

GASTRONOMY

The kitchen revolution

Michael Pollan's latest book will be eaten up by the conscious consumers he created, says **Nathan Myhrvold**.

Michael Pollan is one of the most influential food writers of recent times, and has secured a position as the conscience of a new movement dedicated to local, sustainably produced cuisine. Given this position, it is a surprising admission that until recently he had little interest or skill in the craft of cooking. *Cooked* is the entertaining story of his journey to learn from a series of master cooks, artisan bakers, cheesemakers and brewers.

Pollan is a wonderful writer and his account is told with great wit and humour, which makes for a very entertaining read. The masters he chose are great characters — both in life, and under Pollan's pen.

Other writers have also sought to document their culinary apprenticeships. But *Cooked* has much higher ambitions. "My wager in *Cooked*," Pollan says, "is that the best way to recover the reality of food, to return it to its proper place in our lives, is by attempting to master the physical processes by which it has traditionally been made." This isn't just a well-told tale of how he came to master those processes, it is a book with a mission: to inspire readers to get into the trenches of their kitchens, and to stop letting other people prepare, process and package their meals. It succeeds in making its case, despite occasional lapses.

Many advocacy-oriented books use a direct argument. You should eat this because it is delicious, or because it is fun to make, or because it is healthier. Although each of these is mentioned in *Cooked*, they are sidelines compared with the main purpose: to



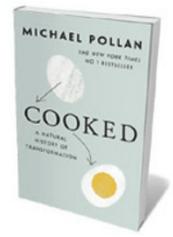
score intellectual and political points.

Politically, a strong anti-corporate theme runs through the book, blaming food companies for making us their "prey" with "edible foodlike substances". Much as I agree with Pollan on the sorry state of what is on supermarket shelves, surely we, the eaters, bear at least some responsibility for what we consume.

Intellectually, Pollan grapples, with varying degrees of success, with a fundamental contradiction. On the one hand, he wants to bring food "back to earth" rather than allow it to be "abstracted" from the traditional methods and values, the "labor of human hands" or the "natural world of plants and animals".

For Pollan, food is meant to be grounded in the context of a traditional kitchen or farmyard; that is how it achieves legitimacy. Yet, on the other hand, he abstracts food by pulling it out of the kitchen and into the salon as a prop in his very philosophical arguments. When he mixes quotes from obscure French philosophers with dialogue from barbecue pitmasters, the result ranges from interesting in some passages to unsuccessful in others. The book's sections mirror the ancient taxonomy of the elements — fire, water, air and earth. But what they are really about is barbecue, bread, beer, pickles and cheese. Put in the patois that his informants might use, if the book is about restoring honesty to food, what's up with the highfalutin words?

In discussing the newfound interest in traditional gastronomy, he asks a rhetorical question: "Can authenticity be aware of itself as such and still be authentic?" It's a very perceptive point in an age in which 'authentic' cuisine — like 'real' southern barbecue or artisanal bread baking — has been seized upon, marketed and branded to a high degree, turning its once humble practitioners into television stars. This is Pollan at his best, honouring tradition while gently calling it into question. In the same

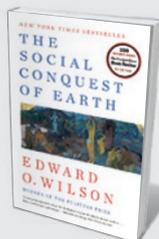


Cooked: A Natural History of Transformation
MICHAEL POLLAN
Penguin: 2013.
480 pp. \$27.95

ILLUSTRATION BY ALEX ROBBINS

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PAPERBACK

Highlights of this
season's releases



The Social Conquest of Earth

Edward O. Wilson (Liveright, 2013; \$17.95)

Distinguished sociobiologist E. O. Wilson asks how social creatures like humans and ants have achieved such evolutionary success. The key, he suggests, is in the way they form communities: with multiple generations, a division of labour and altruistic behaviour. Although Wilson's emphasis on group selection is controversial, this is a masterly amalgam of biology, linguistics, psychology, economics and the arts. (See James H. Fowler's review: *Nature* **484**, 448–449; 2012.)

spirit, I will observe that it is also a question that readers could ask about Pollan's own work, which self-consciously tries to draft on this same authenticity to serve its intellectualism.

Tradition and authenticity are his ideal, but many of his informants aren't as pure as Pollan would like them to be. His barbecue pitmaster uses a proportion of supermarket charcoal, his artisanal baker uses some white flour, his cheesemaking microbiologist nun strikes a nuanced position on raw milk and his pickle guru makes an ersatz kimchi. When this occurs, Pollan wrestles with the issue, sometimes conceding, but often contradicting them or quoting other, more "fundamentalist", sources that call them out for their apostasy.

