ANXIOUS EATERS

WHY WE FALL FOR FAD DIETS

JANET CHRZAN AND
KIMA CARGILL

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ARTS AND TRADITIONS OF THE TABLE

ARTS AND TRADITIONS OF THE TABLE:
PERSPECTIVES ON CULINARY HISTORY

Albert Sonnenfeld, Series Editor

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Columbia University Press
New York

Columbia University Press
Publishers Since 1893
New York Chichester, West Sussex
cup.columbia.edu

Library of Congress Cataloging-in-Publication Data
Names: Chrzan, Janet, author. | Cargill, Kima, author.
Title: Anxious eaters : why we fall for fad diets / Janet Chrzan, and Kima Cargill.
Other titles: Why we fall for fad diets
Description: New York : Columbia University Press, [2022] |
Series: Arts and traditions of the table: perspectives on culinary history |
Includes bibliographical references and index.
Identifiers: LCCN 2021058012 | ISBN 9780231192446 (hardback) |
ISBN 9780231549806 (ebook)
Subjects: LCSH: Food habits—Social aspects. | Nutrition—Social aspects. |
Diet—Social aspects. | Reducing diets—Social aspects. |
Reducing diets—Psychological aspects.
Classification: LCC GT2855 .C47 2022 | DDC 394.1/2—dc23/eng/20220318
LC record available at https://lccn.loc.gov/2021058012

Columbia University Press books are printed on permanent
and durable acid-free paper.
Printed in the United States of America

Cover design: Julia Kushnirsky
Cover photo: Natalia Deviatiarova / Shutterstock

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ACKNOWLEDGMENTS

"A FINE SUFFICIENCY"

This book is dedicated to the memory of Dr. Don Yoder: folklorist, mentor, renowned professor . . . and friend. At the end of a meal, he would say, "Thank you, I've had a fine sufficiency." This old-fashioned phrase originates among the Pennsylvania Quakers. It was used to explain to a child that they have had enough to eat when they ask for more (example: "You'd like another piece of cake? No, you've had a fine sufficiency of cake") and to gently remind them not to be greedy. Don used it differently; with him, it meant that he was replete and happy. He'd had enough and didn't need more. That phrase sang through Janet's head again and again while writing this book, and it probably created the emergent ponderings that led to the book's existence. What does it mean to have enough and to have enough food? How do we know when to put on the brakes and stop eating? Almost all fad diets presume that humans can't do that—the core premise of their practice is the need to police the self because the self never has enough. Without strict control, denial, and arcane rules, the body swells with fat and must be regulated by special diets. But that's not usually the case, and certainly not for Don. He knew when he'd had enough to eat, and he knew to be grateful for the meal. He taught Janet something immensely valuable about living in the world, enjoying its wonders, and accepting limits. He taught her to appreciate "a fine sufficiency" and to be grateful. Thank you, Don.

Of course, there are many others to be grateful for, because without their assistance this book would not exist. The greatest thanks are due to Jennifer Crewe, editor extraordinaire, who suggested that we write the book we'd been intellectually doodling about, and who guided and shepherded it through a long gestation and multiple iterations. She was immensely patient and supportive, and without her kind counsel it would not have been completed. Sheniqua (Nini) Larkin, executive assistant to the associate provost and director of Columbia University Press, made sure the I's were dotted and the T's crossed and did so with absolute good humor, efficiency, and professionalism. Our copy editor, Susan Zorn, cleaned up the mess without too much psychological damage to the authors and in record time. Four primary peer reviewers provided valuable advice that corrected our assumptions and errors, tightened our reasoning, and improved the book immensely.

Many people made it possible to write this book. Jennifer Stock, then Director of the Helen Kate Furness Library, kindly ran the county library numbers to determine which diet books were the most popular among patrons. Thanks as well to the Board of Directors of the Delaware County Libraries (DCL) for allowing these data to be used for this project. We must also thank the producers and patrons of the Oakmont Farmers' Market, who have provided hundreds of hours of conversation, surveys, and interviews about what it means to be a concerned—and anxious—eater. Over the years we've presented these ideas at meetings and seminars, and our panel companions and collaborators have sharpened our thinking, expanded our perspectives, and challenged our assumptions. Without Leighann Chaffee and Sierra Clark and the many members who attended our Association for the Study of Food and Society (ASFS) panels over the years (and asked penetrating, intellectually stimulating questions), this book would have been impossible to write.

Gratitude and thanks to Warren Belasco, Fabio Parasecoli, Carole Counihan, Jackie Ricotta, Rachel Black, Ken Albala, Amy Bentley, Scott Alves Barton, John Brett, Leigh Bush, Miriam Chaiken, Charlene Compher, Emily Contois, Sheila Crye, Jon Deutsch, Alice Julier, Ellen Lampert, Leslie Sue Lieberman, Marci Pelchat, Gloria Rodriguez, Jamie Schler, Christy Shields, Rosemary Trout, and William Woys Weaver: all of them provided, at one time or another, "Ah-ha!" conversations that shaped our thinking about fad diets. We are also grateful for all of the members of the ASFS for providing a warm welcome to early career food scholars, as well as editorial

support and mentorship. Special and enduring thanks to Elizabeth (Beth) Barden, nutritional anthropology partner in crime, for a delicious gift of the Enid Blyton–inspired volume *Five Go Gluten Free* and for thirty years of inspiring chats about food and the human condition.

ANXIOUS EATERS

INTRODUCTION

Perhaps you've had an experience like this: you're out for lunch with a friend and you notice that he's lost weight and seems to be in very good spirits. As you review the menu your friend explains that he can't eat much of it because he's on a special diet, and then he tells you about his new food routine in detail. You listen, rapt, since your friend is so enthusiastic and besides, he seems to be looking pretty good, so maybe the diet works? It seems pretty complicated, however, with the need to eat particular foods—and avoid other particular foods—at specific times of day. It sounds like he's only eating a few foods because he needs to avoid so many, particularly carbohydrates, or fats, or fruits, or dairy. He explains the biology of the diet, and how it's rooted in deep evolutionary history, so that he's only eating foods that are specifically good for his DNA. He's returning his lifestyle to an earlier, healthier mode that ensures a clear mind, fulfilling sleep and will avoid illness and lengthen his life span. He assures you that we should all be adopting this diet if we are going to be our very best selves. After that, he orders a burger, no bun, no condiments or cheese, and switches out the accompanying fries for steamed broccoli. A salad of iceberg lettuce and Ranch dressing and a dessert of gluten-free chocolate cake, and he's a happy eater. You remain a bit confused, however, about how his lunch choices reflect the diet he had explained.

Two months later you meet again, and your friend has gained back a lot of the weight he had lost, but he's enthusiastic about another new diet, one that meshes his nutritional biology with his diurnal cycle. As it turns out, the problem with the other diet—and the reason it failed—is that he's learned it's not about what you eat, precisely, but when you eat it, and in combination with other foods. So now he's on the right course and will be able to eat what he wants when he wants, for life, without having to worry about his weight again. He orders gluten-free pasta with carbonara sauce and an extra order of bacon and, for dessert, crème brulée with whipped cream. He explains that he eats meat and dairy three days a week, with carbohydrate foods at lunch only, and can have vegetables, beans, and carbs the other days. But no gluten, ever, because that's not a natural carbohydrate but one that was bred into newer varieties of wheat that cause bloating and allergies. He seems happy and convinced, but you think his lunch looks a bit odd, and you are glad to eat your hamburger and fries. And you are a little curious about how gluten, a protein found in wheat and some other grains, turned into a carbohydrate, according to your friend. Perhaps it changed while you weren't looking?

We have all had that experience with the friend who has a new diet, one that they're following enthusiastically. Or maybe we've been that friend, adopting a new diet because we learned about it from another friend or read about it online or in a magazine or heard a compelling celebrity endorsement. Most such diets promise the same things: weight loss, better health, better sleep, higher mental functioning, and a general improvement in mood and affect—in other words, self-transformation. Many convince us that certain foods or food ingredients cause ill-health and that avoidance will improve a wide range of physical and mental capacities. Most also seem quite simple—at least at first. It's easy to avoid this food or that food, and it makes shopping so much easier just to know what to do without having to think through every single meal and food choice. These diets promise radical transformation in our lives if we just follow a few "simple" rules.

Both authors of this book have professionally encountered such diets in their research, in their clinical work, and with the general public. Janet is a nutritional anthropologist who teaches courses in food and culture, nutrition, nutrition evolution, and other related topics. When someone hears about what she does, she is told about their latest diet—often with the desire to have the diet validated and approved of by a "professional."

She also has been involved in projects designed to increase vegetable and whole-fruit intake, improve diets in schoolchildren, and support local farms and regional cuisines, including the creation of a farmers' market in a suburb of Philadelphia. She created the market and the educational not-for-profit that runs it to make fresh vegetables and local foods more available to the community and to support local farms and businesses. An explicit mission goal is community food education, specifically, supporting healthy food choices and access. Many of her observations about the use of special diets have arisen out of the nutritional education efforts of the market and interactions with patrons at the market.

A typical conversation about fad diets occurred at the market during the summer of 2018. A market customer, clearly well spoken and well educated, asked Janet about organic produce and bakery goods. She explained that she ate only organic food because she had a reaction to conventional foods and that she avoided all white flour and sugar because she was allergic to them. When asked—using a very neutral tone of voice—to describe the reactions and allergies, she explained that she hadn't been feeling good for a long time but didn't know why. Her daughter-in-law suggested that she switch to a popular new diet designed by a wellness expert, so she bought the recommended books and cookbooks to explore what she should be eating. The author (a diet guru) explained very clearly that the symptoms and malaise demonstrated that she wasn't eating what humans had evolved to eat. In particular, the customer stated that she was allergic to white flour and sugar, just like the book said, because she sometimes felt "funny" after eating a meal with bread or sweets. She had switched to whole-grain bread and now avoided sugar, and her allergy was under control. She had not gone to an allergist to diagnose the problem but had self-diagnosed; she said there was a questionnaire in the book and she answered the questions, and it was clear she was allergic. She then explained her diet, which sounded like the typical food avoidance plan—in her case, the removal of carbohydrates—and went shopping. Her purchases consisted of a pie from the cookie baker (made with conventional white flour, white sugar, and organic berries) and a fruit-filled sweet bread made with mixed grains (some white) from the bread maker. When asked if she had found what she needed for her special diet, she said yes, she found the right foods and that she wouldn't be eating any vegetables or fruit from the market because she wasn't "sure if they were organic." She left the market happy and left Janet

confused by how a seemingly sensible woman had not only adopted a diet that didn't make sense but had then happily purchased foods not part of the diet, convinced that they represented what she "should eat." We've all been this well-meaning woman when we've fallen for what looked like scientific claims that promised to solve a problem we didn't fully understand but badly wanted to remedy.

Another example is an interaction with a local contractor who heard about a diet "where you eat the foods that people did a long time ago and it cures cancer." He couldn't remember the name of it—he read all about it online—but it started with a "p." When Janet suggested "Paleo," he affirmed that was the name. When told that Paleo diets don't cure cancer, he argued and said that he read online from lots of people whose cancer was cured by eating the diet. When asked if those were sites that sold dietary supplements and ingredients for Paleo, he again affirmed and wanted to know what Janet thought of the diet before he started buying what they offered. In this case, the promise of avoiding or curing a much-feared disease was reason enough to try the diet and even to buy products. He did, however, agree that testimonials on a sales website might be distorted in favor of the item being offered but still was convinced, given what he had read, that somehow that diet probably prevented cancer, because (according to him) people didn't have cancer in the past.

These are not solitary examples; situations of this sort have occurred with numerous community members and customers at the market and demonstrate that knowledge about food, diets, health, and nutrition is idiosyncratic, riddled with cognitive dissonance, but also emblematic of the American understanding of food intake and the self. More often than not the desire to adopt such a diet is tied to avoidance of illness as much as it is to the creation of a slim body. Above all, interactions of this sort made Janet wonder what was going on with these eaters and how such dietary patterns of behavior fit into the big tent of food culture within the United States.

Kima is a professor of clinical psychology who teaches the psychology of food and culture, as well as consumerism and its effects on well-being. Kima's previous scholarship has examined how overeating is influenced by living in an affluent culture focused on consuming. She views appetite as not only a biological drive but also a broader desire to consume material goods, luxury experiences, food, medications, and alcohol. She also focuses on how the food and pharmaceutical industries use psychology to trick us

into consuming more by distorting scientific information, sowing nutritional confusion, resisting regulation, and convincing us that the solution to the ills of overconsumption is more consumption. In her clinical psychology practice Kima often learns about nutritional practices and fad diets adopted by her patients in order to lose weight, improve fertility, or address perceived allergies.

Our collaboration and this volume began accidentally when Janet was asked to peer-review Kima's book *The Psychology of Overeating*. In Kima's clinical work, she often interacts with patients who struggle with weight or have difficult relationships with food. In trying to understand why her patients were having trouble with consumption of consumer goods as well as food, Kima explored the magical belief systems that they adopted to rationalize their actions. One patient relied on a series of fad diets to control her weight, albeit unsuccessfully, and was particularly convinced that going gluten free would solve her myriad somatic problems. Kima wrote about how "Allison" saw a gluten-free diet as a kind of magic bullet that would fix, with one simple action, her mental and bodily health problems. And in an early draft of the book manuscript, Kima made a very easy mistake (for someone who isn't a nutritionist, that is . . .): she described gluten as a carbohydrate. This makes perfect sense because going gluten free means avoiding wheat, the most popular and prevalent source of carbohydrates in the United States. Cognitively we often identify wheat as a carb, and thus if something in the wheat is causing a problem, that problem must also be a carb, right? It makes perfect sense given how our brains mentally map the world around us. But it's incorrect, because gluten is a protein; in fact, it's a springy one that allows breads to rise and provide that toothy loft that marks a really tasty, well-made loaf. Gluten stretches to accommodate the air bubbles that cause the bread to rise because protein elongates far better than carbohydrate. Without gluten, you'd have a cracker, not a slice of bread.

Janet flagged this small mistake, Kima fixed it, and we then started talking about how food beliefs and practices are shaped by cultural norms, by what we know (or think we know), and by what we don't know. We also realized that we shared a fascination with dietary behavior and had significant clinical and participant-observational experience in what people eat, why they eat it, and how it affects health, both mental and physical. We often discussed the dietary fads that we heard about from subjects and

patients, so that together we could provide a greater understanding of why such diets were adopted by such a wide variety of people.

This conversation has continued for years and is a source of real inspiration to both of us since we approach our knowledge of food from different academic disciplines. Whereas Janet is a nutritional anthropologist, trained in human biology, nutrition, and medical anthropology, Kima's specialty within psychology is the cultural origins of psychological disorders with a training background in psychoanalytic and existential theory. We realized that each of us holds a piece of the puzzle we title "why do people follow fad diets?" and that by comparing our notes about clinical experiences, dieters' behavior, academic theory, and methods we could triangulate the question to create a far more contextualized cultural map of why people choose such diets.

There is no single definition of a fad diet, but we generally understand a fad diet to be a novelty diet that makes big promises and often has little scientific evidence supporting it or in many cases is supported by debunked science or pseudoscientific claims. The Pennington Biomedical Research Group defines fad diets as ones that:

- Ask the user to eliminate one or several food groups.
- Promise quick results, such as five or more pounds of weight loss a week.
- Use personal testimonies as proof of effectiveness.
- Use only certain or special foods that claim to offer advantages for weight loss.
- Recommend supplements or pills as part of the diet.
- Are endorsed or advertised by a celebrity.
- Sound too good to be true.[1]

We would add that, like fashion fads, fad diets are a form of collective behavior that develop within a culture, a generation, or social group and that people follow enthusiastically for a somewhat short period. All dietary practices these days—whether perennial diets such as vegetarianism or more recent fad diets such as Clean Eating—have sizable online communities and cultures that allow for the viral spread of trendy behaviors and practices.

An important element contributing to fad diet popularity is the charisma and appeal of their founders. It's easy to be snarky about how diet originators benefit from their diets—they often make a lot of money from

books, consulting, and paid talks—but they also become important cultural figures, health "VIPs" who command attention and accolades. Authority is granted though endorsements by celebrities; appearances on television chat shows, podcasts, and other media; and the acceptance and approval of friends who follow and promote the diet and lifestyle. The mere fact that they have produced a book signals to many people (especially those who don't understand the ease of self-publication) that the authors are reliable and knowledgeable, because how can you get a volume published if the information within isn't accurate? In addition, their messages are deeply hopeful, and they guarantee that their diets will improve the lives of all who follow. The proponents often promise improved health and wellness and provide glowing testimonials from followers to support their diet protocols. They also become icons of aspiration; just think of the appeal of Gwyneth Paltrow: she's famous, beautiful, financially successful, and has a lovely family. Some are considered to be prophets or gurus by their followers, especially when they attribute their health and success to religious or spiritual guidance. Indeed, the appeal of merely getting rich may pale in comparison to the attainment of social and cultural accolades and success. The charisma and aspirational promises of these gurus make them profoundly appealing in general, especially to those who are worried about health, appearance, or "living their best life." Following these diets promises so very much, from health and wellness to wealth and social success. It's astonishing, frankly, that fad diets aren't even more popular than they seem to be!

In the process of discussing and comparing disciplinary findings, we realized something surprising, something we even found intellectually perverse: fad diets make cultural sense. Fad diets aren't a product of ignorance, lazy or wishful thinking, or purposeful mendacity (although sometimes all of these occur as well); they are a product of deep and enduring cultural and psychological processes and needs. When examined within a cultural system, they are rational. Not only that, but every fad diet expresses important cultural tropes and belief systems that make it a functional and sensible example of social, cultural, and psychological programming. Even if the diets don't make much biological sense, they make cultural sense and fulfill psychological needs, so they persist.

Fad diets are behaviors designed to calm an accompanying set of concerns or anxieties. These might be concrete anxieties about weight, body

size, or food safety. Or they might be broader existential anxieties about social status, aging, virility, or fertility. If you are familiar with obsessive-compulsive disorder, then you already know that it's an anxiety disorder in which fears (obsessions) are accompanied by behaviors (compulsions) that are designed to calm the fears. A person who fears contamination might compulsively wash or disinfect objects to calm their anxieties. The compulsive behaviors work as a kind of treatment, or talisman, to manage the internal distress. We aren't suggesting that fad dieting is a clinical disorder! However, there is a similar psychology at play: our subjective distresses channel themselves into dietary behaviors that are meant to calm and organize the self.

Finally, we should add that we are not exempt from fads! While we try to maintain objective, scientific distance, we're also rank-and-file members of this culture and often wish for the same easy solutions and quick fixes as everyone else. We would also do well to remember that, above all, fad diets serve as heuristics, that is, mental shortcuts or systems to simplify what has become a complex and confusing behavior: eating.

THE MAGIC-BULLET EFFECT

Many fad diets make extravagant promises about results, assuring users that the relatively small effort of adhering to a seemingly easy diet will pay off with outsized results in multiple areas of life, from physical appearance to mental functioning and longevity. The process is depicted as a unidirectional cause-and-effect relationship, usually with few side effects or risks. We think of such promises as magic bullets: they argue that the adherent needs to do only one simple act, such as take a pill, avoid a certain food, or practice a behavior, and the results are guaranteed to solve the problem, however defined. Most importantly, there is rarely any mention of possible negative outcomes or even outcomes that don't work at all.

The name for this type of thinking originated in a German story from the Renaissance, a tale about a marksman who owned magic bullets that hit the target every time he fired, without fail. Hundreds of years later the phrase "magic bullet" entered the medical lexicon, signifying a drug or treatment able to selectively cure disease with no harmful side effects. But note that in the original tale the marksman acquired the magic bullets from the devil—who retained the final bullet for his sole use. Ultimately, that

final bullet could be used against the marksman; that is, the "magic bullet" contained a hidden cost. This darker side of the folktale was forgotten when the phrase entered the popular medical lexicon. The belief in magic bullets expresses our deep-seated desires for powerful, simple solutions to complex problems (such as cancer or a slim body), as well as our longing for self-transformation. But just as that final bullet couldn't be controlled by the hunter, these solutions don't always hit their mark.

Fad diets are just one of the many cultural practices that channel our wishes for easy, seemingly cost-free solutions, expressing desires for self-transformation and relief from anxiety often outside of our self-awareness. Indeed, one of the core attributes of most fad diets is the promise of a simple fix to the problem of diet-induced fat, ill-health, or general malaise, as numerous critics have illustrated (for example, see Levinovitz, who is particularly helpful when contemplating how mythology validates diets, and Warner, who illustrates how pseudoscience encourages magic-bullet thinking). A simple perusal of your email account's spam bucket will turn up numerous offers for the perfect, easy diet, similar to much of the clickbait that shows up on your social media news feed. The allure of something for nothing—or, in this case, losing weight and achieving perfect health for minimal effort—is hard to resist. Our minds know it can't be true, yet we hope that maybe this diet, this time, will remove that pesky extra twenty pounds.

In this volume, we will examine fad diets from the perspectives of nutrition, anthropology, and psychology to explain why such diets are popular and how they help users manage anxieties about food choice and offer the promise of self-transformation. While most studies of dietary practices focus on the content of the diet and how it affects the bodies and social lives of adherents, this book will instead explore the cultural correlates for diet popularity. In other words, we aim to understand the cultural and economic context of diets, as well as their psychological appeal for the individual. Diets—particularly fad diets—do not appear and become culturally salient in a vacuum; diets, bodily practices, and nutritional belief systems are created by culturally determined narratives, often designed to effect self-transformation through elitism, identity, or rituals of purification. As such, they meet psychological yearnings and rationales, operate through cultural systems that condition use patterns and legitimize practice, and affect biological bodies individually and collectively. Yet they are almost always of their time and place, and they are subject to social and cultural

change as belief systems shift in response to perceptions of nutritional science and appropriate bodily practice. While individuals feel that they choose specific diets for reasons that are personal, in fact, the diet is available to them because of social systems that harness cultural narratives to channel acceptance and behavior to make the diet physically, economically, and perceptually rational. It's worth repeating that the forces that make diets available are often outside of our awareness, even though we often feel that our dietary choices are individual and rational.

While we do comment on the nutritional wisdom of many diets, our primary aim is to explore their popularity and functionality in relation to culture, nutrition, and individual psychological needs. We present an analysis of dietary practice and belief designed to provide the reader with the means to better understand why specific diets are popular among the American population. We want to answer the questions: Why this diet, and why now? Moreover, the book will arm the reader with a critical method to understand future fad diets in sociocultural and psychological context. Every era is marked by specific dietary regimes that reflect broader cultural and historical trends in understanding the body, the self, and social relationships. We will explore how these bodily practices and belief systems represent and express a culturally and historically situated self and why parsimonious solutions, such as "eat less food," are less attractive than diets that are more esoteric (and arbitrary). We'll ask if this nutritional confusion is a product of our culture and, if so, how we can use cultural (and personal) practices and beliefs to better understand why we choose to follow diet fads and what we expect them to do for us.

We should also note that dietary behaviors, especially those connected to fad diets, are nearly always social behavior. Even in our clinical practices, we rarely learn about private dietary behavior (except in cases of disordered eating). The diets we discuss in this volume are all named, often branded, and practiced in public, social ways. There is a performative aspect to these diets that distinguishes them from private bodily practices and makes us understand them as cultural and relational. More specifically, as people increasingly have social lives online and craft online identities, we also see the ways in which web influencers shape people's beliefs and behaviors about diet. In fact, it seems to us that most people choose their diets not based on their own intuition or taste preferences but because of how they are socially influenced by people they know in person or (increasingly)

online. As you learn more about the subtle, unconscious ways in which your diet is influenced by your cultural context, you might find yourself asking, "Now what?" We're not arguing that people have no free will or control over their dietary choices. Quite the contrary! Much of the discipline of psychology is based on the premise that creating a conscious awareness of our choices and behaviors leads to growth and positive change. This was Freud's essential belief and is the underlying premise of most forms of psychotherapy. We wholeheartedly believe that increased awareness of how fad diets work and the common pseudoscientific principles they employ liberates us from their grip.

THE ORGANIZATION OF THIS VOLUME

In addition to the introductory chapters and conclusion, four chapters focus on particular diet types: food removal, food addiction, Clean Eating, and Paleo/Primal. We've clustered the diets in this way because they share similar belief systems and practices, and in some cases they have simply been recycled with new names over the years. These chapters include a description of the diet and its practices, why it's attractive, a discussion of the popular or cultural concepts that are expressed through the diet, and an analysis of the psychological and social reasons for its popularity.

Food Removal

Food removal diets generally limit one macronutrient believed to cause excess weight and obesity, such as the Atkins diet and other low- or no-carb diets. More recently, avoidance of simple sugars (monosaccharides and disaccharides or simple carbohydrates such as glucose, fructose, and galactose) has morphed into a popular avoidance of white sugar and sweeteners of all types. Currently popular anticarb or antisugar diets often advocate the removal of all simple carbohydrates and sharply limit intake of complex carbohydrates, asserting that carbohydrates are linked to many health problems from overweight to cancer. These diets often result in quick weight loss caused by caloric restriction. But the fat loss is rarely sustainable, nor is the diet balanced enough for long-term health. The reasons for failure are biological as well as social: the cultural constructs that allow us to consider food "good to eat" determine social eating and food rules,

and food restriction makes it difficult to eat with other people. Our eating patterns are socially constructed and enacted, and humans have a long history of cooking and sharing food as a core behavioral characteristic. As such, the individual dietary choices most of us are familiar with are quite new in the history of human cultural behavior. Whereas what's good to eat is socially determined, until recently almost all food considered good to eat for the group was also considered edible for an individual. This new era of personal choice may be liberating, but it is also confusing—what Jean-Paul Sartre called being condemned to freedom. Individuals no longer rely upon long-held cultural wisdom about diet, and instead, many of us now constitute food rules seemingly de novo. Much like how modern parenting is now often learned in isolation through books and blogs by new parents who are geographically isolated from extended kinship networks, so too have cooking, diet, and food choice become individual and isolated. Yet the maintenance and defense of individual dietary choice limit shared group experiences and render many food restriction diets impossible to sustain.

This chapter also addresses how options for diets relying on macronutrient restriction create seemingly easy psychological and biological solutions, a form of wishful thinking that embraces "nutritionism" to reduce the value of foods to a single, defining nutrient. Food removal diets can be understood within a historical context of moral panics surrounding food and drugs (e.g., absinthe, alcohol, marijuana, fat, sugar, etc.) that create a demonized commodity that must be exorcized from the body to restore individual and social morality. Such moral panics typically emerge from a strong internal locus of control, typical of Westerners and especially Americans, and espouse a cultural goal of conquering and mastering nature, self, and destiny.

Food Addiction

Food addicts believe that an ingredient within food is toxic or intolerable to some people. The toxicity or intolerance may be expressed by a negative biological reaction, an allergic reaction, or an addiction process that simultaneously harms while, in some cases, creating overwhelming cravings, similar to alcohol among alcoholics. Diets followed by those in recovery as food addicts often avoid wheat products, sugars, and individual "trigger" foods. What makes recovery diets different from carb avoidance is the

popular belief that wheat products and sugars cause a negative biophysical reaction in some people. Rather than asserting that all wheat is bad for all people, this set of diets posits that some people have a problem (sensitivity, allergy, or addiction) with some types of food ingredients. This is not to deny that food allergies exist and are very dangerous to some people, but there is a folk construction about food allergies, sensitivities, and addictions that differs from biomedical diagnoses and symptomatology of the condition.

Additionally, the people who believe—through self-diagnosis—that they are allergic or sensitive to specific food elements often also believe that they are addicted to them. While this may seem a mutually incompatible belief, it is in fact a rational construction within American culture because of the popularity of Alcoholics Anonymous, the primary treatment paradigm for addictions. A long-standing explanation for alcoholism among followers of AA is that alcoholics possess an "allergy" to alcohol that damages them but that nonalcoholics are free of this problem. In this construction, the allergy or addiction creates an insatiable craving that is not felt by nonalcoholics. In the publications of diet proponents, the notion of the uniquely dangerous yet addictively craved food substance is very common, indicating that the cultural construction of addiction adopted by AA has deep cultural resonance. These fears often center on essentialized components of food, with the assumption of allergy or addiction linked to specific compounds or molecules within the food source.

We explore the rise of "affliction diets" through the lens of medical anthropology, examining folk medicine traditions that link affliction to the ability to heal. Shamanism secondary to survival of an illness is present in almost all cultures and provides medical legitimacy in many traditions. For example, in the United States, Alcoholics Anonymous posits that only those in recovery can help the currently afflicted. That people believe experience lends credibility to healing processes is clear when analyzing the published texts about food addictions. Many of these accounts incorporate a personal narrative of affliction and recovery leading to a better life, lifestyle, and so forth for those selling books, diet products, and treatment therapies. Indeed, such patterns are endemic to much of the writing about weight loss in the United States and exemplify the medical anthropology theories that explain the "afflicted shaman" cultural trope. They also reflect popular American Alcoholics Anonymous and temperance narratives that

frame a descent into addiction, degradation, and disease with an arc of redemption. The sufferer begins whole and healthy, descends into social and physical corruption, and then, by abjuring the addictive and dangerous substance, returns to social acceptance and physical health.

Addiction/affliction/allergy diets are appealing because they offer a single theory that explains all of our problems. For example, people sometimes blame wheat for panic attacks, fatigue, migraines, and AD/HD. But even more appealing than a single explanation for all of our ills is a single solution. Removing a single ingredient like wheat illustrates the magic-bullet approach. Such magical thinking may exert a kind of temporary placebo effect that mitigates symptoms, but it is unlikely to last, if for no other reason than that such diets are difficult for most people to maintain indefinitely. Diets following an addiction model often have parallels to cults and cult behavior, in that there is frequently a guru or charismatic leader offering salvation to those who suffer the same affliction. This chapter will draw this parallel via scholarship by psychologists and anthropologists who have studied cults and cult behavior.

Clean Eating

The Clean Eating movement consists of a set of dietary behaviors and practices designed to decrease intake of substances considered to be dangerous additives in food and increase the intake of foods that are whole, natural, organic, and unprocessed. Many adherents of Clean Eating (including those who have adopted the "Whole30" and similar diets) also abjure white sugars, wheat products, and other foods they consider harmful to the body. In this way, the Clean Eating movement overlaps with diets that restrict categories of macronutrients, eliminate gluten, advocate for vegetarian or vegan dietary regimes, or promote a Paleo or constructed old-fashioned diet perceived to reflect evolutionary physical needs. Clean Eating is often linked to other bodily practices designed to protect the individual from harmful environmental toxins or to promote well-being, such as detoxing, yoga, massage, alternative medicine, and other regimes of self-care. The practice of Clean Eating can be relatively innocuous and in harmony with sensible and orthodox nutritional advice, but it can also tip into orthorexia, an eating disorder defined by an obsessive need to consume only healthy foods. Clean Eating is, ultimately, a means to control anxiety about dietary

intakes, food safety, and health. Consuming food can be scary, and choosing the "right" foods can become a disorienting and frightening task in a world with seemingly unlimited choices, especially when that world is also considered to be environmentally polluted and potentially dangerous. In that context, Clean Eating channels anxiety by providing food rituals that, when followed, allow the adherent to feel that she is doing everything possible to protect herself from environmental contaminants and ill-health.

This concept of bodily purity, where the body serves as a barrier to the influx of harmful outside influences, is a common construct in many cultures. Indeed, the belief in the sanctity of the body is so strong in the West that it has determined much of the theory and practice of Western medicine. As such, it's an unexamined, fully accepted reality for most people, resulting in a feeling of great distress if and when the porosity of the body is revealed. Indeed, many cultures adopt food rituals, such as fasting, specifically designed to control the interpenetration of the body and world. These rituals become part of a culture's construction of what is "good to eat" and how it should be prepared, consumed, and discarded. We examine theories of the body and the body's relationship to the environment to help readers think through the relationship of their bodies to the outside world and to decrease anxiety about eating.

Food rituals, both social and personal, are adopted for many psychological reasons, and specific food practices designed to alleviate anxiety and fears are appealing to those who are worried about diet and health. Many diets promise to make users healthier (ensure longevity, promote fertility, etc.), to protect them from perceived contaminants in the environment, or to ensure that their food and their bodies remain in a state of self-defined purity. Ethnographic accounts of Clean Eaters (and juicers) have shown that adherents may start such diets to feel pure or in control and then often wind up feeling superior to others by virtue of their dietary choices. Such social emotions will be explored, along with how such diets are used as a talisman against broader existential threats such as global warming, food safety, and corporate malfeasance in the food industry.

Paleo or Primal Diet

The very popular Paleolithic diet encourages consumers to eat foods (or their modern near equivalents) that preagricultural Paleolithic humans

might have eaten. The rationale is that our bodies haven't evolved as quickly as our agricultural and food systems have modernized and that humans are not genetically equipped for a modern diet. Paleo enthusiasts argue that much of modern degenerative disease is caused by modern foods and that we can restore ourselves to a state of preagricultural health by a return to an older diet. Unfortunately, a reconstruction of ancient diet is difficult because of archeological processes that obscure food materials as well as the omnivorous nature of our species. Regardless, many dieters believe that a Paleo diet is the only way to maintain weight and stay healthy. Certainly, some elements of an imagined Paleo diet have nutritional merit as well as archeological validity, but because of the scientific difficulty of determining what our ancestors ate, defining a true Paleo diet is impossible.

In this chapter, we demonstrate how an imagined golden past channels the performance of social roles and promotes popular acceptance of diet regimes. In the case of the Paleo diet, the foods allow for the construction of a biological (often racial and gendered) identity that proposes a need for a recreation or return to a golden age of health and nutrition. This chapter will also examine the evolutionary importance of how food was prepared and eaten by early hominids because paleoanthropological research demonstrates that fire and food sharing probably played a more important role in evolution than did specific foods. We'll explore the methods and theories used to understand the past and the evolutionary pathways that led to our present biocultural health patterns.

This discussion allows us to refocus ideas about Paleolithic diets from the nutritional content of foods to the social and environmental context of early diets and to better understand the importance of an omnivorous diet to our species. We further examine the appeal of this cluster of diets and how it expresses ambivalence about civilization's taming of human beings. Paleo diets are often practiced alongside other perceived caveman behaviors and lifestyle choices that express a wish to return to humanity's natural state. Such wishes may express existential anxieties connected to urbanization and technology, such that accessing a more primitive part of the self functions as a talisman against these threats of the modern world. This chapter will review the anthropological and nutritional evidence for ancient diets and will then explore how and why so many people reject the scientific facts in favor of an imagined, perhaps even idealized past. We

outline strategies for navigating the disparate and often overly authoritative messages about the ideal diet.

