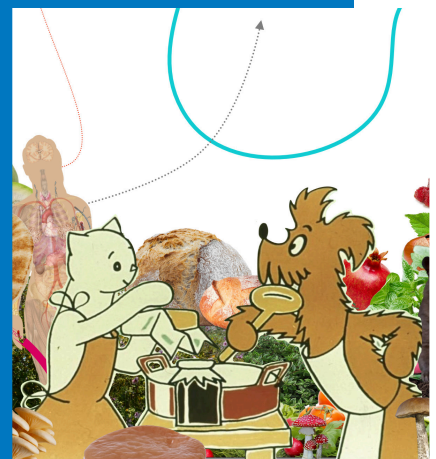


More-Than-Human Food Futures Cookbook

A Feeding Food Futures Initiative

Cookbook contributors: Aditi, Allan Gomes, Amala, Ann Light, Anna Lychagina, Åsa Ståhl, Danielle Wilde, Deborah, Ferran Altarriba Bertran, Geethika, Hilary Davis, Iben, Iryna Karaush, Jonathan C, Kristina Lindström, Lara Houston, Laura Fährndrich, Li Jönsson, Marie Nowak, Markéta Dolejšová, Mia Shu, Michelle Lai Jingmin, Paul Graham Raven, Sandra van der Hel, Sebastian Prost, Sjeff van Gaalen, Sjösjuk sjöman, Sneha Solanki, Steph Marsden, Tom Gayler, Urja Jhaveri, Xinyi Li & Yoram Chisik.



Aalto University publication series
ART + DESIGN + ARCHITECTURE 3/2022

More-Than-Human Food Futures Cookbook

A Feeding Food Futures Initiative

Aalto University
School of Arts, Design and Architecture
Design
Feeding Food Futures

Editors

Markéta Dolejšová, Sjef van Gaalen, Danielle Wilde,
Hilary Davis & Ferran Altarriba Bertran

The More-than-Human Food Futures Cookbook received a Special Award of the Jury at the Gourmand Awards section of the Umeå Food Symposium 2022

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Abstract

This cookbook contains eleven experimental food futures recipes that aim to provoke imagination and inspire critical thinking on how human-food practices could be different, supporting sustainable flourishing. From a picnic meal reimagining the human body as a resource to slug-driven food governance, the recipes capture co-creative thought experiments of 33 contributors who came together for the two-day workshop Experimental Food Design for Sustainable Futures held online in July 2020.

Please enjoy!

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MORE-THAN-HUMAN FOOD FUTURES COOKBOOK

the sweet spot
of
consumption

MORE-THAN-HUMAN
FOOD FUTURES
COOKBOOK



A Feeding Food Futures initiative:

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sjöman, Sneha Solanki, Steph Marsden, Tom Gayler, Urja Jhaveri,
Xinyi Li & Yoram Chisik.

*organised alphabetically by first name; some names are
pseudonyms

This cookbook is based on the outcomes of the two-day workshop
Experimental Food Design for Sustainable Futures:

Day 1: Fantastic(e)ating Food Futures:**Reimagining Human-food Interactions:**

Hilary Davis, Danielle Wilde, Ferran Altarriba Bertran
& Markéta Dolejšová

**Day 2: Designing With More-than-Human Food Practices For
Climate Resilience:**

Markéta Dolejšová, Sjef van Gaalen, Danielle Wilde, Paul Graham
Raven, Sara Heitlinger & Ann Light

Layout & Cover:

Sjef van Gaalen & Savannah Vize

More about the workshop/s:

<https://experimentalfooddesign.wordpress.com/>

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Introduction

This cookbook is founded on a two-day workshop—Experimental Food Design for Sustainable Futures—held online as part of the Designing Interactive Systems (DIS) conference in July 2020.

The workshop experimented with food as an accessible starting point from which to explore and articulate values, concerns, desires, and imaginaries associated with food-tech futures and climate resilience. Working remotely from our homes during the burgeoning pandemic, we co-designed scenarios and collages; engaged in foraging walk-shops around our kitchens, pantries and gardens; and proposed diverse imaginative approaches to nurture transformation towards sustainable futures.

Each workshop day focused on a distinct theme: on day 1—Fantastic(e)ating Food Futures: Reimagining Human Food Interactions—we examined interdependencies between food, eating, and social practices, critically engaging with future flourishing through food-tech innovation. On day 2—Designing with More-than-Human Food Practices for Climate Resilience—we focused specifically on more-than-human food practices and how they could be incorporated into food systems. The two workshop days were thematically intertwined and carefully designed to be complementary: the fantastic food future imaginaries co-created on day one laid the groundwork for our thinking about plausible more-than-human food practices on day 2.

The workshop outcomes have been collectively compiled into the More-than-Human Food Futures Cookbook that you are reading right now. We would like to thank all workshop participants for bringing their energy, ideas and imaginations to the table. This cookbook is just a small sampling of our combined efforts, we hope it feeds your imagination and nourishes you during these challenging times. In the spirit of fantastic(e)ating food futures, and expanding more-than-human food practices, this content is free to read and enjoy. However, if sharing, please acknowledge this work and the authors using this reference:

Markéta Dolejšová, Sjef van Gaalen, Danielle Wilde, Hilary Davis & Ferran Altarriba Bertran (2020). *More-than-Human Food Futures Cookbook*. Available at <https://foodfutures.group/>

Enjoy the reading!

Markéta, Sjef, Danielle, Hilary and Ferran

The cookbook editors

Reflection

Danielle Wilde

Increasingly, design researchers and their fellow travellers are coalescing around the sticky subject of food. They often come to the table with different tastes, priorities, cultural backgrounds and experiences. What they share is a commitment to commensality—fellowship at the table. Food is a fundamental human-material practice. Eating is necessary for life. Eating together enables people to forge social bonds, learn and consolidate culture—as individuals, families, social units—as a species. Eating at once shapes, and connects us with, who we are.

In this cookbook, we use experimental design research methods to activate food as a research subject, object, context; and as tangible bio-design material. Our objective is to imagine societal transformation collectively, and thereby better understand how to support profound and meaningful change. A cookbook is a traditional format. Personal cookbooks may be incomplete, hand-crafted, messy. They reflect the lives of their owners. Often humble, pragmatic instruments at their origins, they evolve with experience and use. In their fullness, they may contain trace efforts of joys, disappointments, wild interpretations, sadness, silliness, boredom, fun. Food is all of these things and through its nature, makes visible our place in the web of life.

We live in uncertain, urgent times. The recipes in this cookbook posit food as a powerful catalyst for change. They are not alone in doing so. EAT Lancet tells us: food is the single most robust lever to optimise human health and environmental sustainability on Earth (Willet et al. 2019). The human food system impacts all 17 of the UN's Sustainability Development Goals and all nine planetary boundaries (Steffen et al., 2015). Currently, it is damaging both people and the planet. In intergovernmental reports on sustainability, climate change, biodiversity collapse and more, sobering statistics and grim projections make clear we must transform how we live. It follows that we must transform how we design. Victor Papanek (1972) stressed long ago that design is at the root of so many of the problems we face today. However, Design can also help us to respond constructively to issues; to re-infrastructure, as we reexamine our relationships within the web of life.

Design's capacity for world-making can open up new imaginaries; enable people to interrogate their relationships and practices, envision the change they want to see.

The imaginaries in this cookbook are tasty gestures towards this world-making journey. During the workshops, the authors engaged in carefully designed, densely packed processes, and ate their way towards new understandings of human interactions in the world. Unlike recipes, the resulting imaginaries are not instruction sets. Instead, they are provocations—material, social, legislative, socio-technical and ecological invitations that reflect emerging commitments across the research landscape.

Obsessions with food unfold on our screens; world-leading chefs are living-room gods; amateurs strut alongside them. Locked inside our houses during COVID-19, the privileged mimic the less-so, making sourdough, pickles and ferments. It seems easy for those in the Global North to occlude other understandings of issues. But we cannot allow this to happen. The food system is shaping our todays and our tomorrows. Food is sensual and meaningful; can be cheeky and fun, as well as nutritious (or not). The ideas herein reflect that heterogeneity. They propose the ubiquity of food to create space for other voices. As Levinas tells us

“Knowledge requires ... an openness to something new, something foreign, something totally other beyond the self.”

(Levinas, 1979). Please enjoy our tasting menu.

Levinas, E. (1979). *Totality and infinity: An essay on exteriority* (Vol. 1). Springer Science & Business Media.

Papanek, V. (1972). *Design for the Real World: Human Ecology and Social Change* Thames and Hudson London.

Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., Biggs, R., Carpenter, S. R., De Vries, W., & De Wit, C. A. (2015). *Planetary boundaries: Guiding human development on a changing planet*. Science

Day 1:

Fantastic(e)ating Food Futures: Reimagining Human–Food Interactions

Workshop organisers:

Hilary Davis, Danielle
Wilde, Ferran Altarriba
Bertran & Markéta
Dolejšová

Fantastic(e)ating is a play on the word fantasticating – to make or render something fantastic – and the act of consuming or eating. The workshop title recognises the playful and creative elements that can be reimagined at all stages of human–food interaction, including designing, creating, eating and consuming food.

The Fantastic(e)ating Food Futures workshop used experimental food design co–creation to examine interdependencies between food and technology, and fantasticate future food–technology practices navigated by diverse human and non–human stakeholders.

