Book Reviews

Reviewed by Luc Hens

Email: luchens51@gmail.com

1   **The Perfect Meal: The Multisensory Science of Food and Dining**
     by: Charles Spence and Betina Piqueras-Fiszman
     Published 2014
     by John Wiley & Sons, Ltd.
     The Atrium, Southern Gate, Chichester,
     West Sussex, P019-8SQ, UK, 400pp
     ISBN: 978-1-118-49082-2 (paperback)

In environmental tourism (e.g., eco-tourism, agro-tourism and sustainable tourism) dining, meals and (local and seasonal) food are of increasing importance. Moreover, it is significant to analyse the determinants making food attractive and dissecting the trends in the evolution of an (environmentally sound) kitchen.

This book focuses on the sensory elements of meals. It takes a multidisciplinary approach to the issue, combining neuroscience with physiology and elements from (food) history, perception, culture, wider social considerations, technology and economics, just listing these aspects.

The book entails 11 chapters, not reflecting a systematic build-up, but rather describing in an analytical way the different aspects of the subject. Chapter 1 provides an introduction: it defines different (historical) cuisine movements and paves the ground for 'neuro-gastronomy', 'gastro-physics' and the multisensory nature of food perception. What follows are chapters on menu design (Chapter 2), food labelling (Chapter 3), the appearance of a dish (Chapter 4) and cutlery (knives, forks and spoons) (Chapter 5). From Chapter 6 on, the science dominates the discussion with contributions on the multisensory perception of flavour (Chapter 6), the importance of surprise and incongruity (Chapter 7) and colour (Chapter 8), the environment in which the meal is consumed (Chapter 9) and the technology influencing the dining table (Chapter 10). Of particular interest is the concluding chapter on future trends. For example, the authors point to the growing impact of entomophagia (cooking with insects), lab-grown meat, technology and digital artefacts while eating.

Although this is not a book on environmentally sound cooking (its scope is definitely wider, going beyond the environmental aspects), it offers a series of keys that are important from an ecological point of view: the (relative) usefulness of nutritional information, health, perception and the atmosphere of the food environment. Nevertheless, readers interested in the environmental aspects (contaminants, hygiene, sustainable agriculture and cuisine) may remain somewhat 'hungry' after going through this otherwise broad, most accessible and interesting book.

Each chapter is most logically structured entailing an introduction, a main body, a conclusion and an extended reference list. Of interest is that longer chapters are also

provided with an 'interim summary'. This approach contributes not only to the scientific format of the book, but also to its readability for non-food experts. The 400 pages of the book do not entail tables or figures. On the other hand, sections are illustrated with carefully selected photographs of which the black and white versions are also presented in a colour plate section.

Both authors have a CV dovetailing in sensory science. Charles Spence is a Professor of Environmental Psychology at the Oxford University. Betina Piqueras-Fiszman is an Assistant Professor in Marketing and Consumer Behaviour at the Wageningen University in the Netherlands.

They have written a book that adds a chapter to the classical bromatology course. They convincingly show that culinary science goes beyond analytical chemistry. Overall, the book is about the bridge between multisensory science and the interesting results that modern chefs present on their restaurant tables.

2   Chickenizing Farms & Food: How Industrial Meat Production Endangers Workers, Animals and Consumers
by: Ellen K. Silbergeld
Published 2016
by Johns Hopkins University Press
2715 North Charles Street Baltimore,
Maryland 21218-4363, USA, 315pp
ISBN: 9781421420318 (electronic)
ISBN: 9781421420317 (electronic)
ISBN: 9781421420301 (hardcover: alk. paper)
ISBN: 9781421420309 (hardcover: alk. paper)

After introducing the basics of sustainable development, I often ask my students to provide examples of sustainable activities. Invariably 'agriculture', an activity going back over more than 3,000 years and 100 generations, results from this experience. Equally invariably, they point to the weaknesses of modern industrial agriculture. While acknowledging that industrialised agriculture has succeeded in feeding more people than ever before in the history of humanity, they mention the high amounts of nutrients and pesticides that are used, the negative impacts on the environment, such as eutrophication and soil degradation, the aberrations of the globalisation of the seeds and the yields.

A particular aspect of this discussion is how we treat the animals prior to consumption. This book focuses on these aspects for poultry. The book dissects the discussion in 12 components, each of them discussed in a separate chapter.

The first of these chapters sets the scene of the book. The main underlying finding is that our often bucolic vision of agriculture fundamentally differs from the reality in which poultry is bred and raised. This duality impairs an objective discussion. Chapter 2 examines the process of agricultural industrialisation during the last 90 years. It points, among other things, to the confusing terms that are used to hide the reality of the activities and contribute to the window dressing of the sector. Chapter 3 describes how raising animals and growing their feed changed in the 20th century. Chapter 4 describes how the industrialisation of poultry production provided a model of producing other

animals for food. Taken together, Chapters 2 and 3 show how animal production was profoundly changed by drivers such as the maximisation of production and profit.

The next few chapters constitute the core of the book. They deal respectively with adverse effects of industrialised poultry raising on:

- Human health (Chapter 5): e.g., how the use of antibiotics and other antimicrobial drugs in animal feed results in bacterial resistance.

- Ecosystems (Chapter 6): e.g., on spreading diseases in nature and the waste production from massive poultry farms.

- Large-scale ecosystem damage (Chapter 7): e.g., the expansion of environmental reservoirs of drug resistance.