FINAL THOUGHTS

Our agenda is ambitious, but at the same time, it is very simple: to show that fad diets make sense. Every culture constructs beliefs about what is "good to eat" to teach members how to stay healthy, nourish themselves, fit in with the group, and—hopefully—enjoy their meals. Historically, these cuisines and the patterns of production and belief that underpin them often existed to manage food scarcity rather than food abundance. But we now live in a globalized world marked by abundance of food, matched with a developed market for branded, commercial food products. This situation leads to conflicting information about what's "good to eat" and ultimately to confusion and anxiety in consumers. This problem is especially prevalent in a neoliberal economy in which eaters absorb the message that they are solely responsible for their health and well-being, via good or bad choices, and that food choice and proper body management are the foundation of good health. Free will, discipline, and the elevation and control of the bounded, rational self undergird this paradigm and influence our thinking in ways we often don't recognize.

Medical anthropology provides a rich analysis of how concepts about bodily control, control of the self, and the inviolate self all contribute to health states. Similarly, the idea of control has particular resonance in the United States, where the good citizen is posited to be the fully-in-control-of-self citizen. However, for every action that indicates control, the individual often grants the self an opportunity for loss of control; there is an uneasy back and forth between rigidly upholding behavior patterns that promote the ideal and losing it in rituals of release and subversion. "What happens in Vegas stays in Vegas" is not just a pithy phrase but can become a rationale for actions that negate good intentions, known in psychology as "moral licensing." The cycle of control and loss of control has a deep history cross-culturally, in which rituals of reversal (or inversion) are marked as special times for license and excess. Management of these cultural patterns and expectations, especially in relation to food, requires self-knowledge and, yes, some amount of self-control, which can create cognitive dissonance and anxiety. Managing control is especially difficult in a modern

culture in which adherence to the holy grail of self-control seems to have become all-important and self-defining.

To make sense of these messages—and the dizzying abundance of food—we have developed numerous means to channel food choice through practical implementation of primary information about control, status, health, identity, purity, and medical efficacy. The wellness and self-care industries are only the tip of the iceberg in this messaging—much of it commercial—about what we ought to eat to promote personal health and the health of the planet and our communities. How can consumers navigate these thickets sanely and effectively? How can eaters evaluate dietary messages and prescriptions to promote a good diet? Above all, how can consumers adopt practices that manage the inherent anxiety created by constantly having to choose, and choose correctly? Read on!

Chapter One

WHY WE LOVE FAD DIETS

From the outset we knew we wanted to organize this book around specific fad diets like Paleo and Clean Eating. For most people, a diet is a belief system about food (often named or branded) that they imagine they have freely chosen and put into practice. We knew that organizing this book around recognizable, popular diets would make the most intuitive sense to readers. Yet as we wrote, we found ourselves often repeating our ideas chapter after chapter, and this repetition reinforced one of our strongest observations: The same fears, beliefs, and fantasies underpin nearly all diets, *even when the diets appear radically different*. That is the central argument of this book: that all fad diets are driven by the same engine of wishes and fantasies that repeat themselves not only across diets but also across historical eras.

Rather than repeat these themes and ideas in every chapter, we've chosen to discuss in this first chapter the key concepts that explain the general appeal of fad diets and some of the universal truths underlying all of them. We draw from food studies—an interdisciplinary and expansive field that incorporates history, sociology, anthropology, psychology, geography, economics, and other disciplines. Here we briefly introduce some of the major scholars and texts relevant to each concept. Later, in the diet chapters, we will select the most salient themes and apply them to the specific diet in

question, with the goal of moving readers toward thinking like anthropologists and psychologists with regard to diet culture and behavior.

AMERICANS AND FAD DIETS

Americans are more interested in diets than people from many other cultures and are more likely to consider their diet a significant part of their identity. Americans have a strong sense of rights related to freedom and liberty, especially "freedom from" and "freedom to." "Freedom from" indicates that individual actions won't be constrained by obstacles (social, political, or cultural), while "freedom to" expresses the individual's right to act, including in his or her own interest. While these concepts are deeply social, cultural, and legal, many Americans see them as largely concerning the self and the rights of the individual, that is, as a guarantee of self-determination. Nowhere have we seen this attitude more clearly than in the recent mask-wearing culture wars of the coronavirus pandemic.

These beliefs can devolve into a conviction that one has the right not to be constrained and the right to do as one pleases. This idea of the highly individualized self accompanies the belief in and wish for self-actualization, transformation, and autonomy: that is, the ability of the individual to alter both the self and the contextualizing world. Americans are highly individualized, and many view the individual self as a lifelong project of improvement and perfection. We can see evidence for Americans' prioritization of personal growth and self-transformation in the popularity of self-help books, therapy, and makeover shows.

This belief in the power of personal growth depends on the idea that we can control our behavior, tame our bodies, and manipulate our personal fortunes and destinies. These might seem like universal or innate personality characteristics, yet they are actually quite unique and culturally specific. Many people around the world do not see themselves as in control of their fate and instead see themselves as at the mercy of larger economic, cultural, and environmental forces. The freedom to choose one's own spouse, profession, or home, for example, is foreign to a great many people on the planet. By contrast, most Americans believe that individuals have sole control over their success in life or over their destiny. When the Pew Research Center recently surveyed people in forty-four countries, 57 percent of Americans disagreed with the statement that "success in life is pretty much determined

by forces outside our control." That's a higher percentage than in most other nations and far above the global median of 38 percent.[1]

In fact, according to the political historian Daniel Rodgers, the American belief in personal control over the world even *increased* during the last few decades, as "conceptions of human nature that in the post–World War II era had been thick with context, social circumstance, institutions, and history gave way to conceptions of human nature that stressed choice, agency, performance, and desire. Strong metaphors of society were supplanted by weaker ones. Imagined collectivities shrank; notions of structure and power thinned out."[2] Such cultural shifts away from the collective and toward the individualistic reveal that many Americans would refute the idea that "no man is an island," that no one is truly self-sufficient, and that everyone must rely on others to thrive. A later chapter will show that social influences over the self are repeatedly rejected in rationalizations for adopting the Paleo diet, especially by men who belong to alt-right or "men's rights" groups; the desire to dominate is often linked to a belief in an essentialist "cave man" nature as part of their construction of ideal masculinity.

Psychologists refer to *locus of control*, that is, the degree to which people believe that they exert control over the outcome of events.[3] People with a strong *internal* locus of control tend to believe that the events in their lives are determined by their own actions, willpower, self-determination, and merit; people with a strong *external* locus of control attribute events to outside forces beyond their control. For example, when receiving exam results, people with a strong internal locus of control are likely to attribute their grade to their intelligence or studying, whereas those with an external locus of control are likely to view the teacher or the testing conditions as the reason for their grade.

While there is wide variation among Americans on locus of control (as for any personality characteristic), the Pew study indicates that Americans may have the strongest internal locus of control of any culture in the world. Naturally, this fact has implications for how Americans view diet, nutrition, and the body. Locus of control has been studied extensively by health psychologists. The Dieting Beliefs Scale assesses expectations about whether weight is determined by factors outside one's control, such as luck or genes, versus the expectation that one can control one's own weight through willpower and effort.[4] Researchers have not proven this empirically, but based on what we do know about dieting beliefs and culturally mediated locus

of control, we suspect that Americans have a very strong "weight internal locus of control." If we did not, how could we explain the billion-dollar diet industry? We buy diet books, join weight loss programs, and eat special foods because we believe that these are tools that will help us change ourselves.

History helps us understand how and why Americans embrace fad diets, as Warren Belasco has demonstrated with his masterful books *Appetite for Change: How the Counterculture Took on the Food Industry* and *Food: The Key Concepts*.[5] The latter introduces readers to important ideas in food studies and outlines the unique relationship that Americans seem to have with obesity and dieting, reminding readers that we annually spend an enormous amount of time and money on diets. Belasco attributes this obsession with dieting to core American cultural traits such as belief in individual perfectibility and willpower, the ability to control nature, and the priority of youth; a mechanistic view of the body; the Protestant work ethic; and faith in consumer capitalism. Together these attributes point to a cultural belief system that sees the body as infinitely malleable, that makes an individual naturally responsible for his or her bodily shape and, indeed, morally culpable if not appropriately and youthfully thin. And because Americans believe in the capacity of purchased goods and services to solve problems, create identity, and craft the body, it is inevitable that diets arise out of consumer processes and structures. A diet does not exist on its own, free of purchasable goods and concepts; it is created and validated by the books, ad-filled blogs, diet amendments, products, and retail foods that constitute its consumerism. Without the option to purchase and create self-identity through brand allegiance, the diet might have no meaning and thus no followers. So a diet is not just a set of behaviors but a belief system, a consumer product, and a social identity.

Many other scholars have discussed the history of fad diets in the United States, such as Harvey Levenstein, whose *Fear of Food* chronicles the history of food scares in the United States and the resulting dietary beliefs and practices designed to protect the individual from these collective dangers.[6] Levenstein categorizes various food scares into epistemological groups and cycles that wax and wane in the intensity of belief in them and in relation to public awareness of food-contamination problems. Arising out of his earlier historical examinations of food use in the Americas, such as *Revolution at the Table: The Transformation of the American Diet* and *Paradox of*

Plenty: A Social History of Eating in Modern America, the linkages Levenstein describes in *Fear of Food* demonstrate the wild gyrations of dietary belief and practice and show how these beliefs and practices have been shaped by the natural bounty of the so-called New World and the public's understanding of how health, disease, and diet are connected. In his analysis, the newness and the possibilities—as well as abundance—of the New World diet have led to dietary extremes and to the latest and more faddish dietary plans to combat excess weight.[7]

The commercial aspect of the diet business is also explored by the historian Hillel Schwartz in *Never Satisfied: A Cultural History of Diets, Fantasies, and Fat*, one of the first academic accounts of American fad diets. In his examination of fat, ideas about weight, and dieting, Schwartz states that "diets seem to appear out of nowhere, in no time at all, like barbarians or wandering saints, and they seem to disappear as easily and swiftly as they come." This constant search for the purchasable new remedy is the qualifying characteristic of American diets, because they are inevitably linked to a diet industry that promotes them as the newest and best means to solve the problem of excess weight. Schwartz makes clear that diets are always tied to the opportunity to sell—ideas via books and consulting services, nostrums marked as medicine, and food products designed to replace the presumably fat-inducing analogues. He sums up this situation as "a tumultuous fairground of diets, diet foods, diet drinks, diet books, diet doctors, drugs and devices," many of which are recycled from decade to decade, given new names, new promoters, and seemingly new opportunities for weight reduction.[8]

In the United States, several cultural variables have converged to favor the growth of the diet industry, including the abundance of food (in comparison with the Old World), a culture that believes in self-control and individual responsibility, and widespread faith in the market to solve almost all problems, personal or social. These variables constitute the perfect set of ingredients to ensure the growth of the for-profit diet market and its attendant need for new, ever-changing fad diets.

DIETARY AND NATIONAL EXCEPTIONALISM

But is the United States exceptional? Some Americans (especially politicians) call the United States exceptional, although that word and its

meanings differ depending on the individual's political persuasion and educational experiences. Certainly, the American diet is exceptional; an abundance of available food has been a defining feature since the colonial period. Many authors, both academic and popular, link the current high rates of excess weight and obesity to what is often labeled SAD or the standard American diet, clearly indicating that our diet is different and exceptional, even in comparison to diets of other advanced industrialized nations. (However, there is now increasing evidence that many other countries have begun to catch up to the United States both in dietary habits and in rates of excess weight and obesity.)

Critiques of the SAD (such an evocative acronym!) are rampant among diet gurus. A simple internet search for the term reveals thousands of results, with the first ten pages demonstrating little or nothing that supports or advocates for the SAD. All reviews are negative, and some use the concept to sell diets such as Paleo, Atkins, or something similar that is assurred to reverse the damages attributed to SAD. The idea that the national diet is somehow problematic has become so normalized that it is rarely questioned, and descriptions of SAD veer into the hysterically negative. Even within clinical dietetics, the unequivocal denunciation of our diet is paramount, as demonstrated by the opening paragraph of a peer-reviewed and invited review from the well-respected journal *Nutrition in Clinical Practice*:

> The origins of the Western diet, also referred to as the standard American diet (SAD), can be traced back more than 10,000 years to the Neolithic period. It was during this time that agriculture and animal husbandry evolved, resulting in increases in animal and grain consumption. Today's Western diet or SAD generally refers to a total diet pattern (with multicultural variations) that includes excess consumption of calories from refined carbohydrates, fatty meats, and added fats and that lacks many nutrients found in whole grains, fruits, and vegetables. This dietary pattern, which also includes excess sodium intake, has been blamed for contributing to our current staggering levels of overweight and obesity as well as diet-related diseases and conditions such as type 2 diabetes mellitus, hypertension, and heart disease.[9]

This paragraph defines SAD as high in meat, fat, carbohydrates, and sodium, and it blames the development of agriculture and animal husbandry

for the current state of obesity. In other words, this critique stresses the *contents* of food rather than the *context* of the diet; we are fat because our food is bad, rather than we are fat because of a series of complex, interlinking patterns that contribute to excess intake and decreased activity. Given such blanket condemnations within academia and professional practice, it is easy to understand why concerned citizens and diet gurus so comfortably reject individual foods or components of foods.

Once the sin, as it were, is located in the essence of the food item, the only response can be to abjure it completely. The review just quoted borrows heavily from the even more prestigious article by Cordain et al. from the *American Journal of Clinical Nutrition*, which presents a far more contextualized and complicated relationship between modern obesity and disease. However, the authors also assert that "in the United States and most Western countries, diet-related chronic diseases represent the single largest cause of morbidity and mortality. These diseases are epidemic in contemporary Westernized populations and typically afflict 50–65 percent of the adult population, yet they are rare or nonexistent in hunter-gatherers and other less Westernized people."[10] The solution is simple, it seems; we must adopt a diet different from SAD, preferably one from the past, whatever it might be; the stage is set for validating the Paleolithic diet and other fad diets that advocate for the avoidance of specific food items or macronutrients.

Of course, there is some validity to this criticism of the American diet. These diet-promoting authors echo the themes of many other authors who critique the modern food system, such as Michael Pollan, Barry Glassner, Barry Popkin, Michael Moss, Marion Nestle, and Mark Schatzker.[11] There are problems with our food system, and there is a higher percentage of obese individuals in the United States than in all other high-income industrialized countries, with a national average of 39.8 percent. The United States has the highest rate of obesity among Organisation for Co-Operation and Development nations (the OECD average is 19.5 percent), with Japan at the low end with 3.7 percent, France at 15.3 percent, and the United Kingdom at 26.9 percent.[12] The reasons for these statistics are extremely complex, however, and are not the focus of this book. Obesity in the United States is related to myriad factors, including the lack of a unifying food culture, sedentism, and agricultural subsidies and the resulting excess production of commodity crops. Moreover, the power of the food companies and lobbies

ensures that the regulation of advertisements and even school lunch menus can be politically and culturally fraught. Adiposity is connected to the sheer abundance that promotes increased intake, from ever-larger portion sizes to multiple snacking episodes during the day.[13]

Robert Paarlberg tackles the concept of exceptionalism and abundance in his witty volume *The United States of Excess: Gluttony and the Dark Side of American Exceptionalism*.[14] Paarlberg has spent decades examining the relationships between agricultural production, international trade, and food insecurity and provides a unique view of American exceptionalism, one that causes the reader to ponder how economics and history affect cultural behaviors and social outcomes. Paarlberg argues that cheap and abundant energy (in the form of oil, gas, and electricity) and food have incentivized the American public to use as much of these commodities as possible. Facilitating this high usage are failures of the American governance system because the multiple layers and regional governments can easily veto and block any regulatory action designed to inhibit usage or intake. In addition to having the highest rates of obesity, the United States has the highest rate of per capita CO_2 emissions, roughly twice that of other developed, wealthy nations.[15] Paarlberg argues that high usage patterns of food and energy are culturally intertwined and emblematic of cultural values in general and that they interact within a cultural belief system that produces citizens who are "distinct from the citizens of other rich countries due to their mistrust of government authority, the value they place on individual versus social responsibility, their readiness to embrace religion, and also their unusual optimism about what science and technology can provide."[16] Together these cultural values and constructs block attempts to moderate food and fuel consumption on the national level.

Paarlberg also argues that because of an individual focus on responsibility and causality, Americans are more likely to embrace adaptation (treatment) over mitigation (prevention) and will "opt for more medical treatments plus physical accommodation and social acceptance for those who become overweight." The combination of resistance to governmental public health interventions and the tendency to view health problems and obesity as a failure of personal responsibility means that most adults oppose taxes on sugary beverages yet are equally likely to be on a personal diet, to have bariatric surgery, or to take weight loss drugs. Paarlberg sums up this disconnect with a damning quote at the end of the book: "In response

to climate change, America pivots toward adaptation to protect itself, and itself alone. With obesity, America's embrace of personal rather than governmental responsibility works well enough for the nation's more fortunate citizens, those better educated to avoid the condition and better able to afford medical treatments. For Americans with less education and fewer resources, particularly disadvantaged minorities, personal responsibility without stronger public policy action will remain inadequate."[17] Paarlberg tells us why Americans are so willing to embrace individualized diet and exercise plans rather than to support public health programs and indirectly explains why fad diets are so prevalent in the United States: being thin is a signifier of class and ethnicity, of being a "winner" in American culture.

DIET, THE BODY, IDENTITY, AND CITIZENSHIP

That the lithe body is a personification of the good citizen is explored in Helen Zoe Veit's remarkable volume *Modern Food, Moral Food: Self-Control, Science, and the Rise of Modern American Eating in the Early Twentieth Century*.[18] Her argument adds dimension to the examination of diet fads because she brings together multiple lines of evidence to explain how a thin body became a symbol of good citizenship, morality, self-discipline, and perceived intellectual and spiritual value. She locates the articulation point around 1910, when fashions changed to emphasize leaner lines, nutrition science alerted consumers to the value (and dangers) of calories, and the soon-to-follow food conservation campaigns of World War I encouraged decreased consumption so that food could be sent abroad to feed the troops and our wartime allies. As she explains, "The administration clearly saw the food conservation campaign as an opportunity to champion the moral values of austerity, and they drew parallels between righteous physical self-control and individual capacity for political self-control."[19]

These campaigns also embraced antimodernity sentiments by channeling nostalgia for a past, presumed simpler time and equating Puritan and pioneer diets with the morality and the austerity needed to win the war. Food reformers were convinced that good nutrition was essential to the individual body as well as the national economy and that poor nutrition threatened national security. These reformers also linked self-control, moral righteousness, and asceticism with the body personal and politic; the good person, the good citizen, was disciplined, economically powerful,

patriotic, and, above all, thin. The need for slimness, which might not be achieved by altering food intake (or thinking one was reducing food intake), created a cultural space for fad diets promising weight reduction; in the past, fad diets might have promised better digestion (such as Fletcherism) or health in general (Kellogg's Sanitarium and diet), but the emphasis here was on more than fat reduction. As the twentieth century progressed, fad diets overwhelmingly promised first and most importantly to make a person slim, with increased health and vitality secondary and as a result of weight loss.

More ominously, the conflation of morality, patriotism, self-control, a lean body, and discipline also embraced a racist ideology of "euthenics" that reinforced popular beliefs that only white people had the capacity to be lean and patriotic because "intelligence and self-discipline were advanced traits that only white people really possessed."[20] Such racism was furthered by revisionist narratives espousing Puritan values as the source of the self-control necessary to voluntarily reduce intake and master the self to ensure a lean, healthy body. African Americans and other nonwhite populations were presumed to lack the capacity for self-control, and indeed, even the capacity for the patriotism necessary to voluntarily reduce intake. To further complicate dietary intakes, the food items to be conserved—and thus sent to Europe—were precisely those that were thought of as the natural diet of the "white race": wheat and beef.

Popular notions about race proposed that different diets were essential to the bodies of differing populations and that meat was the natural or ideal food for white Anglo-Saxons. But the propaganda of the war effort also argued that austerity would improve racial stock: "We eat less, fewer and simpler now. We'll be a stronger race as a result." White food was also "clean" food, pure, unmixed, and simple, presumably that of the early settlers and Puritans. Indeed, those who were fat were seen to be shirking conservation and thus were "fat and disloyal," while those who were conserving food and patriotic were "righteously hard and lean."[21] The fat were disloyal citizens; the thin were good Americans. There were even cases of people reporting "fat and lazy" neighbors to the government as disloyal citizens. As Veit concludes: "The thin ideal arose from bedrock intellectual and moral convictions at the dead center of Progressive ideas about social order, especially the increasingly steadfast conviction that physical self-control indicated a capacity for moral and political self-government."[22]

In this case we must note that "Progressive" does not indicate the political meanings it connotes today; at that time, it meant a movement and set of ideals to improve the nation, society, and individuals using rationality and science. And, unfortunately, eugenics and racism were often a part of that movement, and "euthenics," or the environmental effects on race, was intimately tied to ideas about nutrition science and the perfectibility of racial types through dietary management.

Veit's analysis of social concepts maps the thin body, class, race, and citizenship in a manner still recognizable today. Thinness is presumed to be the outward manifestation of inward character traits, but those traits are racially and economically coded to conflate the "good" qualities with whiteness and the "bad" qualities with those who are Black, brown, poor, or just not white Anglo-Saxon. Thin (white) people are cast as intelligent, self-controlled, energetic and economically productive, socially moral and spiritually strong, and patriotic good citizens. Others are by default stupid, lazy, poor, out of control, immoral, selfish, ungodly, and unpatriotic. While racist conflations of this sort occurred prior to the twentieth century, Veit argues that during and after World War I these prejudices became linked to body size.

Veit's cogent analysis forcefully outlines connections between social concepts of health, citizenship, and race—cultural linkages that seem sadly commonplace even today. It would be easy to assume, therefore, that those linkages are observable and socially important to current adopters of diet fads: in other words, that diet acceptance and use are somehow linked to or determined by racial or ethnic categories. But by and large that is probably not the case—our comprehensive review of diet studies and research did not reveal differences in diet acceptance and practice among differing communities. The one exception (explored in chapter 6) is that the Paleo diet appeals to many alt-right males, although the attraction seems to be rooted in misogyny more than in ideas about racial difference and white supremacy. However, that Paleo appeals to a certain kind of white male doesn't negate its appeal to men and women from widely differing populations, economic levels, and backgrounds. The promises of fad diets don't discriminate—improving health and fitness is appealing to all people—and thus the diets are attractive to all. Numerous Boolean keyword and subject searches for academic, peer-reviewed articles examining race, ethnicity, gender, and other "intersectionalities" (as academics like to think of these

categories) and fad diet use, outcomes, and communities turned up nothing beyond the Paleo link previously mentioned. This might seem hard to imagine given our current cultural interest in understanding how health and behavior parameters affect differing populations, but it does make sense given the broad appeal of fad diets, the difficulty and expense of conducting nutrition outcome trials, the inadvisability of designing nutrition research protocols that assume racial differences (because there tends to be more biological variability within populations than between them, one of the tip-offs that "race" is more a social category than a biological one), and ethical concerns (and the difficulty of securing funding) about explicitly race-based studies (for good reasons).

Furthermore, while it's clear that many of the diet gurus who design wellness programs, write books, and provide health counseling are white and middle (or upper-middle) class, their message is not limited to their cultural cohort. Diet and lifestyle cookbooks provide recipes adapted from many differing cultures and cuisines, signaling that their programs are meant for everyone regardless of background. It's pretty difficult to say with any assurance that "X" fad diet appeals to "Y" type of person when reading these cookbooks and lifestyle protocols, and because of the use of avatars it's also hard to assign racial, gender, or ethnic identity to users of related online communities. That does not mean that questions about diet adoption among differing communities aren't of interest, but it does mean that such research is difficult to fund and conduct. It also indicates that such research might need to be done, especially if biocultural beliefs and behaviors connected to fad diets are demonstrated to affect the health of specific communities. Of more interest would be studies in communication and social environment and how fad diet use is thought about and experienced within differing communities of color, income, region, and identity. Currently those studies are not published or available, so we encourage academics to explore how different groups of people perceive, use, adapt, and perform fad diets and how adoption contributes to identity and social performances.

To return to Veit's argument about race and the thin body, it is clear that the toxicity of connections to social and racial categories gave strength to the fad diet industry and the desire to reduce, for not only was fat seen as unattractive, but it was also a register for qualities that effectively downgraded identity within social life. After all, it's an oft-quoted aphorism that

"one can never be too rich or too thin"—a statement that neatly expresses the idea that to be rich is to be thin, and that the poor are most likely fat. The sociologist Alice Julier analyzed concepts about obesity and poverty and concluded that obesity is functionally important in a stratified society because fat codifies stigma and identifies the nonfat as virtuous.[23] And while this volume isn't about fat, obesity, race, or ethnicity (topics covered by other academics and health professionals ably and authoritatively), it is important to understand how cultural beliefs about thinness and fatness affect identity, citizenship, and self-concept; encourage weight reduction; and provide a fertile environment for the development and acceptance of fad diets. If the lithe body symbolizes the exceptionalism of the cultural experiment known as America, and if it is also a physical manifestation of individual and social achievement, the huge amounts of food available in the United States, the ever-growing obesity levels, and the robust fad diet market must create significant cognitive dissonance.

FOOD ANXIETY

The fear of falling—into fatness, down the class ladder—is one of many anxieties surrounding consumption and modern life. It is clear that food itself creates anxieties for people: individual food fears and stresses, as well as cultural narratives of food anxieties that affect dietary patterns and beliefs. Such anxieties are explored by Peter Jackson in *Anxious Appetites: Food and Consumer Culture*.[24] While not focused on diet fads, his examination of food fears helps us understand why and how diet fads are culturally salient. His analysis of food anxiety is not focused on a fear of hunger but rather on those societies with abundant food and choice, where the problem of choosing food correctly creates a sense of anxiety about what foods to choose, when to choose them, what might be "in" them, where they are from, and whether they are authentic. While people are concerned about food safety, they are also worried about how food might affect their health; the first would be a fear of potential external or extrinsic contamination and the second a fear about internal or intrinsic nutriture and content—the essential nature of the food.

These are cultural narratives of anxiety about food rather than individual fears about specific food problems; as cultural tropes they are shared socially and validated by mass group acceptance, by communities of practice. These

perceptions of risk disrupt the rhythms and rituals of everyday life and cause consumers to rethink their buying and intake habits. Anthropologists would argue that food anxieties rupture the practice of everyday life and thus alter social and individual identity creation, destabilizing us and further creating a state of fear and anxiety. Anxiety about food disrupts the performance of self in a strong and meaningful manner. The anxiety is both internal (fear of health consequences, a fat body, or economic decline) and external (fear of what others might think of food choice and use). Food choice is scary because it operates in the social spaces of identity negotiation and maintenance, as a performance of the type of person one wants to be and wants to appear to be. It requires a constant dialogue between the self and others, as one manipulates consumer items that reflect the self to the self and that also present the self as an object to others. Add the fear of gaining weight, of losing class, status, and social "face," to this process, and diet fads make more and more sense, especially if they promise a simple, clear, and easily performed set of beliefs and practices that validate the self to the self and demonstrate social worthiness by adhering to a widely accepted and lauded cultural script about food. Most fad diets promise excellent results with just a few easy steps.

In this potentially toxic stew of commercialized abundance, (over)consumption, identity formation, and fear, the social performance of eating appropriately and acquiring an ideal body size requires rigid control, self-discipline, and deep cultural knowledge of the currently acceptable food choices and practices. The pressures placed on the average American eater are contradictory but culturally imperative: the body must be slim, muscular, and fit, characteristics that provide a visual symbol of the preferred internal qualities of the citizen-consumer: intelligent, capable, self-controlled, patriotic, and economically powerful. Exhibiting the wrong body shape and size endangers one's social standing and class status. At the same time, there is cognitive dissonance because the environment provides far too much food, with far too many opportunities and expectations for consumption, both literal and conceptual, and encourages citizens to project and develop self-identity by purchasing certain items and displaying appropriate lifestyle choices. The social environment also programs the eater to believe in, as Warren Belasco enumerates, "faith in individual perfectibility and willpower, ability to control nature, priority of youth, a mechanistic view of the body, the Protestant Ethic and faith in consumer capitalism."[25]

Imagine the great psychological pressure felt by a possibly plump eater, the nearly impossible need to control appetites in a culture that celebrates the expression of desires and encourages constant snacking, consumption, and the performance of self through consumerism. This confusing, toxic brew must be overwhelming to the eater standing in the grocery megastore, trying to shop for dinner.

These choices are made far more difficult by the wealth of often-conflicting diet knowledge available in the public sphere, with information from Google to the latest celebrity makeover potentially confusing even those with high nutritional literacy. This information abundance mirrors the abundance of food, making decisions and practices even harder to adopt and maintain. As Veit suggests, control is the flip side of patriotism, of the good body, the good citizen, the successful person, even the right kind of person. Qualities tied to the lithe body are so overwhelmingly positive, and those culturally attached to obesity so shaming and negative, such a robust symbol of "loser," that fad diets are bound to arise. The stakes are too high for them not to exist, and their simplicity cuts right through the confusion of too much information and too much food with easy solutions for the body and the mind. If we were to construct a Venn diagram of the cultural and psychological processes that help create fad diet industries, we could see how various belief systems (extrinsic and intrinsic food qualities, social meanings of diet choice, ideas about the body, the self, and social position, etc.) converge on the need for a simple, easily digestible narrative of the self in relation to food. Fad diets make sense because they are intimately tied to the social, cultural, linguistic, and biological construction of our worlds. Fad diets make sense because they place individuals within a meaningful and culturally salient social space that creates group validation and belonging.

CLASS AND CONSUMERISM

Another referent for socioeconomic class and success is consumption; what one buys and uses (and eats) is read as a marker of class just as surely as body size and shape. But consumerism is also a factor in a culture that accepts obesity, because consumption is central to identity and to everyday individual purpose—as well as a primary means by which to organize social and economic systems of exchange, production, and use. Consumer

choices define or create a sense of self, and social identity and opportunities are mediated through what one chooses to purchase, own, and display.[26] Consumerism embraces excess of the sort that Paarlberg critiques; indeed, consumerism depends on excess to create the choices that allow for presumed self-determinism or self-creation. And if excess is required, there will be few efforts to curb excess production and excess use of anything, from energy to food and discretionary purchases such as clothing and home goods. Abundance also encourages intake, as demonstrated by many studies linking portion size and variability with increased food consumption.[27] In many ways it's a perfect recipe for the development of a fatter population, especially if, as Gerda Reith asserts, consumption itself can be psychologically addictive.[28] Using sociology and economic history, Reith builds a compelling model of how economic commodities have become makers of identity as well as inescapably (psychologically) addictive. Rather than assuming that consumption is accidently or secondarily habit forming, she maintains that the desire to possess is central to the rise of the modern capitalist commodity system.

Reith uses case studies to trace the addictive nature of acquisition—specifically of drugs and alcohol, food, and gambling (the last a form of dematerialized consumption)—to Western philosophical conceptions about commodities and their histories as produced, traded, and utilized "things." Like many others who have examined the concept of addiction within the Western world, she links addiction to loss of control (as specified within the DSM-5), because "in neoliberal consumer cultures, understandings of the disease of addiction are expressions of long-running concerns about loss of control: a condition that hovers around the boundaries of Cartesian dualism, part physical disease, part mental disorder, and located somewhere in the hybrid zone between the body and the mind."[29] This description arises from early cultural and mercantilist ideas about the newly abundant consumer commodities of the eighteenth century, such as tobacco, sugar, and other colonial or foreign products. Their abundance made them accessible to the working classes, and this accessibility propelled fears of improper use and abuse. Substances acceptable for the higher classes were unacceptable for the lower classes, and consumption of these substances by lower classes was seen as a usurpation of class prerogatives and a violation of unwritten, culturally determined sumptuary laws. Moreover, the upper classes were understood to be better able to handle the consumption of drugs and

commodities; that is, they were more likely to exhibit control. Many other authors have also explored the social "problem" of lower-class use of previously upper-class goods, such as sugar,[30] but Reith connects the use of commodities to the core purposes of the capitalist system; in her analysis, capitalism depends upon choice, control, use, and misuse to ensure the production of goods.

Just as capitalism demands excess production of goods to fuel consumption, so does our food system require overproduction and excess to provide what the food shopper desires. Thus the consumer is required to police the self; "although the target of the 'war against obesity' is located in political-economic systems, the struggles have been waged primarily at the level of the bodies, brains and subjectivities of individual consumers themselves."[31] If fat people are stigmatized but food is ubiquitous, dieting is essential to the creation of the appropriate self: "excess now starts to appear as an inherent feature of the system of consumer capitalism. In this reading, obese bodies, pathological gamblers, binge drinkers and unrepentant smokers, amongst others, emerge as cultural figures that are formed in the shadow of ideas about reason and productivity, where they act as both material as well as symbolic counters to the ideology of responsible, controlled consumption itself."[32] Contemporary fat shaming projects equally negative labels upon the obese: out of control, weak, unsuccessful, and potentially addicted, which is to be less rational, less intelligent, and potentially dangerous. The obese are certainly dangerous to the aspirational citizens who know that in a winner-take-all world, one must be successful and also perform success according to cultural demands and standards.

POVERTY AND OBESITY

We cannot ignore the usefulness of the sociological structures that determine obesity and poverty and the linkage of fat, poverty, and social mobility.[33] While the etiology of obesity is complex, its correlation with poverty is established and well known. Food insecurity is closely correlated with poverty, and both are correlated with higher levels of obesity within a population. Public health studies have demonstrated that almost all the states with the highest poverty rates also have the highest rates of obesity.[34] These states also have the highest rates of food insecurity and hunger.[35] In many populations, there is a correlation between poverty, obesity, and food insecurity,

with food insecurity best understood as a further register of poverty. Such statistics aren't intuitive, because one would assume that food insecurity would be negatively correlated with obesity. But for many reasons—social, economic, political, and demographic—those who are poor in the United States have a higher likelihood of also being fat. This correlation is much explored within public health, nutrition, and epidemiology, and its cause is complex and multifactored.[36] Examined on a population level, however, it is also linked to income disparities. A larger income gap between rich and poor correlates with a higher level of obesity for the low-income population.[37] While certainly not conclusive or causative, these overlaps suggest that obesity may be related to inequality as well as to poverty and food insecurity, a correlation that occurs across the globe.[38]

Wilkerson and Pickett have provided an accessible explanation of how obesity is linked to inequality in their volume *The Spirit Level: Why More Equal Societies Almost Always Do Better*, and Gerardo Otero provides a precise analysis of how and why the world's poor are more likely to be fat.[39] In short, the poor are more likely to buy cheaper, energy-dense processed foods, foods that have recently been demonstrated to cause weight gain due to a higher intake of calories and amounts accompanied by less fiber.[40] Fresh fruits and vegetables tend to be more expensive than ultraprocessed foods in general and per calorie, and they are less likely to be easily available in poorer zip codes. In addition, poorer neighborhoods have fewer opportunities for exercise, either because there are fewer parks or because going outside could be dangerous. Those who are poor are also more likely to be working job shifts or multiple jobs that make finding time to cook a challenge.[41] Together these characteristics synergistically create an environment that favors obesity, particularly for the poor, resulting in the probability that the less well-off are more likely to be fat than the rich—thus body size becomes inversely related to wealth and income.[42] The sociologist Barry Glassner points out that the inequality of poverty triggers a cascade of conditions that predispose the poor to fat, just as environmental conditions—privilege, if you will—enable the wealthy to remain lithe: "shielded from discrimination and chronic stress, and possessed of more social connections and money for higher education, weight-loss drugs, and personal trainers, the rich stay healthier and thinner, and thus better paid, less subject to discrimination, and less stressed."[43] He labels this an auspicious cycle; clearly, then, there is a negative feedback loop in place for the less entitled.