The workshop activities included:

- The use of **Food Tarot cards** (<https://foodtarot.tech/>) to provoke critical food conversations and collective imaginaries. The card deck presents 22 imagined diet tribes such as Datavores, Genomic Fatalists and Turing Foodies whose diet has been impacted by (bio)technological advancement. The cards were designed to enable playful (more–than)human–food interactions and support the notion of uncertain food futures open to multiple interpretations.
- A **food–technology digital story** – based on a collection of smartphone video–recordings introducing food items significant to the Food Tarot cards selected by individual workshop participants. The items were varied, including raw materials sourced from local spaces (Urban Foragers; Monsa[n]taninsts cards), home–made food stuffs such as kombucha (Gut Gardeners card) or favorite kitchen utensils (Food Gadgeteers). The short audio–visual narratives were curated and weaved into a ten minute digital story. The story content was ‘hidden’ in a food–technology mystery box on our shared Miro board and revealed during the workshop introductions¹. It served to both introduce participants and their food–related interests, and



provoke initial thoughts about the meaning of their food items and their relationship to context.

- A **food swap pantry**, where foodstuffs and other artefacts can be exchanged in the spirit of reciprocity. The pantry items were visual representations of items selected by participants and showcased in the digital story.
- **Fantastic(e)ating picnic meal prototypes**, using the food swap pantry resources. Working in groups, the prototyping started with **picnic baskets** pre-filled with items from the food swap pantry brought by individual group members that could have been swapped based on the group's prototyping needs. The prototypes are represented in the following cookbook section, in the form of six recipes. Among others, you will find a recipe for Nutritious Dating – Flourishing, a Food Waste Glam, or for a Companions Picnic.

Our long term aim with providing a shared space for activities like these is to help nurture existing research into everyday food-technology cultures, while ensuring inclusion of fantastical elements such as food crafting, food play and future speculation. The day 1 workshop activities and prototypes inspired the second workshop day that focused on bringing the fantastic ideas forward into a set of recipes for plausible more-than-human food practices.

t: <https://youtu.be/Oyh-LZ5w0Eg>



The **food swap pantry** includes Food Tarot cards and visual representations of food items selected by workshop participants for the digital story. These items were used as main ingredients to prototype our fantastic recipes.

Nutritious Dating – Flourishing

Amala, Anna Lychagina,
Danielle Wilde, Mia Shu &
Tom Gayler

Inspired by the Nutri Amorists and the Turing Foodies tarot cards, we developed a dating sequence that brings together gut bacteria, trees, technology and potential lovers. In it, the health of the tree and the contents of a picnic basket depend on – and make sense-able – physiological signs of arousal, measured through the lover’s spit and a swallowable sensor, before and after dating. Four steps, from nutritious dating to multi-species flourishing.

1. PREPARE: Swallow the butterfly tracker pill, chew a small handful of Zira. Spit in the AI bucket.
2. WAIT FOR THE AI TO FIND YOUR MATCH
3. PICNIC: with your date. The health of the tree that provides shade and the contents of the picnic basket that nourishes you and your date are determined by the AI, based on a combination of digital gut sensor data and the biological data provided by the fermenting cabbage you feed with your microflora.
4. POST-DATE CHECK-IN. Home again, chew zira once more to freshen your breath and spit in the AI bucket, to close the cycle.

Relationships are not linear processes, and while technologists may try to invent solutions for matters of the heart, we propose that such matters must be complex and multi-species in their unfolding. Our group contained people on many sides of many fences. Techno-optimists and techno-sceptics, early adopters and inherently cautious, wary, even potentially suspicious developers of speculative fabulations. The resulting step-wise process brings together ritual, nature, technology, data and chance.

Doesn’t everybody want to find love? Many people consult diverse oracles in their search for love. Might we operationalise such rituals to better afford multi-species flourishing? Do we sometimes need to look to ourselves, and love ourselves, before we can love another?



Our basket of goodies – kombucha, a mirror, a wooden bucket and an apple tree. Our starting point as we converged upon the Nutri Amorist and Turing Foodies tarot cards, to fantastic(e)ate our picnic.

Amala

Mia

Danielle

Tom

Anna

ethical cannibals

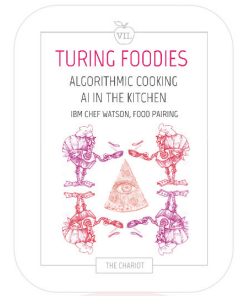
- 'Placenta cake', food that is / close to / from the body

- Gastro Masochists
- smart plate for counting your calories

p2pfarmers

- how to ferment foods successfully in local conditions

NB if you are in an unhealthy relationship, the system will reflect that



Turing Foodies

- AI... to track gut bacteria... how food influences romantic health

Nutri Amorists

- eating representations of each other (values, preferences, desires, dislikes, etc.)

tummy butterfly measurer

1a



Zira is used for fresh breath and cabbage fermenting!

4a



AI bucket representing the relationship in the fermenting process

4b

1c

2



1. PREPARE for your date! (a three-part ritual)
 - a. swallow the butterfly tracker pill to analyse your gut
 - b. take a handful of zira, to freshen your breath
 - c. spit into the AI bucket to help ferment the cabbage
2. (Matching process)
3. PICNIC with probiotics and your (ideal?) date
4. FEED THE AI: Chew and spit out the zira seeds again, so that the AI can perform a love-life evaluation. The evolving state of the fermenting cabbage determines – at different steps – who your date is, what you eat together, the health of the tree you sit under. It also represents the projected health of the relationship. Multi-species interactions across time and space, 'read' by the AI, thus guide you in your search for love.

tree health controlled by AI



3

Dining with yourself (mirror) - visualisation of "activities" happening inside the body



Cannibalistic Pickn'ick for Homo Sapiens

Lara Houston, Sebastian
Prost, Sneha Solanki,
Steph Marsden & Urja
Jhaveri

Our overall theme is based on the notion of 'reflection'. The recipe that we have co-created is inspired by the Ethical Cannibals card and develops the idea of the human body as a farm. It provokes us to look at ourselves as human species and reimagine the role that our bodies might play in near-future food systems.

For instance, during the COVID-19 pandemic, many people are in lockdown and they feel as if food systems are breaking down. In many places the sudden lack of resources has created panic and resulted in panic-buying. This made us think: is it time to start using resources that are not only around us but also within us? Shall we start using edible resources cultivated in and on human bodies, such as urine or milk, and use these to sustain ourselves and our communities?

We envisioned a local peer-to-peer system, designed for mutual gifting and exchange within local communities: people contribute whatever products they have available, including their personal bodily materials, to a large shared 'pot luck' meal. We recognise that some of these shared-body elements are taboo. We wonder what values might need to change to reduce the 'lck' factor, and allow us to share our bodies, our cultures, our rituals to enable sustainable future flourishing?

Further inspired by the Gut Gardeners card, we expanded our view of communities beyond just human beings, aiming to extend the everyday dining experience to be inclusive of different 'cultures'. Did you know that some foods, or more precisely the micro organisms within them, eat us the same as we can eat them? Try feeding some bits of your skin or nail clippings to a mushroom, you might grow a fancy – and very personalised – mycelium suit.

We also want to consider body augmentations. Human bodies are similar but not the same: for example, some people do not lactate. How can we augment their bodies so that every 'body' can contribute? And if this is something that we want to do, how do we recognise and design for inclusivity – cultural, ethical and other?

Our recipe is certainly still 'brewing'. It is not finished, but it carries a call for reflection as its central ingredient (notice the mirror in our recipe collage). As the human species, we need to look ourselves in the eye and carefully reflect on what we and our bodies are able and willing to contribute to our communities to help nurture sustainable, regenerative futures.



Steph Urja Lara Sneha Sebastian

We are curious about:
Turing Food, how does that work?
We also liked NutriAmorous,
but chose Ethical Cannibals

Artist/designers-
SymbioticA
Maja Smrekar: lab-grown meat from her body; lactating to feed puppies
Leanne Rimes(?) feeding mycelium with her skin, hair and nails
- to create a burial shroud to decompose her body (when she dies) in an efficient manner

"we are always eating the artists' body"

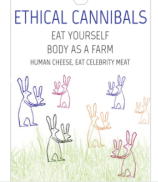
MaddAdam trilogy "secret burgers" - Margaret Atwood

blood

More-than-human

Vanity, changing body, experiential factors of producing food

Sustainable



cells & micro-organisms cultivated by & on the body

-Lab grown meat
-Making meat out of body cells

Skin, hair and nails

Racism/sexism in the history of bodily production, e.g. wet nursing as a profession

What's our idea of it?
- Cheese out of breast milk
- mystery, stillness, passivity

Hair ash: Medicinal purpose. Used to treat surface wounds, so functional and useful in the picnic outing

Avoiding the "ick" factor?

Near future? Now-5 or 10 Years down the line

DIY in nature?

Does that mean we make food only for ourselves from our own bodies?

Reflection: looking at ourselves as species

Gift exchange
P2P exchange

P2P as commensal

Microbial others that are doing the work

Setour "experience" now - as COVID has shown us the fragility of our food systems

Community- what is the goal of sustaining ourselves, or others?

You are eating microbes and microbes eat you



Pineapple: you being eaten as the pineapple eats you (your tongue) - your body as a farm, eating yourself through food that eats you while you eat it

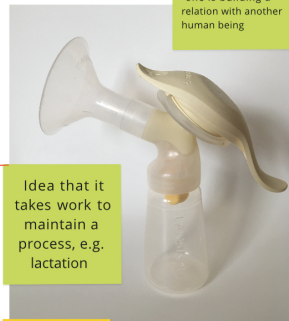


Two different relations between breast pump and bottle:
-one is individualistic
-one is building a relation with another human being



How you acquire the food experience?

What you have to bring to a dinner party? Pieces of yourself



Idea that it takes work to maintain a process, e.g. lactation

Pot luck body parts!