Chapters 8 and 9 look at the impacts on occupational health and people. Of interest is the section on human ecology: how the transformation of agriculture into an industry has impacted rural communities and how the exploitation of rivers for energy and irrigation reduced agricultural land and changed the ways farmers realise their income.

Chapters 10 and 11 conclude the book. The way forward is discussed based on a three-step plan. The focus is on enough safe and affordable food for the planet, but in a way that does not threaten human health or the environment.

Although throughout the book one reads evidence stemming from environmental engineering and toxicology (the background of the author), the book does not take the format of a scientific publication: the logic of problem description – research methods – results and discussion is absent. There are no graphs or tables. In contrast, the reader finds a well-documented and sound personal testimony (the book is written to a large extent in the first person 'I' form) about the need for the agricultural industry to reform. The book fluently links the basic science data with their applications, sociology and perception, ethics and policy. It is sprinkled with a series of real-world examples the author has collected and experienced. Are all (e.g., adverse) aspects of chickenising dealt with? Likely not. The reader will hardly find data on greenhouse gas emissions and the contribution of the sector to climate change. However, these lacunae are almost inevitable when discussing such a broad subject.

This is not just a book for the happy few of the 'animal rights' activists; neither it is especially written for those attracted by and practising non-meat diets. It is a book for all of us lecturing on, researching or consulting on a more sustainable world. The way in which this world became chickenised is a well-documented example of how this type of industrialisation is in need of serious environmental, social and ethical review.

3 Energy Revolution: Your Guide to Powering the Energy System
    by: Howard Johns
    Published 2015
    by Permanent Publications
    Hyden House Ltd, The Sustainability Centre, East Meon,
    Hampshire GU32 1HR, UK, 286pp
    ISBN: 978-1-85623-1978

Since the establishment of the IPCC in 1987 and the Convention on Climate Changes in 1992 and its yearly Conferences of the Parties, the research evidence that the world has to

reduce the emission of greenhouse gases has accumulated fast. Consequently, the world faces an impacting energy transition that consists of two main aspects:

- Using energy more efficiently: an important aspect of this being that we should waste less energy than we were used to in the past.

- Replacing the carbon-based energy sources by renewable ones, such as solar, wind, water and soil-based energy.

Analysing and illustrating this transition is the core of this book, which is structured in four parts. The first one is about the diagnosis of the problem: how this world over-invested in energy based on incineration processes and why neither fracking nor nuclear contributes to a sustainable solution.

The second part provides examples from 14 countries in four continents on success stories with the local implementation of renewable energy projects. The 99% of electricity provided by wind in Denmark, the energy deprivation in large areas of sub-Saharan Africa and its solar energy potential, China as the world's largest investor in renewable energy and the fast transition to renewable energy in Nicaragua, provide just a selection of the examples.

Part 3 is about 'making it happen'. It is a wide perspective guide for communities to the first steps in realising the energy transition at the local level. It entails chapters among others on business possibilities and opportunities, technology, financial planning, legal aspects, promotion and project management. This last short chapter puts emphasis on subcontractors, design verification and cashflow management.

The last (two chapters) part of the book takes the reader away from pessimism and provides a message of hope. Hope for realising the energy transition by putting people and their communities at the centre. It is time to join the 'energy revolution'.

This book does not have the format of a scientific publication. It hardly entails graphs and does not use complex tables. Even Part 2, written by an expert in local renewable energy projects, is not technical at all. It is rather a mirative approach documenting and explaining the main arguments of each of the chapter subjects. The book presents a remarkable collection of small stories, 'faiths driers' and citations from influential reports on the subject. It is a testimony from a practitioner in developing, implementing and assessing local sustainable energy projects.

This most accessible book should reach a wide audience of all those who are prepared to contribute local action to this global dynamic, which will fundamentally change our energy production and consumption.

4   A New Approach to Landscape Change Modelling:
   Integrating Remote Sensing, GIS and Fractal Analysis
   by: An-Thinh Nguyen
   Published 2012
   by The Gió'i Publishers
   Hanoi, Vietnam, 309pp
   ISBN 9786047703401

Fast changes in landscapes of industrialised countries, but even more in (fast) developing countries, are likely one of the main underestimated environmental problems. The remote

sensing (RS) and GIS technologies to study landscape changes have evolved dramatically during recent decades and the statistics to deal with the huge amounts of data follow the technological evolution.

This book anchors on this evolution. It is about RS, GIS and fractal analysis techniques applied to different cases of land use changes in Vietnam. The book is structured in two parts. The first chapter provides a theoretical introduction both to landscape ecology and its current study methods. The remaining six chapters deal with almost prototypes of land use changes in Vietnam: reforestation, mangrove restoration, planning for coastal landscapes, landscape development and urban growth prediction.

The book provides examples of the use of advanced statistics in this area ranging from fractal mapping over multivariate and connectivity analysis to Markov cellular automata, more advanced cellular automata and hexagonal grid analysis. Nevertheless, it is the results of the case studies that attract most attention. It is remarkable how in the six addressed domains the conclusions are hardly contributing new environmental or landscape insights in spite of the advanced statistics.

The book is very well-illustrated with tables, figures and black-and-white photographs. Ample attention is given to stepwise explanations of the methodology sections. This makes the book most useful a research instrument for landscape ecologists and modellers, especially those exploring new analytical avenues. Overall, the book provides useful information for geographers, ecologists, managers of natural resources, conservation biologists and urban planners.