The increased risk of obesity among the economically precarious is not socially tangential to the users of fad diets. Significant data demonstrate that there is a wage penalty for being overweight, particularly since heavier women tend to earn less and to be in lower-status employment. It could be argued that one loses status by gaining weight.[44] There is significant shame associated with being fat, particularly in the United States, and that shame is reflected in discrimination against overweight people, particularly overweight women.[45] When one of the authors was examining the food addiction movement (through publications, online resources, and conversations), it was very clear that many, if not all, of the images available online were of fatter, seemingly lower-status people, often gorging on inexpensive fast or fatty foods and sweets. Most of the books and testimonials described a level of misery and economic despair that could be mitigated by losing weight: part of the testimonial was premised on the perceived truth that if large people got smaller, they would become much more economically successful, a critical element of the reimagining of the "New You" espoused by food addiction and weight loss programs.[46] Accurate or not, the cultural belief that fat people are less employable, more likely to belong to a lower class, and less successful is hard to ignore and provides a powerful reason to diet for the aspirational middle classes. The body size of lower socioeconomic classes and its presumed associations with lifestyle, identity, and place in the social world help to fuel a diet industry that promises a new life in addition to a smaller waistline.

FAD DIETS AS RELIGION

Another dimension of American culture that has seen rapid change since World War II is the increasing secularity of many Americans. Historically, family, tribe, and religion filled humans' social and moral needs, but in the contemporary United States and much of the secular urban West, people are less likely than ever to live in close proximity to families or to participate in organized religion. This loss of stabilizing structures in urban industrial environments makes life more ambiguous and difficult. People find it increasingly burdensome to constantly carve out a singular identity and have an unmet desire for community, rules, and a means to distinguish right from wrong.

Accordingly, the Pew Research Center recently reported that 23 percent of Americans now identify as atheist or agnostic, up from 16 percent in

2007. Among millennials, 70 percent claim no religious affiliation and say that religion is not important in their lives.[47] This secularization has left many searching for the structure and identity that religion once provided. Fad diets arguably can do what religion once did by prescribing organizing food rules and rituals. Like religion, they provide meaning in confusing situations, giving us moral guidelines and comfort. In urban, secular cultures and locations such as the United States, such diets are more appealing than ever, both because, for some, they function as new religions and also because of the unprecedented cultural premium placed on health, longevity, and the body.

The historian Harvey Levenstein, in describing widespread food fears in America, argued that residual Puritanism and its tradition of self-denial made Americans especially vulnerable to nutritionists' cautions against pleasure and hedonism.[48] This guilt over self-indulgence, along with the belief that self-denial is the road to salvation, surely played a role in the appeal of restrictive or self-punishing food cults. For example, adherents of calorie-restricting (CR) longevity diets often practice a grueling 40 percent daily calorie reduction for years, believing that such restriction yields a longer life span and lower rates of cancer, diabetes, and other diseases, in spite of mixed scientific evidence in both humans and nonhumans.[49] Like so many religions, a great many fad diets often feature fasting, asceticism, conversion, and renewal as their central tenets.

Alan Levinovitz, a scholar of religion at James Madison University, has analyzed the social and psychological processes that lead to belief in fad diets by examining diet as religion. He maintains that the suspension of facts in favor of faith ties dietary fads and practices together. The pathway to belief in a diet fad is like the pathway to faith: group validation and a pseudoscience that equates correlation with causation. Both religion and fad diets reject technology in favor of presumed older systems of practice and belief, while modern science is ignored. Levinovitz debunks fad diets by revealing their histories and demonstrating that almost all food fads recycle "the same archetypal myths and the same superstitions." For example, Chinese Daoist monks of two thousand years ago decided that avoidance of rice would prolong life because agricultural grains rotted the internal organs and caused disease and death. Monks encouraged followers to shift to a wild-plant-based diet to ensure "perfect health, eternal youth, immortality, the ability to fly and teleport."[50] The early Daoists were proposing a

return to a golden, preagricultural past in which people presumably lived long, natural, and happy lives. This story provides several archetypal myths: a lost paradise, perfect health, long life, and eternal youth. Losses caused by modernity can be recovered by rejecting specific foods, and to do so is a moral (religious) imperative. Today our fantasies of self-transformation take a different shape. We are more likely to be told that the diet protects from or cures cancer, ensures a lean body shape, and provides restful sleep and abundant feelings of well-being, rather than the ability to teleport. The Daoist diet is two thousand years old, which is precisely the point. These diets conform to established cultural tropes that provide meaning to their followers; they repeat themselves in every era because they promise to provide similar, highly desired outcomes with minimal effort.[51]

Levinovitz is convinced that, just as religious belief systems can be irrational, so too are many diet fads, because they use the very same mental structures. He points out that many systems of thought encourage misplaced faith in fad diets. For instance, the doctrine of signatures (or doctrine of similarities) proposes that the form that a substance takes points to its use in the body: red foods are good for the blood, meat will make you strong, and fat will make you fat. You literally are what you eat, and thus fat will make you corpulent.[52] As Levinovitz explains, "Magical thinking is more like science than religious faith. Magic is governed by simple and intuitively plausible laws that explain the natural world without supernatural forces: beet juice is red, blood is red, therefore drinking beet juice ought to replenish blood."[53] Similarly, he argues that sugar was considered a health food until it became more available to the masses, suggesting that as long as it was an elite food, it was good. The use of sugar by the lower orders was perceived as a moral problem, and diet and social reformers condemned the intake of candy by the young, likening it to physical and spiritual poison. Because of this theft of class position, the perceived values of a commodity were often reimagined, creating what an anthropologist would see as "matter out of place" or moral disorder.[54]

Levinovitz considers these cultural processes as deeply irrational, causing flawed understandings and blind faith about how a fad diet works and what it can accomplish. These fallacies explain belief in magic elixirs, superfoods, toxic additives, bogus food-borne cancer beliefs, Paradise-lost prescriptions, and easy, simple, miracle diets without side effects. Such beliefs set the stage for faith in diet efficacy, even if proof is elusive.

The historian Adrienne Rose Bitar has applied a historical and cultural studies lens to analyze American diet fads as products of their time and place and as unique cultural practices that define and express broader concerns within a society: "the role of these texts in shaping the stories American culture tells about its past and its future . . . the stories we tell ourselves about ourselves."[55] The fad diets she examines—Paleo, Eden (rooted in biblical text), precolonial, and detox—all promise that a return to a mythical golden past will reverse the ills of the modern world. She maintains that the narratives are the same: a fall from grace, a loss of innocence, and the resulting diseased body and mind. Each diet proposes an ideal past space that defines human origins, perfection, and health, and each step away from these places of origin results in greater and greater misery and ill health. In these diets, Americans imagine their perfect future selves as embodiments of an idealized past, but the shape of the myth is determined by current cultural desires and dilemmas. Bitar's argument is particularly strong when she is delving into Edenic diets, or diets premised upon biblical injunctions or foods. Many of these diets promise that adherence will create a slim body because the correct body shape will emerge if one is practicing food as Jesus intended and correctly living the scriptures. Bitar makes clear that the primary narrative of biblical diets is that modern American culture causes obesity, rather than the Christian sins of gluttony, sloth, or other forms of individual behavior. Many Christian diet books locate the cause of obesity in something cultural—obesity is an indicator that America is immoral.

Edenic diets share—along with Paleo diets, precolonial and primitive diets, and detox diets—the firm belief that the problem is located within the cultural food system, not within the body of the dieter. They profess that the problem is the modern American way of life, that a toxic modernity is at fault and that only a return to a simpler, more "natural," and more religiously moral lifestyle—the proverbial Golden Past—will reverse the damages. As Bitar states, "Much like Paleo, precolonial, and detoxification diets, devotional diets pathologize the relationship between human health and modernity, interpreting modern diseases as biological expressions of social decline." She asserts that "diet books are powerful . . . but the story they tell is not special. They recount the foundational myth of American Culture: that of the American Adam at the brink of history—competent, innocent, ready to make the world anew."[56] Bitar's analysis reveals that, for

Americans, diet books allow for the rebirth and renewal—or at least the perception of such a possibility—of the body personal as an expression of the body politic. Diet fads offer the capacity for endless re-creation, for an ever-expanding opportunity for altering the narrative of self and nation. In essence, diet books express the deepest hopes that the nation and self are exceptional, malleable, and perfectible, as the shining city on the hill and the ideal lithe body.

PSEUDOSCIENCE

Over and over, we see that pseudoscientific claims underpin all fad diets. Pseudoscience refers to statements, beliefs, or practices that are claimed to be scientific and factual but have not been empirically validated—nor are they usually compatible with the scientific method. Pseudoscientific dietary claims influence and manipulate people by employing cognitive mechanisms that promote gut-level heuristics over rational judgments. The most common thread across pseudoscientific claims is the appearance of actual science. Fad diets often use buzzwords that sound credible and exaggerate the beneficial or detrimental properties of a particular food or dietary habit.

> Claims regarding toxins, antioxidants, and superfoods are abundant and often rife with qualifiers such as *natural* (versus *unnatural* or *modified*). For example, superfood crazes such as acai berries and kale are touted for their antioxidant count and detoxifying abilities. Although some of these terms have concrete scientific meaning, the average person is unlikely to know what that meaning is. Likewise, claims regarding the abilities of these foods (e.g., that kale can dissolve unhealthy foods in the body) are vague and unverified. The heuristic associations these words imply nonetheless affect people's perceptions and behaviors regarding these foods.[57]

A great many books respond to pseudoscientific thinking. We call this genre the "pushback diet," that is, a diet book designed to discredit a popular diet for scientific or social reasons or, less ominously, to explain the diet's use as a result of social factors or cultural fractures. The pushback theme may be employed by academically trained writers or by the engaged public writer or journalist and ranges from the scholarly to the scurrilous.

Many of the nonacademic volumes are amusing, such as Anthony Warner's *The Angry Chef: Bad Science and the Truth About Healthy Eating*, an impassioned screed that excoriates fad diet proponents for their lack of scientific reasoning. Damien Thompson, an English journalist better known for writing about religion, has published two books that attack the irrationality of the addiction, fad diet, and alternative medicine belief-o-sphere, both well reasoned and fun to read.[58] Some, like Matt Fitzgerald's *Diet Cults: The Surprising Fallacy at the Core of Nutrition Fads and a Guide to Healthy Eating for the Rest of Us*, criticize fad diets, only to suggest their own "rational" diet, also guaranteed to achieve lifelong weight stability.[59]

Among scholars, the tendency to leap into this epistemological pile is also strong, with analyses ranging from explanations of how science is ignored in diets, to explications of how dietary beliefs represent particular ways of seeing the world, or how culture conditions people to believe and behave in a predictable manner. Academic scholars are less likely to write a hit piece on diets than journalists or lay authors, but they do seek to explain diet choice and the belief systems that encourage dietary regimes using the theories and methods germane to their disciplines. Many of these scholars (and the scholarly public, such as Damian Thompson) find the irrationality of these diets appalling, and they use their disciplines' theories and methods to illustrate how belief in these diets is faulty, illogical, and unscientific.

For example, Marlene Zuk, an evolutionary biologist and behavioral ecologist at the University of Minnesota, has used her considerable knowledge of human and evolutionary biology to critique the Paleo diet in her volume *Paleofantasy: What Evolution Really Tells Us About Sex, Diet, and How We Live*. Her entertaining yet knowledgeable book explores the misplaced biology of Paleo beliefs and also situates the desire for an ancient, knowable, and ideal diet in the values of today. She is not a nutritionist, but she explores Paleo using her knowledge of human biology and evolution and, in particular, the evolution of sexual behavior. This slightly sideways analysis allows the reader to better understand how strongly connected food, sex, and social systems are, both now and in prehistory. She takes on the myths surrounding meat eating (meat is assumed to be a historically primary food item by many Paleo adherents), the scientific limitations of using a historic lens to understand present-day nutrition, the limits of evolutionary science research, the sampling and methodological problems

inherent in using hunter-gatherers as analogues for all past humans, and finally, the limits of extrapolating from archeological remains.

Zuk uses a gender lens to examine how the fantasies of Paleo support a male-dominant, patriarchal vision that creates woman as a feminized sex object without agency or evolutionary importance. She tackles the hunting hypothesis, the false fantasy of the all-powerful alpha male, and the role of social systems, family groups, and kin networks in ensuring that children are fed, and she also situates the evolution of human social groups in relation to other primates and vertebrates. Of particular interest is the emphasis on food sharing to ensure child survival and its robust development in *Homo sapiens* past and present; Janet has specialized in this area of biological anthropology and can attest to the soundness of Dr. Zuk's analysis. Zuk states: "Rather than trying to use our past to proscribe our present, or our future, we can use it as a way to understand where we came from. Paleofantasies call to mind a time when everything about us—body, mind and behavior—was in sync with the environment. But as the previous pages have shown, no such time existed."[60]

ALIENATION FROM MODERN CULTURE

Several overarching concepts unite the trends or epistemologies about fad diet popularity in the United States. It appears that Americans are deeply at odds with their food and their bodies. There seems to be a consensus that our current diet has irrevocable flaws that cause health problems and that it is corrupt, a falling-away from a prelapsarian ideal. The flaws are essential and intrinsic, connected to the contents of the food (such as carbohydrates, gluten, or sugars) or extrinsic, caused by contamination from an environment polluted by cultural processes that create unhealthy food. Similarly, the content of the body is seen to be at odds with its modern context (as with Paleo) or internally afflicted and diseased, as witnessed by the pervasive belief that food can be addictive or dangerous to the vulnerable. These trends suggest that Americans perceive the body and the self as under attack on multiple fronts, internal and external. The self must be protected from what is inside food because the food system—socially created, politically mandated, and economically structured—provides poison rather than nourishment. This emphasis on control over the self and dietary intake to protect against external encroachment leads one to conclude that some

Americans perceive the self to be at odds with culture and perceive that there is a fracture between the individual and society.

Of course, it's theoretically inaccurate to utilize the concept of the fad diet as a metaphor for American culture, but the fact that so many currently popular diets are posited as antidotes to a presumably toxic food system indicates a shared culture of doubt about our food system—a collective sense of needing to protect oneself. The multitude of books about the problems in the food system have convinced many people that there is something very wrong with the food they eat. There are books and media streams produced by food conspiracists, books produced by people who employ a mix of peer-reviewed science and speculation to present what appears to be solid evidence, and well-researched volumes produced by scientists and health practitioners. Unfortunately, it is very hard for the public to determine the difference between these sources or to understand what is valid and what is not. For instance, Janet's county library system purchases a wide array of food texts because they are popular with patrons; these books range in quality from the fringe to the solidly scientific, but all are presented as equally valid when grouped together in the "diet and health" shelving areas. Books by reputable public health officials and journalists such as David A. Kessler, Michael Moss, and Mark Schatzker are presented next to sensationalist fad diet authors such as Steven Gundry and Mark Sisson.[61] While the reputable texts often provide well-reasoned examinations of the Western diet that illustrate the structural imbalances of the current food regime, the fringe texts usually focus on the health dangers of the food system to the individual eater. Neither model is dispassionate, and together they create widespread alarm for readers not trained in biology or public health.

Conversations with farmers' market customers and the general public about dietary intake and diet adoption provide a clear link between awareness of problems within the food system and the resulting adoption of the latest diet: "I'm eating clean and gluten-free because big food is putting poison into our meals; I read Michael Moss and it's very clear why we need to go clean" is a typical comment. Indeed, some of these critiques encourage rejection of certain food types and even groups (processed foods, for instance) in favor of more natural, or presumably ancient, dietary options. Pollan's now-infamous directive on how to eat ("Eat food. Not too much. Mostly plants . . . and nothing your great-grandmother wouldn't recognize"), from his book *Food Rules: An Eater's Manual*, has been cited again

and again to defend diets such as Clean Eating and Paleo.[62] According to many people, *The Omnivore's Dilemma*, with its celebration of farm-fresh and foraged food, leads directly to the Paleo diet. The reasoning is that if the current diet is bad for you, an older diet must have been better, because we supposedly didn't have problems such as diabetes, gluten sensitivity, obesity, and cancer in the past. Therefore, eating clean, or avoiding carbohydrates, or going Paleo is the best way to correct diet and public health problems.

These are perceived to be individual choices; dieters are unaware of the multitude of cultural channels that present a certain diet at a certain time, and to a specific eater. Dieters might not clearly understand their reasons for choosing a diet, other than that they expect certain promised outcomes and believe that performance of the diet will generate social approval and relieve anxieties about food choice. The historical, economic, and cultural dimensions of the diet are obscure; dieters only know that they "should" adopt the diet, and health benefits will follow. The belief that the individual chooses a diet hides how social, cultural, and psychological factors influence dietary belief and behavior. Dietary choice seems to be individual and scientific, but all dietary practice is cultural, and the nutritional or scientific research that validates regimes of behavior is also culturally determined and created, even when biologically accurate. In the case of dietary preferences, even if the outcomes and the data represent a biological reality, the questions asked, the research conducted, and the diets' social approval are driven by cultural paradigms.

Modern fad diets make sense because they propose that the individual can be protected from negative social, cultural, and biological influences by adopting a personalized, bounded diet suited to the particular needs of the eater. Eaters must protect themselves from the outside world, from foods with dangerous ingredients and foods corrupted by environmental and social toxins. An individual eater is, metaphorically, a dietary island adrift in a polluted sea. The proliferation and tone of the modern fad diet market indicate a profound alienation and fracture between self and society and between the individual and culture—because many people have come to believe that the only way to ensure health and safety is to wall themselves off from the world.

Chapter Two

FOOD REMOVAL DIETS

THE CLASSIC "FAD DIET"

You've heard of them and may have one or more friends on them; maybe you're on one yourself. With these diets, you sharply limit certain foods because you want to lose weight, avoid illness, reset your body, eat a biologically ideal diet for our species, or "live your best life." They come and go, gaining and losing popularity in a somewhat predictable social cycle and changing names—if not practices—as new advocates rediscover and capitalize on their re-creation of the new-old craze. One decade might abjure fats, while the next lives in fear of carbohydrates. Cookbooks pop up in quick and easy abundance to offer simple, family-friendly recipes that supposedly eliminate the forbidden food category (these same cookbooks will populate the shelves of charity thrift stores in a few years). Celebrities and health gurus endorse the diet, and it becomes the only way to eat for a year or two if you want to demonstrate how much you value health and well-being to your friends, family, and Instagram followers. These are the diets that define fad diets: the ones that promise easy solutions and rapid fat loss only if you remove an entire category of food from your diet. Why is this particular type of fad diet so appealing?

Food removal diets are often branded and ask the dieter to spend money on special foods, membership in an organization, or the services of

a professional nutritionist, personal trainer, or coach. Paradoxically, these food removal diets often wind up *adding* foods, albeit special ones that are intended to replace the foods that are supposed to be removed. These diets appeal to a uniquely American practice of shopping to solve problems, following a widely held belief that consumption solves, rather than creates, problems. It is the commodification of inadequacy—the ways in which brands and the consumer marketplace remind you of all the ways you could be better.[1] We suspect that buying things to solve problems creates a sense of agency among dieters: purchasing special foods makes them feel more efficacious than if they just ate a little bit less all the time.

Shopping, spending, and eating are all part of a faith in consumption that influences our culture, but our attempts at solving the problem of being overweight through more consumption is an effort that mistakes the disease for its cure, perpetuating a confusing pursuit of good health in a world of consumer goods. Even one of the oldest and most successful diets, Weight Watchers, relied on membership subscriptions well before its branded foods and online services developed. In the 1960s a woman named Jean Nidetch, after losing significant weight herself, had the idea of creating a support group with attendance fees for people who wanted to lose weight (what became Weight Watchers). Scoffers said, "Oh please!! No one's going to pay money to lose weight!" Weight Watchers proved them wrong.

Janet has enjoyed hundreds of conversations with people on fad diets, and most of those diets eliminate one or more foods rather than decrease the amount of food eaten. People say they adopt the diets to decrease caloric intake, reset metabolism, restore health, or simply lose weight quickly. These diets are so popular that eliminating a food type may be the archetypal diet in the minds of Americans, rather than, for instance, eating less or less frequently or replacing high-calorie foods (like fatty snacks) with low-calorie options (like fresh fruit).

It is even possible that the concept of "food reduction" may have come to mean "reduction of a food group (or macronutrient)" rather than reduction of the overall amount of food. Two examples stand out as typical and interesting because the people involved were self-aware and conflicted about the diets and their efficacy. The first example concerns the Atkins diet and Whole30. The former eliminates most carbohydrates, and the latter eliminates most carbs and many fats, gluten, all sugars, and alcohol, promising a fast health reset. Both tout their capacity to cause rapid weight loss.

Once when Janet was at a pet store, the clerk recommended an all-protein, no-carbohydrate food as the best option for cats: "This food has no carbs, which is good. We shouldn't be eating any carbs, and neither should our cats. They are very bad for us." Janet responded that while cats were obligate carnivores and didn't require large amounts of carbohydrates, humans were omnivores and absolutely needed to eat a balanced diet with differing forms of carbohydrates. The clerk asked why "everyone knows" that carbs are bad if they aren't, and then asked what Janet meant by different kinds of carbs. A few minutes later, after discussing simple and complex carbohydrate biochemistry, the clerk said his girlfriend was often on a diet and that most diets required cutting out carbs. She did Atkins for a while, and now she goes on and off Whole30. He admitted that it made dinner much less enjoyable: "You know, I do like my pasta, and the occasional pizza, and if she can't share with me, it's not a real meal." And then he said that she never seemed to lose weight on the diets, that she'd take it off, and then as soon as she stopped the diet—or went to a new one—the weight would all come back, plus more. She'd look for the next diet, one that was even more restrictive, something that was sure to work because it made sure she couldn't eat "all the bad foods." Janet then talked about how the body physically compensates with weight gain after experiencing a starvation episode and why and how avoiding carbs causes rapid weight loss—and rapid weight gain afterwards. After discussing feline and human needs, the clerk agreed that what works for a carnivore probably doesn't work for a species that evolved from fruit-eating primates.

The second example is from a conversation with friends who were anticipating "doing the Whole30" as part of a sober January, to "clean the body and lose the holiday weight." They explained that they always went on Whole30 in January, to "get rid of the toxins" from the holiday excess. But they said, "It's really hard, because we get together with friends every week for dinner and so it's difficult to have a shared meal. Sometimes we're all on Whole30 and so we can agree on the food, but we really enjoy having a glass of wine; we don't get drunk or anything, just it's nice to have a relaxing evening. And the food, well, that gets boring too, doesn't it? I mean, there are lots of recipes out there for Whole30 meals, but it's just missing something after a while, isn't it?" Janet asked why they adopted Whole30 if it wasn't a pleasant way to diet, and the response was "Well, it's the best way to lose it, isn't it? You just avoid all the bad foods and it gets rid of the inflammation

and the toxins from the body. But the food is really hard to keep doing; you really start to miss having a pasta dinner or some good sourdough bread. But the diet's really good for you, so we do it for a month to get rid of the Christmas weight." Janet asked if they lost weight on the diet, and they told her they weren't sure they did, "but that's not all it's about; it's about resetting the body, getting a good clean start to the year, getting rid of all the toxins—oh, but then in February we sometimes eat and drink enough to make up for January!" While planning a month of sobriety and conscientious eating is a good idea—many cultures embrace fasting to encourage health, reflection, and renewal—this example demonstrates that embracing a diet that makes socializing difficult could be counterproductive.

Several themes stand out from these conversations. One is that the diets might not work and may also cause compensatory behavioral overindulgence leading to weight gain. Two, they are difficult because people miss certain foods. Three, they are difficult because they disrupt valued personal and social habits. Four, they make socializing difficult or more complicated because people can't share food easily. And five, they are perceived to be difficult by their users and are unpleasant as an everyday food regime. They disrupt commensality and food habits enough that maintaining the diet becomes complicated and difficult. Furthermore, people justify their use with a variety of reasons that might not be accurate, because removal of toxins or a perceived decrease in inflammation isn't necessarily something the diets accomplish. We are left with the question of why people do them if they are difficult and unpleasant, and after many conversations Janet suspects that people justify their adoption *because* they are unpleasant and *because* they are difficult. Indeed, she has come to suspect that the difficulty is linked to a mental perception of efficacy and that sacrifices might equate with a magical thinking that such great unpleasantness will produce correspondingly profound wished-for outcomes. Like Benjamin Rush's adoption of heroic medicine, the cure must be effective because it is so extreme, shocking, and painful that it *has to* result in a similarly robust positive outcome. Kima once worked with a couple who fell on and off the diet and exercise wagon with regularity. When they were on, the regimen teetered on masochism. They drank no alcohol and ate only poached chicken breasts, steamed broccoli, and other bland foods that they perceived as "healthy." They paid hundreds of dollars per month to a boutique gym with a personal trainer and took "boot camp" classes whose routines

sounded byzantine. They described running through tires, climbing a rope to ring a bell, coming down a zip line, and then doing a lot of jumping jacks and crunches. Because they weren't used to eating or exercising this way, the diet resulted in boredom and noncompliance within a couple of weeks, and the exercise program resulted in injuries, soreness, and exhaustion within a month. Once they fell off the wagon, they ate most of their food from fast food chains, drank both cocktails and wine nightly, and stopped exercising completely. Of course, the weight came back quickly, and the sense of defeat was crushing. What was striking was the difficulty they had achieving something in between these two polarities. Kima could never convince them to go on a daily walk in their neighborhood or cook a simple, tasty dinner of a pot of chili and only one or two beers. They dismissed this middle ground as unappealing because it wouldn't be efficacious enough, and instead they repeatedly opted for episodes of an extreme but unsustainable lifestyle that mirrored what they saw on blogs and social media feeds.

We have heard, again and again, that people simply can't continue on fad diets, that they fail because they are abandoned. Something "just doesn't seem right" with their meals, and they're hard to maintain for a long time. That might be why so many of the carb-reduction diets tout a fourteen- or thirty-day plan and then allow users to gradually increase carbohydrates. But we also suspect that they fail because they interfere with the concept of the meal and with commensality, two deeply embedded cultural practices that define eating for many people. After all, people eat meals (not single foods), even though they often write and think about food as some type of nutrient package, or with some other individualized classification system that separates food from the everyday lived practice of eating. Leaving out a macronutrient may become difficult over time because our brains, cultures, and dining expectations tell us that our meal must include carbohydrates or fat to be conceptually complete. Our cultures train us to eat a certain way, and if we do not, we feel that something is vaguely wrong. Similarly, most of us also value eating together, and our preferred mental image of "how to eat" involves food sharing. After all, we valorize the family meal, and people treasure eating out with friends. Many of our cultural rituals require celebrating together over a table groaning with special foods. To prove this point, try to think about Christmas or a wedding without a shared and festive Christmas dinner, or a table filled with people dressed

in their best without enjoying wedding cake. Even Ramadan, the month of daily sacred fasting for Muslims, is socially marked as much by the celebratory shared meal (*iftar*) at the end of each day as by the more solemn, spiritual, and reflective period of daily fasting. The idea of eating together is baked into our understanding of how to feed ourselves, and so adopting a diet that makes it difficult to enjoy a meal with the people we care about makes that diet much less attractive over time. We suspect that these two cultural constructs—the structure of the meal and eating together—make the practice of these diets difficult and make them likely to be abandoned.

FOOD REMOVAL DIETS AND HOW THEY INFLUENCE OUR THINKING ABOUT FOOD

Food removal diets, the classic "fad diets," generally limit one macronutrient and allied or related food categories. They often work in the short term because they decrease calorie intake and cause dieters to self-police their food habits and practice hyperawareness to eliminate foods with the offending macronutrient.[2] And when dieters are actively aware of and chronicling intake, they do tend to buy or eat fewer calories.[3] Eliminating food macronutrients is easy to do because they are often visible—the fat attached to the protein bits of bacon, or the bun for a hamburger. Cut off the fat or remove the bun, and you have done your duty for your diet. It is also conceptually easy because there is a cultural understanding of which foods contain which categories of nutrients: we know that bread contains carbohydrates, steak contains protein, and butter and oil contain fat. This is part of the mental feedback process that allows "nutritionism" to define how we think about food. Nutritionism is a paradigm introduced by food philosopher Gyorgy Scrinis that argues that people have come to think about the value or healthiness of a food based on its scientifically identified nutrients.[4] In other words, people often perceive that the value of a food is the mathematical sum of all the individual nutrients, vitamins, and other components. Obviously, nutritionism is reductive and often inaccurate, since foods labeled by cultural norms (such as bread being a carbohydrate) often are far more nutritionally complex than a single label can indicate, but the social construction of a nutrient monoculture allows for a seemingly simple practice of fad diet restrictions. Our culturally constructed nomenclature of food that tends to link one nutrient to one food

has allowed the easy acceptance of these kinds of fad diets because foods can be defined definitively, making avoidance rational and condoned. If we defined food by social categories (such as foods we eat for dinner, or with others, or at parties, or for a religious practice), it would be much harder to justify food elimination as a dietary practice. Because we have embraced nutritionism and reductionist labeling, defining a food by its least desired—or most obvious—macronutrient can become the dominate epistemology for how we understand food intake.

Nutritionism also allows other, allied foods to be clumped into the same mental categories as the macronutrient-defined foods, so that a targeted food component is linked both to the food and to the macronutrient and the two concepts become the same in our minds. Gluten is the perfect example, because "everyone knows" that gluten is found in wheat products. Gluten thus performs a dual task as a referent for both wheat and carbohydrates because wheat is thought to belong to the cultural domain called "carb," even though it is nutritionally and chemically far more complex. Similarly, the mental construction works in the opposite direction: carbohydrates come to be defined as having gluten, so that to be "gluten free" is to avoid carbohydrates. This happens because wheat is the most culturally prominent food grain for many Americans—even though corn is economically the most important. And somehow in this epistemological mashup, gluten becomes perceived as a carbohydrate because those who avoid gluten consider it the defining element of wheat, which is culturally defined as a carb. But gluten is one of the many proteins—and other nutritionally important constituents—to be found in a wheat grain. Perhaps the way to imagine this kind of thinking is with a Venn diagram, and instead of having the various circles create a small part of overlap as they meet in the middle, one can rearrange them as if they were a stack of pancakes. The areas where they do not thematically overlap are no longer recognized as semiotically meaningful; only the center point becomes real and thus constructs the social and functional reality of the overlapping circles.[5] In that manner, gluten becomes a dangerous carbohydrate and could potentially lurk in all carbohydrate-containing foods, not just wheat. Of course, this is not a mistake that someone with celiac disease would make, because he or she would receive targeted education to ensure dietary practices to sustain health (slightly less than 1 percent of the population have this disease, and they should avoid gluten).

Another example of how such labeling occurs concerns white sugar. A few years ago, Janet was called by a member of the PTA for a local elementary school to intervene in a disagreement between two parent groups who were having a pitched battle over Goldfish crackers as snacks for schoolchildren. Parent Group 1—we'll call them Team Indulgence—thought that Goldfish were an acceptable snack item because they weren't a cookie or candy and all children loved them. Parent Group 2—or Team Austere—felt that Goldfish were inappropriate because they contained white sugar and would damage the childrens' health. Team Indulgence thought this was ridiculous because a small handful of crackers wasn't going to cause harm and, besides, the children really liked them and liked to share them, so they could be used to teach kindness and caring (yes, this is how complicated food can get). To a nutritionist the most salient ingredient isn't sugar but salt, since a standard 1-ounce serving contains 10 percent of the recommended daily intake for sodium, or 250 milligrams (based on a 2,000-kilocalorie diet). Goldfish do contain carbohydrates, but a standard serving provides 20 grams of *complex* carbs, or 7 percent of the recommended intake, yet also contains 5 grams of fat, or 8 percent of the recommended daily intake. Given that the energy needs of a young child are much less than 2,000 kilocalories, a child could be consuming a large amount of sodium while snacking, which would be more of a concern than the carbohydrates. The label also clearly states that there is less than 1 gram of sugar per serving. Janet's recommendation was to serve whole fruit and carrot sticks as a regular snack but to allow Goldfish occasionally, served alongside apple slices or cut-up vegetables.

That's when things got ugly, or interesting, if viewed from a distance (and time). Team Austere told Janet she was very wrong since Goldfish were made up of little more than white sugar, and it was deadly. This experience then acquired some anthropological interest. Team Austere explained that carbohydrates were sugar, and sugar caused inflammation, obesity, and diabetes and was addictive. Janet explained that the carbs in the crackers were mostly complex and long-chain carbs—not monosaccharides such as glucose, fructose, and galactose—and that complex carbs were essential nutrients for humans, providing energy, fiber, and a platform for needed micronutrients. But Team Austere perceived that Goldfish were made of sugars—long-chain carbs are constructed of monosaccharides and therefore are sugar. Here again we have the pancaking of categories, so

that the most feared ingredient defines the whole. Yes, carbohydrates are made up of linked sugars, but that does not mean that complex carbohydrates are white sugar or that they are digested into dangerous substances in the body; glucose is an essential monosaccharide that the brain depends upon for cognitive functioning. The Great Goldfish War demonstrates how culturally negotiated categories may define the meaning and functionality of biological food items. And because the cultural categories are socially constructed, they seem very real and rational—and allow misconceptions about nutrients and ingredients to proliferate.

What Are the Most Popular Food Removal Diets?

