

Back To The Land 2.0: Food Systems and Design

Reader by John Thackara (June 2022)

This reading list is for designers (broadly interpreted) on the annual summer course I run together with Konstfack, in Sweden. The focus is on food and *relationships* - social and cultural ones, as well as technical and business. The emphasis is on care, more than consumption. It's about connection to place. It celebrates contact between generations. It demands respect of other cultures. By the end of the course - with its readings, activities, and exercises - participants will have experienced: new ways to think about food and food systems; how to *be* as well as what to do, in a food context; who you need to connect with, and how, in order to intervene in a food system; how to reflect, in your journey ahead, as well as how to take action.

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readings before we start

WHERE WE ARE COMING FROM

Robert Woodford on the Deep Time Walk

The Deep Time Walk app helps people walk a story of Earth's evolutionary journey - a new story that can reorientate us to where we come from - our origins, our purpose. A story that combines the latest scientific insights with the deep reverence inherent in our perennial traditions that bind us to life and the cosmos. The Deep Time Walk is experienced as a 4.6km walk, inspiring wonder and reverence for Earth, and galvanising positive action needed in our times.

www.deeptimewalk.org/blog/2018/03/27/walk-new-story/

Annie Proulx on Barkskins

Or, how we first got the idea that the earth's resources are limitless. Proulx's story begins with the arrival in "New France" - the vast tract of north America and Canada colonised by the French between the 16th and 18th centuries. Two young men set out to earn their freedom by clearing an area of forest; they are soon awestruck by the imposing, often impenetrable and seemingly limitless extent of the forest.

www.theguardian.com/books/2016/jun/19/barkskins-annie-proulx-review

The historical roots of our environmental crisis, Lynn White jr 1967

All forms of life modify their contexts. Ever since man became a numerous species he has affected his environment notably. The word ecology first appeared in the English language in 1873. Today, less than a century later, the impact of our race upon the environment has so increased in force that it has changed in essence

www.zbi.ee/~kalevi/lwhite.htm

A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet, by Jason W. Moore and Raj Patel.

Nature, money, work, care, food, energy, and lives: these are the seven things that have made our world and will shape its future. In making these things cheap, modern commerce has transformed, governed, and devastated the Earth. Bringing the latest ecological research together with histories of colonialism, indigenous struggles, slave revolts, and other rebellions and uprisings, Patel and Moore propose a radical new way of understanding—and reclaiming—the planet in the turbulent twenty-first century.

www.versobooks.com/books/3139-a-history-of-the-world-in-seven-cheap-things

Fred Provenza on "Nourishment: What Animals Can Teach Us Rediscovering Our Nutritional Wisdom"

When people's knowledge becomes detached from the acts of growing and harvesting foods, people little understand or appreciate the biological or cultural origins of their diets. Nor do they realise when those norms change, as they have in the past century, in ways that are harmful. By raising our level of awareness of the knowledge we've lost, we can redesign 'grazing circuits' that better enable the health of herbivores and humans and the landscapes we inhabit.

see Twitter thread: twitter.com/fleroy1974/status/1126381773611577345

The relationship between humans and nature, Rebecca Hosking (video)

Dr Rebecca Hosking examines the language we use, the history and the psychology that has led to this dichotomy.

www.youtube.com/watch?v=yJeeTDgIEmo

WHERE WE ARE HEADED

Simone Weil

“Place is a doorway into caring. Rootedness in a place is the most important and least recognized need of the human soul. Love of place unleashes the personal and political will needed to make profound change. It can also unite people across diverse ideological spectra because place is what we all share: it is the commons that allows people to call themselves a community. Places are alive, characterised by all the fluid, dynamic and multi-level relationships that shape all living beings, and understanding them presents a special challenge atlasofplaces.com/essays/uprootedness/

Pluriverse: A Post-Development Dictionary

Indigenous traditions and world views have long understood that everything is inter-connected and has its own lifeforce. The visions and practices known collectively as the *pluriverse* elucidate many paths to a social transformation that places empathy with humans and non-human beings first: Frugality. Courage. Marginality. Magic. Generosity. Accessibility. Collaboration. Care for place. Care for people. The one hundred short entries in this book (it's free to download) honour cooperation rather than competitiveness as the norm. They are waypoints in the transition from a world shaped by commodities, to one of communities. From commodities, to communities. Indigenous traditions and world views have long understood that everything is inter-connected and has its own lifeforce. The one hundred short entries here (it's free to download) elucidate many paths to a social transformation that places empathy with humans and non-human beings first. The visions and practices here honour cooperation rather than competitiveness as the norm

www.ehu.eus/Post-Development+Dictionary.pdf/

The Overstory, Richard Powers

Richard Powers writes about tree-consciousness, cultural epiphanies, a world going up in flames, and what lies beyond despair. “The idea, quite

plainly put, is that there is no separate thing called humanity, any more than there is a separate thing called nature. Now, when we look at a forest, we see a highly cooperative and interdependent system that you can almost think of as a superorganism”.