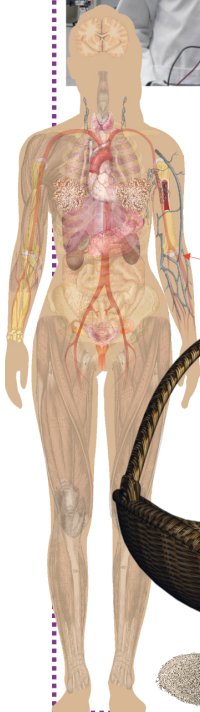
Ritual potluck picnic meal of foods we have created from our bodies at the mirrored table

P2PConnection, communication

The "ick" factor



Mirror as a prop, but metaphorical. And symbolic of reflection



Food Waste Glam

Ann Light, Deborah, Iben
& Sandra van der Hel

“to make [something] desirable, it has to have some degree of exclusivity to it [...] the notion of just and the notion of status are in contrast to each other [...] justice’s always got that problem on its hands.”

“we wanna make a meal that’s accessible to everyone yet exclusive; that is extravagant and has a lot and yet is efficient. We have a lot of tensions and contradictions in our meal that we want to bring in.”

[they all laugh under
breath]

— Discussion among
participants

Looking at the Glam Diners card, we were intrigued by the notion of glamour and how it might both intersect and be in tension with issues of justice and sustainability. In the words of one of us: “What does glamorous eating that’s [also] an efficient eating look like?” Our prototyped Food Waste Glam recipe was prompted by the following question: “I was wondering if there was a way of doing something that has a sense of abundance but actually used things that are easily available”.

To respond to that provocation, we decided to ideate a dish that was at once exclusive and accessible; glamorous and sustainable; extravagant and healthy. To provide the dish with a sense of glamour and exclusivity extravaganza, we framed it as a complex elaboration: an intricate onigiri layered with flavours and textures. We carefully selected ingredients that might be considered exclusive (spirulina), sustainable (seaweed), accessible (rice), extravagant (pomegranate), glamorous (ice cream) and healthy (seaweed and rice).

The resulting *Frozen Onigiri Ricecream with Pomegranate and a Dash of Spirulina* is an attempt at exploring how experience and sustainability might not necessarily be an “either or” binomial, but can embody qualities of both. In doing so, our onigiri presents a way of thinking about the complex interrelationships between those often opposing concepts, by eating them together.

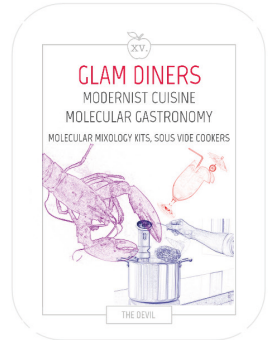


Sandra

Deborah

Iben

Ann



Make food waste into glam food

Glam dumpster diving

Seeweed feels Exclusive but there is so much of it

"The chicken in the chicken in the chicken" extravaganza

Can glam food be fair/just?

Like glamping: make it accessible to most people (but if everyone can have it its no longer exclusive)

Exclusive but also accesible

Efficient eating

Something special/exclusive



Efficiency as healthy food

Limiting impact on the world



Requires an effort to make

Local/global
Local food is sometimes more exclusive (e.g. seaweed from Denmark in Denmark)
Expensive restaurants using food from their own garden



Frozen onigiri ricecream with pomegranate and a dash of spirulina



IntrosPicnic

Allan Gomes, Ferran
Altarriba Bertran, Hilary
Davis, Iryna Karaush &
Xinyi Li

In our group we were excited about the potential of technology to support novel forms of shared eating experiences. Our resulting recipe, IntrosPicnic, is a food-tech system that allows people to share a close understanding of what is happening within and outside their bodies during the eating process.

IntrosPicnic consists of two technological artifacts: a swallowable DeepFood sensor and a computational MouthShare mouthpiece that can be attached to one's palate. All members of the IntrosPicnic dinner party are encouraged to swallow a sensor at the beginning of the meal. Once in the diner's gut, the sensor monitors their food intake, digitising the information to create a model of the diner's food experience. This data is then made available for everyone else to experience: the computational mouthpiece can reproduce a range of multi-sensory stimuli (taste, texture, smell, temperature...) and, as such, it can bring to life and replicate the digital models of the food-experiences captured by the sensors. IntrosPicnic thus enables diners to share a food experience in new ways, by making public all that takes place inside a diners' guts.

During the ideation process, we focused on the potential of such technologies to afford novel and exciting food-tech experiences. We did not turn our group discussion to deeper social, cultural, economic, or planetary implications of what life might be like, if these were real – but we offer our recipe as a starting point and provocation for others who are keen on discussing and bringing the recipe forward.



Our picnic basket was full to the brim, and the variety of the ingredients we had at hand inspired our extravagant – and maybe somewhat spectacular – recipe.

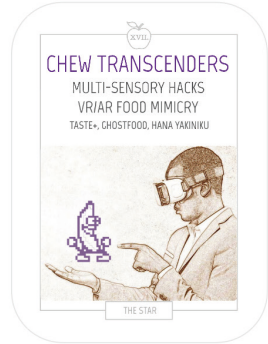
Xinyi

Allan

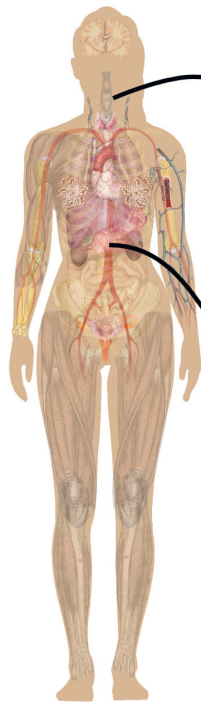
Ferran

Iryna

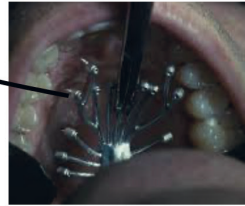
Hilary



IntrosPicnic



MouthShare



DeepFood



INTROSPECTION

Mukbang, or the pleasure of watching others eat online
<https://www.theguardian.com/food/shortcuts/2018/nov/05/mukbang-is-loneliness-behind-the-craze-for-watching-other-people-eating>

(NO)FOOD FOOD?

**ECCENTRIC ADVENTURES SPECIAL NEEDS
 TECH-LOVER MULTI-GENERATIONAL
 NEED FOR EXPERIENCE, NOVELTY, STIMULATION
 AR VR MR REASON-SEEKING
 MULTI-SENSORY**



Cheese Bored? Reimagining a Cheesy Picnic Speed-date

Aditi, Geethika, Hilary
Davis, Jonathan C &
Marie Nowak

Our cheesy speed-date picnic is inspired by a picnic basket containing cheese cultures, Pavlova cake and a human body. We also had a cookbook and an ice tray in our basket, which we swapped for some fermentation starters and an apple tree.



Our overall theme was fermented: Inspired by the Food Hackers, Ethical Cannibals and Nutriamorists cards, we present to you an alternative to a traditional cheese-focused picnic, we imagine as a 'speed date'.

Our picnic cheese board includes elements that are sustainable and climate-conscious as well as varied and suitable for diverse diets and tastes. These cheesy elements are brought together to attract a mate: they are present both as a topic of conversation and a challenge for a prospective date to eat.

For our main picnic course, we prepared for example a Vegan Cheese created especially for ethically minded cheese-lovers, a Breastmilk Cheese made for sharing with prospective family members and a special Dating Cheese made from human bacteria. The latter delicacy is imbued with the odour of human pheromones—an odour created from human sweat glands—thus creating truly personalised cheese flavours. Collected from your sweaty local gym, this personalised smell can then be used to attract (or repel!) romantic partners at the imagined picnic.

Bored with hard cheese? We provide sweet alternatives – such as Caramelised Cheese, Pavlova Cheese and Chocolate Cheese. Accompaniments at our picnic included crisp apples, Russian cheese salad and sourdough bread. Fermented drinks such as kombucha, apple and berry cider, buttermilk and fruit tea help to wash down any cheesy after-taste.

Our cheese is presented unwrapped, or with sustainable edible wrapping. We consider that plastic has its advantages, such as keeping bacteria out, however we are concerned about our impact on the Earth. Our cheese is to be made and consumed on the same day. Therefore, it is wrapped in cheese cloth in the morning and eaten in the afternoon. This is assuming your romantic partner does not take the term 'speed-date' literally and run away – leaving you holding the cheese. If this happens, we have heard that the local ducks might enjoy the cheese, or you could bring your cheese home and try a cheesy speed-dating picnic another day.

Marie

Aditi

Jonathan

Hilary

Geethika

Cheese 'bored'? Try our cheeses:

- Vegan cheese
- 'Dating' cheese made from human bacteria
- Cheese based pavlova
- Breast milk cheese
- Caramelized cheese
- Chocolate cheese
- Beetroot cheese
- Cheese salad

Merging with Ethical Cannibal and Nutri Amorist cards

A cheesy picnic/date (?)



accompanied with sourdough and apples

<https://www.biology.lu.se/research/research-groups/pheromone-group/research-projects/the-pheromone-brewery>



Pheromones in Animals



DRINKS-
Kombucha
AppleCider
Berry Cider
"Buttermilk"
Teas - Apple tea
(leaves or fruit, bark?)



Companions Picnic

Laura Fährndrich,
Markéta Dolejšová,
Michelle Lai Jingmin,
Sjösjuk sjöman & Yoram
Chisik

“The companionship [in our case] is not just sharing of the food, it’s also sharing of the gases produced from the consumption of the food that could be fed back to the system.”

