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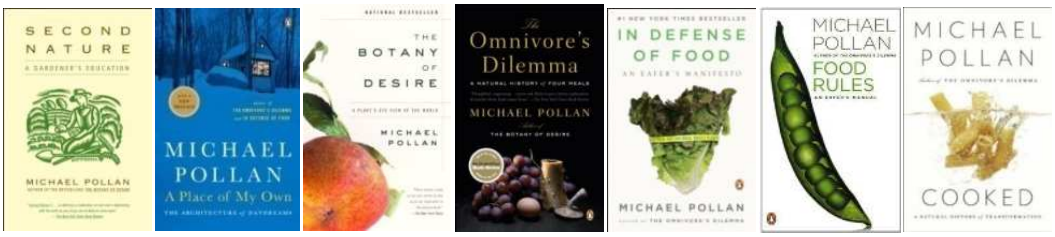
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Michael Pollan

Cooking, nourishment, life, the universe, and everything



Michael Pollan
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Michael Pollan's books written over more than 20 years: Second Nature (1991), A Place of my Own (1997), The Botany of Desire (2001); and The Omnivore's Dilemma (2006), In Defense of Food (2008), Food Rules (2010) and now Cooked: a Natural History of Transformation (April 2013: extract below)

Editor's note

From time to time as readers will know, *WN* publishes extracts from books, especially those that concern nutrition and public health written from a broad or innovative perspective, as here. This is the introduction to *Cooked: a Natural History of Transformation*, published in the US on 25 April by the Penguin Press. Thanks are due to Michael Pollan himself, who is a good friend to *World Nutrition*. To order the book, please go to Michael Pollan's website: www.michaelpollan.com.

In *Cooked*, Michael Pollan discovers the enduring power of the four classical elements – fire, water, air, and earth – to transform the stuff of nature into delicious things to eat and drink. Apprenticing himself to a succession of culinary masters, he learns how to grill with fire, cook with liquid, bake bread, and ferment everything from cheese to beer. In the course of his journey, he discovers that the cook occupies a special place in the world between nature and culture. Both are transformed by cooking, as is the cook.

Each section of *Cooked* tracks his efforts to master a single classic recipe using one of the four elements. A North Carolina barbecue pit-master tutors him in the primal magic of fire. A cook trained at Chez Panisse restaurant near his home in Berkeley California, schools him in the art of braising (roasting). A celebrated baker teaches him how air transforms grain and water into a fragrant loaf of bread. Several magician *fermentos* reveal how fungi and bacteria can perform the most amazing alchemies of all.

The secrets of living

The lessons in the book are practical in a book that is also an investigation of how cooking involves humans in a web of social and ecological relationships: with plants and animals, the soil, farmers, our local and wider history and culture. And as well as this, with the people our cooking nourishes and delights.

The effects of not cooking are similarly far reaching. Here is where Michael Pollan's investigations most immediately impact on the thinking of public health and nutrition professionals. When populations rely on corporations to process food, the result is fatty, sugary salty ultra-processed products – what he himself terms 'edible food-like substances'. This way of being disrupts our links with the natural world, and weakens our relationships with family and friends.

Cooked proposes that giving time to enjoy learning how to cook, and the acts of food preparation and cooking, may be the single most important steps we can personally take to help make food systems healthier and more sustainable. Reclaiming cooking as an act of enjoyment and self-reliance, learning to perform the magic of these everyday transformations, opens doors to a more nourishing life

Cooked: Introduction

At a certain point in the late middle of my life I made the unexpected but happy discovery that the answer to several of the questions that most occupied me was in fact one and the same.

Cook.

Some of these questions were personal. For example, what was the single most important thing we could do as a family to improve our health and general well-being? And what would be a good way to better connect to my teenage son? (As it turned out, this involved not only ordinary cooking but also the specialized form of it known as brewing.) Other questions were slightly more political in nature.

For years I had been trying to determine (because I am often asked) what is the most important thing an ordinary person can do to help reform the US food system, to make it healthier and more sustainable? Another related question is, how can people living in a highly specialized consumer economy reduce their sense of dependence and achieve a greater degree of self-sufficiency? And then there were the more philosophical questions, the ones I've been chewing on since I first started writing books. How, in our everyday lives, can we acquire a deeper understanding of the natural world and our species' peculiar role in it? You can always go to the woods to confront such questions, but I discovered that even more interesting answers could be had simply by going to the kitchen.

I would not, as I said, ever have expected it. Cooking has always been a part of my life, but more like the furniture than an object of scrutiny, much less a passion. I counted myself lucky to have a parent – my mother – who loved to cook and almost every night made us a delicious meal. By the time I had a place of my own, I could find my way around a kitchen well enough, the result of nothing more purposeful than all those hours spent hanging around the kitchen while my mother fixed dinner.

