculative design work that focusses on magnifying the horrifying truths about the future, I have tried to take a route where my chosen theory of **Capacity to Aspire** and the method of **Speculative Design** intersect to proactively envision futures resulting from collective hopes, dreams, aspirations etc. through an approach of **Research Through Design**.

The ethnographic design activities unfolded credible and meaningful practices of the future around food in

the environment of and by the people it addresses, before the idea is fully developed.

Micro-utopias like these serve as inspiration, encouraging not mega-utopias defined from the top down but seven billion little utopias emerging from the bottom up, facilitated by, not determined by, design.¹⁴

The days of designers dreaming on behalf of everyone have passed but designers can still facilitate a dreaming process that unlocks imaginations. I present my revisited experiences in this paper for researchers and design practitioners in the field of human food interaction to engage in the design of digital technologies for futures of food practices that benefits us and the environment we live in while giving much more attention to the people and the ways in which they engage with food in a desired manner.

As designers can we think of human-food-interactions to resonate the values and aspirations of the people?

REFERENCES

¹Sustainable Development Goals | www.fao.org. (n.d.). Retrieved January 17, 2018, from <http://www.fao.org/sustainable-development-goals>

²Grimes, Andrea, and Richard Harper. "Celebratory Technology." Proceeding of the Twenty-sixth Annual CHI Conference on Human Factors in Computing Systems - CHI 08, 2008. doi:10.1145/1357054.1357130.

³"Uninvited Guests." Superflux. Accessed May 2018. <http://superflux.in/index.php/work/uninvited-guests/#>.

⁴Appadurai, A., 2004, 'The Capacity to Aspire: Culture and the Terms of Recognition', in Rao, V. and Walton, M., (eds.) Culture and Public Action, Stanford University Press, Palo Alto, California, pp 59-84.

⁵"The Future of Food." Open Source with Christopher Lydon. November 30, 2017. Accessed May 13, 2018. <http://radioopensource.org/the-future-of-food/>.

⁶"Designing the Future Kitchen." IDEO Is a Global Design and Innovation Company. Accessed May 13, 2018. <https://www.ideo.com/case-study/designing-the-future-kitchen>.

⁷Dunne & Raby. Accessed May 13, 2018. <http://www.dunneandraby.co.uk/content/projects/510/0>.

⁸"5.5 Designers: 'guide to Free Farming' Project." Designboom | Architecture & Design Magazine. December 04, 2009. Accessed May 13, 2018. <https://www.designboom.com/design/55-designers-guide-to-free-farming-project/>.

⁹"The Parlour of Food Futures." "MARKETA DOLEJSOVA - Critical Food Design & Edible Speculation". Accessed May 13, 2018. <http://materie.me/foodparlour>.

¹⁰"Human Hyena." Paul Gong. Accessed May 13, 2018. <http://www.paulgong.co.uk/Human-Hyena>.

¹¹Halse, Joachim. "Ethnographies of the Possible." Design Anthropology : Theory and Practice, August 29, 2013, 180-82. doi:10.5040/9781474214698.ch-010.

¹²Auger, James. "Speculative Design: Crafting the Speculation." Digital Creativity 24, no. 1 (2013): 1-22.

¹³Halse, Joachim. Brandt, Eva. Clark, Brendon. Binder, Thomas. Rehearsing the Future. Köpenhamn: Danish Design School Press, 2010.

¹⁴Dunne, Anthony, and Fiona Raby. Speculative Everything: Design, Fiction, and Social Dreaming. S.I.: MIT, 2014.



S R I S H T I

Institute of Art, Design and Technology