– Companions Picnic group

We decided to become Food Gadgeteers and prepare a sustainable experimental picnic for everyone. Or, well, everyone who can digest our edible imaginations. At the beginning, our picnic basket contained a sourdough jar, a home-made berry jam, a food-safe transportation box, nutmeg leaves and some gut supplements. Based on our group discussion, we added a fermented carrot marmalade foraged in one participant’s home pantry and also some jammed black walnuts to add raw, earthy flavors. We took our sourdough and made a flatbread (in some food cultures called a ‘pancake’) as a staple to feed our workshop companions. Did you know that the word ‘companion’ comes from ‘panis’, the Latin word for bread? Originally, the term was used to describe someone with whom you shared a meal.

Flavored with the fermented jams we had at hand and some extra nutmeg for a twist, our bread was a humble yet tasteful meal. We Gadgeteered the first bread prototype in our group kitchen and started thinking, how to make more of it in an outdoor picnic setting, as sustainably as possible. We had our box to safely transport all the ingredients, but the cooking mechanism and energy source were unclear. And then we considered: in the spirit of all-embracing food companionship, why not build a simple mobile stove powered by the gas released from the fermented jam jars and human digestive processes triggered by jam consumption? A sustainable more-than-human picnic stove, using both food and human microbes to make a tasty meal for everyone. Does that sound silly? Maybe. It is our first playful step in thinking about sustainable food futures that are sustainable and efficient but also experimental and fun.



The picnic basket we started with contained a sourdough jar, a home-made berry jam, a food-safe transportation box, nutmeg leaves and some gut supplements. And you know what? We didn’t swap any of it. We are happy with what we have. We are Gadgeteers – we can make stuff out of any other stuff!

Yoram

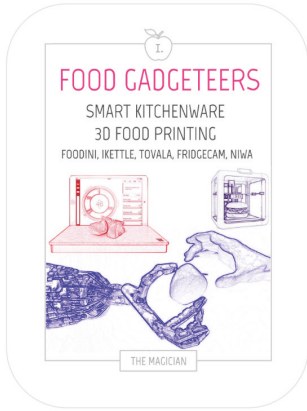
Markéta

Laura

Sjösjuk

Jingmin

FERMENTED PICNIC STOVE



Day 2:

Designing With More-than-Human Food Practices for Climate Resilience

Workshop organisers:

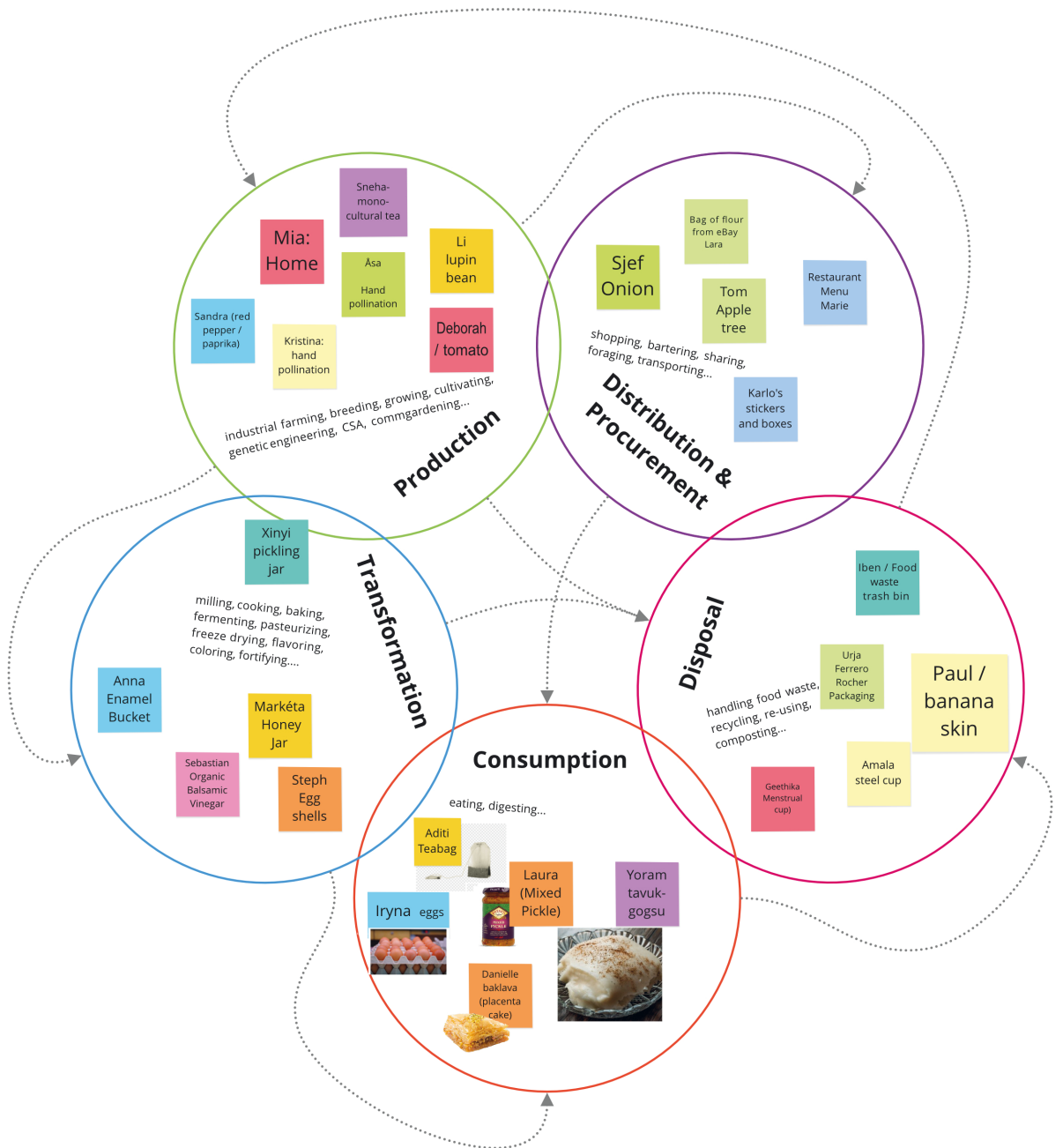
Markéta Dolejšová, Sjeff van Gaalen, Danielle Wilde, Paul Graham Raven, Sara Heitlinger & Ann Light

On the second workshop day – Designing with More-than-Human Food Practices for Climate Resilience – we continued discussing and experimentally exploring sustainability challenges in food systems. Inspired by the fantastic(e)ating recipes co-created on day 1, we focused specifically on more-than-human food practices and their potential role in supporting sustainable food transformations. Similar to the previous day, we used a shared Miro board pre-populated with various materials, including five ‘pantries’ stocked with examples of more-than-human oriented food practices across five food system areas: production, procurement & distribution, consumption, processing, and disposal. Working in small groups, we collaged proposals (recipes) for ways to plausibly embrace more-than-human perspectives in each of the areas. Participants also brought their boundary objects representing existing sustainability issues in all five areas that they placed on the shared Miro to kick-start the discussion.

Through four hours of collaging and exchange of food experiences, critical reflections, imaginations, as well as boundary objects, we unearthed a rich variety of intriguing dilemmas:

- How can we rethink hierarchies in food systems?
- Why are non-humans not credited for their contributions to food processes?
- Can fermentation & human-microbe care provide a model for change?
- How would slugs design food policy?
- Doesn't more-than-human also imply less-than-human?

The following pages document our co-creative processes and showcase the five recipes that emerged as outcomes. You will discover a recipe for a floating urban platform of clover plants that promotes beneficial effects of invasive species on local biodiversity; a slug-based exercise in inhabiting a multi-species food policy position; a dreamy yet feasible garden restaurant for snails; and more. We hope our more-than-human food proposals will be digestible for you and will be pleased to hear your feedback!



Food system areas for more-than-human collaging
 The five food system areas we explored through our collaging. Post-its a collage group participants with their food boundary objects.

Production:
**The Good,
The Bad
and The
Invasive**

Åsa Ståhl, Deborah,
Kristina Lindström, Li
Jönsson, Mia Shu,
Sandra van der Hel
& Sneha Solanki

***“It’s time to think of
food production that
is not immediately
beneficial to humans
but that will benefit
humans in a longer
term”***
- Food Production group

We dug deep into the complex entanglements of more-than-human food systems and the ethical conditions underlying who should eat whom, what should be grown where and for whose benefit. We considered the intricate position of invasive species, commonly considered as unwanted ‘pests’ causing harm to ecosystems. Despite this ungracious reputation, many invasive species can have positive effects on their surrounding habitats, although often in less obvious ways. In Sweden, for instance, lupin bean is considered an unpopular garden invader that should be terminated. Yet, lupin is also a good source of protein for cows and some people admire the lupin plant for its aesthetic beauty. Similarly, the red swamp crayfish that likes to invade Dutch rivers is not on the country’s list of welcomed guests – it harms the water quality and prevents growth of some plants as well as fish. Since the crayfish is quite hard to eliminate, Dutch locals have been encouraged to...eat it. Changing local mindsets from considering crayfish as a ‘bad’ invader to accepting it as a delicacy might help protect local aquatic ecosystems.

To extend our discussion, we prototyped a floating platform of clover plants to be set up in cities and help promote local biodiversity. In the UK, clover is often considered a pest that hijacks people’s lawns. However, clover is an incredibly potent plant for fixing soil nitrogen. Our platforms would reposition clover as an important sustainability agent, rather than an interloper. So, are all invasive species ‘bad’? Who should decide? Based on what criteria? We propose that, for food production to be sustainable, we need to move beyond a human-centric appraisal of immediate practical benefits of food production processes. Caring for seemingly un-productive and hence often overlooked or undesirable species can be a means for us to care for sustainable food futures.