And though once I had my own place I cooked whenever I had the time, I seldom *made* time for cooking or gave it much consideration. My kitchen skills, such as they were, were pretty much frozen in place by the time I turned 30. Truth be told, my most successful dishes leaned heavily on the cooking of others, as when I drizzled my incredible sage-butter sauce over store-bought ravioli. Every now and then I'd look at a cookbook or clip a recipe from the newspaper to add a new dish to my tiny repertoire, or I'd buy a new kitchen gadget, though most of these eventually ended up in a closet.

Beginning as a child



Michael Pollan gardening at home in Berkeley, California. Gardening has always been important to him. Study of and passion for cooking came later

In retrospect, the mildness of my interest in cooking surprises me, since my interest in every other link of the food chain had been so keen. I've been a gardener since I was 8, growing mostly vegetables, and I've always enjoyed being on farms and writing about agriculture. I've also written a fair amount about the opposite end of the food chain – the eating end, I mean, and the implications of our eating for our health. But to the middle links of the food chain, where the stuff of nature gets transformed into the things we eat and drink, I hadn't really given much thought.

Cooking as spectacle

Until, that is, I began trying to unpack a curious paradox I had noticed while watching television, which was simply this: How is it that at the precise historical moment when the US people were abandoning the kitchen, handing over the preparation of most of our meals to the food industry, we began spending so much of our time thinking about food and watching other people cook it on television? The less cooking we were doing in our own lives, it seemed, the more that food and its vicarious preparation transfixed us.

Our culture seems to be of at least two minds on this subject. Survey research confirms we in the US are cooking less and buying more prepared meals every year. The amount of time spent preparing meals in US households has fallen by half since the mid-1960s, when I was watching my mom fix dinner, to a scant 27 minutes a day. (People in the US spend less time cooking than people in any other nation, but the general downward trend is global).

And yet at the same time we're *talking* about cooking more – and watching cooking, and reading about cooking, and going to restaurants designed so that we can watch the work performed live. We live in an age when professional cooks are household names, some of them as famous as athletes or movie stars. The very same activity that many people regard as a form of drudgery, has somehow been elevated to a popular spectator sport. When you consider that 27 minutes is less time than it takes to watch a single episode of cooking shows like *Top Chef* or *The Next Food Network Star*, you realize that there are now millions of people who spend more time watching food being cooked on television than they spend actually cooking it themselves. I don't need to point out that the food you watch being cooked on television is not food you get to eat.

This is peculiar. After all, we're not watching shows or reading books about sewing or darning socks or changing the oil in our car, three other domestic chores that we have been only too happy to outsource – and then promptly drop from conscious awareness. But cooking somehow feels different. The work, or the process, retains an emotional or psychological power we can't quite shake, or don't want to. And in fact it was after a long bout of watching cooking programs on television that I began to wonder if this activity I had always taken for granted might be worth taking a little more seriously.

Cooking as magic

I developed a few theories to explain what I came to think of as the Cooking Paradox. The first and most obvious is that watching other people cook is not exactly a new behavior for us humans. Even when 'everyone' still cooked, there were plenty of us who mainly watched: men for the most part, and children. Most of us have happy memories of watching our mothers in the kitchen, performing feats that sometimes looked very much like sorcery and typically resulted in something tasty to eat.

In ancient Greece, the word for 'cook', 'butcher', and 'priest' was the same – *mageiros* – and the word shares an etymological root with 'magic'. I would watch, rapt, when my mother conjured her most magical dishes, like the tightly wrapped packages of fried chicken Kiev that, when cut open with a sharp knife, liberated a pool of melted butter and an aromatic gust of herbs. But watching an everyday pan of eggs get scrambled was nearly as riveting a spectacle, seeing the slimy yellow goop suddenly leapt into the form of savory gold nuggets. Even the most ordinary dish follows a satisfying arc of transformation, magically becoming something more than the sum of its ordinary parts. And in almost every dish, you can find, besides the culinary ingredients, the ingredients of a story: a beginning, a middle, and an end.

Then there are the cooks themselves, the heroes who drive these little dramas of transformation. Even as it vanishes from our daily lives, we're drawn to the rhythms

and textures of the work cooks do, which seems so much more direct and satisfying than the more abstract and formless tasks most of us perform in our jobs these days. Cooks get to put their hands on real stuff, not just keyboards and screens but fundamental things like plants and animals and fungi. They get to work with the primal elements, too, fire and water, earth and air, using them – mastering them – to perform their tasty alchemies. How many of us still do the kind of work that engages us in a dialogue with the material world that concludes – assuming the chicken Kiev doesn't prematurely leak or the soufflé doesn't collapse – with such a gratifying and delicious sense of closure?