dark-mountain.net/older-than-writing/

Hungry City: How Food Shapes Our Lives, and Sitopia. By Carolyn Steele

The gargantuan effort needed to feed cities across the world on a daily basis has a massive and vastly under appreciated social and physical impact on people and the planet. From our foraging hunter-gatherer ancestors to the enormous appetites of modern cities, food has shaped our bodies and homes, our politics and trade, and our climate. Whether it's the daily decision of what to eat, or the monopoly of industrial food production, food touches every part of our world. By forgetting its value, we have drifted into a way of life that threatens our planet and ourselves. *Sitopia* is a provocative and exhilarating vision for change, and how to thrive on our crowded, overheating planet.

www.goodreads.com/hungry-city

www.ted.com/how_food_shapes_our_cities

Agroecology Resetting the Design Intention | Lynne Davis @OpenFoodNet @Agroecology

Now We need food system infrastructures that: are open, not closed; replace order, control & uniformity, with diversity; allow unexpected things to happen, by design.

www.agroecologynow.com/21st-agroecology/

Social Food

Social food projects create ‘public goods’ in the form of social cohesion, public health, territorial development, food sovereignty, farmer livelihoods, learning, innovation, and biodiversity. They re-make relationships – between people, food

and place – damaged by the commodity-based industrial agriculture system. They focus on care, not just consumption. They reconnect urban and rural in a spirit of mutual respect, and a practice of shared responsibility. Examples include municipal gardens, community meals; social harvest festivals; community kitchens; community baking and brewing sites; care farms; school gardens; street food festivals; cooperative grain growing; farm hacks; and many more.

thackara.com/notopic/social-food-forum

www.mammamiaa.it/en/atlas-archive/

Food sovereignty.

Cheap food is an illusion. It is not produced out of the efficiency of the industrial #foodsystem; it is a product of the exploitation of displaced communities and nature. But it doesn't have to be that way. We can choose a world in which producers are ensured fair prices and consumers are guaranteed access to healthy and affordable #food. The exploitation cycle will only end when we operate in systems where food is recognised as a right, not a commodity

nyeleni.org/spip.php?article290

Gaia Alchemy, by Stephan Harding

If Earth is indeed Gaia, and we humans are a living part of Gaia, then maybe the living biosphere has something to say to us. Gaian science revolves around the idea that the earth's oceans, atmosphere, rocks, and living systems all interact in complex, intelligent ways to self-regulate the biophysical conditions of Earth so that life can flourish. Earth is not just a dead rock hurtling through the universe; it is an always-evolving living system whose many living organisms collectively contribute to its ecological stability for life.

www.resilience.org/dr-stephan-harding-on-gaia-alchemy-and-the-animate-earth/

SOILS AND SOIL CARE

James Merryweather, It Starts With The Soils

Ninety-nine percent of all food comes from our soils. As home to an enormous variety of organisms – from bacteria, to mammals – soil health determines

the metabolic health of all terrestrial ecosystems. See: Living Soil Forum Sweden

www.summerofsoil.se/forum/

saveourwoods.co.uk/soils-biodiversity-dr-james-merryweather/

Soil and Soul, Alastair Macintosh

Communities governed by a sense of reverence and mutual responsibility. But right relationship can be restored, he suggests, by learning from the bardic tradition to create a new harmony of soil, soul and society.

www.alastairmcintosh.com/soilandsoul.htm

Soil Care Network

An interdisciplinary, global community of scholars and practitioners animated by the love of, fascination with, and dedication to soils.

www.soilcarenetwork.com/2022-may

The Neurology of Soil

@SimonSublime (Photography)

exploringtheinvisible.com/the-neurology-of-soil

Ten Facts About Land

Land systems are key to overcoming existential challenges facing humanity and achieving sustainable development. Here, Land System Scientists from around the globe synthesize their knowledge into 10 Facts on Land Systems that together light the way toward a sustainable future.