Tool for hand pollination



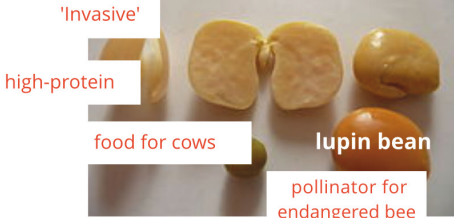
ethics of eating invasive species



locust swarms



Invasive: King Crab



'Invasive'

high-protein

food for cows

lupin bean

pollinator for endangered bee species



Invasive jellyfish-taking over sea's & oceans



how do we make decisions on what we eat?



Home food production

for soil

supporting local production



grows wild and farmed

nitrogen fixing

soil regeneration

often overlooked /invisible

relationships and entanglements

as a model to reinvent ways of producing in cities



not intentionally produced (sometimes it is)



For matcha tea

care for the non-productive

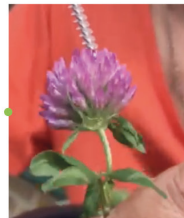
inspired by traditional ways of producing

pollination

saviour - danger-scale



Tea- typical 'English' tea (from India or Sri Lanka)



techno-utopian imaginary

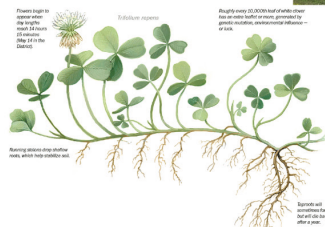
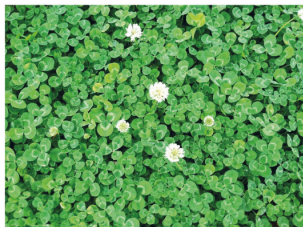
exclusive/expensive

Urban aquaponic farming

Resources intensive
Closed-loop system

companion planting enforced by humans

where do the tomato seeds come from?





rodaleinstitute.org

How to Establish a Small-Scale, Pastured Poultry Operation- Rodale Institute

Sustainable poultry farming integrates Birds with the farm and land in a way that, with proper management, Promotes the health and well-being of the...



www.bbc.com

The cows that queue up to milk themselves

There's a growing number of dairy farms where the cows are milked with minimal input from humans...



www.ridgedalepermaculture.com

Agroforestry

Agroforestry is a land-use system that combines agriculture and forestry technologies to create a more integrated, diverse, productive, profitable, healthy, and sustainable land-use system...



www.permaculturenews.org

5 Reasons Why You Should Plant Cover Crops - The Permaculture Research Institute

In permaculture, one of our main preoccupations is that of building soil And fertility. It's a means...

fiestafarms.ca

Six Sustainable Benefits Of Clover in Your Lawn

Fiesta Farms is Toronto's largest independently owned grocery store. We're pioneers and leaders in helping People reflect their values with a shopping cart....

www.dpi.nsw.gov.au

How earth worms can help your soil

The Food Production pantry stocked with examples of existing more-than-human food production processes.

**Procurement and
distribution:**

**What
would food
policy look
like, if it
was made
by Slugs?**

Lara Houston, Marie
Nowak, Sjef van Gaalen,
Sjösjuk sjöman & Tom
Gayler

***“How do we, as the
egocentric creatures
that we have trained
ourselves to be, arrive
at even a possibility
for multi- species food
policy, what does that
look like?”***

*- Responding Participant
from
“Chicken or Egg”*

Points were raised in the initial discussion about what we (humans) in our (human-centric) point of view consider to be “good” and “bad” life, how to tell otherwise hidden environmental/social (meta)stories about food, and how we might resolve some of the issues around existing power structures and economic incentives.

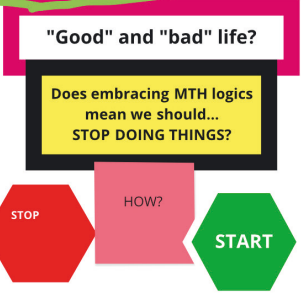
In an attempt to investigate more-than-human issues around competition and make inter-relationships more apparent, we explored the creation of food policy from the perspective of a non-charismatic animal. Something generally considered to be a pest.

What would food policy look like if it was made by slugs? What if advocates for the slugs were tasked with negotiating a trade deal with the other species to which they relate? Would the slugs be able to maintain a long-term strategic outlook?

This is not to seriously entertain having policy designed by and for slugs, or to say that these issues must have an economic resolution. Although economic measures are an obvious tool, there may be alternative ways as well. Our slug-based food policy is an exercise in inhabiting a different perspective, and seeing what light taking a slug’s perspective might shine on our very human-centric assumptions and points of view.



SLUG-GOVERNED FOOD POLICY



How to tell stories about food, the hidden environmental / social me(a)ta data of food

Mitigation

Birds lizards toads hedgehogs and the French

Incentives More for who?

slug policy may be too production focused?

ability to move dictated by environment (dependent on wetness)

radically local strategy-opportunistic scavengers



Other animals eating food in other parts of the house (than the kitchen)

tagging peer2peer local cataloging



picky shoppers?



Passive farming and land development: A real options approach
The EU's farmers are no longer required to reduce commitments to farmers direct payments unless they keep their land in good condition. Come...

Subsidies for doing nothing - use economics as a lever for changes that are about 'less 'in good ways

Food policy

Made by slugs?



Embracing more-than-human logics

Slug friendly certification

Slug based quality assurance



Misunderstood molluscs: five reasons to love slugs
The slug has an excellent record as a highly nutritious protein. It's also a great food source for light to dark up their diets.

Long-term slug policy

Abundance

Dead and decaying matter

(de)centralised distribution?

mesh networks



Power in the food systems - supermarkets, supply chains, regulations for food production, supply, pricing

designing with redundancy values of supply chains

organically produced food in cities more expensive luxury to caring

Disruption for lasting change

Incremental betterment-system can't change immediately

TRADE DEAL?



PandemicUKfoodarticle

Personal Choices

Transparency

remote destinations

renationalisation?

CO2 emissions

system shocks

Distribution of waste

Packaging/casing referenced in disposal discussion



Corona virus as more-than-human actor

Virus/animal/insect/human disruption/power
What's efficient?
What's effective?



Blackaphids

Ant mutualism

SARS-CoV-2 as our MTH companion: disrupting our foodchains



Every product has a story
We help brands and retailers build customer trust through transparency using blockchain technology. Provenance empowers shoppers to choose your product.





The Food Procurement & Distribution pantry suggested a few examples of how food resources can be obtained and distributed in a more-than-human focused manner.

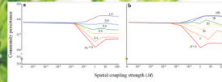


from 2010 The Guardian

www.theguardian.com

Wild mushroom foraging is damaging forests, warn nature groups

Wild mushroom foraging for commercial gain damaging local ecology, say RSPB, National Trust and Forestry Commission...



www.nature.com

Adaptive migration promotes food web persistence

Interactions between diverse species that coexist in nature are of utmost interest in the field of ecology. Recent theoretical studies have shown that spatially plays a key role in maintaining complex systems with multiple differing species. In these mo...



www.livescience.com

How Do Squirrels Remember Where They Buried Their Nuts?

Squirrels bury thousands of nuts over a lifetime. How do they have the wits to find them all again?...

theseedsite.co.uk

Dispersal of Seeds by Animals



Disposal:

Less than Human?

Amala, Geethika, Iben,
Paul Graham Raven &
Urja Jhaveri

***“We don’t think of the banana farmer as responsible for the banana peel”
– Participant during discussion***

Our discussion began with the realisation that everyone in our group had brought boundary objects that were containers of some sort. From (menstrual) cups to chocolate wrappers and banana skins, some objects were trying to solve the problem of waste and others were creating it, but all of them were packaging.

While the packaging itself is often disposed of, we only tend to package things that we value. This then begs the question, value for whom? We talked about how these values of waste differ. Menstrual blood, composting toilets and e-waste were all brought up as examples showing that the idea of waste is subjective.

Disposal also has differing value across classes in society. Dumpster diving may be considered hip, an activist gesture to bring attention to climate change issues. Celebrities may attach themselves to such climate-actions to achieve a certain kind of glamour. The packaging becomes metaphorical, part of a brand experience. However, this glamour and hipness does not extend to rag-pickers, or other communities on the periphery, living on others’ waste.

To address this issue we propose presenting solutions as “packages” for a democratic form of governance. These packages are plans of action to deal with the problems of disposal in a way that contextualises them in respect to the culture and environment, originating from the communities involved. We present these packages to (municipal) governments for implementation, to translate untapped potential into action, and restructure society. The “package” is convenient, but it also has an expiration date, and must be acted upon, as time is running out.

The “more-than-human” aspect in this plan for action may not be easily spotted, but “more-than-human” also implies “less-than-human”. Those who are human but are considered “less” than due to their association with waste. When talking about disposal we must consider not just what is considered disposable but also whom.

Waste -- but waste for whom?

recycling as a class issue/ different categories of waste

Societal implications of recycling / reusing

Ideal Future:
No waste--> what to do with the empty wastebins --> Packaging



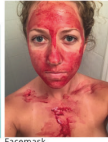
It's the things that are inside which are of 'value'



EWASTE?

Creating value

cooking with waste
-Taste the waste



Culture
Impact on consumption of traditional Indian sweets made specially during certain rituals and festivities in India

Water Supply Quality
More than half of plastic generation in India is uncollected; choking up water bodies and degenerating in our water sources

Class-infected ideas
Responsibility of low-income groups to sort out trash.