We have adopted the term "food removal diet" to cover a wide variety of weight and health management practices that identify one or more food items or macronutrients to be avoided. It is likely that these diets have some appeal simply because they follow the practice by all cultures of eschewing certain foods for religious or ecological reasons, which differ by region.[6] These food regimes often converge with other popular diets such as Clean Eating and Paleo because they focus on removing certain foods, although those practices usually abjure more food categories and focus less on nutrients as defining components of food. They differ from age-old dietary advice that identified excess food as a cause of excess weight; people have known for centuries that eating too much contributes to being plump. Food removal diets target specific nutrients for avoidance and are made possible by nutritionism and cultural food-labeling processes that define food by its biological composition. Though this classification scheme is messy, it is united by similar behavioral habits, including the demonization and avoidance of specific food components. While dietary fat was the predominant feared target in the 1960s and 1970s, carbohydrates became forbidden starting in the 1980s thanks to the popularity of the Atkins diet and, in rapid succession, the Zone diet, Sugar Busters diet, Sugar Addicts diet, and so on.[7] The rise of the Paleolithic diet in the 1990s added to the pro-meat and pro-fat, anticarb sentiment and provided additional legitimacy to the pop science theories that vilified carbohydrates.[8] The early 2000s gave rise to a fear of micronutrients (such as gluten) alongside the popularity of Paleo and rise of Clean Eating, crystallizing negative perceptions about carbohydrates because of concern about agricultural grains

(Paleo) and processed foods, especially sugar and white flour (Clean Eating and Paleo).

Most recently the Keto diet has dominated the popular imagination, although it is a thinly reworked Atkins diet, with a focus of achieving the physiological state of ketosis through the nearly complete removal of dietary carbohydrate. The achievement of ketosis follows the same logic as nutritionism, except that the reductionist lens is trained on the body instead of the food. In this case, the reductionism occurs with a physiological state in the body (ketosis), conflating it with good health or thinness, whereas nutritionism identifies specific nutrients and conflates them with good health or thinness. Regardless, many earlier diets have jumped on the bandwagon by reissuing their core texts as slightly edited new versions proclaiming to be "Keto-friendly!"

Food removal diets have a long and checkered history in the Western world. While most people were vaguely aware that certain kinds of foods eaten to excess made one overweight, there were few established fads prior to Mr. Banting's madly popular high-protein diet, published in 1863. In fact, until the more recent advent of Atkins, one would announce that one was "Banting" and be understood to be avoiding carbohydrates. Banting's physician advised him to limit sugars and "farinaceous" foods because he had heard a lecture about excess sugar in the livers of overweight diabetics. Banting lost weight, felt better, and wrote a self-published tract titled *A Letter on Corpulence, Addressed to the Public*. His diet limited carbs (but included charred toast), fat, and some vegetables, eliminated pork and veal, but allowed alcohol—which seems a very Victorian adjustment given the popularity of drink among men of the era. His diet became very popular even though he and his ideas were mocked by the press. He relied on testimonials, self-diagnosis, and self-help to legitimate his ideas, a tactic common to fad diets today. His high-protein, low-fat, and low-carbohydrate regimen became accepted as the reducing diet in the decades that followed. This diet fit into class and gender ideals for well-off men because it supported a male hunting, shooting, and fishing culture and identity, arguably an early foreshadowing of the Paleo movement. The widespread popularity of "Banting" on both sides of the Atlantic virtually ensured the cultural acceptance of food removal as a legitimate way to reduce girth.[9]

While many other fad diets rose (and fell) over the next century, the revival of "doing Banting" as the Atkins diet during the 1970s and 1980s

shifted the discourse about how and why people gain weight and how best to lose it. Atkins initially proposed five phases, reduced to four in later editions of his book, the first for at least two weeks with no more than 20 grams of carbohydrate per day.[10] Phase Two added 5 grams per day, to be increased weekly (up to 40 to 60 grams daily) until the weight loss goal was achieved. Carbs were added by including more vegetables into the diet. Phase Three was "pre-maintenance," adding another 10 grams of net carbs daily to slow weight loss and develop a healthy ongoing intake level. The final phase, maintenance, allowed up to 100 grams per day if weight loss was maintained. Amy Bentley has summed up Atkins's rationale neatly:

> Most carbohydrates = bad, protein = good, fat = underrated. The basic underlying premise of Atkins is that an excess of carbohydrates—starches and sugars—is the main culprit in preventing weight loss . . . our body, needing energy to function, burns glucose (also called blood sugar) made from carbohydrates. Limiting the number of carbohydrates we consume allows our bodies to burn energy from stored body fat and thus lose weight. Further, limiting carbohydrates—"carbs" in Atkins parlance—also helps to stabilize and limit the production of insulin, the glucose-regulating hormone in the body. Not only can too much insulin in the bloodstream prevent weight loss, Atkins argues, but it can also lead to a medical condition, hyperinsulinism, which can contribute to a whole host of health problems, including diabetes.[11]

These beliefs have been refined over the years to include a rationale for the intake of fat: the current iterations of Atkins and the low-carb movement maintain that dietary fat intake does not cause the body to make fat deposits. Body fat is created, they believe, by increases in blood sugar that trigger insulin and makes the body store fat. Thus carbohydrates cause fat, not the other macronutrients, and energy intake (calories) is not the problem since fat does not raise blood sugar levels.[12] To justify these biological and dietary prescriptions, in 1972 Atkins cited evolution and cavemen diets as proof that humans naturally subsist mostly on meat.[13]

The Atkins diet has morphed into a three-stage plan that targets carbohydrate levels at 20 grams, 40 grams, and a maintenance stage of 100 grams per day.[14] Dieters are now asked to pick their level, and Atkins.com offers meal plans, shopping lists, phone apps, and a meal delivery service

to ensure success (see www.atkins.com/products). And even though Dr. Atkins died in 2002, the publishing juggernaut continues under the aegis of the "New Atkins Revolution," with innumerable texts filled with meal plans, recipes, testimonials, self-help encouragement, and breezy explanations of biological and nutritional reasons for weight gain and loss. Titles tend to emphasize simple, fast weight loss and a starting-today promise to "feel great!"[15] Atkins remains a low-carb, calorie-unrestricted diet, although many users probably think of it as a "no-carb" practice because all but the maintenance phase makes intake of most traditional dietary choices difficult. Atkins and many other food removal diets offer the promise of eating as much as you want, so long as you remove the one food or macronutrient in question. Having your cake and eating it too is likely a large part of the psychological appeal. Not only do you not have to suffer hunger or restriction, but the promise of simultaneous indulgence and no-limits behavior makes these diets palatable.

We think that another part of the appeal of Atkins and all fad diets is that they are mental shortcuts. Cognitively, it's much easier to follow one diet rule than to do the arduous work of watching one's overall calorie intake. Of course, some people can quite successfully just eat less, but for many people who want to lose weight, it takes a lot time and energy to learn about nutrition, read labels, and often weigh or track food in order to learn portion control and achieve basic nutritional literacy. In other words, it's hard work, and time consuming at that. The appeal of a simple system with one rule like "no carbs" frees up cognitive attention for other tasks. Much like using a cake mix simplifies the complex task of baking, we think that this heuristic effect of fad diets is often the gateway to them.

Similar to Atkins and almost equally popular is the South Beach diet, created by the cardiologist Arthur Agatston and first published in 2003. This diet limits the "bad" carbohydrates (simple sugars, processed flours, and high-glycemic foods) in favor of high-fiber sources and supports intakes of healthy fats (mono- and polyunsaturated) from lean meats and plants. Like Atkins, the diet provides stages designed to kick-start weight loss, although it designates macronutrient intake percentages rather than net carbs. Phase One provides 25 to 30 percent of daily calories from protein, 20 to 30 percent from healthy carbohydrates, and 40 to 50 percent from fat; Phase Two allows a gradual increase of "good" carbs; and Phase Three is a lifestyle plan allowing roughly 30 percent of calories from carbohydrates.[16] Agatston

vilifies white sugar, processed foods, and many fruits—he's the source of the widespread belief that bananas are dangerous: "it seems wholesome, as desserts go, but this one is a killer." He also tells readers that sugar addiction is real and prevents weight loss, which is why they must avoid sugars and processed foods. The diet is nutritionally balanced but contributes to dichotomizing food beliefs by labeling forbidden foods as "lethal," "harmful," and "health hazards." It relies on the common tricks of the fad diet: patient success stories, the author's explanations about science and the efficacy of the diet (which can veer into pseudoscience), and uplifting individual testimonials that assure readers that the diet will work for them.[17] Readers are repeatedly told that the science supports the methods, but the first volume provides no references; the later volumes do provide references for each chapter, but there are no in-text citations—just a list of references provided for the chapter. The reader is left without a clear link between the statements made and the alleged science. Statements such as the following are not linked to any citations: "When you understand that the reason you keep falling off the diet wagon has nothing to do with a character flaw . . . you are not weak or undisciplined. You are most likely insulin resistant and addicted to sugar."[18] Furthermore, these texts provide no published peer-reviewed studies demonstrating the efficacy of the diet. The evidence is a pile of citations independent of the written chapters and the assurance that the diet has worked for others. It's the classic fad diet approach.

Agatston revamped the diet in 2008 to include exercise with *The South Beach Diet Supercharged*, aligned himself with the gluten-averse in 2014 with *The South Beach Diet Gluten Solution: The Delicious, Doctor-Designed, Gluten-Aware Plan for Losing Weight and Feeling Great—FAST!*, and in 2019 jumped on the Keto bandwagon with *The New Keto Friendly South Beach Diet*.[19] Each new iteration was accompanied by one or more cookbooks and manuals, all ensuring a steady publishing income, reminding us that one of the most essential features of a fad diet is that it be a salable product. Therein lies the power of this diet: it provides an intensely practical program, with helpful hints, food lists, meal plans, and recipes. The website provides meal kits and food delivery designed for each phase and priced at differing, accessible levels. The explanatory volumes include a few chapters of background information, but fully two-thirds of the pages are "how-to's" and recipes. The Keto-friendly volume offers 60 pages of background and 229 of recipes and meal plans. The recipes are quick, easy, and seem tasty,

with lots of spices and attractive photographs. They don't rely on obscure or proprietary ingredients and include lots of fresh vegetables. Take away the bombast, dodgy testimonials, and sketchy science, and the diet isn't a bad idea. It's not going to hurt anyone, it's well balanced, and it could teach new habits. In fact, when people ask Janet if they should go on a low-carb diet, she recommends that they follow South Beach, but to start at Phase Two or Three and to skip the very-low-carb induction period.

Dr. Agatston's pursuit of diet fads reveals an important trend in weight reduction and wellness over the last few decades: a tendency to remove foods to achieve health goals. Food removal has become a primary strategy for self-help health care and has focused on carbohydrates (especially wheat) and their allied ingredients such as gluten, although other food categories have also been targeted. Tomatoes and other members of the nightshade family (eggplants, potatoes, and peppers) have been accused of causing arthritis and other maladies; the alkaline diet removes foods alleged to cause acid in the body (wheat, refined sugar, meat, and processed foods). These ideas are not backed by nutritional science, but adherents argue that removing specific foods restores health and vitality. Although some of these lists are idiosyncratic, there is a general agreement that farinaceous foods (especially wheat), sugars, processed foods, and high-glycemic foods (like bananas and potatoes) are problematic. These exclusions partly reflect Banting's original diet, and they validate one another, so once one diet is adopted the others become equally appropriate because the assumptions about proper diet are so similar. Together they contribute to a coherent set of beliefs about health that begin to seem incontrovertible.

For example, recent wellness diets created by medical doctors reproduce many of the practices of Atkins and South Beach, and the credentials of their originators imply legitimacy, even if the medical degree is in a field far removed from dietetics or gastroenterology. The Perricone diet was created by a dermatologist and forbids most grains, gluten, dairy, red meat, sugars, potatoes, processed foods and snacks, fried foods, and high-glycemic fruits but encourages fish and other sources of Omega-3 fatty acids and copious (expensive) proprietary supplements. It's a 28-day plan that promises to reset the body and eliminate inflammation to provide a "total rejuvenation."[20] Dr. Steven Gundry has become famous for his warnings about the dangers of lectins, which he maintains cause obesity and disease; he's the source of widespread fear about "leaky gut syndrome." Lectins are proteins

found in plants, especially whole grains, beans, peas, and vegetables. Foods to avoid include grains, flours, processed foods, sugars, legumes, most fruits, many vegetables, and nightshades—as well as all GMO foods and anything that's been treated with herbicides. Like other food removal diets, this one is low carb, high protein, and positive about some fats.[21]

The Dukan diet reproduces much of the Atkins diet by offering a high-protein, four-stage diet. The first phase ("attack") is all protein, with no carbohydrates or fats. The "cruise" phase alternates an all-protein diet with days that allow nonstarchy vegetables but no carbohydrates except oat bran; this is followed until the weight target is hit. The "consolidation" phase adds small amounts of bread and a small amount of fruit and cheese. The final phase ("permanent stabilization") allows more foods but requires a return to the "attack" phase one day per week; it also requires oat bran to be eaten daily.[22] The Wheat Belly diet, from Dr. William Davis, targets modern wheat varieties as the cause of most obesity and health problems. Gluten is a problem, in his formulation, but so are many other constituents of wheat and carbohydrate-containing foods. Forbidden are all grains (including rice), all processed foods (from canned soups to snacks and desserts), potatoes, legumes, gluten-free foods (because they contain grain-based starches), sugars, soft drinks and fruit juices, beer, and dried fruits. Permitted are vegetables, raw nuts, oils, meat and egg proteins, dairy, red wine, and chocolate.[23] These diets link ill-health to exposure to food components labeled dangerous, even if science doesn't support such claims. The originators, all medical doctors in clinical practice, claim that they have special knowledge and that most doctors are wrong about illness causation.[24] We don't dismiss the expertise of practicing physicians, but it's important to note that these publications are not based on peer-reviewed studies published in academic journals—the gold standard for clinical evidence. The diets promise quick weight loss and rejuvenation through the avoidance of "bad" foods and restrict specific types of foods rather than moderating intake overall. Most do not restrict calories because they assert that weight gain is caused by a target component or food chemical, not by excess intake or lack of exercise. All of them target carbohydrates, especially wheat products, as the ultimate cause of weight gain and illness.

The poster diet for these trends is Whole30, the diet mentioned at the beginning of this chapter. It applies most of the proscriptions already listed into one 30-day plan that reputes to reset the body, remove toxins, and

reduce weight. Written in a take-no-prisoners, no-nonsense manner, the plan offers a solution to almost every disease you might have, from high blood pressure to multiple sclerosis, and is particularly concerned about inflammation. You must "slay the sugar dragon," avoid alcohol and grains, "pass on the peanuts" (and beans and soy), and deny dairy (because milk, cheese, and yoghurt "don't do a body good"). It's pretty simple, in the end: you avoid all sugar, alcohol, grains, legumes, dairy, baked goods, and treats. You eat meat, seafood, eggs, vegetables, and natural fats. You are also given a very long list of ingredients to look for on food labels, with detailed information about whether they are acceptable or not. According to the authors of Whole30, the Hartwigs, one bite of pizza makes a difference because you have to eliminate 100 percent of all "potentially problematic foods" from your diet for a full thirty days or it doesn't work.[25] The Hartwigs have published five manuals for their diet, innumerable cookbooks, and other related material, but their primary profits probably derive from online coaching and subscription plans. It's a very complicated diet that requires a great amount of planning and effort but probably feels like it's effective simply because of the difficulty.

In summation, these diets differ from other weight loss diets because they advocate the removal or sharp reduction of a food or food component. They justify these dietary changes with narratives about health and wellness, particularly that the targeted nutrients or foods cause negative biological outcomes, including obesity. Often the reason for the diet is health improvement, although weight loss is promised because of renewed vitality. Excess weight and obesity are posited as symptoms of the diseases caused by intake of the "bad" substances rather than a result of excess calories, so most food removal diets don't restrict calories. The outlier among these plans is the South Beach diet because it advocates percentage intakes of macronutrients and restricts fewer food types; it recommends a shift from simple carbohydrates to complex ones. All the diets agree that limiting carbohydrates—especially wheat, processed flours, and sugar—is essential. Conceptually these diets read as "easy" (many books have the words "Easy" or "Simple" in their titles), even though both followers and creators acknowledge that adherence is difficult—references to difficulties are usually buried at the end of the diet books. To quote one dieter: "I don't want to eliminate those foods from my life. But in our society, there are good foods and bad foods. That's just how it is."

WHY ARE FOOD REMOVAL DIETS HARD TO FOLLOW?

A food removal diet perhaps makes cultural sense to Americans in a way that it might not to other cultures or peoples. It certainly aligns with our tendency toward "all or nothing" dichotomized thinking. It's probably aided and abetted by the lack of a socially constructed national cuisine with firm cultural rules about what is and is not a proper diet, something you might find in many other cultures. In the overheated discussion about individual foods and choice we sometimes forget—or fail to acknowledge as we focus on single foods or single nutrients—that almost all food episodes are experienced as meals. Meals are composed of more than a single food and are socially constructed and culturally determined. Snacks, on the other hand, may contain only one food without shame—think about having an apple midmorning, or some chips or a cookie after dinner while watching a film. But we definitely disapprove of substituting a snack for a meal because we understand it's not the proper way to eat. Please pause for a moment to think about what constitutes a proper meal for you. What are the elements? The textures? The flavors? The number of items or types of foods? The temperatures? How is lunch different from dinner, and what about breakfast? How do snacks fit into the daily round of eating episodes? Can you have breakfast food for dinner, or would that break some form of internal food gyroscope: would something in your brain whisper, "this isn't really dinner"? And if you can identify meal rules, where did they come from? Did you learn them growing up, are they simply what everyone does, or did you decide to create rules for yourself based on preferences or your knowledge of dietary options? If you did create new food rules for yourself, how did you construct them, and what did you use as guidance in the creation of what you eat?

These questions are not random, because almost everyone learns food rules that reflect their culture's idea of the "right way to eat," and these rules inhabit our brains and influence our decisions at the grocery store, at a restaurant, and when we plan and cook our food. Kima went to college with someone widely known as "the girl who eats meatball sandwiches for breakfast," a practice viewed as so odd, in such violation of accepted food rules, that it became the primary way this young woman was known socially. Even if we adopt new ways of eating, we do so within a cultural envelope that teaches us what to eat when, and how to prepare it. These

rules are practical as well as social because they create a language and grammar of food that signal to us that we are eating properly and to others that we are part of a culture, that we belong to the group—because we are eating the right way.

WHAT'S A PROPER MEAL, OR WHAT DOES LINGUISTIC STRUCTURALISM HAVE TO DO WITH FOOD?

Anthropologists have long recognized that food is a symbolic construct that reveals patterns of cultural grammar and that part of this grammar is how meals are assembled. And just as you know when a sentence isn't right, or a word is being used incorrectly because it doesn't fit into the sentence you are reading or hearing, so does food use possess a structure that alerts our brains and our cultural selves that we are doing the right thing with our diet. Food, and the individual items that make up the elements of our diet, can be read as a code in the same way that words, and how they are used, present a linguistic map that structures our use of language. Claude Levi-Strauss argued that food use revealed the metaphorical processes of human thought and cultural patterns. Drawing on linguistic theory, he labeled the distinctive features of a cuisine "gustemes"—elements of a food language that could be read to understand sociocultural phenomena. He posited food processes as a cultural text mirroring perceptions of the social self, so that the transformation from raw materials to cooked food to digestion or rotting becomes a homology for the transformation of the human animal to the social being, or nature to culture.[26] While this might sound theoretical, think of it as a language that conveys meaning to others, but with food rather than words. Would you invite friends to dinner and serve them food that hasn't been prepared? Probably not, because it would be rude; instead, you'd use your culinary skills and experience to craft a dinner that says something about you and that is designed to please and honor your guests. Similarly, your guests would have an idea of what to expect, and they would anticipate a meal made up of identifiable elements (courses, dishes, structure, food types) and certainly would be taken aback if presented with raw, unprepared foodstuffs. The act of cooking (and sharing food) is a metaphor for welcoming people into the home and into the social circle and acknowledging them as friends. Just as cooking transforms nature into (food) culture, sharing a cooked meal turns strangers into friends. And this

is just one of the many elements of food language that we "read" as cultural agents, usually without ever thinking about how or what we are reading.

Using a different structural approach, Mary Douglas analyzed food choice, uses, and consumption to reveal patterns of encoded social structure. The rules for the proper components of a meal, a day's worth of meals, and a yearly cycle of eating events and rituals provide boundaries that mirror unstated rules about what should be eaten (and how) and human interaction and exchange.[27] Observation of British families revealed that most follow a tripartite meal scheme with a stressed food and two unstressed sides, a pattern that is repeated within the day with a stressed meal (dinner) and two lesser meals (breakfast and lunch). This scheme translates, roughly, into a meat center and a starch and vegetable accompaniment (meat, potato, vegetable—or A+2b—often served with a sauce such as gravy). A "proper" dinner consists of a core item (meat or meat substitute) plus two ancillary foods. The mental placement of a protein as a core is probably one of the many reasons that Western or Global North food removal fad diets generally never call for a reduction in that macronutrient.

Mary Douglas and Michael Nicod's work on food rules demonstrated that British eaters have a clear set of expectations about what a meal should contain. Dinners are different from lunches, which are different from snacks, but each relates to the other through a set of structural rules for the social importance of the meal. While dinner contains meat, potato, and vegetable, lunch provides meat and a potato simulacrum (bread). The cultural recognition that dinner is not complete without the elements considered essential guides the everyday construction of the meal. To leave out an element relegates the meal to a lesser category such as a snack. This is a gross simplification of a clever analysis, but it demonstrates that food rules dictate what is considered good to eat and appropriate to eat, and—in the case of the British diet—ensure that dinner contains all of the elements necessary to demonstrate a proper cultural understanding of *how* to eat. In any case, meal activity usually requires that the staple carbohydrate be included, whether potatoes or bread or some other form of starch.

To explore this idea, please ask yourself "what's for dinner tonight?" The question will probably be answered by a listing of the stressed food (for instance, "fried chicken") with two or more sides ("with potatoes, sautéed spinach, and corn on the cob"). The linguistic structure of how you describe the meal reveals the way you think about it; a meal is a core food

with other foods. It could be argued that a hamburger becomes a meal for North American eaters because it retains the A+2b structure (meat, starch, lettuce/tomato) or, with a meal analogy, the burger + fries + drink. Lunch can consist of a sandwich, which is A+2b because it contains a stressed filling with bread and condiments or lettuce as the nonstressed accompaniments. A perfect example would be a peanut butter and jelly sandwich. If that sandwich consisted only of bread and jam, it would be a teatime snack, since snacks can omit the stressed foodstuff. This pattern also dictates the structure of other meal episodes and other food events. The daily stressed meal often follows a more complicated tripartite system of courses (A+2b) with a starter (perhaps soup or a salad), a main course, and the secondary dessert. Holiday and special occasion meals repeat the A+2b pattern but have additional courses and nonstressed accompaniments such as gravy. Christmas dinner might consist of three courses of A+2b, such as ham, biscuits, and salad to start; which is followed by a second course of turkey, potatoes with gravy, and peas and carrots; and which finishes with a dessert (pumpkin pie, ice cream, and whipped cream). The point is that there is a structure that we read as the normative way to eat, and we unthinkingly reproduce that structure when we create our meals.

While this may all sound implausible, there is significant additional evidence that A+2b provides a mental food map for many Western, European-ancestry eaters. Anne Murcott's Welsh participants defined a "proper meal" as one that contains meat, potato, and vegetable, or "meat and two veg," a finding later reproduced by other British researchers.[28] Even more recently Alan Warde and Luke Yates demonstrated that these preferences remain in the new millennia, although younger cohorts may replace potatoes with pasta or pizza.[29] For their subjects "the main dish of the meal was disaggregated where possible into sub-categories of staple, centre and trimming, adapted from the food categories established by Douglas and Nicod.[30] While lunches are often repetitive and bread based, weekday dinners "comprise potatoes, pasta or rice, with potatoes the most common staple and poultry the most popular centre."[31] Marshall and Pettinger note that within the past few decades there has been an opening up of menu options, what they call menu pluralism and culinary diversity, but those new opportunities still include a carbohydrate staple such as rice or pasta, sometimes derived from an ethnic cuisine.[32] So while we might describe the meal by referring to the center (meat or meat substitute), the staple part of the meal

remains carbohydrate based and is indicative of the mental and cultural importance of that category of food to the creation of a proper meal.

This pattern is reproduced in the Scandinavian countries, where the idea of a proper meal spans classes and influences family meal contents.[33] "There was a three-meal structure: In the morning, a sandwich-based breakfast was eaten at home, often alone. Lunch was eaten at work, and consisted of a couple of open-faced sandwiches brought from home, while dinner during the work week was an early and quick family meal, requiring quite simple cooking (such as meatballs with potatoes and carrots)."[34] Potatoes were the most important staple in all Scandinavian countries, supplemented by bread in Finland and Sweden.[35] People in Finland tend to eat a meat center with a staple (potatoes at dinner, bread at lunch) accompanied by vegetables; in effect, they uphold the A+2b pattern.[36] In Norway, Bugge and Almås found the idea of the proper meal consistent across classes, with women identifying A+2b as the hallmark of the ideal family menu.[37] Meals deemed problematic by the subjects were ones that were takeout, were frozen, or contained the center minced meat served in a manner not traditionally Norwegian, such as with hamburger or kabobs. Such meals also lacked the appropriate 2b: no vegetables, no potatoes, and with packaged condiments in place of gravies. Potatoes—and by default, the inclusion of carbohydrates—were a core necessity for a family meal. These researchers also performed a text analysis of how women used the term "proper meal" and found three models of a proper dinner: the traditional, the trendy, and the therapeutic. The traditional model followed the A+2b pattern closely, the trendy model inserted more courses and expensive or newer ingredients (and was more typically created by middle-class, not working-class, women), and the therapeutic model emphasized nutrition by substituting a perceived healthier center and more vegetables.[38] This research demonstrated that even when families use food to perform class, health, or identity, they continue to rely on the deeply normative and enculturated food models learned while growing up. Perhaps one way to imagine these proper Scandinavian meals is with the ubiquitous Ikea Swedish meatball dinner. You can order it in large or small sizes, and you have the choice of small roasted potatoes or mashed potatoes. It is always served with gravy, and always with lingonberry jam on the side. You can also ask for a small scoop of vegetables, but most people eat the center (meatball), staple (potatoes), and side

(lingonberries) along with gravy. The inclusion of the potatoes, gravy, and berries transforms the center into a proper meal.

Does this pattern hold true in North America? Anthropologists, sociologists, and nutritionists have explored meal formats in the United States extensively and describe the cultural stickiness and longevity of meal patterns. Meal formats and patterns are not the same as food choice, and many studies have focused on choice, timing, daily intakes, and other food metrics rather than on what is expected to be on the plate for lunch or dinner. Early studies were interested in food folk culture or economics, often tied to social class, ethnicity, and region. For instance, Bennett and colleagues were interested in folkways in Illinois and collected food lists and meal patterns. Using interview data, they identified the most popular or typical food items for each meal, with the largest and most important meal consisting of "boiled or fried potatoes, cooked dried beans, cooked (with meat grease) green or lima beans, boiled pork or fried fat pork, sliced fresh tomatoes, fresh lettuce, served 'wilted' with vinegar, macaroni with tomatoes, pie or cake, and coffee (with cream or canned milk)."[39] These dishes provided a balance of macronutrients and food types, with a prominent inclusion of carbohydrates, fats, and proteins alongside seasonal vegetables. The researchers identified a core diet that was augmented by secondary peripheral and seasonal foods, all governed by rules about food combinations that often featured a potatoes-beans-pork basic diet. And while meal format patterns were not the focus of this study, it's clear that the core meal identified, the potatoes-beans-pork basic diet, reflected an A+2b content model. This study also demonstrated that families in Illinois had a long-standing food culture that shaped expected meal patterns and contents and that food habits were deeply embedded in the structures of daily life. In Kansas City, Jerome used food frequency interviews to identify dietary patterns, demonstrating that this population also had a clear sense of a core food, core accompaniment, and peripheral and marginal foods and also understood that meal structure was dictated by a relatively short list of dishes eaten by a large percentage of the study population.[40] The full list of foods reveals a diet heavy on starches and affordable meats, with a narrow range of vegetables and fruit. Potatoes were the most prominent vegetable consumed, and combination dishes like macaroni and cheese and other casseroles were popular. All macronutrients were prevalent within core categories, and the core diet was clear, consistent, and widely understood to

demonstrate the proper way to eat. In effect, there was great cultural consonance between households on what should be eaten, and these studies confirmed that peripheral and marginal foods are more likely to shift over time, with core foods a stable component of dietary structure.[41]

Many of these early studies explored food use in relation to economic patterns and ethnicity rather than as meals, but later dietary research often queried meal formats. The Russell Sage Project on Gastronomic Categories chronicled meal patterns among three U.S. populations: the Oglala Sioux, Italian Americans in Philadelphia, and rural North Carolinians.[42] The Italian American study demonstrated a pattern slightly different than A+2b, but it incorporated a clear structure and provided a strong model for menus throughout the week and for special occasions.[43] Those formats included a remnant ethnic pattern—the one-pot meal—as well as the pasta and sauce dinner, the Anglo-style meat and potatoes "platter" dinner, a sandwich meal (mostly for lunch), and the celebratory restaurant meal.[44] As is obvious, the platter meal is the Northern European A+2b, while the gravy meal is pasta plus sauce plus side dishes. For feasts and celebrations, these formats were combined and elaborated with additional sides and courses. Janet is very familiar with these meal patterns because she lives outside of Philadelphia, where the Italian American food culture has persisted for generations. While the structure and composition of the Philadelphia Italian American meal resemble what many Anglo Americans eat, there is an expectation that pasta with sauce will be part of the dinner rotation. These meal types are combined for feasts, and it is here where the ethnic traditions have most obviously shaped regional food habits. Some traditional dishes and menus simply *must* be served for weddings and holidays.

Perhaps because Italian restaurateurs are also prominent regional caterers, local people can expect to find the feast structure at events even if the celebrants are not Italian American. The predictable menu combines two formats and adds multiple mains and sides: pasta salads, carved meats, a fish dish, baked chicken (a cacciatore or other Italian recipe), sautéed peppers, and sausage (a core dish and a remnant one-pot meal)—all served with roasted potatoes, green beans, vegetables, salads, and a full antipasti spread. The expected menu is so deeply embedded in the local culture that a party isn't right without the individual components included. Janet has noticed that people tend to tackle the buffet at least twice. The first visit will result in a salad plate alongside a separate plate of the preferred pasta, and

the second pass will include a slice of the carved meat (with gravy or horseradish sauce), the roasted potatoes, and a side vegetable. So even though people are presented with a stunning and abundant buffet and could conceivably pile up all sorts of disparate food items on their plates, they tend to reproduce the A+2b meal format. It's almost as if you can't serve sauce without pasta or prime rib without roasted potatoes—and anthropologists would argue that our internalized syntagmatic food relationships pretty much dictate the conceptual format of an expected and appropriate meal. And those expected elements include foods that include all the macronutrients. This is probably one reason why leaving out carbohydrates is so very difficult for long periods of time and why those who choose to do so (as opposed to must, in the case of celiac disease) often fall off the "carb wagon" within weeks. Following these food removal diets is much like trying to speak a foreign language you don't know well—that is to say, both exhausting and far less comfortable than speaking your native language.

But what about the rest of America? Do many people categorize meals in this way, or is this something only found among older people or ethnic European communities? Obviously, it's hard to quantify, and much of the research about meal intakes focuses on components rather than combinations. Recent studies of contemporary families and individuals reveal that ideas of normative meals that include all food groups are still common and influence dietary patterns. Alice Julier's perceptive analysis of shared meals reveals adherence to A+2b, even if "what counts as a meal is a highly contested and ideologically charged question that is also filtered through people's biographies and social locations." One of her subjects (Margaret) acknowledges that eating together is more difficult because "now you have to ask, is anybody a vegetarian, . . . is anybody allergic to something, or is there anything you don't eat?," revealing the dual ambiguities of living in a culture that values individual choice for diet management and also the social importance of sharing food. For formal dinner parties, another subject (Marion) reveals the strength of the A+2b model that includes the starchy staple: "So we usually have pilaf rice, this traditional thing, and put parsley on the chicken. People don't even notice, they're just so glad they don't have to cook. That's what I think. You know, we'll have rolls, we'll have salad, and then a dessert." Julier notes that "descriptions of menus seem to come right out of the etiquette books' recommendations, constructing nonregional 'American' food, almost classic New England cuisine—in

Douglas's sense the A plus 2B ordered meal."[45] So, while the individual components of the meal are not important, they must comply with a structural norm to be experienced as a proper meal, and especially, a proper social occasion involving food.[46]

Amy Bentley has chronicled how Martha Stewart's lifestyle cookbooks use the A+2b meal structure to model white hegemony because it demonstrates class effectively.[47] Bentley perceptively notes that Stewart's food promotes a certain kind of upper-middle-class white meal structure (and class position) by providing a template for elaborate menus that signify and telegraph specialness and conspicuous consumption:

> Martha Stewart food, as photographed for her magazine and her cookbooks, seems to regard A + 2B as too mundane, too bourgeois. For Martha Stewart the ideal meal formula more resembles something like "BAC + D over E"—a more complex and thus perhaps more sophisticated version of standard American fare. The flesh (A), while not absent, is enveloped in and often partially hidden by vegetables and/or pasta (B), which are surrounded by secondary vegetables such as herbs (C), but which are just as important to the meal as the primary vegetables (B). BAC is accompanied by (D), a dipping sauce (although Stewart does not particularly like this term). As important as the food itself, all are ensconced in silver, plateware, glassware, napkins, tablecloth and centerpiece (E). The entire effect confirms MS food as the embodiment of a class-specific notion of whiteness, even as it is perceived (at least in part) as accessible by women of varying socioeconomic backgrounds.[48]

As this passage makes clear, Stewart's food is deeply and recognizably aspirational because it utilizes the known (A+2b) but fancifies it to telegraph elevated economic status and cultural capital. Proper food equates with proper (and hegemonic) class identity. Even when providing recipes for non-Western menus, Martha Stewart Living encases them in a format that is acceptable to middle-American readers, transforming a foreign meal structure into one recognizable to her audience. In both situations—the elaboration and the transformation—the power of A+2b is reinforced.[49]

The salience of using food to perform class allegiance and social space is reinforced by Julier's subjects' responses to potlucks, which are fraught because they can so easily deviate from the ideal model by having too much

of one category of food. Just as Douglas uses meal structure to explain social categories of intimacy and belonging, shifting to a potluck format indicates a loosening of social structure and an opening up or expansion of the sorts of people that might be acceptable at the table. Abandoning the meal format during the potluck results in the relaxation of social hierarchies as well as a rejection of the hierarchical host/guest dynamic. But as the following respondent indicates, the very difference is so noted that it reinforces the absolute normality of the expected A+2b format: "I think the thing about a potluck is you really have to roll with the punches, you know, if you get discordant things it just, that's just part of the nature of it, you know, it can't be this finely tuned thing that a dinner party is."[50] We could argue that the meal structure is so deeply baked into our notions about self, nourishment, and sociality that we are unable to tease the elements apart; all we know is that when part of the structure is missing, the lack is felt so acutely as to disrupt our sense of self alongside our convictions that we are eating the right way.