10facts.glp.earth/

Soil Tasting Ceremony (Experience)

thackara.com/transition-and-resilience/what-does-soil-taste-like-how-does-this-forest-think/

Caring for Soil is Caring for Life (EU)

op.europa.eu/publication/32d5d312

Urban-Rural Exhibition, China - Soil Zone

(PPT) The slideshow (link below) explains how the story was told in words and images.

1. The soil, and us, are one system. The health of the

soil, and the health of people, are the same story.

2. “From the Soil” (book cover: classic Chinese text)

3. The ecological restoration industry (Society of Ecological Restoration).

4. Most Ecosystems Can Recover in One Lifetime.

Example: Loes Plateau, China

5. The Ten Elements of Agroecology: At its heart, the idea of a farm as a whole system, or organism.

6. The ClimateTech wiki, and the booming AgTech scene,

7. Soil Restoration: Four indicators of healthy soil: structure | microbial life | nutrient density |

8. Five farming methods

9. Five Citizen Actions

www.slideshare.net/johnthackara/urbanrural-exhibition-shanghai-november-2019

Jiao

This Taoist ritual of renewal, still performed by Taoist priests today, affirms their belief that the affluence of a society can be judged by the number of different species that live there. “If all things in the universe grow well, then a society is a community of affluence. If not, this kingdom is on the decline” [We lost sight of this wisdom for much of the modern age. Thanks to a cultural disconnection between the man-made world and the biosphere, we either failed to think about rivers, soils, and biodiversity at all - or we treated them as resources whose only purpose was to feed the economy]

www2.kenyon.edu/Adler/jiaorite.htm

FARMING

Rural Europe Takes Action (ebook)

Stories of innovation and resilience, from 25 countries - from North Macedonia to North Friesland - that are signals of a larger and a more open Europe.

arc2020.eu/rural-europe-takes-action-e-book/

Agroecology

The study of interactions between plants, animals, humans and the environment within agricultural systems. Consequently, agroecology is inherently multidisciplinary; it includes knowledge from

agronomy, ecology, sociology, economics and related disciplines. Agroecological practices require support services and systems —many of which can be designed - such as extension services; storage facilities; rural infrastructure (roads, electricity, and information and communication technologies) for access to regional and local markets.

en.wikipedia.org/wiki/Agroecology

Agroecology combines the best of two time-tested disciplines, ecology and agriculture, to pursue solutions for a healthier world. Bear in mind that 97 percent of all farms in world are less than two acres in size; 70 percent of active farmers are women; and 50 percent food world eats comes from smallholder farms - that, between, them, use 20 percent of the the world’s arable land

blog.ucsus.org/delonge/abcde-of-agroecology

Seven case studies of agroecological transition.

A new agroecological paradigm is rooted in fundamentally different relationships between agriculture and the environment, and between food systems and society. The seven case studies in this report provide concrete examples of how, in spite of the many barriers to change, people around the world have been able to fundamentally rethink and redesign food systems around agroecological principles:

www.ipes-food.org//CS2_web.pdf

Policy Principles for Scaling Up Agroecology

We need a richer understanding of innovation that includes indigenous, local, and traditional knowledge. Simply put, not all innovations come from experts in white coats in laboratories. In large areas of Asia, farmers now join farmer field schools, a group-based learning process that enables farmer-to-farmer instruction. In India, farmers pool their seeds in community seed banks, which are administered through institutional arrangements to ensure the availability of planting material and the preservation and improvement of agrobiodiversity. And in Ghana, scientists launched radio broadcasts in local languages to popularize the best techniques to grow rice without additional inputs, rather than breeding new rice varieties.

Agroecological practices require public investment such as extension services; storage facilities; rural infrastructure (roads, electricity, and information and communication technologies) for access to regional and local markets; credit and insurance against weather-related risks; agricultural research and development; education; and support to farmers' organizations and cooperatives. The investment can be significantly more sustainable than the provision of private goods, such as fertilizers or pesticides that farmers can only afford so long as they are subsidized.

wiki.p2pfoundation.net/Six_Proposed_Policy_Principles_for_Scaling_Up_Agroecology

A Small Farm Future: Making the Case for a Society Built Around Local Economies, Self-Provisioning, Agricultural Diversity, and a Shared Earth, by Chris Smaje