A scientific perspective on food makes a token appearance, and includes footnotes to papers in scientific journals (including *Nature*). But this is mostly for show; like most books based on traditional cooking, its explanations deviate from scientific accuracy. This book is, at its heart, about what people feel about food, rather than what science has shown to be true.

Pollan's proselytizing that we all ought to cook more can seem a bit strident given that we are living in the golden age of organic, sustainable artisanal local food. Interest in cooking has never been higher (even if many people still don't do it); indeed, that is why Pollan's previous books have been best sellers, as this one is also likely to be. In one passage he marvels that an artisanal baker sells his loaves for only 41 cents more than the giant Hostess Brands sells its Wonder Bread. The unspoken irony is that Hostess itself recently went bankrupt. Times have changed, and many parts of *Cooked* read like a call-to-arms for a revolution that is already well under way, thanks in part to Pollan's previous books. *Cooked* will add to that legacy. ■

Nathan Myhrvold is chief executive and founder of *Intellectual Ventures*. He is also the creator and co-author of the award-winning books *Modernist Cuisine* and *Modernist Cuisine at Home*.

BIOLOGY

Vive la différence

Suzanne Alonzo relishes a synthesis of the extraordinary variations among males and females of the same species.

Forget men and women being from different planets. In *Odd Couples*, Daphne Fairbairn shows that males and females of many species look almost as if they hail from different galaxies. What is a little friction over whether the toilet seat should be left up or down? You could be a female giant seadevil with a parasitic mate one-fiftieth of your size stuck to you for his entire adult life — or a male garden spider, eaten by your mate after you have broken off your genitals to ensure her fidelity.

Fairbairn, an evolutionary biologist, demonstrates that such differences between the sexes are a fundamental component of biological diversity, affecting everything from an animal's behaviour and appearance to its life expectancy and nervous system. After a general introduction to how this works, Fairbairn spends the bulk of the book on a guided tour of sexual dimorphism in eight carefully selected and researched species, covering two fishes, a bird, a mammal and four diverse invertebrates.

As Fairbairn lucidly explains, the defining distinction between the sexes is that females make eggs and males make sperm. What is harder to understand is how that — along with a species' basic biology and habitat — can drive a cascade of differences in almost every aspect of male and female biology. Whether an organism makes eggs or sperm can affect, for example, the energy it takes to reproduce. This, in turn, affects how much energy each sex has left for growth and survival. Disparities in these, in their turn, alter the body size, habitat use, metabolic rate and reproductive behaviour favoured by Darwinian selection in males versus females. Over time, these effects lead to striking differences in body mass, colour and much more between males and females of the same species. It remains a challenge to understand how these myriad factors interact to shape

the striking differences in what it means, across species, to be male or female.

Fairbairn's tour elucidates these points as it entertains. After first exploring the perhaps more familiar patterns found in mammals and birds (elephant seals and the great bustard, species in which males vastly outweigh, and compete for, females), we encounter much stranger creatures. Take the bone-eating tubeworm: deep below the ocean's surface, harems of dwarf males live within the tube-like home of a single, much larger, female. Even more bizarre are the shell-burrowing barnacles, whose long-lived females weigh 500 times as much as the short-lived males. The males never eat, developing into little more than sperm production and delivery machines on finding a female.

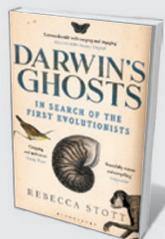
A key message here is that the large, flashy males who fight one another for access to numerous small, coy females — as seen in birds and mammals — are not representative of the predominant pattern. Females are larger in 86% of animal classes with sexual size dimorphism, Fairbairn tells us, and in many species the main challenge

males face is finding a female. Moreover, Fairbairn emphasizes that selection on males and females differs in a multitude of ways, rather than being primarily due to sexual selection on males (namely, competition among males for access to mates or to fertilize eggs). For example, male shell-carrying cichlid fish are much larger than females of the same species not only ▶



Odd Couples: Extraordinary Differences Between the Sexes in the Animal Kingdom

DAPHNE J. FAIRBAIRN
Princeton University Press: 2013. 312 pp.
\$27.95, £19.95



Darwin's Ghosts: In Search of the First Evolutionists

Rebecca Stott (*Bloomsbury*, 2013; £8.99)
Science historian Rebecca Stott probes the intellectual origins of the theory of natural selection, showing that Charles Darwin stood on the shoulders of giants, from Aristotle to Jean-Baptiste Lamarck. (See Andrew Berry's review: *Nature* **485**, 171–172; 2012.)



The Spark of Life: Electricity in the Human Body

Frances Ashcroft (*Penguin*, 2013; £9.99)
As you read this, ion channels regulate the electrical activity in your neurons and muscle cells. Physiologist Frances Ashcroft offers a brilliant treatment of the 'body electric', mixing research, science history and personal stories.