The cooking animal

So maybe the reason we like to watch cooking on television and read about cooking in books is that there are things about cooking we really miss. We might not feel we have the time or energy (or the knowledge) to do it ourselves every day, but we're not prepared to see it disappear from our lives altogether. If cooking is, as the anthropologists tell us, a defining human activity – the act with which culture begins, according to Claude Lévi-Strauss – then maybe we shouldn't be surprised that watching its processes unfold would strike deep emotional chords.

The idea that cooking is a defining human activity is not a new one. In 1773, the Scottish writer James Boswell, noting that 'no beast is a cook,' called *Homo sapiens* 'the cooking animal.' (Though he might have reconsidered that definition had he been able to gaze upon the frozen-food cases at Walmart.) Fifty years later, in *The Physiology of Taste,* the French gastronome Jean Anthelme Brillat-Savarin claimed that cooking made us who we are; by teaching men to use fire, it had 'done the most to advance the cause of civilization.' More recently Lévi-Strauss, writing in *The Raw and the Cooked* in 1964, reported that many of the world's cultures entertained a similar view, regarding cooking as the symbolic activity that 'establishes the difference between animals and people.'

For Lévi-Strauss, cooking was a metaphor for the human transformation of raw nature into cooked culture. But in the years since the publication of *The Raw and the Cooked*, other anthropologists have begun to take quite literally the idea that the invention of cooking might hold the evolutionary key to our humanness. A few years ago, a Harvard anthropologist and primatologist named Richard Wrangham published a fascinating book called *Catching Fire*, in which he argues that it was the discovery of cooking by our early ancestors – and not tool making or meat eating or language – that set us apart from the apes and made us human. According to the 'cooking hypothesis,' the advent of cooked food altered the course of human evolution. By providing our forebears with a more energy-dense and easy-to-digest diet, it allowed our brains to grow bigger (brains being notorious energy guzzlers) and our guts to shrink. It seems that raw food takes much more time and energy to chew and digest, which is why other primates our size carry around substantially

larger digestive tracts and spend many more of their waking hours chewing – as much as six hours a day.

The society of meals



Michael Pollan (third from the left) with family, friends and co-creators of the 36 hour meal, celebrated in the New York Times Magazine in October 2010

Cooking, in effect, took part of the work of chewing and digestion and performed it for us outside of the body, using outside sources of energy. Also, since cooking detoxifies many potential sources of food, the new technology cracked open a treasure trove of calories unavailable to other animals. Freed from the necessity of spending our days gathering large quantities of raw food and then chewing (and chewing) it, humans could now devote their time, and their metabolic resources, to other purposes, like creating a culture.

Cooking gave us not just the meal but also the occasion: the practice of eating together at an appointed time and place. This was something new under the sun, for the forager of raw food would have likely fed himself on the go and alone, like all the other animals. (Or like the industrial eaters we've more recently become, grazing at gas stations and eating by ourselves whenever and wherever.) But sitting down to common meals, making eye contact, sharing food, and exercising self-restraint all served to civilize us. 'Around that fire,' Wrangham writes, 'we became tamer.'

Cooking thus transformed us, and not only by making us more sociable and civil. Once cooking allowed us to expand our cognitive capacity at the expense of our digestive capacity, there was no going back: Our big brains and tiny guts now depended on a diet of cooked food. (Raw-foodists take note.) What this means is that cooking is now obligatory – it is, as it were, baked into our biology. What Winston Churchill once said of architecture – 'First we shape our buildings, and then

they shape us' – might also be said of cooking. First we cooked our food, and then our food cooked us.

What we miss now

If cooking is as central to human identity, biology, and culture as Wrangham suggests, it stands to reason that the decline of cooking in our time would have serious consequences for modern life, and so it has. Are they all bad? Not at all. The outsourcing of much of the work of cooking to corporations has relieved women of what has traditionally been their exclusive responsibility for feeding the family, making it easier for them to work outside the home and have careers. It has headed off many of the conflicts and domestic arguments that such a large shift in gender roles and family dynamics was bound to spark. It has relieved all sorts of other pressures in the household, including longer workdays and overscheduled children, and saved us time that we can now invest in other pursuits. It has also allowed us to diversify our diets substantially, making it possible even for people with no cooking skills and little money to enjoy a whole different cuisine every night of the week. All that's required is a microwave.