The modern reliance on cereal crops is due to their profitability and ability to be stored, transported and grown in huge monocultures that rely on large machines, pesticides and synthetic fertilisers. 'Spread out and skim' is a metaphor Smaje keeps returning to, and I like it. A social scientist by training and a small-scale farmer by occupation, Chris Smaje helps run a smallholding in Somerset, southwest England where they grow fruit and vegetables for sale, usually keep a little livestock, and manage our woodlands and campsite. Drawing on a vast range of sources from across a multitude of disciplines, *A Small Farm Future* analyses the complex forces that make societal change inevitable; explains how low-carbon, locally self-reliant, agrarian communities can empower us to successfully confront these changes head on; and explores the pathways for delivering this vision politically.

smallfarmfuture.org.uk/?page_id=1637

smallfarmfuture.org.uk/?page_id=7

Relational Coffee

Africa produces 75% of the world's cocoa but gets 2% of \$100b chocolate market revenue. Ratio for coffee are similar. But few of us in the North know much about the 25 million families that grow and produce this valuable bean. In a system that can involve as many as eight transactions to bring the

coffee to market, coffee farmers receive less than two percent of the price of a cup of coffee sold in a coffee bar or roughly six per cent of the value of a standard pack of ground coffee sold in a grocery store.

www.womenincoffee.org/

Call of the Reed Warbler: A New Agriculture, A New Earth By Charles Massy

Monaro farmer Charles Massy has written an excellent book on agricultural change to restore the environment. Massy talks about his transformation from a land degrader to a land regenerator, and the inspiration he received from dozens of other Australian farmers who have done the same. The book discusses five key landscape functions that conventional agriculture degrades and which regenerative agriculture addresses: solar, water, nutrient recycling, biodiversity - and the human mind.

www.goodreads.com/call-of-the-reed-warbler

Agroecological urbanism, @CoventryCAWR

Debates around urban agriculture largely consider the city as a container, a place to be retrofitted with food, rather than a context that - for the very reason of its 'urbanity' - determines specific modes of consumption and lifestyles. Grassroots experimentations in urban agroecology and farmers' engagement with urban policies have marked the rise of a new agenda aiming to bridge urban and agrarian movements.

www.tandfonline.com/doi/full/10.1080

Agroecology, Pablo Tittone

A thought provoking 12 minutes video on future of food systems, knowledge intensive farming; Integration of science, practice and movement; marrying wisdom of farmers and science One of the best, clearest explanations of I've seen.

www.youtube.com/watch?v=wvxi4mN

Urbanising in place, @feast_project

An alternative urbanism - 'urbanising in place' - places food, agroecology, and an ethics of land stewardship, at its core. Priority goes to design actions that that enable the metabolic agency of food

with its place in natural cycles of nutrients and soils.

urbanisinginplace.org/

www.chikyu.ac.jp/rihn_e/

www.feastproject.org/

PROCESSING

It's not (just) about diet

A focus on 'diet', in isolation, can be so harmful to the health of living systems as a whole. This calm and informative critique of the EAT Lancet report points out that "diet was the focus of their message, conveniently placing responsibility on consumer choice over agri-business"

triedandsupplied.com/saucydressings/eat-lancet/

Farm-2-Table Food Hubs / Open Food Network

A sustainable and resilient food system needs to reconnect producers and consumers. The Open Food Network (OFN) (now in 13 countries) is a global, open-source community collectively developed and maintained by food activists and software developers around the world. As a platform cooperative, users of OFN become members and owners of the network. The OFN's flagship project is an open source software platform that makes it easy to create innovative, independent, community food enterprises. The software can be used by farmers to set up their own online stores, or by communities to create food collectives, manage food hubs, or take their farmers' market online with pre-purchases to give stallholders more secure sales, and more.

openfoodnetwork.org.uk/newcastle-food-coop

openfoodnetwork.org.uk/tynefresh/shop

desira2020.eu/digitising-the-solidarity-economy/

Biocanteens

In the French town of Mouans-Sartoux, on the French Riviera, a thousand organic and mostly local meals are served each day to local school children. The meals are 100% organic - and because they are mostly composed of local products, the drastic reduction of food waste thereby fully compensates for the higher cost of switching to organic products.