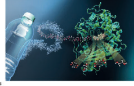
Capitalism

Untapped potential

Are our responses and answers to concepts of 'modernisation and development' wrong?

non-organic composting

How plastic-eating bacteria actually work - in a sterile experiment



Concept of composting beyond our food and perishable items; extending it to synthetic/plastics materials

Can it be used for something else?

Packaging: all are natural or manmade forms of packaging

Composting: idea of bacteria eating plastic; composting of not food waste but material around

'development' definition

It's the things that are inside which are of 'value'

Interesting way that capitalism is all about tapping potential

Eg: e-waste collection from manufacturing companies recycling old phones in replacement of new phones

Preservation: And is it related to perishable

Class- Socio cultural structures: a class infected idea

Question with recyclable products is that does our government have infrastructure to recycle it?

Is the disposal necessary at all?

Peripheral Communities sorting urban trash; mirror to their practice on leaders; homeless people separating gift materials to earn an income.

Dumpster diving: for the climate, way of showing the problem?

Lifestyle: How much of it is based on how much time we have on our hands? (popularity of single-use plastic)

Dumpster diving perceived differently in Denmark as part of a culture, while in other countries a low-income group activity

Give and take

Community-led initiatives

Bottom up approach Power shift from the governments to the people

Packaging in metaphorical sense

Solution and problems Challenging the political structure

Now

Tons of trash in the landfill

"Out of sight out of mind"



Tapping Potential: Capitalistic values aiding sustainability?

How to get there

Communities are tackling climate change from bottom-up. eg india cleaning the beach

Engaging the citizens and governments: Create an easy to implement "Package" with the solutions and problems

The "Package" can be physical manifested with a dumpster, where people can dump their ideas.

Has an expiration date to be used --> we have to act fast to change the environment

Can other species be a part contributing to the package. Can humans allow it?

Future

Eliminating land fills

Waste is no longer exciting

"Waste" has a value and is being re-used

Power shift from the governments to the people

Responsibility of waste management is it 100% consumer's responsibility But also of the producer?

Act fast-->the packaging has an expiration date due to the "materials" used



Packaging

Packaging Humans

Concepts of selling an 'image'

Building a 'pretty package' through joining initiatives



'Packages' a stool of power distribution

Restructuring society

Revising relation between authority and citizens

Speculation: Can municipality and governments buy 'packages' / proposals from citizens?

Community-led initiative

Pooling in resources

Democratizing urban problems with waste

Untapped potential being translated into action

Deployment of institutional resources

Drawing an analogy of the supply chain of processes without 'package'



SHIFTING BURDEN AND ACCOUNTABILITY





Human compost, chickens eating scraps, wild weeds and more in the Food Disposal pantry.

read.dukeupress.edu

Compost Politics: Experimenting with Togetherness in Vermicomposting | Environmental Humanities | Duke University Press



Waste, weeds, and wild food

Introduction Although research is uneven in its scope, urban food collecting, whether through foraging or scavenging, is considered a global phenomenon. In cities of the Global North, it is practice...

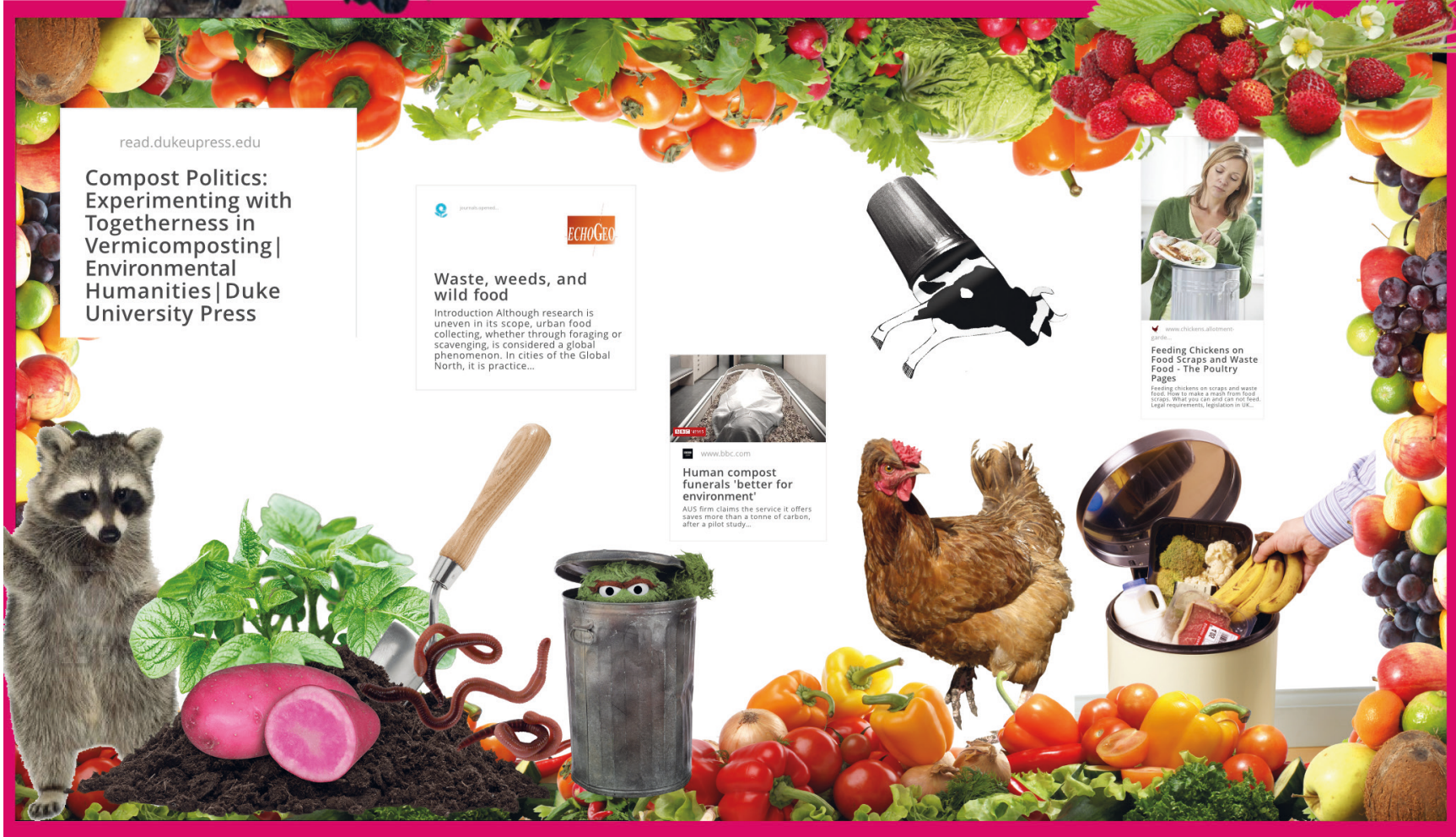


Human compost funerals 'better for environment'

AUS firm claims the service it offers saves more than a tonne of carbon, after a pilot study...



Feeding Chickens on Food Scraps and Waste Food - The Poultry Pages



Consumption:

Chicken or Egg?

Aditi, Danielle Wilde,
Iryna Karaush, Laura
Fähndrich & Yoram
Chisik

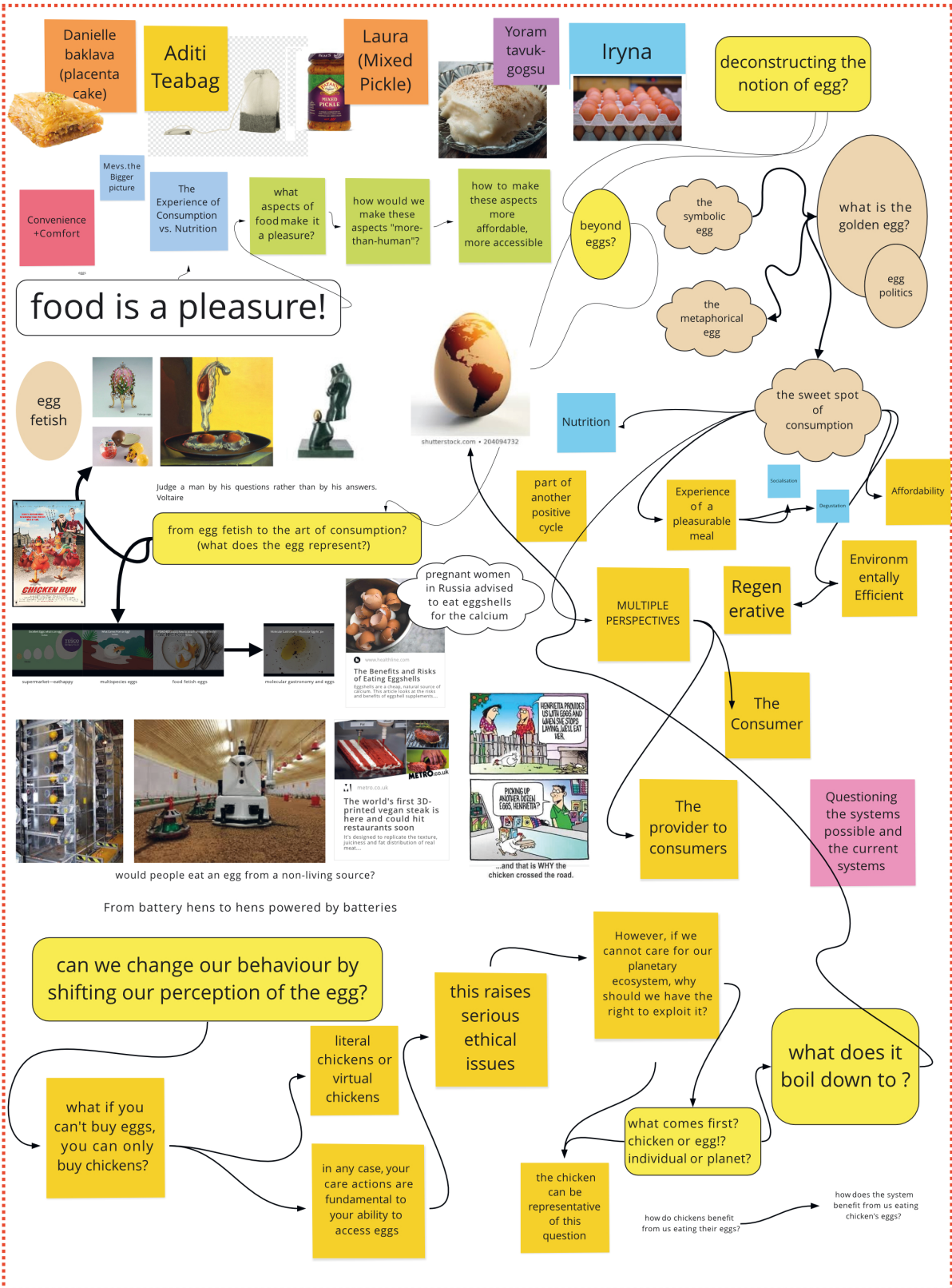
We began with baklava (or 'placenta cake'), a tea bag (which speaks to colonialism), a jar of mixed pickles (which speak of spices and other places), a pudding and a tray of eggs. The commonality was a concern for origins and histories, carried in the foods we eat. The trace we determined to follow was that of the egg.