Another recent study illustrates the critical importance of upholding meal structure and utilizing core cultural foods even when planning for healthy eating—which could explain why maintaining a food restriction diet is so difficult. Amy Trubek was curious about what families cook for dinner and how they negotiated the demands of eating a healthy diet. She and her students videotaped dinner preparations to identify the themes most salient to how, what, and why people cooked. Linguistic analysis of how food is used for health reveals the importance of the standard A+2b meal because cooks are keenly aware that eating healthy food involves eating a balanced meal. There is also the tension of when and how to break the rules. For instance, one subject, Teresa, remarked: "I find when we cook, it's a balanced meal, [and] when I take out, I'm not paying attention so much to getting a salad and getting a vegetable." Furthermore, Trubek states that while "she sticks to the nutritional maxim 'Eat a balanced meal' when making dinner at home, a changed environment makes her abandon or reject such guidelines."[51] Teresa's statement reveals that breaking the rules serves to further cement their validity. Trubek analyzes the health dialogues and notes that respondents invoke cultural rules and patterns when discussing the construction of healthy meals. Mary Douglas's standard "meat and two vegs" is the model used most frequently, a finding that replicates that of health-seeking Scandinavian cooks.[52] Trubek

also notes that other considerations, such as sourcing and production standards, also play a role in the definition of healthy food, so that it's considered healthy to eat a balanced meal made from fresh, local, organic ingredients, for instance. One way to think about this is to realize that a healthy meal consists of a certain set of ingredients and those components are ideally organic, local, pastured, low fat, or some other similar register that the eater identifies as appropriately healthy; it's a nesting set of values that are articulated in intention and practice. Ultimately, Trubek's analyses demonstrate that creating a healthy meal involves negotiation between differing elements but that the concept of the structure of the meal remains largely intact.

THE MEAL AS A TOTAL SOCIAL FACT, OR WHY IT'S SO HARD TO ABANDON THE MODEL MEAL

The meal structure can be thought of as a component of the total social fact that is food, a set of interconnected structures that reveal the organization of a society. According to sociologist Émile Durkheim, social facts "consist of manners of acting, thinking and feeling external to the individual, which are invested with a coercive power by virtue of which they exercise control over him."[53] While Durkheim examined how the individual is shaped by social structure, the more anthropological Marcel Mauss explored how the structures of social and psychological life are woven together to create cultural meaning and practice. He defined total social facts as phenomena that are legal, economic, religious, aesthetic, political, religious, and economic, including "the notions of value, utility, interest, luxury, wealth, acquisition, accumulation, consumption and liberal and sumptuous expenditure."[54] Food cuts across social phenomena in such a way that tracing the food system and its meanings reveals much about the organization of a society. Mauss was interested in how reciprocity defines social life and how mutual gift exchanges knit together social groups and individuals in relationships of obligations. Once we shift our attention to food exchange (and sharing), it is clear that Mauss's more comprehensive concept of interconnected social structures absolutely includes food, so much so that understanding production, exchange, and consumption—and their various and complicated forms—helps us delineate the economic, sociological, and biocultural systems that create the food that is considered "good to eat."

Audrey Richards, one of the first anthropologists to study food as a focused topic, explains this concept clearly in relation to food and nutrition: "In the life of the individual organism it [food] is the more primary and recurrent want, while in the wider sphere of human society it determines, more largely than other physiological functions, the nature of social groupings, and the form their activities take."[55] Yet food practices too often remain almost invisible to the average cultural actor; we learn the food rules, we learn what's good to eat and how to eat it, but we rarely examine why we think so and why we do so. Thus the deep structures of practice, such as a meal pattern of A+2b (including all the macronutrients), are buried deep in our consciousness and acted upon without thought or analysis. That is why these deep structures are so intrinsic to individual practice and social life, guiding us in how to eat. It is also why they are so difficult to ignore. Understanding this is key to understanding why fad diets fail, especially those involving food removal. They break the cardinal rules of what a meal is, yet those rules function outside of our awareness. So we blame ourselves for failing to stay on our diets instead of seeing the impossibility of violating these cultural and culinary codes. This is also why so many people keep trying and failing to follow these fad diets—each one feels like a near miss, making the next one seem like perhaps it could be within reach.

In effect, when we fail to comply with the internal models of how to do something, we must justify it to ourselves and others—we create a marked situation that requires explanation and discussion. The act of explaining solidifies the importance of the culturally embedded rules because as social beings we need to let others know *why* we are failing to uphold norms. For instance, a few years ago Janet had a houseguest who was following the Atkins diet. She was also fond of eating out, especially at fast food and fast-casual restaurants, and was very nervous about eating the food that Janet prepared at home because she thought it might contain carbohydrates. Every restaurant meal involved lengthy discussions with waitstaff about what was ordered and why and how important it was to substitute with an acceptable item. Each time a food item was discussed, the rationale for altering the menu was also discussed, including a detailed explanation of the weight lost and the strategies used to eliminate carbohydrates. And even though many restaurant options could have substituted ingredients easily (or just left the bread off the plate), those items were not chosen; instead, she preferred to order a plate that normally contained a starch and

then bargain to alter the composition. For instance, a plate of pasta would be ordered, followed by a request to substitute zucchini or carrots in place of the pasta. Janet realized that her guest was reminding herself, with every meal, that she was on the diet. Her menu choices were part of an elaborate but necessary performance to make sure that she complied with the diet (a psychological reminder) as well as a social signal to others explaining why she was eating in a manner that was not normal. Janet observed that she was so at odds with her menu choices that she couldn't keep to the diet without this ritualized performance. She had to vocalize the normality of including carbs in a meal to justify her refusal to eat them and to let her dining companions know that she was aware of the breach of social expectations and practice. Avoiding carbs created such cognitive dissonance that she had to continually reference their absence to keep herself from betraying her diet.

If this all sounds implausible, think about if you have been in this kind of situation, either eating with someone on a food removal fad diet or eating on one yourself. What kinds of negotiations were discussed to comply with the diet? Did these changes require an explanation, or were they merely asked for and accepted? We suspect that you can remember a longish conversation about the diet and its restrictions and why the dieter is following it—all part of a complicated dance to explain a failure to adhere to expected dietary practices and habits. The extraordinary situation must be highlighted to remind the self and others that the behavior isn't problematic. Janet thinks that one of the reasons her houseguest didn't want to eat at home was that she wanted to avoid the twinned obligation and negotiation of eating what is offered (a core responsibility of good manners) and managing a no-carb menu. Because she was having such a hard time eliminating the carbs from her meals, it might have seemed insurmountable to ask her hostess to serve a meal that suited her needs. Even though Janet repeatedly offered to cook a meal that had carbs "on the side," her guest insisted on eating out in order to manage her diet, a rejection of the guest relationship and one that ultimately created a fair amount of social confusion for everyone.

One final indication of the cultural salience of the A+2b model—and how it conforms to a structurally deterministic social fact—is the USDA's My Plate program for healthy eating.[56] While the graphic shows five types of food on the recommended plate (the fifth is a drink), the four food types

are protein, grain, vegetables, and fruit. However, the information provided about what to eat and why combines the fruit and vegetable categories, stating, "Make half your plate fruits and vegetables: vary your veggies" and "Make half your plate fruits and vegetables: focus on whole fruits." While there are four portions in the plate pie chart, two of them are grouped together because they are perceived as similar, something that's clear linguistically as well, since we often hear "eat more fruits and veggies" from nutritionists and public health educators. The plate is conceptually A+2b even though there are more than three categories shown. This model is used to teach about food throughout the country, and almost all children and adults recognize it easily. Models like this aren't simply a product of optimal nutritional science because the concept of optimal nutrition is also deeply cultural; each population has very clear ideas about what should be eaten. The creation of a graphic and public health outreach program such as MyPlate is a self-referencing biocultural process because the idea of good food propels the research that demonstrates that such food is indeed good. We search for what we want to find and construct studies that will verify our cultural models and preferences. This does not mean that such a model is broadly biased due to cultural expectations, only that cultural models guide scientific questioning.

IDEAL MEAL PATTERNS ARE CULTURAL

Different regions of the world—different cultures—have other ways to construct a proper meal. Many Americans, for example, don't realize that having a distinct set of breakfast foods, such as waffles, eggs, bacon, and muffins, is a cultural tradition. In many locations throughout the world people eat the same foods at breakfast time—say, fish, rice, or soup—as they do for other meals throughout the day. Janet grew up in northern California with Cantonese-speaking Chinese friends who expected dinner to consist of rice accompanied by multiple dishes with differing textures, elements, and tastes. Rice was served alongside dishes of meat, vegetables, and fruits, a system called fan/t'sai, where fan is a grain and t'sai are the companion dishes.[57] Therapeutic or ideal Chinese meals are balanced with categories such as yin/yang (paired qualities of wet, dry, cool, hot, hard, soft, etc.), four humors (hot, cold, wet, dry), five phases (earth, metal, fire, wood, and water), five flavors (sour, bitter, sweet, pungent, salty), and five

smells (rancid, scorched, fragrant, rotten, putrid), among others.[58] This is a very complicated system that is suggested by Chinese physicians to promote optimal health, while a family meal might contain rice, a soup, and a couple of t'sai dishes. That's a very different plan than the standard American plate, with a large chunk of meat and small sides of starch and vegetable. And as Bentley has pointed out, when American tastemakers cook at home with Chinese recipes, they often transform them into A+2b by emphasizing the meat rather than the rice (and ignoring the flavor, texture, and humoral elements).[59] Similarly, Chinese restaurant food is rendered American when offered as a lunch plate or entrée consisting of a central meat-based tsai, rice, and a vegetable accompaniment, an option provided at many midrange or affordable Chinese restaurants; Chinese haute cuisine tends to stick to the original cultural structure more frequently.[60] The popularity of "ethnic" restaurants might partly be due to an acceptance of eating a different meal structure when dining out as a special or marked occasion when the rules don't need to be followed. But when cooking at home and for the family, normative meal structure rules are applied and menus are adapted to resemble the expected pattern.

The salience of this model is clear to students, even if they think they prefer more adventurous menus. When Janet was teaching a course on food and culture, she devised a collaborative whiteboard exercise that asked students to draw a "good meal" plate. The exercise was designed to make students think through dissimilar cultural meal formats to discuss how culture determines what's good to eat and to explore how ideals of nutritional practice inform food choice. Overwhelmingly students placed a large chunk of meat at the center (or meat substitute, for vegetarians), surrounded by a starch and some vegetables. Altering the composition created significant pushback; students were not willing to substitute the "b" elements for the centerpiece meat even though they all agreed that eating more vegetables was a good idea for health. This exercise was also used with Philadelphia high school students, who were even more vociferous in their conviction that meat must be in the center and that "potatoes or pasta" was next in importance, followed by a vegetable. Janet's whiteboard exercise revealed that Douglas's A+2b model was more accurately written as A(protein)+B(starch)+b(vegetable). The cultural primacy and importance of "meat and potatoes" were revealed by students' preferred meal patterns. The high school students were adamant that it

wasn't a meal without the A+B but that the vegetables (b) could be left out without worry.

WHAT'S "GOOD TO EAT," AND DOES IT MATCH YOUR DIET?

Of course, there are many systems beyond structural for classifying foods, and they often blend cultural, individual, and experiential meanings. Some researchers explore the personal classifications nestled within broader cultural systems. While cultural typologies may provide an overarching set of categories, certain important socially constructed practices and meanings also influence individual food classifications and labels. Furst et al. model food choice as a set of nested circles with all possible classifications as the largest circle and "culturally recognized" just inside, "socially significant" within the cultural, and "personally operational" inside the social circle.[61] Obviously, the cultural categories guide the expression and understanding of experiential, individual, and practice-based food categories, and the particulars are negotiated socially and individually by cultural actors, who possess an almost unconscious but rarely articulated understanding of cultural food classifications. Individuals often classify foods using binary oppositions such as like/dislike, healthy/unhealthy, cheap/expensive, processed/fresh, convenient/not convenient, and try to include/try to avoid. These binaries blend and manipulate ideas about biology, food practice, social class placement, ritual cycles, symbolic properties, and sensory qualities, to name but a few. From an anthropological perspective, while individuals use a variety of means to develop internal food classifications, the universe of their options is determined by their cultural milieu and social experiences. Individuals might think they are choosing a healthy diet by using binary good/bad food categories, but they really are choosing options available because of culture and their social life. A proper meal, just like a proper diet, is largely determined by outside influences invisible to the eater.

Having explored how cultural and linguistic structures shape what is considered good to eat and how to eat it, let's return to the questions posed earlier in this chapter. How do you define a proper meal, and does it allow you to adopt a fad diet? What's the right sort of food for breakfast, for lunch, or for dinner, and what kinds of menu combinations are permitted? Did your parents or other adults model consistent eating behaviors, explain them to you, and teach you to replicate how they preferred you

to eat? What do you remember your parents and other family members eating and enjoying, and how did that affect how you think about food? Did you learn new ways of eating from your peers in high school and college? What is your ideal or perfect meal, and how did you devise it? What are the values you place on each of the food items, and what memories and associations guide those values? How did you learn about your ideal meal? How did you learn to prepare it? How do you find out about food nowadays—from friends, the Internet, books, cooking classes? Similarly, how do you know when something isn't a "proper meal," and what elements—either missing or present—make it problematic? When you eat food from other cultures, are you comfortable with a new meal structure, or does an unfamiliar menu render the food difficult to think through and accept? Can you identify how social experiences have been significant to the development of your food habits? Can you separate your personal preferences from the social and cultural programming and understand how you've developed your likes and dislikes? You might even want to do your own whiteboard exercise—draw a plate and fill it with food. What's on your plate? And does what's there accommodate a food removal diet, or would taking food away make you feel like you are doing something confusing or even vaguely wrong?

COMMENSALITY: A FANCY WAY OF SAYING "EATING TOGETHER"

> Food is by its very essence something to be shared; to not share this with others is to kill its essence, it is akin to destroying it for oneself and for others.
>
> MAUSS, *THE GIFT: FORMS AND FUNCTIONS OF EXCHANGE IN ARCHAIC SOCIETIES*, 70.

Fans of *Star Trek* know that food onboard the starship *Enterprise* comes out of a replicator, the handy microwave-sized box embedded in the wall of the dining commons. You walk up to the machine, tell it what you want (almost anything is possible!), and bzzzzzzwhirrrrrr magical beams create your food and the plate and serve them on a tray. You carry the meal to a table filled with fellow shipmates and enjoy a convivial shared meal. While you are eating together, you are not technically sharing a meal because you've each ordered foods chosen by personal preference, independent of others' needs or desires. You are eating alone, but together: it's a fantasy of how

we imagine our food system works if we live in a culture that exhorts us to "choose wisely" and ignores the economic and time cost of producing and preparing food. This model of future life on the starship *Enterprise* is purely illusory because in the present world what we eat is not up to us; it's determined by the food system created by our culture. The composition of what's on the plate is deceptive: we are told that food is a personal choice, but, as now should be apparent, our cultural and social environments dictate food production, acquisition, and use. Our economic and social systems determine what's available to be on the plate, even if we—deceptively—think we construct that plate ourselves. The cultural programming that teaches us about a "proper meal" is internalized and experienced individually; the assessment is happening inside our heads and reflects our sense of self and identity. But while there are cultural processes that identify what is "good to eat," the more immediate and important reason for what we consume is that most of us eat most of our meals with other people. And when we do so, we tend to share the food and to eat the same things, or, if in a restaurant (and the starship *Enterprise*), we eat together if not the same food. And because being together with food is so important, it's very hard to stick to a food regime that inhibits commensality. The inability to eat together dooms many food removal fad diets because restriction makes us navigate the difficult social consequences of refusing commensality.

The word "commensality" comes from the Latin word "commensalis," meaning with ("com") table ("mensa"), or "one who eats at the same table." It is closely allied with the word "companion," also from Latin, meaning with ("com") bread ("panis"), or those with whom you share food. And, of course, the word "companion" references the core importance of grain to the human diet and its role in sociality. After all, you can share bread easily—break off a piece, cut a slice, and offer some to a friend. Many cultures around the world recognize the ritual of offering bread, salt, and a drink to a guest as essential to hospitality and to signaling that the guest is under the protection of the host. We may have morphed this practice into offering coffee and cake to an afternoon visitor or a cocktail and some nibbles to someone welcomed a few hours later, but the symbolism and intent remain the same: to let guests know they are welcome in our home. The sharing of food demonstrates and cements social bonds and is a practice similar to the Eucharist communion observed by many Christians. In communion, members of a church acknowledge their earthly community

and their communion with God as they symbolically consume the body of Christ in the form of a grain wafer, along with wine as a symbol of his blood. The Eucharist unites the human community just as it symbolizes a community in Christ. According to Claude Fischler, "it takes the Christian view of the Eucharist to create a situation in which each of the participants symbolically shares the same, undivided food, i.e., the body and blood of Christ," and the ritual symbolically joins people together because they are metaphorically eating the exact same thing.[62] A very similar and equally meaningful practice is the Polish tradition of sharing the Christmas oplatek wafer. Oplatek are plate-sized wafers stamped with Christian imagery or religious sayings and are an essential part of Christmas Eve dinner for many Polish families. Participants break off a small piece and offer good wishes to one another—sharing the wafer signals belonging and love and membership in the household.

The importance of food sharing to religious and social life was noted by early anthropologists, even if they were not particularly interested in the actual food. Garrick Mallory asserted in the very first volume of *American Anthropologist*: "It is perhaps not too much to say that a dinner party, thoroughly good in menu, cookery, service, . . . and in the guests with educated palates, affords altogether the strongest everyday evidence of high civilization. Brutes feed. The best barbarian only eats. Only the cultured man can dine."[63]This statement reveals the multiple meanings and symbolic actions embedded in eating together, along with a hefty dose of class privilege. That it was one of the first philosophical articles written for anthropology reveals that eating together is much, much more than simple feeding. Like food in general, it is a deeply important social fact that demonstrates allegiance, belonging, and the myriad cultural acts and practices that create and delineate community. The rituals of commensality reveal much about the social structure and values of a culture.

In the highly ritualized Passover Seder, the Seder plate contains important symbols of the holiday. Maror, the bitter herbs, are used as a symbol of the bitterness of slavery. Zeroa, a roasted shank bone, is a symbol of the Passover sacrifice. Saltwater is also used to symbolize the tears of slavery. The Seder is a ritual meant to bridge the cultural space and emotional experience between generations, evoking faraway places and the rituals of one's ancestors. It is not only the telling of a story, but a reenactment. It is an important component of both religious identity and history in that it

also tells the story of a people so that it is never forgotten. The Seder, then, is a mechanism by which psychological "genes" are handed down through generations and transmit political information through oral history.[64] The poignant role of food and food ritual in the intergenerational transmission of sociopolitical history can be seen in the humorous Jewish saying regarding religious holidays: "They tried to kill us, we won, let's eat."

Ross and Ross have a similar understanding of the Christian mass:

> The characteristic preoedipal activity of idealization in potential space, its fusion of internalized image and external representation, is also reflected in the [Catholic] mass. Above all else, the mass is an attempt to make present what is absent. In psychological terms, it is transitional; in theological terms, it is a form of mediation. The most obvious instance of this mediation is the symbol of the bread/body that is located somewhere between the real and imagined, invoking God's presence when it is not immediately evident, and thus fulfilling the human desire to reunite with the source.[65]

There are countless examples of similar rituals that are meant to bridge the past to the present, the dead to the living. Most of these rituals, whether a Seder, a Catholic mass, or even Thanksgiving dinner, are the bread and butter, so to speak, of religious, family, or ethnic identity. These food rituals are the experiences that define ethnic group membership and transmit psychological "genes" between generations. In short, they are the narratives of individual and collective experience.

Because it is almost impossible to write an ethnography without including shared eating occasions, commensality has been studied deeply and thoroughly by anthropologists and sociologists.[66] Sobal and Nelson, as well as Fischler, present superb reviews of the meanings of commensality, and the recent volume *Commensality: From Everyday Food to Feast* provides a comprehensive analysis.[67] The Paleo diet chapter of this volume presents information about the evolutionary importance of food sharing. Janet has studied commensality and provides a thorough overview of how eating together affects nutritional intake.[68] Herbert Meiselman's edited volumes on meals contain numerous chapters that discuss the importance of commensality.[69] These references barely scratch the surface, but that's OK; what's really important about commensality for understanding fad diet adherence is not theory but how the social expectation of eating together

affects the practice of performing an individualized diet. Commensality is so deeply ingrained in our understanding of how to be social that it's almost impossible to avoid eating together. The importance of commensality is not the food; what's important is that it makes social life possible.[70]

Eating together constructs the social world by creating spaces for the performance of community life. Tan provides a neat synopsis of the many functions of commensality, and those ideas and categories are used in this analysis to provide a springboard for understanding how social life makes fad diets difficult to follow.[71] "Domestic commensality" sounds self-explanatory: it's eating within the house, among the family. Who eats with whom, when, where, what—and how food is apportioned—are determined within the domestic sphere and influence children's nutrition and health. They also reveal domestic roles and status and have been the focus of most research about meals and meal content. In many societies, eating together denotes deeper ties of intimacy, either sexual or parental, and of course the mother-child sharing of blood and then breastmilk is the most direct and original form of commensality.[72] Direct food sharing of this sort is the clearest form of bonding; sharing food signals to others that people are closely connected.[73]

When Janet teaches Food and Culture courses, she asks her students to tell her what they assume if they see two women taking food from a shared plate. The students almost always say that they are roommates or best friends. If she asks them about an adult and a small child, they tell her it's a parent feeding a toddler. If she asks what they assume if they see a man and a woman sharing food from the same plate, there is a long, somewhat uncomfortable pause while they consider how to suggest that the two are lovers, but eventually it comes out, albeit with a lot of amusing euphemisms to convey that they are sleeping together. Asking about two men sharing a plate elicits an even longer pause. Usually someone clears their throat a few times and says, "Uh, maybe they are boyfriends? Or foodies? Or gay foodies?," thus demonstrating awareness of the TV show *Queer Eye for the Straight Guy*. Regardless of gender or age, when people share food directly, the cultural assumption is that they are intimates. It is no accident that most cultures have more tension about and rules for eating and sex than for most other behaviors; these are the two social actions where the barriers of the body are breached and body fluids exchanged, actions with the most potential risks.

Kin and communal commensality widens the domestic arena to welcome more distant kin and community members, usually for celebratory feasts or religious rituals. The banquets that mark life-history events are good examples: christenings, birthdays, weddings, holidays, and even funerals. Cultures generally have very clear rules about who should attend these events, what should be served, and how people should behave. Such food rituals work toward social cohesion, although these events may also present social dangers (even beyond the tedium of listening to your crazy uncle spouting conspiracy politics). Maurice Bloch explains that eating together is an act of social joining, one that has as much salience and danger (almost) as sex, the other social joining act. Time spent away from relatives or in-laws may give them the opportunity to become your enemy, but coming together for a feast or a marriage helps to solidify connections. Bloch points out that most kin or community feasts consist of core domesticated items such as the staple starch, foods that are recognizable and not likely to be poisoned; wild foods don't reflect the *cultural* notion of society because they have no social value as symbols of the social construction of the community.[74] Tension also can occur over the guest list because inclusion at table represents belonging to family or community. A perfect example of this process is a wedding, where months can be spent strategizing over who should be on the invite list—and who safely can be left off. And what is served has deep cultural significance and signals belonging, identity, and heritage. For an Italian American bride to forgo the foods of the ancestors would be tantamount to disavowing identity and family during a ritual that celebrates joining and inclusion. That is why grandpa's favorite sausage and pepper dish must be included in the buffet—to omit it would be to reject community.

Ceremonial and religious commensality includes the symbolic rituals that signify faith, such as the Eucharist and church suppers, as well as community festivals such as association dinners, fundraising events, and other kinds of public gatherings that highlight food sharing. Many of these festivals are both religious and social because the entire community joins in, either as coreligionists or as welcomed neighbors. Good examples of this kind of food sharing include Eid al-Fitr, the Feast of Fast-Breaking at the end of Ramadan, as well as the less formal Iftar, the meal at the end of each day of Ramadan. In the Philadelphia suburbs, the Greek Orthodox churches are famous for their annual festivals featuring fun fairs, dancing,

and home-cooked Greek food. While the event is largely secular, it occurs at church and celebrates the religious community. And everyone, absolutely everyone, in town attends these festivals because they are so much fun, the food is so delicious, and you run into neighbors and friends.

Anthropologists have eagerly observed rituals and feasts of this sort because they are culturally important expressions of identity and community. Two excellent reviews of feasting and sociality cover most of the important ideas: Nina Etkin used a food-forward approach to understand how social eating affects health and community bonding, and Martin Jones looked at feasting to understand what kinds of cultural functions were facilitated by social feeding.[75] There are countless ethnographies that describe what happens at community feasts, who attends, why they attend, what they eat, and how they behave while eating. The idealized outcome is that the community comes together, creating and reproducing a sense of shared identity and belonging. Often the foods served, like those of the Greek festival, are deeply meaningful to the participants and representative of livelihoods and heritage. For example, a wine-making region might celebrate the harvest with a seasonal meal and lots of the local wine; the entrancing images of these feasts romanticize wine-producing communities and create a desire for fantasy tourism experiences that allow the traveler to attend the feast and to be a member of an envied social group—without, of course, ever having to take care of vines, clean out a barrique, or labor in a winery. And that is why so many advertisements for tourism include photos of people eating together—it signifies that the tourist is becoming an honored member or guest and having an authentic experience with the community. By sharing the feast, the tourist slips from outsider to insider and, for a moment, belongs.

The next type of food sharing is political commensality, where banquets or food exchanges are organized to further a political goal. In this context the word "political" refers to expressions of power and includes events as variable as a king provisioning his subjects, exclusionary banquets that celebrate ethnic belonging and hegemony, and the fancy dinners organized to honor visiting dignitaries or officeholders. The historian Paul Freedman explains how banquets and formal feasts demonstrate hierarchy by exclusion (who is not invited) or by what is served to whom; more honored guests receive fancier food or more food and are seated in more prestigious areas. These visually obvious differences clearly demonstrate the

social pecking order. Banquets often embrace excess, especially if the hosts are showcasing their wealth, prestige, or taste.[76] Such events may involve those in governmental power but might also demonstrate hegemony when organized by businesses to influence potential allies, competitors, or customers. These political events differ from the ceremonial meals discussed previously because they are designed to convey power and hierarchy, while community events express solidarity.

Hospitality commensality is the kind of meal sharing that immediately comes to mind—the dinner party—or even more formal occasions such as weddings or graduations. These meals can be seen as the extension of family meals to friends, an honor that ritualistically welcomes someone into the home. Indeed, it is this kind of hospitality that Douglas studied to understand that "drinks are for strangers, acquaintances, workmen and family. Meals are for family, close friends, honored guests. The grand operator of the system is the line between intimacy and distance."[77] For these occasions, an individual or a family—or even a group—provides food to others. The goal is conviviality and a theoretical absence of hegemonic difference. The rules of hospitality are encoded culturally, and most adults can read the symbols and understand the code, which is probably why there are so many cookbooks and etiquette manuals devoted to creating a successful dinner party. It is for this kind of commensality that your parents insisted on learning table manners (although they are essential for the other forms as well!). Of course, with hospitality there can be significant tension for both host and guest, as witnessed by stories about dinners gone wrong and what not to do when entertaining. As Julier outlines, the stress of serving and being served renders hospitality fraught, with much social negotiation and anxiety over who attends, how they are fed, what they are fed, and appropriate forms of participation.[78] Hospitality can also involve eating together at a restaurant, either as a planned menu (paid for by the host) or as a shared occasion where individuals order together or alone and share a meal, if not the same food. Regardless of where the meal occurs and what is served, the social importance of these forms of commensality is revealed by the large number of rules (manners) that are expected to be followed by both host and guest. Bloch might point out that this is because hospitality promises the opportunity for bonding as well as rejection, and the latter might result in poisoning.[79] While we suspect that very few modern dinner guests fear their hosts might slip them some strychnine, they often have

anxiety about making a good impression and modeling appropriate (and aspirational) class and role behaviors. Hospitality is a site of pleasure and peril. That's why Martha Stewart was able to create her empire and why your mother insisted that you never lick your knife at the table.

We'd like to add a potential sixth form of commensality, or perhaps elaborate on the last type. We'll call this shared commensality, and it's probably the kind that readers are most familiar with—friends getting together at a restaurant or café. This might not involve direct hospitality, but it can take the form of hospitality, and Fischler noted national or cultural preferences in how the bill should be apportioned. His survey indicated that Germans and Americans preferred to pay only for their own food, while Italians, Swiss, and French preferred to split the bill equally.[80] Regardless of how the bill is handled, getting together for a meal is a primary form of social life for many people, especially those who are younger or urban.[81] Just as the other forms allow important cultural work to be done (we'd say they are intrinsic cultural spaces), meeting up for a meal furthers friendships, allows for romance, and provides a neutral space for negotiating business or other social issues. It also helps people learn how to eat different cuisines and experiment with new foods. You probably have unacknowledged rules in your head about how to perform eating-out commensality: agreeing on a restaurant and a price range, deciding the time to meet, and making a rough outline of how to order and whether it's acceptable to share food from one another's plates. Because a café is a neutral and shared space, it's a comfortable arena for meeting people, getting to know acquaintances, and reconnecting with good friends. It's a "third" place, not work or home, and open to new possibilities and forms of being social, and it is very, very important for our identities as social beings. For most of us it might be the primary place in which we spend time with friends.[82]

As a quick thought exercise, what was the last time you met a friend for a meal or coffee? What about sharing a meal in your home? Attending a formal banquet? Going to a community festival, or an event at a place of worship? What about eating with your family or your roommates? What about picnics, barbeques, or holiday meals? Think of a memory from each of these events; did you think about the food, or did you think about the people, or both? We're betting that you thought about the people first and the food second, because we're a social species and we like to eat together.[83] That's why commensality is so important: food sharing is not just about the

food, and sometimes not about the food at all, but about the people we care about. This chapter is being written at the height of the coronavirus pandemic, when restaurants are not open and seeing friends is almost impossible because of social distancing. We are all suffering from a lack of social interaction, and when you can't meet friends, you recognize how critically important it is to your sense of self and your enjoyment of "living in the world." Our isolation is causing anxiety, unhappiness, and depression, so imagine if, because of a restrictive diet, getting together with friends is always as difficult as it became during the coronavirus pandemic. We evolved as a food-sharing species, and it remains socially, culturally, biologically, and structurally important to us even if we frequently eat alone.[84] And if we can't share food because we are on a fad diet, we break social norms (rather than nutritional rules) because we have marked ourselves apart. By rejecting shared food, we reject the connection, we signal (per Bloch) that the food is potentially poisoned and so is the relationship. It is, on some level, the way we "break up" with a friend.

The social consequences of food rejection hinder our ability to connect with others and make long-term adherence to the diet difficult. Interestingly, the isolation caused by the pandemic creates the perfect conditions for restrictive or fad diets because there is decreased commensality and meal sharing. For many people there would be little social cost to adopting a highly restrictive diet. Yet what we are seeing is quite the opposite. People are reporting the dropping of food proscriptions, a regression to comfort foods, and widespread weight gain. In fact, one *New York Times* article documented a dramatic increase in sales of nostalgic foods, such as Chef Boyardee canned ravioli, Cheetos, sweetened breakfast cereals, and spray cheese (which is being dispensed directly from the can into people's mouths, we predict). The article reports,

> Just a few months ago, Sue Smith considered herself a healthy eater. She ate salads with kale and quinoa. She counted calories. She eliminated processed sugar from her diet. She avoided dairy products. But in the past month, as the coronavirus pandemic made her housebound, Ms. Smith, a writer in Los Angeles, began shopping—and eating—completely differently. During a trip to the grocery store, she bought SpaghettiOs. She threw two large boxes of Goldfish crackers into her shopping cart. And she went all in on dairy. "I'm eating ice cream. Ice cream bars," Ms. Smith said. "And tonight, I'm making

a spinach-artichoke lasagna. There's so much dairy in it. But I just need the comfort that I get from that food right now."[85]

What this tells us is that people are not able to handle the added cognitive load imposed by a restrictive diet during the intense stress of the pandemic. This suggests that the capacity to engage in fad diets normally requires a certain amount of stability and predictability—much like a hobby—so that one can absorb the stress of dietary restriction, even if only for a short time.

WHY BEING SOCIAL MAKES FAD DIETS DIFFICULT TO FOLLOW

This chapter started with an example of how one couple found Whole30 hard to do because they couldn't get together with friends, so they cycled on and off and were unsure if they lost weight. Perhaps you can remember a time when you were eating with someone who was on a food removal diet. Was it difficult to find a place to eat, or to order at a restaurant? Or were you following a diet and uncomfortable being social while out? How did you navigate your dietary choices with the need to see friends? Were you irritated that your friends' diet changed your time together? Estelle Masson has researched how diets affect social life in France and the United Kingdom and reports that "all interviewees mentioned how it was difficult or sometimes impossible for them to eat with others—family members, close friends, colleagues and acquaintances alike . . . the impossibility of adapting their eating practices to those of their social networks was described by respondents to seriously undermine their relationships with others." This was particularly difficult for users in France, a country where "eating is eating together" and where eating alone is avoided.[86] Similarly, Pellerano and Gimenes-Minasse report that fad diets are linked to social problems among friends: subjects say the diet created friction with family and friends. "When I was at a more, shall we say, restrictive [diet] stage, that phase in which I would actually eat just protein, I think it would kind of even limit the number of people who would go out to eat with me, you know?" Another respondent stated: "I don't talk much because with [my friends] I have already argued because, you know, it's something that breaks paradigms, so people don't take it well, they think I'm crazy, you know? . . . Then I got tired of being seen as crazy. . . . I got sick of it, I stopped talking to people, I talk only to two of them today, who understand me, you see? Because

overall I'm the boring one, the crazy one. Because of the diet."[87] Indeed, Jallinoja et al. found that Swedish adherents of low-carb diets placed less value on sociability and pleasures connected to food, indicating that dieters may self-select according to personality traits.[88] That respondents from France and Brazil expressed difficulties with shared food events demonstrates that fad diet restrictions affect sociality even in countries where eating together is highly valued.