Biocanteens reverse the trend for school meals to be provided by catering services managed by large companies serving low-quality food based on ready-made products transported from central kitchens. The Centre for Sustainable Food Education (MEAD) on a municipal farm of 135 hectares.

urbact.eu/biocanteens-organic-without-spending

Eleven resources for developing thriving local food movements

From the UK, a good checklist of what is needed for a local food system to succeed

sustainweb.org/building_good_food_movement

Mold Food Waste Special

thisismold.com/futures-mining-food-waste-in-the-anthropocene

FERMENTING

Wild Fermentation, Sandor Katz

Fermentation is a biological phenomenon, a force of nature recognized and harnessed by people all around the world since ancient times. It is an important part of cultural traditions everywhere, an essential aspect of how people make effective use of available food resources. All civilizations, present and past, had some basic practice of these techniques. Kimchi, Sauerkraut, and plenty of other lactic fermentations were common almost everywhere until recently. Microscopic organisms - our ancestors and allies - transform food and extend its usefulness. For instance: Bread, Cheese, Wine, Beer, Mead, Cider, Chocolate, Coffee, Tea, Pickles, Sauerkraut, Kimchi, Miso, Tempeh, Soy Sauce, Vinegar, Yogurt, Kefir, Kombucha. T

thisismold.com/katz-fermentation-as-metaphor

Food, Feminism, Fermentation (pdf)

Food-making affects how we make our bodies and our selves. Feminist thought critically connects power & ethics across embodied difference. And, fermentation transforms how we eat, how we think, and how we live. With these ideas in mind, discussants in this publication and engage in conversations across culinary, health, and

educational sectors.

drive.google.com/file/d/1KiMu5oH/view

Attunement and Multispecies Communication in Fermentation (Dr Maya Hay)

Dr Maya Hay calls attention to the concept of attunement, which is the ability to notice, apprehend, and connect with others in meaningful response. Drawing on ethnographic fieldwork, I explain why brewers must attune to the social, spatial, and temporal scales of life within the brewhouse, including the microbes who remain invisible to the brewers.

ojs.lib.uwo.ca/index.php/fpq/article/view/10846

Ferment Radio @agnes_pockels

Fermentation is a process that can bring you closer to changes: those which exceed our lifetime, and those which are harder to understand because you cannot perceive them clearly with your senses. Fermentation gives us the superpower to experience bacterial transformations and inspires us to be attentive to changes happening at different scales too. What started as collaborations with microbes during pre-pandemic times turned into conversations in which small, unnoticeable organisms become catalysts for transformation and change. Since then, I've asked many questions in diverse fields, such as astrobiology, sociology, food activism, molecular biology, technology studies, feminist theory, postcolonial studies, citizen science, bioart, community art, food studies, architecture, design, international relations, and anthropology.

www.hiap.fi/resident/aga-pokrywka/

@agnes_pockels

@ferment_radio

Social Fermentation, Eva Bakkeslett

Mark Watson interviews Norwegian artist Eva Bakkeslett about the ancient and modern language of fermentation. Food holds the secrets of lost knowledge and traditions. It is a bridge between our inner lives and the physical world around us. It connects us to the land. Food can nourish the connection between us, bringing us together in celebration of the moment, even when separated

physically. Good food boosts our health and immune system. Traditions around fermented food are age old, and it harnesses time as a tool for transformation.

dark-mountain.net/making-friends-with-microbes/

EATING

The multiple meanings of urban food

End your urban farming definition stress! This rather wonderful text by Wayne Roberts @wrobertsfood explains that city planners and managers need (with our help) to embrace and enable a multitude of different urban agricultures

[resilience.org/2020-0... HT](https://resilience.org/2020-0...)

pic.twitter.com/loF4XsRKVG @ChiaraTornaghi

sustainontario.com/Way-to-a-Citys-Heart-is-Through-its-Stomach-Wayne-Roberts.pdf

Peer-to-Peer Restaurants

Pre-Covid, nearly 60% of new restaurants failed within the first two years of being open. One of the main reasons was the tremendous amount of debt that many restaurant owners accumulate from the start (the building itself to the furnishings to the cooking equipment, the ventilation system, marketing, branding). Running costs once open are also high (managers, servers, kitchen staff, bartenders and a host. With their small profit margins, these restaurants survived, in the past, on profits from alcohol.

civileats.com/2020/04/10/can-restaurants-survive-the-pandemic-by-feeding-those-in-need/

Restaurant of the near future (from NYC)

New York State and much of the United States has been in lockdown for months. Chef Dan Barber reacts to the topic on everyone's lips – whether restaurants will survive the coronavirus pandemic and what they may look like once they reopen. He explains the different ways he's looking to save independent farmers and protect independent agriculture

www.theworlds50best.com/dan-barber-fixing-local-food-systems-how-you-can-help.html