These are no small benefits. Yet they have come at a cost that we are just now beginning to reckon. Industrial cooking has taken a substantial toll on our health and well-being. Corporations cook very differently from how people do (which is why we usually call what they do 'food processing' instead of cooking). They tend to use much more sugar, fat, and salt than people cooking for people do; they also deploy novel chemical ingredients seldom found in pantries in order to make their food last longer and look fresher than it really is. So it will come as no surprise that the decline in home cooking closely tracks the rise in obesity and all the chronic diseases linked to diet.

The rise of fast food and the decline in home cooking have also undermined the institution of the shared meal, by encouraging us to eat different things and to eat them on the run and often alone. Survey researchers tell us we're spending more time engaged in 'secondary eating,' as this more or less constant grazing on packaged foods is now called, and less time engaged in 'primary eating' – a rather depressing term for the once-venerable institution known as the meal.

The shared meal is no small thing. It is a foundation of family life, the place where our children learn the art of conversation and acquire the habits of civilization: sharing, listening, taking turns, navigating differences, arguing without offending. What have been called the 'cultural contradictions of capitalism – its tendency to undermine the stabilizing social forms it depends on – are on vivid display today at the modern US dinner table, along with all the brightly colored packages that the food industry has managed to plant there.

These are, I know, large claims to make for the centrality of cooking (and not cooking) in our lives, and a caveat or two are in order. For most of us today, the choice is not nearly as blunt as I've framed it: that is, home cooking from scratch versus fast food prepared by corporations. Most of us occupy a place somewhere between those bright poles, a spot that is constantly shifting with the day of the week, the occasion, and our mood. Depending on the night, we might cook a meal from scratch, or we might go out or order in, or we might 'sort of' cook. This last option involves availing ourselves of the various and very useful shortcuts that an industrial food economy offers: the package of spinach in the freezer, the can of wild salmon in the pantry, the box of store-bought ravioli from down the street or half-way around the world.

What constitutes 'cooking' takes place along a spectrum, as indeed it has for at least a century, when packaged foods first entered the kitchen and the definition of 'scratch cooking' began to drift. (Thereby allowing me to regard my packaged ravioli with sage-butter sauce as a culinary achievement.) Most of us in the course of a week find ourselves all over that spectrum. What is new, is the great number of people now spending most nights at the far end of it, relying for the preponderance of their meals on an industry willing to do *every*thing for them save the heating and the eating. 'We've had a hundred years of packaged foods,' a food-marketing consultant told me, 'and now we're going to have a hundred years of packaged meals.'

This is a problem – for the health of our bodies, our families, our communities, and our land, and for our sense of how our eating connects us to the world. Our growing distance from any direct, physical engagement with the processes by which the raw stuff of nature gets transformed into a cooked meal is changing our understanding of what food is. Indeed, the idea that food has *any* connection to nature or human work or imagination is hard to credit when it arrives in a neat package, fully formed. Food becomes just another commodity, an abstraction. And as soon as that happens we become easy prey for corporations selling synthetic versions of the real thing – what I call edible food-like substances. We end up trying to nourish ourselves on images.

Women's work?

Now, for a man to criticize these developments will perhaps rankle some readers. To certain ears, whenever a man talks about the importance of cooking, it sounds like he wants to turn back the clock, and return women to the kitchen. But that's not at all what I have in mind. I've come to think cooking is too important to be left to any one gender or member of the family; men and children both need to be in the kitchen, too, and not just for reasons of fairness or equity but because they have so much to gain by being there. In fact, one of the biggest reasons corporations were able to insinuate themselves into this part of our lives is because home cooking had for so long been denigrated as 'women's work' and therefore not important enough for men and boys to learn to do.



Michael Pollan shopping in a local farmers' market. Choosing local food is part of the process of preparation, cooking, helping to make good societies

Though it's hard to say which came first: Was home cooking denigrated because the work was mostly done by women, or did women get stuck doing most of the cooking because our culture denigrated the work? The gender politics of cooking are nothing if not complicated, and probably always have been. Since ancient times, a few special types of cooking have enjoyed considerable prestige: Homer's warriors barbecued their own joints of meat at no cost to their heroic status or masculinity. And ever since, it has been socially acceptable for men to cook in public and professionally – for money. (Though it is only recently that professional chefs have enjoyed the status of artists.) But for most of history most of humanity's food has been cooked by women working out of public view and without public recognition. Except for the rare ceremonial occasions over which men presided – the religious sacrifice, the July 4 barbecue, the four-star restaurant – cooking has traditionally been women's work, part and parcel of homemaking and child care, and therefore undeserving of serious – that is, male – attention.