What comes first, the chicken or the egg, individual or planet? If we must change how we eat (and we must) can we do it by asking what our foods represent? Can we begin with the egg?

According to the 2020 Dietary Guidelines Advisory Committee Scientific Report¹ outlining nutritional recommendations for Americans, eggs are a nutrient-rich 'first food.' Indeed, a single egg contains the necessary nutrients to turn a fertilized cell into a baby chicken. If we reflect on the nutritional, social and gustatory pleasures and pains of the egg, might it help us to reconsider how we feed our bodies, our social connections, our pleasure centres and our planet?

Changing behaviour is far from straight-forward. Beginning reflections from the humble egg enables us to bring many charged conversations to the table. While we do not pretend to have found any solutions to the challenge of transforming how we eat, using an egg as a catalyst for reflection opened up many issues that usefully 'thicken' the discussion.

1: <https://www.dietaryguidelines.gov/2020-advisory-committee-report>



Food fermentation, Helminthic therapy, and other examples of human-food consumption processes that involve non-humans as partners.



www.atlasobscura.com

The Worst Freelance Gig in History Was Being the Village Sin Eater

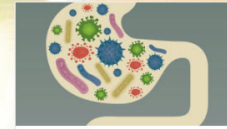
Sin eaters risked their souls to soak up the misdeeds of the dead...



www.theguardian.com

Why a diet of worms could be good for you

Forget tablets to get rid of the wriggly creatures. Some scientists believe eating them may be key to curing autoimmune diseases...



www.ift.org

Feeding the Gut Microbiome

The microbes inhabiting our intestinal tract work in concert with our genes, the foods we eat, our environment, and other factors to influence our health and risk for disease...



Processing:

More- Than- Human Dreaming

Ann Light, Anna
Lychagina, Markéta
Dolejšová, Sebastian
Prost, Steph Marsden &
Xinyi Li

“While tending to our garden, we learned that more-than-human care in food systems shouldn’t be romanticised.”
— Food processing group

Non-human creatures do a great deal of work in our food systems that is essential for humans to survive and thrive. Look at bees, or microbes in fermented edibles. Do we value their labour enough? Don’t they deserve better credit for caring for us and other species on our planet? Perhaps, we should be more grateful and try to make their job easier by providing decent working conditions, rather than keeping up with the food business as usual. But nothing in this world is simple. To transform our food systems towards regenerative more-than-human flourishing, we need to get out of our human shells and learn how to better understand the needs of other creatures.

Remember visiting our garden, the one that’s full of all those wonderful plants – herbs, flowers, vegetable patches? Remember the snails? How cool they are with their little antennae and camper houses attached to their backs. If you had stayed longer, though, you would’ve seen that for the snails, our garden is a free, unrestricted picnic area. Those creatures just want to eat it all! And that’s not so cool. For us – avid gardeners that we are – it’s sometimes quite impossible to maintain a harmonious relationship with the snail picnickers. As harsh as it sounds, we simply need to start getting rid of them.

Recently, we’ve been really bothered with this, thinking: how great would it be to cooperate with the snails and make a deal on which garden patches they can eat, and which should be left untouched? An alternative to treating them as uninvited pests. We tried to call a truce and proposed to run a garden restaurant for them that would serve a fine selection of the harvest. Well, it didn’t work out at all...we didn’t really understand each other. Everybody was confused and felt misplaced! Ah, these romantic dreams of more-than-human care, where snails, plants and humans live in harmony.

What would you do, in our place?

Food Transformation

complexity of systemic food factors - start from infrastructural changes - individual food practices can follow

change possible at individual level food practices? socio-economic context

fluid gyroscope-like hierarchy in more-than-human food systems

interconnectedness vs hierarchy

rather than fixed static things

individual stuckness / systemic stuckness

not romanticizing more-than-human care - example of pesticides & lettuce

snails - we should live with our creatures more, we can learn from them

BUT: snails destroying garden harvest, slowly and efficiently

wish we can 'train' the snails - or make a deal with them - to take their share of the garden harvest, not eat it all!



multi-species care (bees, ferments) - visible/invisible?

food processing facilities - mysterious place, you can't see the labour inside

Restaurant for snails in the garden?

new space

not just 'certified' food labels

visualize the labour put into a food product

package design

crediting more-than-human food collaborators who co-produced food?

fermentation as food preservation and more-than-human health care

showing the amount of people behind the product and amount of hours spent on that product

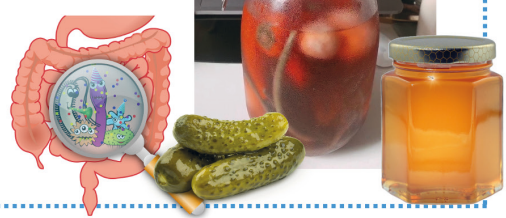
fermentation does bring forward the 'labour' of the non-humans who co-produce food

redesigning the systems in which we encounter food products - not just the labels

new experience

growing your own food, getting hands dirty

experience diaries for citizens - new experience camps on growing our own food





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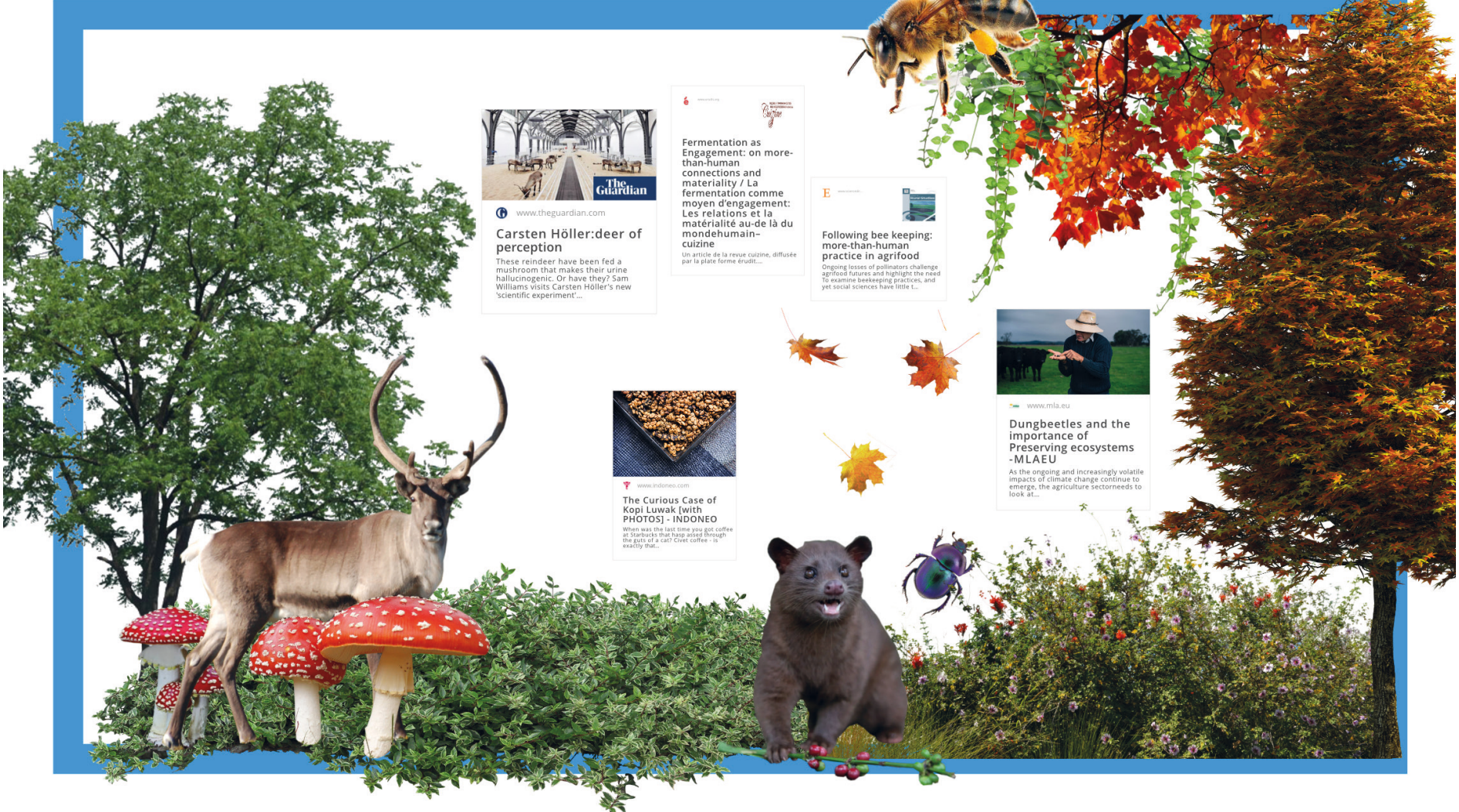
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Digestif

As you reach the end of this cookbook, we hope that your cravings for fantastic and experimental more-than-human food futures ideas have been satisfied.