Farm-to-Table Chef (Sweden)

xenofiliaab.selz.com/item/farm-to-table

Street Food Vendors

Fabulous short films on some of Asia's best #streetfood and the struggles street-side chefs face. Eight workers from three continents to give you a broader portrait of the daily lives of these workers

www.netflix.com/fr-en/title/80244996

DESIGN PROCESS

Food Systems Design Curators

Food system projects do not organise themselves. They happen thanks to the work of food system producers or curators. These individuals identify opportunities such as projects, places, or individuals – and design ways to bring them to life. They connect these neglected assets in events and enterprises. Their work is *connective*; they enable a wide variety of stakeholders to work together. They do this in five key ways:

- map actors and resources
- curate activities and outcomes
- make service prototypes
- test new business models
- assemble co-operation platform

As collaboration experts – people who connect people – their most valuable skills are *hosting, convening, facilitating, animating, and co-ordinating*. Their work is a form of social infrastructure.

www.resilience.org/social-food-atlas/

Mapping the Edible City: Making visible communities and food spaces in the city

Using GIS and other forms of artist, participatory and community mapping, amongst others, food mapping provides a rich arena in which to] communicate new ways of understanding urban space, identities, relationships, informal and alternative economies, mobilities, and connections. Traditional mapping practices have drastically changed in recent years. Often, the new mapping enables a new way of approaching urban issues. Urban food practices, a topic of increasing interest,

are also prolific in uptaking new mapping styles. These papers explores the young history of food mapping.

blogs.brighton.ac.uk/mapping-the-edible-city-showcases-the-diversity-of-urban-food-mapping/research.brighton.ac.uk/en/publications/mapping-the-edible-city-making-visible-communities-and-food-space

blogs.brighton.ac.uk/editorial-board-selects-proposals-for-mapping-the-edible-city-book/

Food system maps and storyboards.

When designing your food system intervention, the most important word is “story”: your task is to explain to a stranger what action or project you propose to undertake. This explanation *may* include fancy visuals – but it can also be super simple – like the first slide here.

www.slideshare.net/johnthackara/back-to-the-land-2020-food-systems-maps-and-storyboards

Ten Food System Interventions PPT

www.slideshare.net/johnthackara/back-to-the-land-20-food-system-interventions

Camargue Rhizosphere via GSD (online book)

Regenerative Empathy is a Studio Report from the Fall 2018 semester at the Harvard University Graduate School of Design based on the option studio “Rhizosphere,” taught by Teresa Galí-Izard. The investigations and drawings here reveal new potential assemblages for La Camargue in France, proposing new forms of association between the people, animals, and plants that inhabit the region. The projects touch on geological and climate data, research on food production, and surveys of scientific literature into drawings focusing on the “rhizosphere”.

issuu.com/gsdharvard/docs/regenerativeempathy

OTHER JOHN THACKARA CONTENT

Blog, PPTs, Handouts: <http://thackara.com/>

Twitter: @johnthackara

Talks on video: <youtube/JohnThackaraVideos>

FB: <facebook.com/thackarameetup>

Publications: <http://thackara.com/publications/>

Urban-Rural PPT

<slideshare.net/johnthackara/urbanrural-exhibition-shanghai-november-2019>

Urban-Rural Video (20')

<https://youtu.be/PoK1HmupNA>

Bottom-Up Biodiversity (text, 1,500w)

<http://thackara.com/place-bioregion/bottom-up-biodiversity>

Relational Ecology and Design (Video, 45')

https://youtu.be/gqjfPuLVo_w

Ten Food System Interventions PPT

<slideshare.net/johnthackara/back-to-the-land-20-food-system-interventions>

How To Thrive In The Next Economy, John Thackara book (PDF)

Below the radar of the mainstream media, a replacement economy is growing from the ground up.

<http://thackara.com/thackarathrive/book/>

http://thackara.com/wp-content/uploads/2020/05/PDF-Thrive-Press_Copy.pdf

Bioregioning: Pathways to Urban-Rural reconnection

(John Thackara in *She Ji*) My 6,000 word paper in China's design and innovation journal, *She Ji*. Main points: A metabolic rift runs through the economy and culture. | The reconnection of urban and rural is an enabling condition for system change. | Bioregions reconnect us with living systems, and each other, through the places where we live. | The design of social infrastructure enables the emergence of new enterprises. | Knowledge ecologies, not transmission channels, are the key to bioregional learning.

www.sciencedirect.com/science/article/pii/S2405872619300012