But there may be another reason cooking has not received its proper due. In a recent book called *The Taste for Civilization*, Janet Flammang, a feminist scholar and political scientist who has argued eloquently for the social and political importance of 'food work,' suggests the problem may have something to do with food itself, which by its very nature falls on the wrong side – the feminine side – of the mind-body dualism in Western culture.

The senses and the elements

'Food is apprehended through the senses of touch, smell, and taste,' she points out, 'which rank lower on the hierarchy of senses than sight and hearing, which are typically thought to give rise to knowledge. In most of philosophy, religion, and

literature, food is associated with body, animal, female, and appetite – things civilized men have sought to overcome with knowledge and reason.'

Very much to their loss.

The premise of my book is that cooking – defined broadly enough to take in the whole spectrum of techniques people have devised for transforming the raw stuff of nature into nutritious and appealing things for us to eat and drink – is one of the most interesting and worthwhile things we humans do. This is not something I fully appreciated before I set out to learn how to cook.

But after three years spent working under a succession of gifted teachers to master four of the key transformations we call cooking – grilling with fire, cooking with liquid, baking bread, and fermenting all sorts of things – I came away with a very different body of knowledge from the one I went looking for. Yes, by the end of my education I got pretty good at making a few things – I'm especially proud of my bread and some of my braises (roasts). But I also learned things about the natural world (and our implication in it) that I don't think I could have learned any other way. I learned far more than I ever expected to about the nature of work, the meaning of health, about tradition and ritual, self-reliance and community, the rhythms of everyday life, and the supreme satisfaction of producing something I previously could only have imagined consuming, doing it outside of the cash economy for no other reason but love.

This book is the story of my education in the kitchen – but also in the bakery, the dairy, the brewery, and the restaurant kitchen, some of the places where much of our culture's cooking now takes place. *Cooked* is divided into four parts, one for each of the great transformations of nature into the culture we call cooking. Each of these, I was surprised and pleased to discover, corresponds to, and depends upon, one of the classical elements: Fire, Water, Air, and Earth.

Why this should be so I am not entirely sure. But for thousands of years and in many different cultures, these elements have been regarded as the four irreducible, indestructible ingredients that make up the natural world. Certainly they still loom large in our imagination. The fact that modern science has dismissed the classical elements, reducing them to still more elemental substances and forces – water to molecules of hydrogen and oxygen; fire to a process of rapid oxidation, and so on – hasn't really changed our lived experience of nature or the way we imagine it. Science may have replaced the big four with a periodic table of 118 elements, and then reduced each of those to ever-tinier particles, but our senses and our dreams have yet to get the news.

To learn to cook is to put yourself on intimate terms with the laws of physics and chemistry, as well as the facts of biology and microbiology. Yet, beginning with fire, I

found that the older, pre-scientific elements figure largely – hugely, in fact – in apprehending the main transformations that comprise cooking, each in its own way. Each element proposes a different set of techniques for transforming nature, but also a different stance toward the world, a different kind of work, and a different mood.

Fire



Fire and water. Two of the four classic elements, sources of energy and life, both essential for transforming raw animals and plants into foods and meals

Fire being the first element (in cooking anyway), I began my education with it, exploring the most basic and earliest kind of cookery: meat, on the grill. My quest to learn the art of cooking with fire took me a long way from my backyard grill, to the barbecue pits and pit masters of eastern North Carolina, where cooking meat still means a whole pig roasted very slowly over a smoldering wood fire. It was here, training under an accomplished and flamboyant pit-master, that I got acquainted with cooking's primary colors – animal, wood, fire, time – and found a clearly marked path deep into the prehistory of cooking: what first drove our proto-human ancestors to gather around the cook fire, and how that experience transformed them. Killing and cooking a large animal has never been anything but an emotionally freighted and spiritually charged endeavor. Rituals of sacrifice have attended this sort of cooking from the beginning, and I found their echoes reverberating even today, in twenty-first-century barbecue. Then as now, the mood in fire cooking is heroic, masculine, theatrical, boastful, un-ironic, and faintly (sometimes not so faintly) ridiculous.

Water

It is in fact everything that cooking with water is not. Historically, cooking with water comes after cooking with fire, since it awaited the invention of pots to cook in, an artifact of human culture only about ten thousand years old. Now cooking moves indoors, into the domestic realm, and in this part of the book I delve into everyday home cookery, its techniques and satisfactions as well as its discontents. Befitting its subject, this section takes the shape of a single long recipe, unfolding step by step the age-old techniques that grandmothers developed for teasing delicious food from the

most ordinary of ingredients: some aromatic plants, a little fat, a few scraps of meat, a long afternoon around the house. Here, too, I apprenticed myself to a flamboyant professional character, but she and I did most of our cooking at home in my kitchen, and often as a family – home and family being very much the subject of this section.