In the United States, Virginia Sole-Smith interviewed dieters and was told by one of her subjects that she "saw relationships with friends change because they could no longer share meals. She stopped accepting dinner invitations because restaurant menus were too daunting to navigate." Another woman, who was following the Wahls Protocol (a low-carb, highly restrictive diet), avoided friends and lost her joy in eating. "For four months, Anna ate nine cups of vegetables a day and sixteen ounces of liver and other organ meat per week. She didn't touch grains, dairy, or soy. . . . She couldn't go out to dinner with friends; every meal had to be planned out in advance. And organ meat made her gag. 'I didn't look forward to eating at all. It was just this mechanical thing I had to do three times a day.' "[89] When her diet failed, she blamed herself rather than the diet; she thought she hadn't done it right. But it was too difficult to maintain given both loss of social connections and loss of pleasure in food. In a more extreme example, people who follow severe calorie-restricted diets known as longevity diets describe their diet as not only socially isolating but also all-consuming, in that they meticulously track and calculate all of their calories and nutrients through spreadsheets. It's likely that the very small number of adherents to this lifestyle are only able to do it largely because of the online support community (https://www.crsociety.org). While there are lessons for food scholars from longevity diet practitioners, we see the psychology of this diet as different from that of fad diets, in that adherents are fixated on aging and death, which is generally a different motivation than what drives the adherents of the fad diets we address in this volume.

We suspect that the impossibility of long-term adherence is a reason that so many fad diets are time delineated, with defined short-term phases. The Whole30 is thirty days; Atkins, the South Beach diet, and the Dukan diet have timed phases, moving from a restrictive menu to allow the addition of other foods. Keto diets are rarely time limited since they are touted

as very low-carb or no-carb lifestyle plans, but most sharply reduce easily digested carbs, not all carbs. Still, abjuring a plate of pasta or piece of bread for long periods of time can sharply limit social occasions—as the example of Janet's houseguest demonstrates. According to one influential review of diet efficacy, one reason for the difficulty of maintenance is indeed social: "low-carbohydrate eating is associated with quite limited population-level and cultural experience."[90]

While these diets assure users that the induction phase is essential for starting the weight loss process, their creators acknowledge that extreme restriction is difficult to maintain. Arthur Agatston writes about his South Beach diet: "From a culinary point of view, it's a perfectly acceptable diet—for two or three weeks. After that, it gets a little dull. That is where the trouble starts."[91] This quote is nestled in the section about why the diet fails (only occasionally, he maintains), and he makes it clear that following the diet isn't easy because too much is given up. So people stop working the diet, gain weight, shift back to the restrictive Phase One, find the food boring and difficult, and give up on the diet. And while Agatston acknowledges that restriction is difficult and causes cheating and failure, he focuses on the food and not the *context* of the food. While solo eaters might fail when they tire of the food, no acknowledgment is made that people eat socially and that food restriction leads to restriction of commensality. The comments previously quoted clearly show that these low-carb diets are experienced as socially problematic. Janet remembers well the many times her father started and stopped the Atkins diet; he loved eating out with friends, and each time he dieted his options for sociality diminished. He even resorted to teaming up with a buddy to stay on the plan; they ate together several times a week, carefully limiting carbohydrates. Inevitably, they'd stop around day eight or nine, when other friends suggested a meal together. While enjoying a shared meal, they'd slip off the wagon and just stop the diet. Then, a few months later, alarmed by growing girth, they'd decide to try it again—and this time they were sure they'd succeed! But again, they couldn't keep it up, and off they'd trip to the buffet, to happily dine on potato salad and fried chicken. Even with a friend to help stiffen resolve, very restricted diets are difficult to maintain for anything but a short period of time. Imagine how difficult they are when they cause social isolation.

DO FOOD REMOVAL DIETS WORK?

If you read the various diet books and blogs, you will encounter many tales of diet success: first-person testimonials that assure delightful results. They promise quick and easy recipes that the whole family will love, renewed health and vigor, and the admiration of friends. But do they deliver? The answer is yes. . . . And no. Any reducing diet, if carefully followed for an extended period, will generally cause some weight loss. The trick is to continue with the diet, which is, unfortunately, what most people fail to do. Regardless of the type of diet (low-carb, low-fat, low-calorie, etc.), if it reduces intake over time, weight will be lost.[92] The problem is that it's very hard to test these diets for efficacy because of confounding variables (a low-carb diet will usually also restrict calories; a high-fat diet will necessarily limit carbs) and because clinical studies are structured very differently than are diets that are followed individually. There are also real problems with definitions, adherence, and outcome variables, even within clinical trials. According to Katz and Meller, "There have been no rigorous, long-term studies comparing contenders for best diet laurels using methodology that precludes bias and confounding, and for many reasons such studies are unlikely. In the absence of such direct comparisons, claims for the established superiority of any one specific diet over others are exaggerated."[93] There have been comparison studies, and their results are . . . interesting, if not compelling. There also are meta-analytical studies that batch and compare the data from published reports, and these tend to reflect the findings of the well-designed studies. Regardless, the outcome variables are similar: low-carbohydrate diets tend to perform better in the short term, but past six months the weight loss tends to be similar to that of low-fat, Mediterranean, and other diets.[94]

First, most clinical studies are targeted to at-risk populations with medical reasons for weight reduction, such as Type 2 diabetes, obesity (BMI greater than 30), or cardiovascular disease. Compliance may be greater because of motivation and clinical supports like counseling, medical monitoring, peer group sessions, and tailoring of the diet to patient preferences.[95] One of the few long-term studies reported adherence rates of 95.4 percent at one year and 84.6 percent at two years, but the study population was at risk, supported, and monitored, and the four diet modalities

were interpreted loosely.[96] For instance, the low-carb diet members were allowed up to 120 grams of carbohydrate per day, an amount significantly greater than that suggested by most carb removal diets. Studies utilizing different levels of macronutrient intake complicate accurate comparison.

Numerous studies have compared results between different diet protocols, mostly with clinical populations. In most studies the low-carb diet caused the most weight loss within the first three to six months when compared with low-fat or other diets, but weight loss was significantly the same after six months.[97] And of course, there are even more studies that measure the efficacy of a low-carb diet, for weight loss as well as for a host of other outcome variables. Most follow patients for less than one year and document weight loss only during that time.[98] Meta-analyses and reviews confirm these general trends.[99] However, the definition of "low carb" is not consistent across studies, wavering from less than 20 grams per day to 120 grams; most aim for around 50 grams per day. And as Katz and Meller point out, "Carbohydrate-restricted diets are calorie restricted as well. In the absence of calorie restriction, high-protein, low-carbohydrate diets can contribute to weight gain and adverse metabolic effects. . . . This covariance of carbohydrate and calorie intake complicates the assessment of the metabolic effects of low-carbohydrate eating."[100] In effect, if one restricts food by reducing intake of a major macronutrient, weight reduction will likely follow if the diet remains hypocaloric.

It is probably not quite as simple as that, however, since there are advantages to decreasing carbohydrate intake. First, high-protein, high-fat diets signal satiety and reduce hunger, so followers are less likely to abandon the diet.[101] An increase in protein and fat blunts the insulin response and may improve receptivity to leptin while decreasing receptivity to ghrelin, thus depressing hunger.[102] The initial rapid weight loss with very low carbohydrate intakes is tied to water loss and gluconeogenesis, where lipolysis cleaves the carbon chains within fat molecules to provide raw materials to construct the glucose required for brain function. The short-term reset diets fail because yo-yo dieting undermines the weight loss effect via lipolysis-induced compensatory weight gain.[103] But diets with no or almost no carbohydrates are neither sustainable nor healthy; here we are interested in low-carb maintenance diets (with intakes between 20 and 120 grams per day) accompanied by increases in protein and, potentially, fat. While that's a wide range of carbohydrate intake, it represents the clinical, peer-reviewed

studies that document the results of low-carb diets. And intakes at that level, as previously reviewed, do seem to contribute to weight loss maintenance, if—and only if—they are followed consistently and for an extended period. They are, in the final analysis, often calorie-reduction diets and will be effective for that reason alone.

While adopting a very low-carb diet (under 20 grams per day) isn't easy, healthy, or safe beyond a short period, a reduced-carb diet (ideally from 40 to 120 grams per day) does work when adhered to consistently.[104] And while reducing overall carbs isn't easy, it might be that reducing certain kinds—simple sugars in particular—is potentially doable without a jarring change in food habits. Weight reduction secondary to decreased intake is linked to the formation of new food habits and dietary mindfulness as much as a reduction of carbs or even calories. First, reducing carbs demands the restriction of simple sugars like glucose and fructose that sweeten food, are easily absorbed, and contribute to insulin spikes. In practice this means that sodas, snack cakes, cookies, potato chips, and other forms of easy-to-access snack foods are avoided. The South Beach diet allows complex carbs and vegetables, while eliminating refined foods such as white sugar (a simple sugar) and processed flour (an ingredient of most snack foods and baked goods). Indeed, Jallinoja et al. have demonstrated that low-carb dieters believe that refined foods are to be avoided while vegetables and whole grains should be included in the diet.[105] Practices of this sort alone could radically dial down calorie intakes, especially in people who are accustomed to snacking throughout the day. Simply thinking about not eating the snacks—or substituting with an approved option—can limit calories and create weight loss over time. And dieters won't feel deprived if satiety is bolstered by eating more fiber, protein, and fat. That infamous 100-calorie pack of almonds really can help get you through the afternoon without craving a donut! Second, reducing snacking is an activity that doesn't violate cultural rules about meal patterns or sociality, because most snacks are eaten alone. And while it might be hard to tell yourself not to snack in general, it's probably easier if you consider yourself to be fulfilling an identity (the Atkins, Keto, etc. lifestyle) and can tap into a diet advocacy community with access to online or in-person forums for discussing strategies and behavioral support. In summation, it's probably not that hard to reduce the intake of simple sugars because reducing or altering snacks can accomplish those goals.

However, that's not to assert that a low-carb, high-protein diet is the answer to obesity for individuals or populations. Reducing simple sugars is probably good for all of us, but sharply reducing carbs overall and for an extended period isn't effective individually or, it could be argued, ethical—because producing meat is a primary agricultural contributor to climate change.[106] There is no way the planet can supply the meat necessary to feed the human species on a low-carb, Paleo, Keto, or any other high-animal-protein diet. Not to mention that it's also expensive as hell. It is simply not practical and therefore cannot be considered a reasonable population-level diet. However, it is possible to safely lose weight on a lower-carb "Eco-Atkins" diet, with proteins derived from plants such as nuts, soy, and legumes, or by adopting the third or maintenance phases of the Atkins and South Beach diets that include increased intakes of complex carbohydrates.[107] Such a diet could fit into the EAT-Lancet diet for climate health and provide sufficient fiber to promote satiety. Paoli and associates have successfully maintained weight loss in patients as they cycle off low-carb and into a Mediterranean (plant-forward) diet.[108] Such a diet limits simple sugars, increases fiber and complex carbohydrates, and encourages higher intakes of vegetables and fruits—all recommendations already suggested for healthy weight management.

BUT ARE DIETERS REALLY REMOVING FOODS?

It might be that questions about the efficacy of low-carb (or high-protein, high-fat) diets are moot because the lived experience of following them is aspirational rather than absolute. Just as declaring oneself a Clean Eater or a buyer of organics might be more about virtue signaling than actual intake, saying one is "Keto" or low carb might not be connected to actual practice. It might be, as Jallinoja et al. demonstrated, that low-carb dieters tend to avoid refined foods in general and thus think that they are following a low-carb diet because they have eliminated white flours and sugars.[109] It's not the diets Banting or Atkins designed, but it does restrict carbohydrate intake. It could also be that they think they are limiting carbs even if they are not, because they have come to identify "carbs" with bread products. For example, Janet recently had a very interesting exchange at the farmers' market. A patron told her that she had been avoiding carbs "because they cause cancer" and wanted Janet's input on the right diet for her health. Janet

replied that the best diet in general is a balanced one, with lots of vegetables and fruits to boost vitamin intakes. The customer replied "No, that's not true—carbs are bad, they cause cancer. I don't eat them anymore." She said this while adding potatoes (admittedly organic) to her basket. Janet didn't feel that it was the right time or place to query her construction of "carb" to better understand what she was eating and why potatoes were OK, so she simply said that she hoped she was finding everything she needed at the farmers' market. But assuredly, that customer thinks that she is avoiding carbohydrates even though she is not.[110]

Similarly, the surge in popularity of "Keto" has engendered a flock of low-carb cookbooks and lifestyle programs. Many of these recipes seemingly omit sugar and flour by substituting with analogues or with proprietary products, but most recipes that originally called for carbohydrates still contain them, albeit in reduced amounts. For instance, *Bake It Keto* uses monkfruit sweetener (an allegedly low-calorie sugar substitute), Swerve (a proprietary sugar substitute), collagen peptides, and almond flour in place of grain products and sugar, resulting in baked goods with similar carbohydrate and protein ratios per gram but with higher amounts of fat.[111] *The Low-Carb Bible* offers a chocolate flan recipe that calls for twenty-four packets of Natrataste brand sugar substitute, evaporated skim milk, and fat-free milk.[112] While the sugar is fake, the milk products certainly provide ample lactose, a disaccharide hydrolyzed into galactose and glucose in the body. A related (albeit not explicitly low-carb) recipe book, *The Grain-Free, Sugar-Free, Dairy-Free Family Cookbook*, uses pitted dates in place of sugar, substitutes cassava flour or bananas for wheat flour, and uses sweetened coconut cream instead of cream or milk.[113] It's included here because Janet was told by a low-carb dieter that she relied heavily on that cookbook for meal planning and cooking, and while it doesn't say "Keto," it's one of the books that comes up when doing a search for "Keto" and "low carb" in the Delaware County Library system. Mark Sisson (the Paleo advocate turned Keto guru) simply eliminates all forms of grain and sweets, provides a punishing list of foods to avoid, but allows sweetened nut milks, yoghurts, and other sources of nontraditional carbohydrates. At least the original diet books (Atkins, South Beach, Zone, etc.) were consistent and provided menus that reduced carbs transparently.[114]

Let's end with an example showing that what people say about what they eat isn't always consistent with practice. Busy Philipps, a social media

influencer, was interviewed by the *New York Times* about her daily routine and diet. She stated that she "likes to stay gluten free as much as possible" after mentioning that she eats a proprietary brand of gluten-free cookies (remember, she is an "influencer"). She then said that she snacks on Hot Tamales candies, which are made up of sugar and corn syrup (OK, still gluten free), and she also said, "We order Rubirosa for dinner. I had a vodka pizza with pepperoni, Caesar salad and an Aperol Spritz to go."[115] Neither pizza nor Caesar salad is gluten free, but she thinks of herself as "gluten free as much as possible." The cocktail is just fine, involving alcohol and sugars but no gluten. She has adopted a gluten-free identity, and it is how she defines herself to others, but her practices are not gluten free—and she displays no signs of cognitive dissonance. We suspect that because these diets have morphed into lifestyle metaphors permitting virtue signaling and self-branding, actually practicing the diet is not necessary to living gluten-free, carb-free, or Keto lifestyles. Simply position yourself as an adherent and enjoy your pizza.

In sum, we'll suggest that food removal diets are culturally and even intellectually rational because of nutritionism, but they are behaviorally difficult because of cultural rules about meal structure and commensality. Our beliefs about the biology of our food and our individual ability to "choose wisely" conflict with a socially programmed need to eat culturally appropriate meals with friends and family members. So maybe (as the examples illustrate), it's easier to tell little white lies about what we eat than to rigorously follow restrictive fad diet ideals.

Chapter Three

FOOD ADDICTION

In Kima's Psychology of Food class, she often begins one of the class sessions with the question "How many of you think there is such a thing as food addiction?" Nearly everyone raises a hand. A week later, when she poses the same question, all hands remain down. Why? Initially most of Kima's students intuitively (or perhaps from popular culture) have the sense that food is hard to resist and therefore addictive. Many of them disclose struggling with their weight or overeating. But after a deep dive into the scientific literature on addiction, they come away unconvinced that food really meets the criteria for an addiction diagnosis. This is the same conclusion that the American Psychiatric Association has reached, at least based on the current evidence. The reality is that there is little scientific agreement about whether food is addictive—it is an unproven and controversial topic among researchers. At the same time, a huge number of people believe that food is addictive and use the term "food addiction" to make sense of their struggles with eating. That fact indicates that in spite of what scientists tell us, there's something culturally and psychologically important going on that we want to understand.

Many self-identified "food addicts" view themselves as in recovery and follow an AA-type treatment plan with a sponsor and/or a twelve-step plan. For example, in the book reviews for Kay Sheppard's *From the First Bite: A Complete Guide to Recovery from Food Addiction*,[1] one reader writes, "Sugar and flour to me are the lesser of the refinement of alcohol. . . . This is a real

deal get off the drugging with food and into a mental and physical recovery so that food isn't the power in your life," while another reviewer calls it "The Big Book for Food Addicts." Many reviewers claim that this book saved their life or put an end to their chronic dieting. Others claim that it is nothing more than another diet book, and one that actually teaches people to wrongly identify as addicts: "The people who follow this plan are on a perpetual diet. They fall off the wagon and get back on. Only the stakes are higher because you are taught to think of sugar and wheat as a drug and you are addicted to them just like an addict to heroin." The same reviewer (Paula C.) later writes, "This book should be titled 'How to be a control freak with food and possibly die of an eating disorder,' " suggesting that the recommended diet plan created new behavioral problems for her that were potentially lethal. Finally, another reviewer (Helena R.) writes, "It's obvious that all these glowing reviews are by a small band of loyal groupies from the Kay Sheppard Yahoo group. . . . For all the book's claims, there is zero evidence that the 'food plan' works, or that any statistically relevant number of people ever achieve 'abstinence' beyond short and sporadic episodes. Since Sheppard has no peer-reviewed research or any documentated [sic] legitimacy to the claims promoted by the book, it has to go to the same junk pile that every other diet book goes."[2]

Other popular books on food addiction follow the typical patterns we see in fad diets: a powerful first-person account, written in pseudoscientific or quasi-scientific language by a charismatic guru, or in some cases by a clinician (but not a research scientist) who claims to have healed many patients with his or her approach. For example, *Food Junkies: Recovery from Food Addiction* by Vera Tarman groups overeating, binge eating, anorexia, and bulimia into the broad category of "food addiction"—a grouping that is not recognized by scientists—and then claims to "tackle the complex, poorly understood issue of food addiction from the perspective of a medical researcher," even though Tarman is not, in fact, a medical researcher.[3] Fundamentally, this is a book about losing weight, as one can see from the reviews, and is therefore not a book about addiction, but a diet book for people who want to lose weight and find the addiction model a useful heuristic.

FOOD ADDICTION AS EXPERIENCE AND IDENTITY

It's perhaps too easy to poke holes in the claims of the authors who promise instantaneous health and well-being if the purchaser/reader/adherent

just follows their twelve (or ten, or four, or even one!) easy steps to a better you, free of cravings, desires, addictions, and those pesky pounds. The dramatic titles of their books are designed to appeal: *The Craving Cure: Identify Your Craving Type to Activate Your Natural Appetite Control . . . Drop Addictive Sweets and Starches—and Stop Weight Gain—in 24 Hours*; other examples are *Why Diets Fail (Because You're Addicted to Sugar): Science Explains How to End Cravings, Lose Weight, and Get Healthy*, and *The Food-Mood Solution: All-Natural Ways to Banish Anxiety, Depression, Anger, Stress, Overeating, and Alcohol and Drug Problems—and Feel Great Again*.[4] The connection to the recovery narrative and movement is made clear by Pam Peeke's 2012 bestseller *The Hunger Fix: The Three-Stage Detox and Recovery Plan for Overeating and Food Addiction*.[5] Janet took note of the title of a book written by Neal Barnard: *The Cheese Trap: How Breaking a Surprising Addiction Will Help You Lose Weight, Gain Energy, and Get Healthy*.[6] The word "trap" is spelled with a triangular wedge of cheese in place of the "A," with a nasty-looking fish hook lurking dangerously deep in the honeycomb gold of a tasty piece of Swiss. There is, of course, a line attached to the hook, to symbolize the metaphorical entrapment that such a naughty bit of cheese will do to the innocent eater. Janet happens to be very fond of cheese (and has presented several talks on the importance of cheese production to local economies), and she is horrified that an entire book has been published that frames cheese as dangerously addictive and advocates—nay, demands—complete avoidance. These titles and volumes might seem dramatic, but they are meaningful and real to the many thousands of people who are in pain about their weight and convinced they are addicted to food.

Food addiction is accepted as a real and dangerous disease among many sectors of the public, even though scientific evidence linking food to an addiction pathway remains tenuous, as we'll cover later in this chapter. But that doesn't matter, because food addiction has become a valid illness category within our culture—so much so that labeling the self as a food addict is acceptable and meaningful and far less stigmatized than publicly announcing an addiction to, for instance, opiates or alcohol. Alcoholics Anonymous and the other self-help twelve-step programs generally demand member anonymity, and it is very rare for members to blithely announce that they are an addict to casual acquaintances and strangers. Food addiction recovery practices seem to provide a less stigmatized identity, permitting the safe performance of a public status and sick role that bundles the disease of serious

addiction with the identity politics of food choice and avoidance. Perhaps this lack of stigma occurs because food is much less of a vice according to cultural categories—we all use food, but it's illegal to use crack—and maybe it occurs because avoiding food is a way to construct and perform the self as special or afflicted and deserving of attention, compassion, and kind treatment. Or perhaps it's simply a currently popular way to talk about our relationship with food: "I can't eat that cookie! I'm totally addicted to sugar! Take it away!!!!" We're not sure exactly why food addiction has become so accepted as a cultural narrative about affliction and distress, but it has—and so we must treat it as a culturally real and emically valid illness, even if its diagnosis as a biological disease is problematic.

A few years ago, Janet checked in with her friend Nancy to see if she would like something picked up from the farmers' market. Nancy said, "Oh, I'd love a baguette!" Janet replied, "OK, I'll pick one up for you." "Oh, no," Nancy replied, "I can't have a baguette, I'm addicted to carbohydrates, I can't eat that . . . if I have even a tiny bit I can't stop myself, I'll eat the whole thing. I just can't control myself, I can't have bread in the house, I eat it all." After Janet asked her a series of questions to better understand what she was experiencing, a pattern emerged: (1) she can't stop eating—she "loses control"; (2) one tiny bite is enough to make her lose all control; (3) it is a solitary problem; it happens at home and alone—she said that when she goes out she doesn't eat the whole bread plate; (4) it also occasionally happens with other bakery goods; (5) she didn't perceive that it happened with other foods, and this fact proved she was addicted only to carbohydrates; and (6) she thought that only bread and baked goods were "carbohydrates," and she didn't know that carbs were in many foods and that there were many other food sources of carbs. To Nancy, bread and pastries had carbs "in them" and other things didn't. This folk taxonomy evidenced a cultural belief system that made rational cultural sense, if not biological sense. In short, carbohydrates were wheat products, generally of the tasty or sweet variety, and they created an addictive process in certain people. Like the AA concept of alcoholism, one bite is enough to start an uncontrolled binge. While the science controlling this process is nebulous, it reflects American folk beliefs about the illness state called addiction, and it also reflects folk beliefs about food.

Since then Janet has heard beliefs of this sort hundreds of times, from people across the educational and income spectrum, and has even been

told that some people are addicted to carbohydrates because they are allergic to gluten. Belief in or awareness of food addiction is growing as well. In 2016, if you searched for "food addiction" on Google, you got 12.8 million hits, but in 2021 Google returned 249 million. Likewise, "carbohydrate addiction" yielded 544,000 results in 2016 and a whopping 2.5 million in 2021. And with this search it's far too easy to get sucked down the rabbit hole of self-diagnosis and worry, since there are so many sites devoted to providing a product or paid service to fight food addiction. The website www.carbohydrateaddicts.com provides an easy-to-understand definition and a set of quizzes, and it maintains that over 75 percent of people who are overweight are really carbohydrate addicts. Similarly, Food Addicts Anonymous (www.foodaddictsanonymous.org) provides a checklist for self-diagnosis and states, "Food addiction manifests itself in the uncontrollable craving for excess food that follows the ingestion of refined carbohydrates, primarily sugar and flour substances that are quickly metabolized and turned into sugar in the bloodstream. Due to those uncontrollable cravings, a food addict's quality of life deteriorates when he or she eats sugar, flour, or wheat. It can deteriorate physically, emotionally, socially and/or spiritually." These are but two of many, many similar sites, businesses, programs, and products. Reading through even a short list of available sites quickly convinces one that carbohydrate addiction is a real, dangerous, and highly prevalent disease.

But it isn't, really. There is no biophysical mechanism that could explain an addiction to carbohydrates. We are programmed to want to eat carbohydrates, and they are essential macronutrients, but they do not trigger an addiction cycle the way that alcohol, nicotine, or opioids can. In fact, all healthy humans have a mechanism for encouraging carbohydrate intake: it's called insulin, which clears the bloodstream of sugars and can cause the shakes (not the alcohol-induced DT shakes) if a meal hasn't occurred. We are programmed by evolution to seek out carbohydrates because we evolved from fruit-eating primates, and fruits and other carbohydrate sources remain important in every human cuisine. But clearly many people believe they are addicted to sugars or carbohydrates. This experience is different from binge eating disorder, which is a belief that specific food items or the nutrients within them cause a recognizable, biophysical addiction process.

To better understand this phenomenon ethnographically, we've relied on our professional experiences with clients and students, as well as

interactions with friends and community members, and reviewed food addiction books available in the local county library system—especially the volumes with the highest checkout rates. Clear patterns emerge and illustrate how the construction of food addiction shapes public discourse about food and individual conceptions of the body and well-being. We don't want to imply that people who believe that they have an addiction to food are somehow deluded. The term "addiction" is a very potent one in America; we attribute many sorts of cultural and biological processes to addiction, and the label lends respectability to many social and cultural problems. We do suggest that what people think is happening to them is a cultural or psychological process, not a biological one. It is plausible and indeed valid that food addiction is a psychological or behavioral problem, resulting in a psychological dependence on a set of behavioral patterns that diminish anxiety and soothe the spirit. Indeed, this fact is obvious from the work that Kima has been doing with compulsive eaters, and the research is solid about how such emotional and behavioral dependence works. But the term "addiction" is often used to imply a physical cause, and so the narrative slides from a behavioral paradigm into the assumption of biophysical reality when the term is used in popular language. There is confusion (even among researchers) between binge eating disorder (an established *Diagnostic and Statistical Manual* [DSM] diagnosis) and food addiction,[7] which is not a psychiatric diagnosis (discussed more later).

This is too pat, of course. But the language of food addiction borrows a great deal from AA and diet gurus like Dr. Atkins, who asserted in the 1980s that people were addicted to carbohydrates (the current Atkins plan supports sugar addiction as well). These two separate streams of belief unite to create a nearly unimpeachable set of reasons to believe that sugars and carbs are addictive. Indeed, Atkins told his readers that it was the insulin response itself that proved addiction—that insulin cleared glucose from the bloodstream, causing an endless craving for more glucose. The perfectly natural system designed to shift glucose—a necessary macronutrient—into cells was twisted in his writings into an addictive reaction that created a craving for endless amounts of additional sugars.[8] Of course, he wasn't the only diet writer who recommended avoiding carbohydrate intakes; Banting's original low-carb diet set the stage for this ongoing practice.[9] The difference here is Atkins's assertion that sugars and carbs are addictive. Another prominent (if fringe) proponent of the addiction theory was

Nancy Appleton, whose 1988 volume *Lick the Sugar Habit* was followed by numerous self-published books dedicated to connecting sugar intake to a range of diseases beyond addiction, from osteoporosis to hemorrhoids. The titles of her volumes are not subtle—*Suicide by Sugar* and *Killer Colas*—and she had written earlier volumes about natural foods and healing, sometimes listing herself as a "PhD" and sometimes as "MD."[10] Her influential website offers 144 reasons why sugar kills, and the list has been downloaded and shared thousands of times (see https://nancyappleton.com). Appleton's work follows the trend of many of these books, with an emphasis on do-it-yourself healing, a denunciation of conventional medical practices, and assurances that her method will work for the reader.

THREE PATHWAYS TO PUBLISHING SUCCESS WITH FOOD ADDICTION

Food addiction books written for the general public usually follow one of three patterns: there are books written by nutritionists and/or health gurus, as already demonstrated; there are food and addiction memoirs written by celebrities or people who wish to become a health guru; and there are recovery books that advise about how to work the twelve steps and maintain abstinence. The categories overlap but are largely recognizable by the qualifications (real or imagined) of the author and the focus of the solution. These books and programs also blend into the diets and volumes written by Clean Eating and food removal advocates, demonstrating how much the wellness industry relies on the categories of toxicity and addiction to support beliefs about contagion and illness. As a result, many of the detox volumes use a food or carb addiction model to advocate for a Clean Eating regimen. For instance, Mark Hyman has published numerous diet and health books over the last few decades, generally chasing the diet concept du jour but always maintaining the need to abstain from sugar and most carbs. One of his recent books is titled *The Blood Sugar Solution 10-Day Detox Diet: Activate Your Body's Natural Ability to Burn Fat and Lose Weight Fast*.[11] He relies on Atkins's insulin theory to explain weight gain, but he packages diet behavior within an abstinence program (detox from carbs) derived from twelve-step and recovery frameworks. In doing so he validates the perceived connections between sugar consumption and ill-health, and he marries weight management to Clean Eating and food avoidance

regimens. This is a message that may be particularly salient to an audience of weight loss readers who travel from diet to diet, because they would be familiar with many of these ideas. Indeed, his book begins with the ubiquitous testimonial of lifetime weight gain, multiple diet attempts, and eventual success thanks to Dr. Hyman's methods. Almost all diet books begin with such a narrative, of course, which simultaneously reassures readers that they are not alone in their misery and asserts that the diet is authoritative, authentic, and transformative.

Other prominent early advocates of sugar addiction were the husband-and-wife team of Drs. Richard and Rachael Heller, authors of the many books in the Carbohydrate Addicts empire. Starting in 1993 with *The Carbohydrate Addict's Diet: The Lifelong Solution to Yo-Yo Dieting*, they published a dozen-plus books through 2010 and currently maintain a practice and website. The Hellers are legitimate doctors, and while their diet empire might seem self-serving, it fits into the pattern adopted by many other diet gurus: publish some variation on your diet theme almost every year, from books of encouragement to cookbooks. Their diet follows heart-healthy guidelines, eliminates processed foods and sugars rather than all carbohydrates, and provides a rational diet plan for weight loss. It's not a bad diet, and we mention it here because its publishing success—and the professional authority of the authors—helped to legitimize the concept of carb addiction among the public. Their website offers a nonscientific 10-point carb addiction quiz (the same used in their volumes), which indicates that almost anyone might suffer from this malady:

1. After a full breakfast, do you get hungry before it's time for lunch?
2. Do you have a difficult time stopping, once you start to eat starches, snack foods, junk food, or sweets?
3. Do you sometimes feel unsatisfied even though you have just finished a meal?
4. Does the sight, smell, or even the thought of food, sometimes stimulate you to eat?
5. Do you sometimes eat even though you are not really hungry?
6. Are you sometimes unable to keep from snacking at night?
7. After a large meal, do you feel very sluggish, almost drugged?
8. Do you get unexplainably tired and/or hungry in the afternoon?
9. Have you at times continued eating even though you felt uncomfortably full?
10. Have you been on diet after diet, only to lose weight then regain it again?[12]

These questions point to a desire to eat frequently and certainly do mirror many of the addiction checklists, but they provide a potentially misleading self-diagnosis for a behavioral response to food. As a diagnostic test for an actual addiction, they are inconclusive, but as a means to identify the self as *afflicted by food* (in distress with use of food), they are ideal. Reading through them could easily convince anxious dieters that their problems were rooted in a biochemical disease rather than behavior, when in reality many of these behaviors fall in the range of normal eating behaviors.

Of course, there are many, many more of these diet-guru sugar addiction programs and books, and many of the diet gurus for Clean and Paleo and food removal also accept as gospel that carbohydrates are addictive, especially when found in processed foods. The overall cultural zeitgeist favors a belief that carbs addict, making books that explicitly target the addiction process perennial bestsellers and catnip for diet writers. Recently popular titles of this type include *Beat Sugar Addiction Now! The Cutting-Edge Program That Cures Your Type of Sugar Addiction and Puts You on the Road to Feeling Great—and Losing Weight!* by Jacob Teitelbaum,[13] who has also written a series of books on other health problems, from fibromyalgia to chronic pain. Other examples are the volumes listed earlier in this section by Peeke, Challem, Hyman, and Barnard. Almost all include a questionnaire of some sort to allow the reader to self-diagnose the disease the author already has defined as the problem. Teitelbaum identifies four types of sugar addiction and provides scaled questionnaires so readers can diagnose their particular type. Peeke uses a shortened version of the Yale Food Addiction Scale (YFAS), as do Avena and Talbott, while Challem has created a (nonvalidated) yes/no scale about emotional moods that includes pinpoint items such as "people have said that I'm moody" to identify sugar addiction.[14] Julia Ross's *The Craving Cure: Identify Your Craving Type to Activate Your Natural Appetite Control . . . Drop Addictive Sweets and Starches—and Stop Weight Gain—in 24 Hours* offers a five-part Craving-Type Questionnaire that asks behavioral questions to diagnose the reader's particular malady. According to her, the Depressed Craver has a deficiency of serotonin, "your brain's inner sunshine," because "you often worry or feel anxious."[15] Scaling questionnaires of these types, especially ones with vague symptoms such as "trouble sleeping" or "you are a perfectionist," are the perfect vehicle to convince people that they are afflicted by a disease the author can cure. And from there, the identification of sugar addiction as

the cause of an ineffable sense of distress and weight gain promises an easy solution for myriad ailments.

Identifying and diagnosing an addiction using a vaguely worded, scaled questionnaire is a commonly used tactic to convince the public to buy a book and adopt a diet plan. Recycling the reasons people are addicted is problematic, however, because if readers are subjected to the same mechanism multiple times by multiple authors, a diet guru's authority as the unitary expert with the only solution might be challenged. As a consequence, there are some variations in authors' descriptions of the addiction process. Twelve-step programs rely on sugar and carb toxicity but locate the problem within the self of the addict, as do most of the Anonymous programs. Ross locates addiction in neurotransmitter imbalances and maintains that amino acids control food desires, and if addicts eat a mostly protein, Paleo diet, they will naturally reduce cravings. Avena and Talbott also identify sugar-created imbalances in the body's response to dopamine, leptin, insulin, and other hormones as the problem, and they support the food-drug analogy by telling the reader that "chemicals that are associated with feeding can also affect brain regions that make us want to take drugs." Avena and Talbott's volume is far more scientific (and referenced) than the books written for a general audience, reflecting Dr. Avena's work as a neuroscientist. Barnard tells the reader that cheese is addictive because it contains a lot of salt and grease (true) and opiates (hmmmm . . .). He maintains that casein, a protein found in milk, breaks down into fragments called casomorphins that function as opiates in the brain. And when casein is concentrated into cheese, it becomes what he calls "dairy crack."[16] Challem asserts that the proper "neuronutrients" decrease cravings and that a high-protein, high-fiber, and supplement-filled diet will end bad moods and addictive processes. He provides a long list of neurotransmitters and hormones that promote negative effects when affected by glucose intake, although references demonstrating these relationships aren't provided. And finally, Pam Peeke asserts that food addiction is physical because of the dopamine-release cycle, and she links binge eating to other forms of dopamine-releasing "false fix" behaviors such as cell phone addiction, credit card debt, drug and alcohol use, and overwork. She cured her own sugar addiction by eating lunch at Chez Panisse restaurant several times a week: "I would eat an inexpensive, blindingly gorgeous lunch prepared by the renowned chef and my friend Alice Waters, in the very birthplace

of the locavore, farm-to-table concept. I learned as a young woman just how good organic whole food tastes. My body started craving fruits and vegetables and whole grains and lean proteins."[17] Chez Panisse certainly is not inexpensive—it's a very expensive restaurant, and one that exists in a rarefied and quite precious cultural space. Her referencing it as a cure places her program solidly in the realm of many other wellness experts who assert that high-end, hard-to-find, and organic foods are the ultimate source of good health.