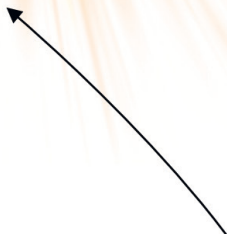
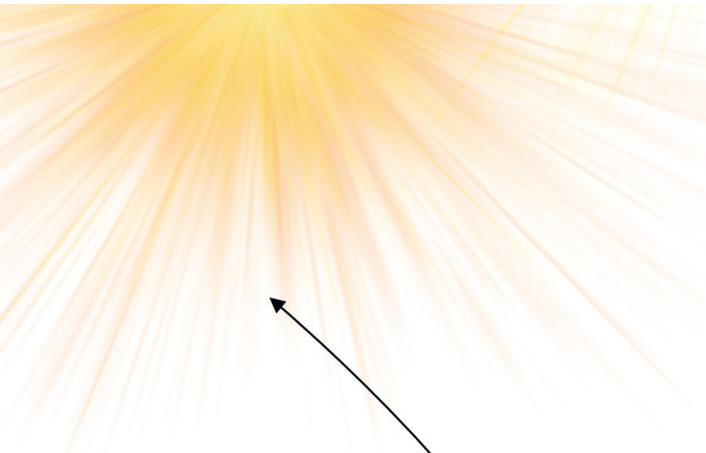
The eleven recipes that we have presented here do not provide exact ingredient lists and precise measures, nor do they contain instructions for how to fix a perfect lunch. Rather than being a step-by-step how-to guide for cooking up better futures, this More-than-Human Food Futures Cookbook aims to provoke imagination and inspire critical thinking on how human food practices could be different, supporting sustainable future flourishing. From a picnic meal reimagining the human body as a resource to a slug-driven food-governance, the book captures the co-creative thought experiments of 33 contributors who came together for two workshop days to cross-pollinate ideas, weaving them into food futures recipes that consider more-than-human interests.

If you find the book's contents inspiring and would like to cook up more with us, do join one of our Feeding Food Futures (FFF) events. See <https://foodfutures.group/> for updates about upcoming FFF projects and other resources detailing our past collaborative work. If you have a proposal for a new collaboration or any other nourishing content to share, do reach out – you are always welcome at the shared FFF table.

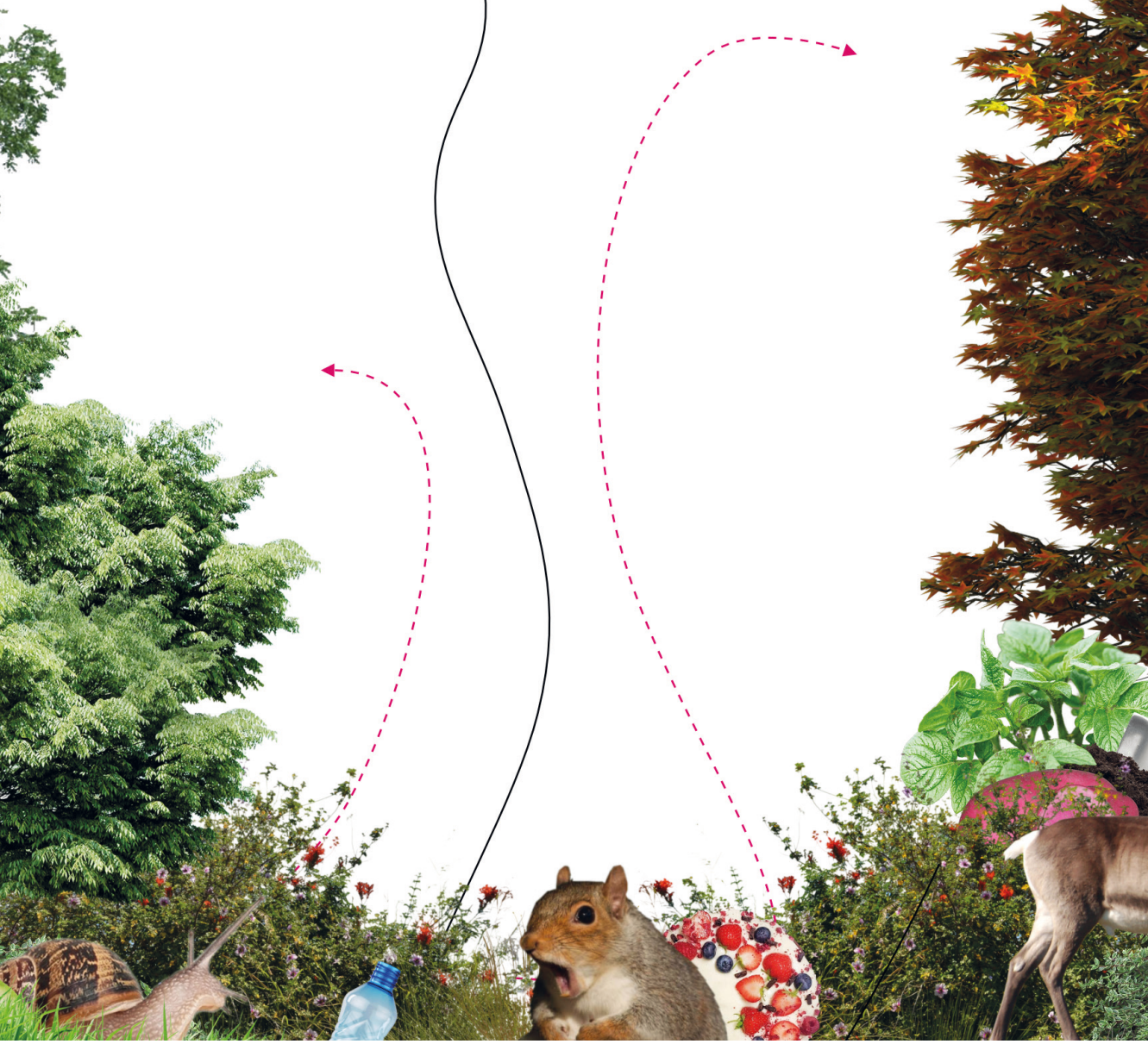
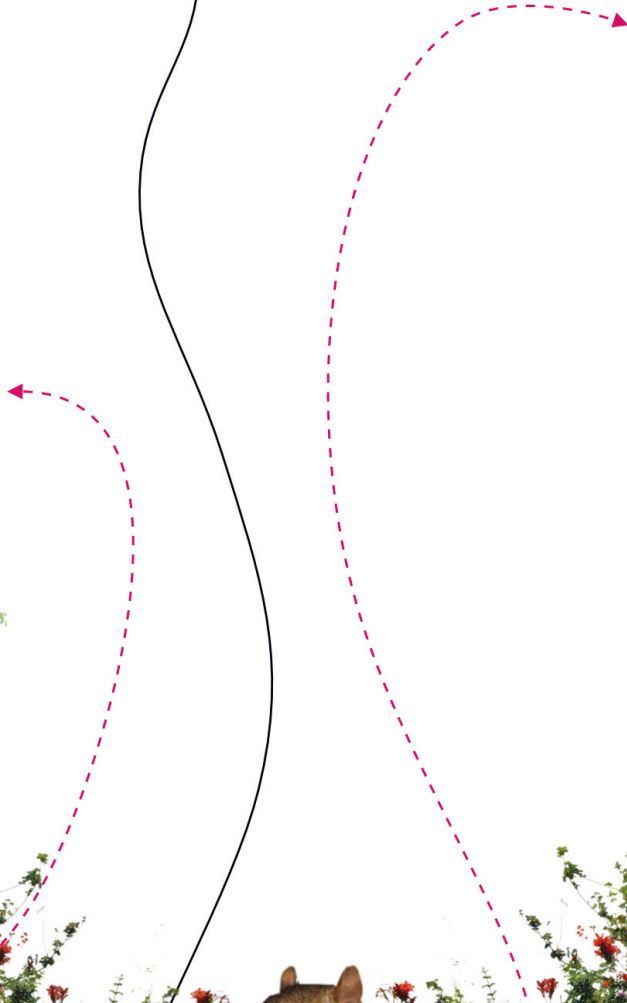
Feel free to circulate this cookbook with your fellow eaters, under the Creative Commons Attribution-NonCommercial-ShareAlike license.

*Warmly,
Markéta, Sjef, Hilary, Danielle, and Ferran
The cookbook editors*

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A Feeding Food Futures initiative

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