Air



Air and earth. The other ancient elements, also essential for food and meals. Air transforms grain into bread; earth turns milk into cheese, fruit into wine

The element of air is all that distinguishes an exuberantly leavened loaf of bread from a sad gruel of pulverized grain. By figuring out how to coax air into our food, we elevate it and ourselves, transcending, and vastly improving, what nature gives us in a handful of grass seed. The story of Western civilization is pretty much the story of bread, which is arguably the first important 'food processing' technology. (The counter-argument comes from the brewers of beer, who may have gotten there first.) Here I take in several different bakeries across the country (including a Wonder Bread plant), following two personal quests: to bake a perfect, maximally airy and wholesome loaf of bread, and to pinpoint the precise historical moment that cooking took its fatefully wrong turn: when civilization began processing food in such a way as to make it less nutritious rather than more.

Earth

Different as they are, these first three modes of cooking all depend on heat. Not so the fourth. Like the earth itself, the various arts of fermentation rely instead on biology to transform organic matter from one state to a more interesting and nutritious other state. Here I encountered the most amazing alchemies of all: strong, allusive flavors and powerful intoxicants created for us by fungi and bacteria – many of them the denizens of the soil – as they go about their invisible work of creative destruction. Here I cover the fermentation of vegetables (into sauerkraut, *kimchi*, pickles of all kinds); milk (into cheese); and alcohol (into mead and beer). Along the way, a succession of *fermentos* tutored me in the techniques of artfully managing rot, the folly of the modern war against bacteria, the erotics of disgust, and the somewhat upside-down notion that, while we were fermenting alcohol, alcohol has been fermenting us.

The story of life

I have been fortunate in the talent and generosity of the teachers who agreed to take me in – the cooks, bakers, brewers, picklers, and cheese makers who shared their time and techniques and recipes. This cast of characters turned out to be a lot more masculine than I would have expected, and a reader might conclude that I have indulged in some unfortunate typecasting. But as soon as I opted to apprentice myself to professional rather than amateur cooks – in the hopes of acquiring the most rigorous training I could get – it was probably inevitable that certain stereotypes would be reinforced. It turns out that barbecue pit-masters are almost all men, as are brewers and bakers (except for pastry chefs), and a remarkable number of cheese makers are women. In learning to cook traditional pot dishes, I worked with a female chef, and if by doing so I underscored the cliché that home cooking is woman's work, that was sort of the idea: I wanted to delve into that very question. We can hope that the gender stereotypes surrounding food and cooking will soon be thrown up for grabs, but to assume this has already happened would be to kid ourselves.

At bottom cooking is not a single process but, rather, comprises a small set of technologies, some of the most important humans have yet devised. They changed us first as a species, and then at the level of the group, the family, and the individual. These technologies range from the controlled used of fire to the manipulation of specific micro-organisms to transform grain into bread or alcohol all the way to the microwave oven – the last major innovation.

So cooking is really a continuum of processes, from simple to complex, and *Cooked* is, among other things, a natural and social history of these transformations, both the ones that are still part of our everyday lives and the ones that are not. Today, we're apt to think of making cheese or brewing beer as 'extreme' forms of cookery, only because so few of us have ever attempted them, but of course at one time all these transformations took place in the household and everyone had at least a rudimentary knowledge of how to perform them. Nowadays, only a small handful of cooking's technologies seem within the reach of our competence. This represents not only a loss of knowledge, but a loss of a kind of power, too. And it is entirely possible that, within another generation, cooking a meal from scratch will seem as exotic and ambitious – as 'extreme' – as most of us today regard brewing beer or baking a loaf of bread or putting up a crock of sauerkraut.

When that happens – when we no longer have any direct personal knowledge of how these wonderful creations are made – food will have become completely abstracted from its various contexts: from the labor of human hands, from the natural world of plants and animals, from imagination and culture and community. Indeed, food is already well on its way into that ether of abstraction, toward becoming mere fuel or pure image. So how might we begin to bring it back to earth?

Doing it

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. The good news is that this is still within our reach, no matter how limited our skills in the kitchen. My own apprenticeship necessitated a journey far beyond my own kitchen (and comfort zone), to some of the farther reaches of cookery, in the hopes of confronting the essential facts of the matter, and discovering exactly what it is about these transformations that helped make us who we are. But perhaps my happiest discovery was that the wonders of cooking, even its most ambitious manifestations, rely on a magic that remains accessible to all of us, at home.