However, we'd like to point out that many of these neurotransmitter and hormone response mechanisms do indeed have scientific merit, and there is evidence that highly palatable, highly processed foods reward the pleasure centers of the brain in ways that encourage overeating (we'll discuss this point shortly). But science doesn't (yet, perhaps) clearly demonstrate that the pathway is addictive, only that hyperpalatability encourages intake. That eating can be an addictive *behavior* is more clearly understood, but that is different from a *biological* addiction to specific nutrients within food. But we must respect that people who *feel* they have no control over food intake may well indeed identify themselves as addicted, and the distinction between a behavioral addiction and a substance addiction may not be meaningful. What's important is that they recognize that they have an illness—an emic (felt) idiom of distress—and we need to empathize and validate their right to experience their condition via the language of addiction.

THE ADDICTION AFFLICTION MEMOIR

The second type of volume that legitimizes food addiction is the addiction memoir, many of which reflect and celebrate the twelve-step paradigm and conflate binge eating disorder with food addiction to adopt a biological addiction mechanism to explain eating disorder behaviors. Perhaps one of the most popular is Mika Brzezinski's *Obsessed: America's Food Addiction—and My Own*.[18] She uses the Yale Food Addiction Scale to diagnose and explain addictive behavior patterns and provides a series of personal narratives (her own, and others') to conclude that food addiction is a biological disease. She locates the problem in the hedonic pleasures of processed food, using published and reliable works by authors such as Sam Kass and David Katz to argue that American food is toxic. The solution is to detox from processed foods and gain emotional intelligence. Another

well-written volume is *The Hungry Years: Confessions of a Food Addict* by William Leith.[19] He takes a journalistic, philosophical, and psychological approach to understand his own behavior within the context of the diet industry and the food system. He recognizes that food is only one of several addictive behavior patterns, and he locates addiction in the self, an unhappy childhood, and psychological problems. His solution is to adopt the Atkins diet and to have psychological counseling, and the text makes clear that the structured, limited diet provides him with a viable daily eating strategy that helps to alleviate his distress.

The volume *Why Diets Fail (Because You're Addicted to Sugar)* is also a memoir of sorts because, like many of these volumes, it starts with the author's personal battles with food. Talbott teamed up with Nicole Avena to provide a scientific discussion of sugar addiction alongside a treatment protocol to gradually reduce sugars to reverse the addiction process.[20] The authors present a lengthy ranked list of foods to eliminate in stages, and each stage is accompanied by a description of Talbott's own process, a narrative technique borrowed from self-help manuals as well as the twelve-step program. Indeed, the chapter titles of this book parallel those typical of drug addiction memoirs, with sections on craving, relapse, and managing social situations, although the solution is rooted in managing diet. Andie Mitchell's engaging autobiography of fatness and weight loss starts off with a clear description of food addiction behavior, when she ate an entire cake for her twentieth birthday party: "I can remember carving the first slice, taking the first forkful. The rush of whipped sugar speeding through my bloodstream. It felt like teetering on the ledge of the roof of a skyscraper, exhilarating and terrifying. The split-second decision between balance and oblivion. What I cannot remember, however, is the exact moment I made the decision to eat the whole thing."[21] That is most definitely a well-written and accurate description of how a drug affects the user, whether it is alcohol, crack, or heroin: the result—and resulting loss of control—are virtually the same. This is a phenomenological and persuasive account of the distress felt when someone loses control over food intake. This distress is also palpable in Nancy Goodman's *It Was Food vs. Me . . . and I Won*, a chronicle of binge eating disorder as food addiction. The parallels with a hitting-bottom addiction chronicle are clear: "It wasn't that I had no other options, like the homeless who scrounge for any available food to survive. I had a beautiful family and a wonderful home with a kitchen full of food. Something

must have gone terribly wrong inside, but I didn't know what or why. . . . I didn't look like the kind of girl who ate fuzzy bagels and cabinets of food." She continues to explain that "every event, every home, every night, every day, I was never safe from food. It would be there waiting and there was nothing I could do."[22] This description clearly nails the feeling of being powerless and out of control in the presence of food. There are many, many more diet chronicles like these, and many of them frame weight issues and binge eating as food addiction, even if they don't acknowledge belonging to a twelve-step group or explore brain-food triggers. It's clear that differing forms of distress can lead to problems with food use, and that might indeed be the formative issue here: disordered eating becomes both a coping mechanism and an illness symptom for people who are experiencing physical, emotional, or social distress. Naming it as food addiction creates a meaningful narrative about feeling ill at ease and illness—what medical anthropologists call a cultural idiom of distress.

TWELVE-STEP FOOD ADDICTION PROGRAMS

Perhaps it makes sense that overeating should have its own "Anonymous" groups, for after all, isn't eating too much (and not being able to stop) very similar to drinking too much and becoming an alcoholic? And indeed, the first of these—Overeaters Anonymous (OA)—was started in 1960 by a woman who had attended a Gambling Anonymous meeting and thought the twelve-step program would work for compulsive overeating. According to the website, OA now has chapters in over seventy-five countries worldwide. There is a ten-question survey available online to determine overeating, as well as a wealth of information and inspirational narratives from members. The questions easily could be answered in the affirmative by anyone who has tendencies toward binge eating or overeating. OA maintains that "1. We are for anyone struggling with food or trying to determine if they have food issues, 2. We believe compulsive eating is a disease like alcoholism is a disease, and 3. Our life-changing approach is physical, emotional, and spiritual, and based on the Twelve Steps of Alcoholics Anonymous (AA)." OA supports a concept of abstinence that borrows directly from AA, but the target is compulsive eating rather than any particular foods: "Abstinence is the action of refraining from compulsive eating and compulsive food behaviors while working towards or maintaining

a healthy body weight. Spiritual, emotional and physical recovery is the result of living the Overeaters Anonymous Twelve Step program."[23] Workshop and meeting materials emphasize the importance of planning meals to avoid trigger foods and compulsive behaviors. It seems that anyone with a food issue potentially belongs, whether that person is anorexic, bulimic, a binger, a compulsive exerciser, and someone with weight-related body dysmorphia in general. Given the wide acceptance of food issues, it might be accurate to say that OA functions as a self-help group for people with problematic eating patterns.

Several other Anonymous groups splintered from OA, providing members with slightly different protocols, illness definitions, and member expectations. In 1987 Food Addicts Anonymous (FAA) was started with a focus on targeted abstinence from carbohydrates, sugars, and processed foods rather than on abstinence from compulsive eating. FAA envisions that the trigger or target foods are phenomenologically equivalent to alcohol as addictive agents, as demonstrated by its description of how FAA works: "This Twelve Step program believes that food addiction can be managed by abstaining from (eliminating) addictive foods, following a program of sound nutrition (a food plan), and working the Twelve Steps of the program. After we have gone through a process of withdrawal from addictive foods many of us have experienced miraculous life-style changes."[24] The FAA food plan provides a list of sugars, sugar substitutes, and wheat products to avoid, although other carbohydrate sources—maize, barley, rice, oats, etc.—are permitted. There is a lengthy discussion of what and how to eat with clear instructions that end with: "The food plan is a way of eating that is free of sugar, wheat, and flour. The food plan eliminates the basic components of our binge foods: sugar, flour, wheat and inordinate amounts of fat (sticky, greasy, pasty foods). This is not a reducing diet because it is not severely restricted in terms of basic food groups."[25] In summary, FAA defines sugars and wheat products as addictive, requires avoidance for membership, and uses the twelve-step model to support abstinence behaviors.

The practices of Food Addicts in Recovery Anonymous (FA) are very similar to those of Food Addicts Anonymous, and it is also another offshoot of OA. It seems to be the most popular of the twelve-step food groups, with thousands of members and more chapters than the other programs. Like FAA, it identifies specific foods as causative triggers for biological addiction and defines abstinence as avoidance and working the steps.

Self-identification as a food addict is facilitated by a twenty-item questionnaire similar to the OA questionnaire, and symptoms include overeating (binging or grazing); purging (bulimia); undereating; obesity (and related problems such as diabetes, heart disease, and sleep apnea); compulsive exercise and/or dieting; obsession with food or weight; and depression, shame, isolation, and hopelessness related to food, weight, or body image. Furthermore, "abstinence in FA is equivalent to AA's 'sobriety' and is clearly defined: weighed and measured meals with nothing in between, no flour, no sugar, and the avoidance of any individual binge foods."[26] In practice it seems to combine elements of both OA and FAA, in that it identifies compulsive eating, as well as sugars, wheats, and individual trigger foods, as addictive. FA has also gained attention since the 2013 publication of *Food Addicts in Recovery Anonymous*, sometimes called the "Grey Book," a recovery narrative volume patterned on AA's famous *Big Book*. It has been reprinted annually. While forbidden food lists are not provided online, this book provides them, as well as advice and personal narratives on what it means to be abstinent, including the avoidance of "foods made with or dusted in sugar or flour of any kind. We exclude sweeteners like maple syrup, honey, and corn syrup, which affect us as powerfully as sugar. Alcohol is also not included in our food plans because of its high sugar content and the danger it poses to anyone who is already an addict." It also abjures pastas, desserts, and breads.[27] Members work with a sponsor to understand and avoid their personal food triggers, and abstinence involves both the traditional twelve-step spiritual and social program and careful adherence to a food plan. It differs from FAA in requiring members to develop a personal food plan as part of an abstinence strategy. FA is certainly a larger, more developed program, with a professional publishing division providing books, recovery pamphlets, and a magazine.

There are even *more* Anonymous fellowships for food addiction.[28] GreySheeters Anonymous (GSA) spun off from OA after the release of the OA GreySheet dietary plan banning sugars and high-carbohydrate foods in the late 1960s. GSA members wanted to focus on maintaining a low-carb diet rather than on compulsive eating, and their program requires that members work with a sponsor to maintain dietary protocols and practice the steps. Recovery from Food Addiction (RFA) also follows GreySheet protocols, although its genesis was Kay Sheppard's 1989 book *Food Addiction: The Body Knows*.[29] The diet protocols are found in Sheppard's two

volumes and other "working the steps" texts published by AA. According to RFA, "Members of Recovery from Food Addiction believe that abstinence from sugar, flour, and wheat is the most important thing in our lives; for without abstinence we do not have a life."[30] Sheppard's volumes have been enormously influential within food recovery culture, and they closely resemble texts produced by twelve steppers in other Anonymous groups because they contain background information about the disease process, narratives of addiction and recovery, and a great amount of affirmative messaging. As can be surmised by the focus of the differing groups, most separated from OA because they adopted the GreySheet dietary proscriptions against sugar, flour, and wheat and defined carbohydrates as an addictive substance. OA defines compulsive eating as an addiction but does not link addiction to a particular food. In effect, the spin-off groups shifted the causative agent of addiction from behavior to biology, projecting the known addictive pathways of alcohol and other problematic drugs onto carbohydrates. This is a critically important epistemological change because it alters the site of the problem—from the behavior of the person to the biology of the body—and dramatically shifts understanding of what causes the phenomenological distress. In doing so, these groups have altered the narrative about food addiction from a psychosocial illness to a biophysical disease caused by external toxins. Abstention practices then mirror those for alcohol and other drugs, and those identifying as food addicts have similar recovery discourses. Most importantly, the sugar/carb toxin/addiction model adopts cultural tropes about alcohol and drug addiction, thus becoming an authentic *disease* and one with a known folk etiology and process. Turning sugar into an addictive substance makes uncontrolled eating a biological disease and one that is a danger to everyone, just as alcohol is a potential danger for anyone who drinks. Abstaining from sugar makes cultural sense.

The Foodalogue

AA is famous for the drunkalogues, the stories told in fellowship about how the addictive process took over the life of the members, causing them to hit "rock bottom" and begin the twelve-step path to sobriety. These tales provide a blow-by-blow account of the members' worst drinking stories and just how badly they ended—with divorces, hospitalizations, prison

sentences, and questionable tattoos. This narrative format is carried into the food addiction memoir with little amendment and provides a linguistic road map for how food addiction is recognized, experienced, and overcome. The stories are repetitive, predictable, and deeply informative. Reading them teaches one how to perform addiction, whether of alcohol or food. And just as the AA tradition has promoted hundreds of recovery memoirs, the food addiction recovery culture is following closely behind, providing inspiring tales of weight gained and lost and sanity restored by "working the steps."

What struck us in reading the FA "Grey Book" was how similar the stories were and how exact the match was between words that explained the mechanism of addition for both alcohol and food. Trigger foods cause a loss of control similar to being overcome by alcohol, which members also avoid because they believe it is mostly sugar. This loss of control reinforces the oft-stated sentiment that they have "addictive personalities" and are unsafe with alcohol and other drugs in addition to food. The belief that there is an addictive type is also straight from AA. But the narrative arc is important; the structure is the same. Individuals were out of control, eating too much, mostly sweets. Other aspects of life were falling apart—they were hitting bottom. They were desperate, a friend recommended FA, they found a group and a sponsor, and through the twelve steps they learned to regulate their eating and control their addiction—leading to weight loss and financial, social, and emotional success.

Kay Sheppard exemplifies the trend of copying the AA narrative for food addiction, which isn't surprising since she started out as an AA member. Her story is provided in *From the First Bite: A Complete Guide to Recovery from Food Addiction*: she became sober from alcohol after losing her marriage and job and moving home with her mother, who noticed she ate all the time. Her mother also identified as a food addict and, indeed, died of the disease, according to Kay. She states, "I was as crazy on food as I had ever been on alcohol" and that "what the body knows is this: it is sensitive to addictive substances and will always, without exception, react in an addictive manner to them."[31] She then learns of OA through a friend, begins the steps, submits to God, and her life becomes blessed. Her books are very popular with Christian readers.

The narrative arc of the food addiction process defines the disease and its symptoms as lived, authentic experiences. Memoir writers describe an

inability to control themselves around food and provide lengthy accounts of how they abused foods. They present this behavior as the same as loss of control with drug taking, cementing the belief that the drug responses are analogous and similarly intoxicating. "Now I am finally free to get my fix. I slip out of the office building to a nearby store, buy candy and two frozen desserts, and lock myself in the office so no one will catch me. Then I eat—not to taste, not to savor, but to get the substance into my body. I'm shooting up with sugar." This writer continues: "Some days I was so hungover from a binge I couldn't return calls."[32] Another writer, Christina, tells her readers that "on the night I shoveled spoon after spoon of sugar in my mouth, I had no idea who I was."[33] Someone named Clara "tried half-heartedly to go back on the abstinent food plan, but she kept falling off the wagon," implying a need for an all-or-nothing construction of sobriety analogous to that for alcohol. Memoirs may contain (erroneous) scientific statements that support the food-as-dangerous-drug construction, as this seemingly innocuous statement demonstrates: "Even fruit can be addictive. Many people find they have to abstain from fruits that contain high fructose loads like mangoes, bananas and cherries," and "Juices are an excellent example of drinks that are as toxic as soda." They then repeat the lactose/casein toxicity narrative: "Do you ever wonder why some people really love their yogurt [sic] and cottage cheese? They contain natural sweeteners in the form of lactose and casein, which our stomach breaks down into casomorphin, an opioid peptide that some people find addictive." Writers nail home the drug similarity with "reintroducing trigger foods at any point, even after years of food sobriety, can drive an addict back into addictive eating."[34]

Authors also tend to write about food in AA drug-taking terms by referencing detoxing, having withdrawal symptoms, hitting bottom and relapsing, and living one day at a time, sometimes describing stark reactions to tiny amounts of food: "I went into shock when I added wheat after being withdrawn"; "I also had severe headaches from a single sip of sugar cola after being withdrawn. While withdrawing I felt hopeless, despair, very tired, cranky and had cravings"; and "When I add foods I am addicted to into my body, it reacts."[35] These are potent nocebo responses to ingestion of a perceived toxin (a nocebo is a negative outcome caused by a belief that the intake or intention will cause harm). Stories of this sort support the belief that the target foods are like drugs and dangerous and must be

avoided. But they also remind us that people who identify as food addicts are truly suffering and looking for a solution to their very real pain.

Memoirs are also focused on sobriety and recovery. The recovery response is framed as if from drugs, with feelings of ecstatic rebirth once the foods are avoided. "Abstinence allowed my body, mind and soul to get clean. Food addiction, like other addictions, robs the sufferer of her Self."[36] "I finally felt that I was home. . . . I could see recovery in their eyes and in their bodies. They had found a solution."[37] Often these feelings are linked to a spiritual rebirth: "I felt a warmth spread through my whole body. Then and ever since, I've known that I am loved. I am special in my higher power, just as I am," and "God lifted my anger. Today, I have what I call outrageous joy." These feelings of transformation are linked to social transformation and rebirth. The importance of fellowship and interpersonal caring is a central component of the recovery narrative and is carefully described in almost all foodalogues. Most people are introduced to the program by someone who cares about them, meet others who help them, and report that relationships are repaired because of the program. One member recounts how she went to lunch with a friend who "was overweight like me, but her lunch that day included vegetables. Clearly, something was different. I asked her what she was doing and she told me about the Twelve Steps. I felt like everything in my life had prepared me for that moment."[38] The narrative arc of most AA stories involves falling, hitting bottom, finding fellowship, and then recovering into a world marked by love, social support, acceptance, and spiritual grace. The transformative power of the program is channeled through human connection, even if working the steps is a solitary task. Food addicts experience a transformative rebirth, and the process is made possible by fellowship and connection.

Reading these chronicles reminds us that people are suffering and that their pain is real. They are in authentic distress and find healing through a program that demands that they abstain from trigger foods labeled addictive. The healing process is physical, emotional, spiritual, and social, and success allows the sufferer to become a happier person occupying a very different role within society. Like other Anonymous programs, this kind of food program shifts personal identity from someone *diseased* into someone *in recovery*—whole, blessed, and newly transformed. But before we go too far in looking at "food addiction" as understood and practiced by the general public, let's step back and evaluate the scientific evidence for and

against food as an addictive substance. We'll then present a counter-theory about why food *feels* addictive to so many people and how we can use anthropology and psychology to make sense of that.

THE EVIDENCE FOR FOOD ADDICTION

Overeating and binge eating have been studied for some time, but only recently did neuroscientists begin to study the purported addictive properties of food. The supporting evidence for food addiction falls along three main arguments: (1) the neurological reward of hyperpalatable foods, (2) the personality characteristics associated with addiction, and (3) the production parallels between drugs of abuse and highly refined foods.

Much of the laboratory research on the neurochemistry of food reward examines palatability, that is, the pleasure or "hedonic reward" provided by foods or fluids. Lately, the term "hyperpalatability" has been used to refer to the high-sugar, high-fat, and often high-salt foods manufactured by the food industry,[39] and indeed, consumption of such products is associated with changes in the pleasure centers of the brain in both rats and humans.[40] Increasingly scientists understand that overeating is caused by two related mechanisms of (1) food reward (its reinforcing and motivational effects), and (2) hedonic value (its palatability and pleasure-giving properties). While the terms "palatability" and "reward" are often used interchangeably, they are different processes that often occur in tandem. In a much-cited breakthrough article, neuroscientist Kirt Berridge identified the motivational effect of food as "liking" and the hedonic aspect of food as "wanting."[41] This distinction between liking and wanting is important because it explains the diminishing pleasure that we sometimes receive from strongly desired behaviors and substances. In other words, we can badly want something or even crave it, and then when we get the desired substance we find that we don't like it as much as expected, that it does not provide the expected reward. This phenomenon is one of the hallmarks of addiction and is why addicts often describe a life of "chasing the initial high."

The second area of research supporting the notion of food addiction focuses on personality similarities between self-identified food addicts and other addicts. There is evidence that "food addicts" have similar personality characteristics to substance abusers and also use food to regulate mood.

Impulsivity, for example, is associated with the addictive consumption of food, and individuals who report acting more rashly when experiencing urgent emotions report more symptoms of addictive eating.[42] Other studies have shown that many self-identified food addicts use food to self-regulate in order to escape a negative mood state[43] and that high-fat sweets in particular are frequently used to regulate emotions.[44]

Interestingly, the increased liking for carbohydrates in the context of depressed mood parallels how other drugs of abuse are craved and used as mood regulators.[45] For example, rats fed a diet of hyperpalatable foods show the behavioral signs of withdrawal, tolerance, and continued use despite negative consequences.[46] Similarly, humans who report symptoms of food addiction on surveys experience more food-related cravings and demonstrate more intense neural activation when consuming highly palatable foods.[47] Other studies have shown an inverse relationship between BMI and illicit drug use, a lower risk for substance use disorders in obese individuals, and lower rates of nicotine use and marijuana abuse.[48] This research suggests that overeating may attenuate the use of other drugs, possibly because the food itself functions as a drug. In fact, in what is referred to as "addiction transfer," food can become the new "drug" of choice as a result of alcohol or drug abstinence, often leading to weight gain among recovering addicts.[49]

The third area of support for food addiction focuses on the production side of food; in addition to the neurological reward provided by sugar, many researchers have noted that the production of refined foods (especially sugar) is more similar to the production and refinement of drugs of abuse than to the natural energy resources we historically consumed.[50] Such chemical alterations are the hallmark of drug production and provide elevated potency and rapid absorption into the bloodstream. The natural coca leaf, for example, is only a mild stimulant in its natural form, but when highly refined into cocaine or crack, it delivers an exponentially stronger hedonic reward and is far more addictive.[51] Similarly, marijuana used to provide a mild high, but it has now been cultivated into a highly potent hallucinogenic compound often delivered through concentrated oils and edibles.[52] Further supporting the notion that highly refined foods such as sugar create more addictive potential are studies with rats in which researchers have found that the reward value of sweet liquids is greater than that of intravenous cocaine.[53]

Arguing for the recognition of food addiction, researcher Ashley Gearhardt and her colleagues summarized these similarities between hyperpalatable foods and addictive drugs, noting that both:

1. activate dopamine and opioid neural circuitry.
2. trigger artificially elevated levels of reward.
3. are absorbed rapidly into the bloodstream.
4. alter neurobiological systems.
5. cause compensatory mechanisms that result in tolerance.
6. are combined with additives to enhance rewarding properties.
7. elicit cue-triggered cravings.
8. are consumed in spite of negative consequences.
9. are consumed in spite of a desire to cut down.
10. impact disadvantaged groups to a disproportionate degree.
11. cause high public health costs.
12. result in long-term alterations from exposure in utero.[54]

THE ARGUMENT AGAINST FOOD ADDICTION

Based on the aforementioned research, you might be convinced that food is addictive, but there's more to the story. While a small faction of scientists argue for the recognition of food addiction, overall there remains strong disagreement in the scientific community about its validity, and many researchers oppose the label as misleading and inaccurate.[55] Consider this: Was anybody living 200 years ago addicted to food? We have never come across an account of an apple addiction, a cashew addiction, or a salmon addiction. But were people living 200 years ago addicted to alcohol, tobacco, or opiates? Of course. That's because each of those substances has inherently addictive properties, containing a specific psychoactive compound causing intoxication, dependence, or withdrawal. Such addictive substances rarely occur in nature and are typically created through processing and refinement.

This raises an interesting point: nearly all of the foods that elicit addictive behavior share one thing in common—they have been significantly altered or enhanced through manufactured flavor chemicals and ingredients. For example, commonly sold cookies have many of the same reward-giving

properties as meth.[56] That's because they contain highly palatable and highly profitable ingredients, often highly engineered forms of sugar or salt. These are not your grandmother's salt and sugar—they are complex formulations engineered by food scientists to be irresistible. We think it's fair to call them psychoactive compounds that meet the definition of an addictive substance. The commodities and ingredients company Cargill (no relation to Kima), for example, has a portfolio of salts that includes crystals with quadrilateral pyramids with flat sides that enable the salt to dissolve three times faster than normal and deliver a faster jolt to the brain.[57] It resembles natural salt no more than crack cocaine resembles the coca leaf. It's telling that if we were to remove the engineered flavor chemicals from our processed food, it wouldn't sell. Doritos Locos without any flavor chemicals? What remains would be plain ground corn—edible, but not highly palatable, and certainly not addictive. In other words, it's everything but the food that is addictive.

Not all the foods causing addiction-like behavior are packaged or processed foods. That's why "carboholic" might be a slightly better term, in that addictive behavior is almost always toward carbohydrate-rich food like cakes, pastas, chips, and cookies. Still, "carboholic" misses the mark because plain carbohydrates, such as bananas, beans, or peas, do not generally elicit cravings, binging, or addiction-like behavior. In laboratory studies, it is only the highly altered carbohydrates with refined ingredients that elicit addictive behavior. In theory one could make these addictive foods in a home kitchen. It's just that most people usually don't. Nor do most people distill their own alcohol, roast their own coffee beans, or cook their own meth. Creating an addictive substance is time-consuming, which is why, when left to market forces, such substances tend to be produced and distributed in complex networks separate from the end user.

Many skeptical researchers acknowledge addictive-like eating behavior but say that the term "food addiction" is a superficially attractive explanation that lacks systematic evidence.[58] They argue that "food addiction" is a misnomer because "foods are nutritionally complex and there is hardly any evidence to suggest that under normal physiological circumstances humans crave specific foods in order to ingest a specific 'substance.' "[59] This group argues that in order for food to be addictive, all foods would need to have equal potential to be implicated in the addictive process.

Another group of researchers have instead suggested that, if anything, the term "eating addiction" might be more accurate because it focuses on

the behavior, rather than the ingestion of a single addictive substance. This view places "eating addiction" in the realm of behavioral addictions like gambling, which are also recognized as addictive disorders but are different from substance use disorders in that the focus is on excessive, repetitive behaviors rather than the pharmacological mechanisms of drug use. These scholars caution against any broadening of the addiction model, noting that already in popular culture the term "addiction" is now used colloquially to describe anything done to excess, like shopping, sex, video games, and food.[60] Inappropriately broadening the addiction model risks losing the explanatory power and its neurobiological grounding.[61] Psychobiologist John Blundell and his colleagues also point out that while many people experience sugar cravings, that may simply be because the brain requires a constant supply of glucose for normal functioning. Such food cravings then may be fundamentally different from the cravings for drugs such as cocaine or heroin, which have no essential function for survival.[62] Moreover, a great many stimuli can cause activation of dopaminergic areas, such as exercising, listening to music, or viewing art, yet those activities are not considered addictive.

It's worth noting here that in spite of the scientific controversy over the addictive potential of food, the food industry certainly means for it to be addictive. In fact, an enormous and secretive world of food science has developed over the past several decades whose sole aim is to create irresistible flavors for candy, chips, ice cream, energy bars, yoghurts, natural waters, and upscale smoothies, to name a few. The holy grail for these food scientists is something called "bliss point," a construct developed by experimental psychologist Howard Moskowitz.[63] Moskowitz optimizes food flavors through sophisticated taste tests and mathematical modeling and has discovered that desirable tastes like sugar have a threshold or tipping point for most people, after which point continuing to add more of that ingredient diminishes the food's palatability. With his market research and modeling techniques, Moskowitz is able to determine the exact point at which sugar, salt, and fat reach the ideal convergence of hedonic reward, a neurological point that he termed "bliss point." Using the incredibly sophisticated science of bliss point, food scientists now devote their professional lives to creating things like Biscuits and Gravy–flavored Lays potato chips.

So, to summarize, the concept of "food addiction" has been controversial in the scientific community. In psychiatry specifically, it's possible that

"eating addiction" may prove to become an official diagnosis, grouping the behavior with gambling and other so-called behavioral addictions. This term, however, ignores the fact that there really are ingredients in foods that do something to the human brain that looks like addiction. If anything, "sugar addiction" or "processed food addiction" might be more valid terms. At the time of this book's publication, there has been recent effort to recognize "processed food addiction," define it scientifically, and identify assessment and treatment approaches.[64] In our view, this is a welcome approach, as the "food addiction" concept has been dominated by fad diets and self-help books, creating more confusion in the general public about the validity of the construct. Sociologist Karen Throsby analyzed how the concept of food addiction was covered in the popular press and found that there were far more mentions of food addiction in tabloid publications than in newspapers that might be reporting scientific developments.[65] She argues that these tabloid publications prefer dramatic, personalized stories using the addiction narrative because these publications are important sites for the production of social norms and hierarchies and, more importantly, where addiction is "done." By that, she means the ways in which culture defines and agrees upon what addiction means and how it is enacted, which we will turn to now.

SOCIALLY CONSTRUCTED DISORDER

Because of the focus in the popular media on "food addiction," we felt it was important to walk the reader through the scientific research for and against food addiction in the previous part of this chapter, but in many ways we don't see that debate as central to this book. The whole idea of "food addiction" rests on a Western, medical model of behavior—that addiction is a disease with symptoms, behaviors, and treatments in the same way that illnesses like cancer and lupus are scientifically defined and understood conditions. Even a great many scientists who study addiction are cautious about how they explain addiction. For example, in 2014 a letter signed by ninety-five scientists was published in *Nature*, challenging the journal's description of addiction as a "brain malfunction." They wrote that "substance abuse cannot be divorced from its social, psychological, cultural, political, legal and environmental contexts. . . . such a myopic perspective undermines the enormous impact people's

circumstances and choices have on addictive behaviour."[66] Psychiatry accepts and advances this biological view of disorder, but many social scientists view addiction as "events-in-practice" that are inseparable from the social and material contexts in which they are brought into being.[67] Since we work at the intersection of psychology and anthropology, we also question the medicalization of problematic behaviors and instead find ourselves more curious about other explanations for behavioral patterns that cause people distress.

Addiction, in particular, has been devilishly tricky to define medically because there has never been agreement about what actually constitutes an addictive substance or a drug. As a consequence, there have been a great many moral panics in the United States over the past two centuries that have focused on a range of demonized substances: alcohol, marijuana, absinthe, tobacco, and sugar, to name a few. But these "substances" were not always viewed as dangerous or addictive, and in many cases, they were later vindicated. Absinthe, for example, was the subject of a decades-long crusade but was later understood to be no more dangerous than any other alcohol.[68] In fact, much of the brouhaha about absinthe was based on scientific misunderstanding of the ingredients in what now appears to be a large-scale case of public scapegoating.[69] Even LSD was originally used as a legal commercial and therapeutic drug. Until the early 1960s, it was available to scientific and clinical investigators for medical research under the trade name Delysid. Then, after Harvard professor Timothy Leary began using and promoting recreational use of it, the cultural and political tides changed, and the scientific community soon followed. These examples reveal that our ideas about what a drug is, or what is addictive, are unstable, subject to cultural and political tides, and particularly vulnerable to being shaped by moral panics.

An even broader critical approach suggested by the French philosopher Jacques Derrida is that there simply is no objective, scientific, or physical definition of a drug—that instead, "it is a non-scientific concept that is instituted on the basis of moral and political evaluations."[70] Accordingly, if we accept addiction as social construction, then we might also consider the extent to which labeling substances as a drug causes individuals to "become" users, as argued by sociologist Howard Becker in his seminal paper "Becoming a Marihuana User."[71] To put it in more psychological terms, the act of addiction, when thought of this way, is simply a sanctioned

means of expressing distress, such that the move toward calling food a drug places it in the repertoire of addictive substances people have to choose from when performing addiction. However, given that a large portion of the aforementioned research on food addiction is on self-identified addicts, the question arises of whether these studies are empirically investigating a group of people with a shared neurobiological problem or pathologizing a group of people with nothing more than a shared social identity.

Even if there are multiple valid addiction concepts, it still seems that the semantic ambiguity leads to a conflation between the moral and the scientific. For even the scientists promoting the food addiction concept have attached moral attributes to food itself. Much of this moralizing has targeted sugar; for example, in describing John Yudkin's 1972 seminal antisugar book *Pure, White, and Deadly*, contemporary endocrinologist Robert Lustig calls it "prophetic" and refers to himself as a "Yudkin acolyte"—terms with clear religious, even cult-like overtones: "Everything this man said in 1972 was the God's honest truth and if you want to read a true prophecy you find this book. . . . I'm telling you every single thing this guy said has come to pass. I'm in awe."[72] In Lustig's viral lecture *Sugar: The Bitter Truth*, he refers to sugar as evil, while others, like science writer Mark Schatzker, have taken to calling it "White Death."[73] Moral panic over sugar is actually nothing new. Sugar has been accused of causing mental excitement, sexual depravity, and hyperactivity, with many people continuing to mistake sugar consumption as a cause of AD/HD. The famous "Twinkie defense" used by Dan White, who killed San Francisco mayor Harvey Milk, argued that sugar caused homicidal behavior.[74] It's possible that Western fears about the power of sugar to corrupt are historically deep; after all, folklore and fairy tales tell us that witches use sweets to lure innocent children into their lairs.

So perhaps we should understand the current feeling that food is addictive as more aligned with the kind of drug moral panics that we have seen historically and that swirl around cultural narratives about what is a drug. If we think of "food addiction" in this context, it helps us frame not only how addiction is performed, but also how science is performed in historical and cultural contexts. Both science and addiction are culturally agreed-upon constructs that have changed over time.