I should add that the journey has been great fun, probably the most fun I've ever had while still ostensibly 'working.' What is more gratifying, after all, than discovering you can actually make something delicious (or intoxicating) that you simply assumed you'd always have to buy in the marketplace? Or finding yourself in that sweet spot where the frontier between work and play disappears in a cloud of bread flour or fragrant steam rising from a boiling kettle of wort?

Even in the case of the seemingly most impractical cooking adventures, I learned things of an unexpectedly practical value. After you've tried your hand at brewing or pickling or slow roasting a whole hog, everyday home cooking becomes much less daunting, and in certain ways easier. My own backyard barbecuing has been informed and improved by my hours hanging around the barbecue pit. Working with bread dough has taught me how to trust my hands and my senses in the kitchen, and to have enough confidence in their reporting to free me from the bonds of recipe and measuring cup. And having spent time in the bakeries of artisans as well as in a Wonder Bread factory, my appreciation for a good loaf of bread has grown much more keen. Same for a wedge of cheese or bottle of beer:

What had always been just products, good or bad, now reveal themselves as so much more – as achievements, as expressions, as relationships. By itself, this added increment of eating and drinking pleasure would have been enough to justify all the so-called work.

But perhaps the most important thing I learned by doing this work is how cooking implicates us in a whole web of social and ecological relationships: with plants and animals, with the soil, with farmers, with the microbes both inside and outside our bodies, and, of course, with the people our cooking nourishes and delights. Above all else, what I found in the kitchen is that cooking connects.

Where we are



Michael Pollan getting to know people, preparing for a meal. He is second from the right, on tour at the University of Wisconsin in September 2009

Cooking – of whatever kind, everyday or extreme – situates us in the world in a very special place, facing the natural world on one side and the social world on the other. The cook stands squarely between nature and culture, conducting a process of translation and negotiation. Both nature and culture are transformed by the work. And in the process, I discovered, so is the cook.

As I grew steadily more comfortable in the kitchen, I found that, much like gardening, most cooking manages to be agreeably absorbing without being too demanding intellectually. It leaves plenty of mental space for daydreaming and reflection. One of the things I reflected on, is the whole question of taking on what in our time has become, strictly speaking, optional, even unnecessary work, work for which I am not particularly gifted or qualified, and at which I may never get very good. This is, in the modern world, the unspoken question that hovers over all our cooking: Why bother?

What's worth doing

By any purely rational calculation, even everyday home cooking (much less baking bread or fermenting *kimchi*) is probably not a wise use of my time. Not long ago, I read an Op Ed piece in *The Wall Street Journal* about the restaurant industry, written by the couple that publishes the Zagat restaurant guides, which took exactly this line. Rather than coming home after work to cook, the Zagats suggested, 'people would be better off staying an extra hour in the office doing what they do well, and letting bargain restaurants do what they do best.'

Here in a nutshell is the classic argument for the division of labor, which as Adam Smith and countless others have pointed out, has given us many of the blessings of civilization. It is what allows me to make a living sitting at this screen writing, while

others grow my food, sew my clothes, and supply the energy that lights and heats my house. I can probably earn more in an hour of writing or even teaching than I could save in a whole week of cooking. Specialization is undeniably a powerful social and economic force. And yet it is also debilitating. It breeds helplessness, dependence, and ignorance and, eventually, it undermines any sense of responsibility.

Our society assigns us a tiny number of roles: We're producers of one thing at work, consumers of a great many other things all the rest of the time, and then, once a year or so, we take on the temporary role of citizen and cast a vote. Virtually all our needs and desires we delegate to specialists of one kind or another – our meals to the food industry, our health to the medical profession, entertainment to Hollywood and the media, mental health to the therapist or the drug company, caring for nature to the environmentalist, political action to the politician, and on and on it goes.

Before long it becomes hard to imagine doing much of anything for ourselves – anything, that is, except the work we do 'to make a living.' For everything else, we feel like we've lost the skills, or that there's someone who can do it better. (I recently heard about an agency that will dispatch a sympathetic someone to visit your elderly parents if you can't spare the time to do it yourself.) It seems as though we can no longer imagine anyone but a professional or an institution or a product supplying our daily needs or solving our problems. This learned helplessness is, of course, much to the advantage of the corporations eager to step forward and do all this work for us.

One problem with the division of labor in our complex economy is how it obscures the lines of connection, and therefore of responsibility, between our everyday acts and their real-world consequences. Specialization makes it easy to forget about the filth of the coal-fired power plant that is lighting this pristine computer screen, or the back- breaking labor it took to pick the strawberries for my cereal, or the misery of the hog that lived and died so I could enjoy my bacon. Specialization neatly hides our implication in all that is done on our behalf by unknown other specialists half a world away.

Being in the world

Perhaps what most commends cooking to me is that it offers a powerful corrective to this way of being in the world – a corrective that is still available to all of us. To butcher a pork shoulder is to be forcibly reminded that this is the shoulder of a large mammal, made up of distinct groups of muscles with a purpose quite apart from feeding me. The work itself gives me a keener interest in the story of the hog: where it came from and how it found its way to my kitchen. In my hands its flesh feels a little less like the product of industry than of nature; indeed, less like a product at all. Likewise, to grow the greens I'm serving with this pork, greens that in late spring seem to grow back almost as fast as I can cut them, is a daily reminder of nature's

abundance, the everyday miracle by which photons of light are turned into delicious things to eat.

Handling these plants and animals, taking back the production and the preparation of even just some part of our food, has the salutary effect of making visible again many of the lines of connection that the supermarket and the 'home-meal replacement' have succeeded in obscuring, yet of course never actually eliminated. To do so is to take back a measure of responsibility, too, to become, at the very least, a little less glib in one's pronouncements.

Especially one's pronouncements about 'the environment,' which suddenly begins to seem a little less 'out there' and a lot closer to home. For what is the environmental crisis if not a crisis of the way we live? The Big Problem is nothing more or less than the sum total of countless little everyday choices, most of them made by us (consumer spending represents nearly three-quarters of the US economy) and the rest of them made by others in the name of our needs and desires. If the environmental crisis is ultimately a crisis of character, as Wendell Berry told us way back in the 1970s, then sooner or later it will have to be addressed at that level—at home, as it were. In our yards and kitchens and minds.

As soon as you start down this path of thinking, the quotidian space of the kitchen appears in a startling new light. It begins to matter more than we ever imagined. The unspoken reason why political reformers from Vladimir Lenin to Betty Friedan sought to get women out of the kitchen was that nothing of importance – nothing worthy of their talents and intelligence and convictions – took place there. The only worthy arenas for consequential action were the workplace and the public square.

But this was before the environmental crisis had come into view, and before the industrialization of our eating created a crisis in our health. Changing the world will always require action and participation in the public realm, but in our time that will no longer be sufficient. We'll have to change the way we live, too. What that means is that the sites of our everyday engagement with nature – our kitchens, gardens, houses, cars – matter to the fate of the world in a way they never have before.

To cook or not to cook thus becomes a consequential question. Though I realize that is putting the matter a bit too bluntly. Cooking means different things at different times to different people; seldom is it an all-or-nothing proposition. Yet even to cook a few more nights a week than you already do, or to devote a Sunday to making a few meals for the week, or perhaps to try every now and again to make something you only ever expected to buy – even these modest acts will constitute a kind of a vote. A vote for what, exactly?

Well, in a world where so few of us are obliged to cook at all anymore, to choose to do so is to lodge a protest against specialization – against the total rationalization of

life. Against the infiltration of commercial interests into every last cranny of our lives. To cook for the pleasure of it, to devote a portion of our leisure to it, is to declare our independence from the corporations seeking to organize our every waking moment into yet another occasion for consumption. To reject the debilitating notion that, at least while we're at home, production is work best done by someone else, and the only legitimate form of leisure is consumption. This dependence marketers call 'freedom.'

The transformation of us

Cooking has the power to transform more than plants and animals: It transforms us, too, from mere consumers into producers. Not completely, not all the time, but I have found that even to shift the ratio between these two identities a few degrees toward the side of production yields deep and unexpected satisfactions. *Cooked* is an invitation to alter, however slightly, the ratio between production and consumption in your life. The regular exercise of these simple skills for producing some of the necessities of life increases self-reliance and freedom while reducing our dependence on distant corporations. Not just our money but our power flows toward them whenever we cannot supply any of our everyday needs and desires ourselves. And it begins to flow back toward us, and our community, as soon as we decide to take some responsibility for feeding ourselves. This has been an early lesson of the rising movement to rebuild local food economies, a movement that ultimately depends for its success on our willingness to put more thought and effort into feeding ourselves.

Not every day, not every meal – but more often than we do, whenever we can. Cooking, I found, gives us the opportunity, so rare in modern life, to work directly in our own support, and in the support of the people we feed. If this is not 'making a living,' I don't know what is. In the calculus of economics, doing so may not always be the most efficient use of an amateur cook's time, but in the calculus of human emotion, it is beautiful even so. For is there any practice less selfish, any labor less alienated, any time less wasted, than preparing something delicious and nourishing for people you love?

So let's begin.
I begin with fire.

Status

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