What's most clear to us is that the term "food addiction" resonates powerfully with many people and that they don't much care whether scientists

approve. For example, morning talk show host Mika Brzezinski, in her book *Obsessed: American's Food Addiction—and My Own*, writes,

> I'm not afraid to say I am addicted to certain foods. To me, addiction is the right word: the one that fits the pattern of my behavior and helps to explain some of the poor choices I have made. Not everyone agrees. Some of the scientists, doctors, and therapists who spoke with [me] as [I was] writing this book are still skeptical about the idea that food can be addictive, because obviously it satisfies one of our most fundamental biological needs. We have to eat in order to survive, just as we have to breathe. In fact, I've heard people laugh at that idea and say, "What's next? Are you going to tell me we're addicted to air, too?"[75]

Mika says something here that we think academics like us need to respect. She says that to her, "addiction" is the right word. It's the word that explains her behavior and her choices. It doesn't matter to her if the word has been scientifically validated in a laboratory or in a peer-reviewed study. What's important to her is that the term "food addiction" describes her lived experience. It provides her with a way of thinking about her experience and gives her a narrative that makes sense. The fancy academic word for this is "phenomenology," or the study of consciousness as experienced from the first-person point of view. If you read much psychology, you'll know that little of it focuses on first-person experiences. On the contrary, a premium is placed on controlled experiments in which data are collected on observable behaviors. The experimental method is the scientific gold standard of evidence, and when we really want to prove whether something is true, we need laboratory-controlled studies. But ask yourself, where does subjective experience fit into that? This is what the phenomenological philosophers (and anthropologists and psychologists) refer to as "lived experience." As scholars and clinicians, we think people's lived experience is as important as, but different from, the knowledge we can produce through experimental studies. Mika agrees. She has put forward her lived experience as a different way of knowing something than the traditional scientific way of knowing something is true. We think there are a great many people who are struggling with their dietary choices, for whom "food addiction" is a concept that makes sense. And that's why we see "food addiction" as not a proper scientific DSM diagnosis, but as a culture-bound syndrome or idiom of distress.

CULTURE-BOUND SYNDROMES AND IDIOMS OF DISTRESS

Every culture has tacit symptom repertoires offered to its people as a means of expressing distress—an internalized "menu" from which we unconsciously choose symptom sets as ways to express the difficulties of living. "Culture-bound syndrome" is a term that emerged from the fields of medical anthropology and cultural psychiatry and was originally coined to describe so-called folk illnesses. In the earlier days of anthropology, because of a strong colonial influence, much fieldwork was done by white European men and women in remote areas with indigenous people. These earlier anthropologists were unfamiliar with the presentations of mental distress and mental illness they observed. Rather than seeing that nearly all mental illness is culture specific, they thought that Western psychiatry's diagnostic system was universal and that the illness behaviors they observed were local, idiosyncratic presentations of primitive people who didn't understand science. Despite this sense of cultural superiority, psychiatry nevertheless thought that it was important to document these folk illnesses and introduced them to the DSM in 1994, defining them as syndromes "generally limited to specific societies or culture areas and as localized, folk, diagnostic categories that frame coherent meanings for certain repetitive, patterned, and troubling sets of experiences and observations."[76]

These disorders, also sometimes called illness metaphors, are described by recognized behaviors, symptoms, and expressions that communicate sickness and that are typically unfamiliar to or misunderstood by people in other cultures. For example, the South Asian syndrome Koro or "shrinking penis" is a disorder characterized by an irrational fear that the genitals or breasts are retracting into the body. In Western psychiatric terms, we might think of Koro as a regionally specific expression of body dysmorphic disorder. Also in South Asia is Dhat, a culture-bound syndrome characterized by the fear of loss of semen. It is a "disorder" that likely expresses anxiety about virility or shame about sexual impulses and masturbation. Similarly, Taijin Kyofusho is a Japanese culture-bound syndrome characterized by extreme anxiety that one's breath, body odor, or hygiene is offensive to others, so much so that the sufferer often becomes reclusive in order to avoid social encounters that might be humiliating. Note that Japan is a culture that, broadly speaking, prizes group harmony, order, and cleanliness. Social, educational, and professional success in Japan requires

that one conform to these crucial social norms. It makes sense that social anxiety would express itself through the fear of being unclean, because the consequences of having body odor, for example, would be catastrophic. One would become a social pariah. Thus Taijin Kyofusho is a good way for us to think about how many psychological disorders (and fad diets) make cultural sense. They are logical. All of our anxieties come from our deep-seated fears of the worst-case scenarios coming true. So Taijin Kyofusho is a perfectly logical anxiety disorder to have in the cultural context of Japan.

Many scholars have argued that a number of Western disorders, such as anorexia and AD/HD, meet the definition of culture-bound syndromes in that they are locally specific and unfamiliar to most other people in the world. For example, in the 1980s Susan Bordo argued that anorexia nervosa was a disorder that crystallized the psychopathology of our culture. She wrote that anorexia "appears less as the extreme expression of a character structure than as a remarkably overdetermined symptom of some of the multifaceted and heterogeneous distresses of our age. Just as anorexia functions in a variety of ways in the psychic economy of the anorexic individual, so a variety of cultural currents or streams converge in anorexia, find their perfect, precise expression in it."[77] Just as Taijin Kyofusho serves as a logical expression of anxiety in its culture, so too, according to Bordo, does anorexia. It is a locally valid way for a diagnostic category to express cultural and psychological distress. It is also completely unfamiliar to and misunderstood by people in other cultures.

It's important to understand that because something is labeled a culture-bound syndrome doesn't mean it's not real, nor does it mean there is no biological basis for the illness. AD/HD might be a culture-bound syndrome, but at the same time it involves real biological changes to the brain. That's because our behaviors, environment, and cultural context have neurological effects. For example, exposure to stress and trauma changes the brain over time, and a great many disorders and illnesses are in some way connected to or result from trauma. So thinking about DSM disorders as culture-bound syndromes does not rule out the possible biological or neurological causes of mental illnesses, but it redistributes the locus of origin onto the culture, and not just onto or within the individual. In other words, a disorder might well originate in neurochemical or neuroanatomical pathology but be activated or exacerbated by cultural pathology. Often it is difficult to see the cultural pathology that influences individual diagnoses

because we reside in a blind spot that keeps us from seeing how individuals can serve as diagnostic proxies for the culture.

Americans are particularly vulnerable to serving as such diagnostic proxies for several reasons. First, the discipline of psychology has historically been overly focused on the individual as its unit of study, often ignoring contexts such as race, class, gender, region, and ethnicity in the construction of the self. Second, the Western self is so highly individualized that it experiences itself as ahistorical, bounded, and self-contained; that is to say, highly separate from an interdependent social fabric. Third, the prevailing biological or chemical imbalance model makes us think of the individual and the brain as the units of diagnosis and treatment. All these forces converge in a way that causes us to experience cultural ills interiorly rather than to think of diagnoses as expressions of something outside ourselves.

As the disciplines of anthropology and psychology advanced, a more sophisticated view developed of culture-bound syndromes, namely, that nearly all disorders are culturally bound in some way. Even depression and schizophrenia, which are widely viewed to be universal forms of distress, take on very different symptoms and expressions depending on where in the world they occur. For example, in China, sadness and depression are generally not felt or discussed in emotional terms, but rather in somatic or physical terms. Many Chinese might describe depression or grief in terms of having a heavy or cold heart, in contrast to Americans, who are likely to express despair in deeply emotional terms.[78] Consequently, there has been a recent move away from the term "culture-bound syndrome" because it suggests that there is a dominant, universal set of psychiatric disorders (i.e., in the West) and secondary to that, regional, indigenous primitive disorders. A more nuanced term that has emerged in medical anthropology and cultural psychiatry circles is "cultural idioms of distress" to refer to collective, shared ways of experiencing and talking about psychological distress and locally perceived causes, as well as coping strategies and patterns of help seeking.[79]

We think that "food addiction" is just such an idiom of distress. Returning to Mika Brzezinski, she writes, "Of course we are each responsible for our own behavior, and in the end, we make our own decisions about what we eat. But we don't do it in a vacuum. With so many Americans either overweight or obese, something larger must be going on. It can't be that all of us just lack moral fiber."[80] Here we can see her struggling to make

meaning of psychological distress. She is looking for a collective, shared way of experiencing it and perceiving the cause of it, as well as searching for coping strategies and ways of offering help. The concept of "food addiction" offers her that way, irrespective of its scientific validity. That "food addiction" has become a cultural idiom of distress is not surprising given the popularity of the twelve-step model of addiction, as well as the widespread understanding in our culture of addictive substances and treatments. Mapping the addiction concept onto food is intuitive and provides a meaningful narrative that's familiar, regardless of whether science agrees.

IDIOMS OF DISTRESS, MEDICAL ANTHROPOLOGY, AND THE REALITY OF FOOD ADDICTION

But what if food addiction is *real* precisely because it is an idiom of distress? What if the lived experience of food addiction is phenomenologically meaningful for those who identify as addicted? What if it is an illness that can be diagnosed and treated using culturally accepted therapeutic methods? While food addiction might exist as a folk disease to a conventional medical practitioner (or nutritionist), it is assuredly real for the person who suffers, as is clear when reading the testimonials of those who belong to twelve-step groups. The widespread use of the word "addiction" when speaking and writing about eating tells us that the concept is deeply embedded in how we think about diet, and so we must respect the reality that people genuinely believe that they are addicted to food. For people who feel out of control with eating, their addictive pathway is real, devastating, and a condition that marks them individually and socially. And it is also a folk condition that can be treated by therapies such as twelve-step programs, so we need to ask how and why these healing regimes work for people who have internalized an identity as an addict.

We propose that classic theories from medical anthropology help to explain how and why food addiction is effectively treated by the diets, programs, and self-help groups discussed earlier in this chapter. We think that the diet processes function as a placebo effect, providing those who identify as food addicted with a clear path to regain control over out-of-control eating. In addition, we'll hypothesize that the FAA fellowship members and even fad diet gurus have effectively taken on the role of shamans in function and form, as afflicted healers who can authentically treat because

they have also prevailed against the malady. Overcoming their own distress grants healers legitimacy to modern Americans in a manner similar to other validating folk therapeutic practices. And like the healing protocols used in shamanic rituals, the practices adopted by the food addicted create a new and transformed identity: their illness episode allows them to embrace and embody a new sense of self.

IDIOMS OF DISTRESS, EXPLANATORY MODELS, AND EXPERIENTIAL EMBODIMENT

The term "idiom of distress" has a very defined meaning in medical anthropology that neatly describes the cultural understanding of food addiction—and it has largely replaced the concept of the culture-bound syndrome among practicing anthropologists. A culture-bound syndrome is an illness arising out of specific cultural structures of thought and practice. It does not always correlate with biomedical disease categories or diagnoses, but it is recognized by cultural actors as a real illness with known etiologies, characteristics, and therapeutics.[81] Alcohol addiction has been argued to be a possible culture-bound syndrome, and the Western notion of addiction may differ profoundly from other cultures' understanding of it as a disease.[82] However, it is probably not a good candidate for a culture-bound syndrome because addiction spans cross-cultural categories and has knowable psychological and biological processes.

For food addiction, the idea of idioms of distress is a far more effective heuristic. Mark Nichter first proposed that "idioms of distress" were "socially and culturally resonant means of experiencing and expressing distress in local worlds. They are evocative and index past traumatic memories as well as present stressors, such as anger, powerlessness, social marginalization and insecurity, and possible future sources of anxiety, loss and angst."[83] Furthermore, Nichter suggests that the term "would identify widely recognized and commonly shared ways of articulating distress for which there are culturally specific ways of acknowledging and managing these experiences and expressions of distress . . . as well as largely nonstigmatized ways of communicating distress."[84] Examples of these conditions include somaticized dietary problems and psychological stress.[85] An idiom of distress allows the afflicted to describe their problems with a culturally accepted diagnosis and a recognizable illness. Furthermore,

this illness is understood to be caused by structural or contextual conditions that affect health and functioning. So when someone says, "I'm a food addict," her peers understand and accept her self-diagnosis, recognize her problems as culturally valid, and realize that they originate (to some extent) as a reaction to environmental problems, such as the easy availability of processed foods.

Related to the idiom of distress concept is the explanatory model (EM), the way that a culture describes an illness process. Good argued that "illness is fundamentally semantic or meaningful and . . . all clinical practice is inherently interpretive." The semantic illness network is thus "the network of words, situations, symptoms and feelings which are associated with an illness and give it meaning for the sufferer."[86] An illness state is socially constructed and mediated through a linguistic performance recognizable to cultural actors. The cultural construction of the health condition is knowable and sharable, socially respected, and rational within the social group. Kleinman simply states that "explanatory models are the notions about an episode of sickness and its treatment that are employed by all those engaged in the clinical process" and have defined and recognizable "(1) etiology; (2) time and mode of onset of symptoms; (3) pathophysiology; (4) course of sickness (including both degree of severity and type of sick role—acute, chronic, impaired, etc.); and (5) treatment."[87]An EM describes an illness as opposed to a disease, although the categories may overlap. An illness is the "innately human experience of symptoms and suffering," while disease "refers to the practitioner's diagnosis of impaired biologic structure and functioning"; illness is an emic term and disease is etic.[88] An EM defines the lived experience of being ill in that cultural context. It is also, most importantly, a means of understanding the emic phenomenology of an illness state. So the term "food addiction" elicits a set of known conditions that most people recognize—a loss of control over eating, a preference for sweet or processed foods, and (like other addictions) a problem that requires abstinence.

A final and formative way to think about "food addiction" is how the performance of the addiction functions as a sick role. In 1958 Talcott Parsons proposed that illness was a kind of deviance within a social system (meaning that it deviated from the norm of behavior, not that the ill person was morally deviant), so a culture had to provide a clear road map to wellness to ensure that the afflicted got better and rejoined the social body. He

argued that in the United States the sick role had four clear components: one, the illness was involuntary, and the patient wasn't responsible for being sick; two, the afflicted had a legitimate reason to be exempted from normal role expectations such as work; three, the afflicted has an obligation to try to get well; and four, the sick person has an obligation to seek competent medical care.[89] In the case of food addiction, the sick role defines the performative arc of responses to affliction and provides the sufferer with a set of behaviors to return to wellness. Acting through the stages of the sick role signals to others that one is legitimately ill and honestly trying to get better. Most importantly, it allows the afflicted a special status recognized by others—an identity that mandates that others respect the illness and grant the afflicted special considerations as a sufferer. It's a social means of publicly adopting a new identity (that of a sick person) that causes others to treat someone differently and with special care.

If this all seems esoteric, we'll boil it down to a simpler analogy. These medical anthropology ideas propose that the conditions of an illness state are socially constructed and can be meaningfully understood within a culture because people agree upon the definition of the situation (the EM and the sick role). It's a kind of shorthand cultural vocabulary about a problem. When you tell someone that you are "addicted to bread," your listener understands that you are manifesting cultural ideas about addiction (a dangerous and attractive substance, loss of control, and potential biophysical harm from eating too much bread), and, more importantly, you can treat the problem by utilizing culturally appropriate therapeutics (sober avoidance, a mutual-aid group, working the steps, personal testimonials, and an identity shift to self as afflicted or addicted). There is a recognizable etiology, treatment paradigm, and sick role.

Furthermore, to recognize addiction to food as an idiom of distress is to contextualize it historically and socially as trauma externally constituted—but individually embodied. The causes are structural, but the experience is personal and felt as distress or suffering. It signals to others that the malaise is rooted in a shared set of social and physical situations that define the reasons for the trauma. In the case of bread addiction, those traumas can range from the individual (a personal biophysical problem) to the ecological (wheat grown nowadays is dangerous because it's polluted, or too full of carbs, or not what we evolved to eat) to the political or economic (wheat is heavily subsidized and cheap so there are more sweets in our diet than

there should be). The addiction trope also signals acceptance of the steps necessary to heal (engaging with an appropriate sick role narrative and process). All these multifactorial meanings are neatly encapsulated in the very simple phrase "I'm addicted to bread," and when you tell others that about yourself, you signal to them that you have taken on a different identity than the one you had before—you are afflicted and in the process of transforming from a sick person to a well one.

How does this process work with food addiction? The books about food addiction almost always start with a narrative about the self as afflicted, including graphic descriptions of the deviant behavior and eating that caused the self-diagnosis. These foodalogues, as discussed previously, are very similar to one another independent of the source; the stories in the Grey Book of FA describe the writers' problems prior to the adoption of the new diet paradigm, the adoption of the new identity as an addict, the decision to join a twelve-step program, the practice of shifting diet behaviors, and the eventual return to a sense of wellness as a new person, someone who is in recovery. The narratives are frequently similar: there is youthful trauma caused by family or society, overeating to compensate and soothe, an event that signals rock bottom, help that is asked for and received, dietary and personal changes that occur, and wellness restored with a new identity and sense of self. Every part of this therapeutic pathway mirrors sick role processes and even marks the illness as an idiom of distress. There are clear, recognizable explanatory models for what is wrong and how to heal, and the transformation process is largely semantic. Healing occurs through narrative performance (telling the stories and working the steps) using an illness vocabulary that is a "network of words, situations, symptoms and feelings which are associated with an illness and give it meaning for the sufferer."[90] The transformation is accomplished as the narrative shifts, signaling a shift in identity from an ill person to a well one.

CULTS OF AFFLICTION

Additionally, we'll argue that the identification of the self as a food addict triggers another medical anthropology concept, that of the cult of affliction. Joining a cult of affliction signals a sick role and a healing process and marks the self as ill in a culturally appropriate manner. The idea was initially explored by I. M. Lewis to describe groups of people who share some

sort of suffering or illness, gather to seek solutions, and help others heal.[91] Victor Turner analyzed how such cults fit into structures of society, describing them as processes that move the afflicted from one social category to another, but usually without a full recovery. The new status within the cult allows the afflicted to help others heal but does not erase the special status of being afflicted; rather, it marks the afflicted as a member and leader of a sacred, moral community.[92] Cults of affliction arise to reconcile central societal contradictions that cause distress to individuals, such as tensions between genders (as seen in Turner's culture groups) or the discord between individuality and community common to American culture. Maria Swora argues that such tensions lead to a sense of alienation among Americans that is mitigated by joining a group like Alcoholics Anonymous.[93] One way to think about twelve-step groups is as cults of affliction that heal connections to community by providing a safe social connection to others who share a common problem.[94] Indeed, shamanic practices among the Hmong use a shaman-mediated cult of affliction model to cure the isolation from community that the American cultural pattern encourages and that causes illness in individual bodies and communities. The shaman heals by identifying the malady and drawing the sufferer into a community of empathic peers, transforming the identity of the persons afflicted and presenting them with a new role and status within the society.[95]

An illness derived from inchoate, nebulous, structural distress like alienation is exactly the kind of malady well served by cults of affliction. Diseases that can be diagnosed by a doctor and treated by established biomedical procedures might have advocacy groups, but rarely cults of affliction. Illnesses that are multicausal, difficult to diagnose and treat, or considered psychological are far more likely to engender a self-help group. AA and the other Anonymous groups are the perfect example because they were indeed begun at a time when treatment for addiction was virtually nonexistent—yet the suffering very real. Cults arise out of problems that affect entire groups of people but are beyond the capacity of a single individual to remedy, such as epidemics, postcolonial economic stresses, and gender imbalances. They are in response to "extraordinary adversities, those that are attributable to human or spiritual forces, [and] can only be dealt with by placating those forces or by intervening in the spiritual realm . . . (such as) misfortune juxtaposed with social conflict."[96] Cults define the problem, provide a course of remedy, and also provide a support group to help the

afflicted recover. In essence, cults give social meaning and respite from the suffering caused by social alienation or the inability of the established medical paradigm to heal effectively. People come together to help one another find new ways to decrease symptoms through a community of like-minded believers and compassionate peers. The fear caused by loss of control of alcohol or food can't be treated easily by a Western doctor or a pill but can be empathically remedied by other sufferers acting as trusted guides and companions, whether meeting in church basements or through online forums and groups.

PLACEBOS, NOCEBOS, AND RITUAL HEALING

Food addicts describe their eating as out of control and triggered by specific foods or nutrients. Most of the Anonymous groups require abstention from those trigger foods to maintain their concept of sobriety, and those foods are usually either simple sugars or carbohydrates from wheat. To an outside (etic) nutritionist, the description of loss of control makes little sense because carbs are an essential macronutrient required for nutritional balance and health. Addicts describe near-catastrophic reactions to ingestion of the trigger food and similarly strong biophysical recovery and relief with abstention. For instance, one man reports that he was only partway into a plate of spaghetti when he fell to the floor with a funny sensation in his chest. He self-diagnosed as going into insulin shock and decided that his body had a "clear, unmistakable reaction to the wheat." He then describes the equally strong but positive biophysical reaction caused by wheat avoidance enabled by fellowship in an Anonymous group.[97] These instantaneous manifestations are biologically impossible; the physical pathways don't work that way or that quickly. These are placebo (or nocebo, when a negative reaction) responses to a trigger believed to cause illness. But while they're not biomedically plausible, they are most certainly real for the sufferers, and so we must consider them as authentic responses to the perceived intake of the trigger nutrient.

The placebo response is understood by most people as something that produces a positive therapeutic response in the absence of biological efficacy, such as an inert pill. A more cultural definition might be "a change in a person's health status that is caused by the symbolic aspects of a therapeutic intervention," a form of mind-body healing.[98] Placebo responses are

influenced by cultural belief systems and depend upon patient and practitioner sharing similar ideas about how medicine works and the expected outcomes.[99] Conventional ideas about placebos often presume that the response is entirely in the mind of the recipient and not a real reaction to a biological, therapeutic regime—but that is not the case. Placebos cause real physiological changes in the brain and body involving complex pathways of self-healing mediated by social and psychological expectations. Rather than focusing on the placebo itself, it's more effective to examine the entire process, including the expectations of the recipient, the patient-doctor relationship, the emotional responses to health care, and even how a sense of self-actualization could influence a positive outcome. Perhaps most important for our analysis is the patient-provider relationship, since it could be argued to mirror the relationships of trust and care found within cults of affliction. Barrett and colleagues have proposed patient-provider processes that influence the placebo response: speaking positively about treatments, providing encouragement and reassurance, developing trust and supportive relationships, respecting patient perspectives and values, supporting health values and worldviews, and having ceremonies and rituals that create positive expectations for patients.[100] Indeed, a warm and supportive doctor-patient relationship has been shown to enhance the placebo response in many clinical situations such as pain management and drug addiction treatment.[101] These responses may also be connected to expectancy, suggestion, observation, and hope, and we can't overlook the role of performative ritual in encouraging a positive outcome.[102]

Anthropologists have been very interested in how the placebo effect influences healing rituals and practices because folk medicine is usually effective within its cultural context. Most patients who have experienced folk healing rituals profess themselves to be cured or to have symptoms reduced, even if the rituals provide no known processes that could treat the condition.[103] Rituals and other therapeutics performed in a social setting may induce healing by expectation, conditioning, social interaction, and emotional response, and the performative value of using healing metaphors can create a convincing healing process solely with words and actions. Indeed, "simply labeling a symptom or illness sets up a whole set of expectations, possibilities, and ways to think about and interpret experience. The consequences depend not only on the patient's own expectations but also on how others respond to the diagnostic label."[104] Central to these

anthropological theories is the understanding that the placebo effect is not about the belief in a (presumably inert) pill but is tied to social processes that cause the patient to internalize and embody a healing reaction. The healing response is located within systems of cultural meaning that encourage belief in the efficacy of the symbolism employed; for instance, doctors shift the meaning of the experience from illness to healing when they explain the illness, demonstrate concern, and promise control of the symptoms.[105] Daniel Moerman explains that treatment forms, colors, and numbers provide metonymic, iconic, and symbolic meanings that, alongside the care and authority of the doctor, convince the patient that the medical process is authentic and effective.[106] While these explanations may seem overly linguistic, they do make sense when thinking through the self-help group healing practices rooted in narratives about addiction and sobriety. AA relies on fellowship and stories to provide meaning to the experiences of addicts, to explain their loss of control, and even more importantly, to frame their sober practices and beliefs. "Working the steps" is a combination of ritual action and storytelling.

Evidence suggests that placebo processes work though social, psychological, and physical actions and responses to create embodied change. "We suggest that what is initially embodied and sensorial may, over time, become cognitive, as narrative, explanation and meaning become attached to the experience."[107] These anthropologists argue that cognitive placebo processes (such as expectancy, interpersonal support, hope, and self-efficacy) act as healing rituals to create embodied change, a transformational healing event.[108] Transformation occurs because "the neurobiological mechanisms of healing . . . can link direct embodied experience—including performative and sensory experience—to changes in immunologic, endocrinologic and pain responses." This, they maintain, is a bio-psycho-social response selected by evolution because individuals who can access these therapeutic pathways could increase their wellness and number of offspring. "In addition, any social mechanism that would support or trigger a placebo response (such as ritual, empathy, altruism, positive social relations, etc.), and would enhance the resilience of the organism to return to wellness, would be under positive selective pressure on a social level."[109] Translation? Humans are probably under biological and cultural selective pressure to develop positive placebo responses from multiple stimuli, and the resulting biological healing

process is multifactorial, operating through systems of social symbols that transform the illness meanings to encourage wellness.

Placebo responses play a role in healing processes as a part of complementary and alternate medical practice (CAM). Many CAM therapies offer an EM about health and wellness that mirrors the beliefs of fad diet adherents and food addicts, such as faith in the goodness of natural rather than man-made or processed foods, the value of supplements, trust in alternate or folk science paradigms, and fear of adulterated or specific ingredients.[110] Ingestion may cause an immediate physical response, either positive (placebo) or negative (nocebo), as evidenced by the example of the gentleman who had a bad reaction from eating a few bites of pasta. Harris and Johns have created a model for understanding the embodied placebo/nocebo response to food intake, acknowledging that symbolism drives meaning making and physical reactions. Food labels alone influence perception, which is one reason that many people think that organic food tastes better than conventional. The authors assert that "symbols create meaning that our minds and bodies interpret on a physiological level, influencing our food choices and health for better or for worse." Indeed, "when an identifiable person prescribes, suggests or prepares food (or a dietary plan) for the purpose of improving the consumer's health, interactions between the source and consumer influence the Total Food Effect as in medicine. The words, attitudes, reliability and behaviors of a practitioner can elicit neurological and physiological responses that impact patient trust and hope, perceptions of empathy, competence and—most importantly—recovery."[111] These authors' detailed and comprehensive model examines numerous cases of food reactions triggered by how food is defined by language use and belief in the characteristics of the foods, such as a negative response to milk intake when lactose-tolerant people believe they are lactose intolerant.

Language, as symbol, affects embodied reactions and can create a positive (or negative) placebo response. How does this work in the case of people who believe themselves addicted to food? Their narratives are so explicit—one sip causes illness, one bite causes a relapse, one "slip" tumbles the sufferer back into behaviors that trigger ill-health. The narratives about being addicted and engaging in the process of recovery are very similar, whether experienced through active participation in a food recovery group or secondary to a self-help book. According to Swora, AA uses stories to rewrite and rework memories and identity "by giving the alcoholic a narrative

framework in which to account for his or her past, to make sense of it, and to create an apologia." And "because experience is so highly valued in AA, the individual alcoholic's past is made useful to all members of the moral community. Not only are memories healed, memories heal others."[112] The repetitive stories rewrite memories and meaning, and they transform the addict from a sufferer to one who is healing and capable of healing others.

Imagine being desperately unhappy about your eating and weight and feeling a loss of control over food. You don't know why you feel this way, you don't know why you are different from others, you don't know why you can't stop eating. This is the beginning narrative of almost all food addiction chronicles, either from FAA, a self-help book, or online forums. Then, someone reaches out to say, "I've been there; we have the same problem. I am in recovery now, and I feel better, and I can control my eating. Also, I have friends who help me stay 'sober' and who support me emotionally. We all have similar stories—you are not alone!" The diagnosis, treatment protocol, and empathy are exactly the steps necessary for a successful placebo response.[113] The steps for recovery are clearly stated, rather simple rituals (avoid sugars and wheat) and create a sense of self-mastery over the problem. You are emotionally scaffolded through storytelling about lives just like yours, always with a happy ending and a description of how the success feels to the member. As you listen, you feel the same emotions as the narrator, because this too is your story. You feel positive emotions as you hear about recovery and the good life your fellow group member now enjoys. And so you internalize—and come to embody—those positive changes as you listen to the narratives. The explanatory model of how you understand yourself and your problems shifts from illness to recovery, just as it did for your friends. Each retelling of a successful recovery remaps the cognitive symbolism of addiction from suffering to hope, trust, and healing, and these new meanings are embodied in how you feel about yourself, how you frame your identity. You have been transformed.

PROCESSES OF HEALING, RITUAL SYMBOLISM, AND EMBODIMENT

We've used the words "symbol," "ritual," and "embodiment" to describe how the placebo response and healing practices work in recovery processes, and they sound exotic and part of magic rather than medicine. We

hope our discussion of how placebos work explained how symbolism influences medical thought and practice and can contribute to measurable outcomes. It might be more difficult to see how ritual plays a role in modern healing, and the concept of embodiment is probably even more opaque. These processes are intrinsic to creating wellness in general, even within biomedicine. Anthropologists tend to study other cultures' folk medical systems to understand ritual symbolism within healing, but symbols abound in the modern hospital as well. Examples are the doctor's white coat, the scrubs worn by nurses and surgeons, and the flowers sent to cheer up a sick person. Each is a symbol we read, and the meaning is known by most cultural actors. The white coat is a sign of authority and earned knowledge, the scrubs tell us that a medical procedure is occurring, and the flowers express care and a desire for a speedy recovery. Yet, like all symbols, they are arbitrary; the doctor's coat could be a different color or a special hat could be worn to convey status, the scrubs could be replaced with clean sweatpants and T-shirts, and we might choose to send other tokens of affection instead of flowers. But we do send flowers because they convey a socially constructed meaning that everyone understands. Food use is equally symbolic (think about birthday cakes, or holiday foods) and influences practices of healing and wellness. And, most importantly for our analysis, symbolic rituals can be used by practitioner and patient to enhance healing and to change how we experience our health.

Rituals are culturally constructed actions undertaken as part of a ceremony, or a set of actions performed in a prescribed manner. Most religious practices include set rituals, and much of cultural life is defined by rituals in one form or another, even if we are not always aware of them as *rituals*. Individuals may have performative rituals that order their days or their relations with the world around them, a set of habits that anchor the self in place physically and mentally. Changing habits—changing rituals—changes our daily routine and changes how we understand our day; we could also argue that changing routines changes who we are because we are interacting with the world differently. The power of symbolic ritual to create systems of healing is well known and applicable to food addiction.

Healing rituals have many variables and components, but there tends to be a culturally determined system of actions. It's easier to understand how rituals work in medicine if we create a typology of afflicting forces (etiology), chronicle ritual healing techniques and procedures, examine

the process of healing, and determine what is meant by efficacy.[114] This outline is an EM, of course, but it explains how rituals work within each set of processes. For instance, a culturally accepted afflicting force might be unhealthy living, an inability to manage stress, insufficient faith, or personal moral failing. In most religious and healing systems there are rituals designed to ameliorate those forces, including exercise, meditation, recommitment to a deity, or behavior change and apologies. Rituals may involve the manipulation of sacred objects, purification, removal of an offending substance, or ingestion of something that will effect biological or psychological change, psychical manipulation, and even trance. Most types of healing ritual trigger a cognitive restructuring that causes patients to see their illness in a new way; this is a shift of meaning, as discussed earlier.[115]

Symbolic healing occurs through manipulation of meanings and metaphors and also through rituals that shift status, such as from the status of "being an addict" to "being in recovery." Kirmeyer states that "therapeutic rhetoric uses metaphor to first evoke and then bridge the compelling narratives of cultural myths and the bodily-felt immediacy of experience" and effects change in patients by manipulating the meanings of their condition.[116] The meanings shifted to create healing include "(i) a sufferer, which rests on culture-specific notions of affliction; (ii) a healer (whose role rests on cultural notions of efficacy and authority); (iii) a prescribed ritual time and place (a designated place where the threat of illness can be contained and a specific healing efficacy can be invoked); (iv) symbolic actions that are intended to transform the illness; and (v) expectations for recovery."[117] Patients, practitioners, and community interact to alter each of these nodes using meanings, archetypes, and metaphors to shift from ill to well through a culturally approved set of actions. In the case of food addiction, each of these nodes is altered through storytelling, the ritual of membership and meeting, and working the steps, including avoidance of trigger foods. When addicts perform the rituals for each node or variable, they can be said to be "in recovery" so long as they maintain the new (transformed and transformational) behaviors.

Anthropologists have demonstrated how curing rituals use changes in symbolism to create effective outcomes. Glik explains that the afflicted are transformed in the process of working through rituals that cause them to identify with the healing group, engage in role playing and new identity formation, and assimilate new belief systems.[118] Clearly, this transformation

occurs within Anonymous groups through attending frequent meetings and sharing stories to create new identities and new ideas about the self and the affliction. Furthermore, in many ritual processes, efficacy depends upon the patient being actively engaged in personal empowerment and transformation.[119] Transformation occurs through ritual words that provide a sense of order by naming the illness and its causes (which sounds like an EM). Mental and verbal affirmation of newfound health contributes to feeling in control and personally empowered. McGuire states that "the link between identifying something and the course of action implied is crucial for the individuals' sense of being able to change the unpleasant situation (i.e., hope), because it gives the individual a 'handle-hold' on the problem. Naming the problem may enhance the sick person's ability to mobilize personal resources against the illness."[120] It's not always enough for a healer or shaman to do something for the patient—the patient must have a role within the ritual to ensure success. We could argue that this is also an act of ritual symbolism because it transfers agency from the healer to the patient, making patients responsible for their cure—a psychological means to ensure that patients see themselves as transformed into more active, powerful, and actualized beings. Working the steps and maintaining sobriety are ritual actions that the afflicted controls, and accomplishing them provides empowerment and transformation. While many of these actions are symbolic, they do encourage a real change in outlook and behavior and alter how addicted persons understand themselves. Just as with the placebo response, ritual actions that mobilize or transform meaningful cultural symbols also physically transform the persons engaged in the ritual. They do so by altering the meanings assigned to the mind-body connection, creating a shift in their experience of embodiment.

We've used the term "embodiment" again and again: in its most basic sense, "embodiment is a way of describing porous, visceral, felt, enlivened bodily experiences, in and with inhabited worlds . . . a bodily being-in-the-world."[121] For understanding healing processes, embodiment situates the body as subject rather than object, and it recognizes that humans experience their illness and wellness through bodily sensations.[122] Thomas Csordas, who has been one of the most active theoreticians examining embodiment, experience, and healing, explores how rituals translate into phenomenological healing. He states that in "the lived world of perceptual phenomena, our bodies are not objects to us. Quite the contrary, they are

[an] integral part of the perceiving subject," and "when the body is recognized for what it is in experiential terms, not as an object but as a subject, the mind-body distinction becomes much more uncertain." Csordas understands the afflicted as whole persons who alter their sense of bodily being (embodiment) though multiple nodes of action and symbolism: "my argument is that the locus of efficacy is not symptoms, psychiatric disorders, symbolic meaning, or social relationships, but the self in which all of these are encompassed."[123] Rituals create change in the social and cultural connections between participants; provide opportunities for the sacred to be experienced as empowerment; change the patient's behavior, emotion, or cognition; and convince the afflicted that their condition has been effectively healed.[124] The practitioner must identify and diagnose the problem, provide a ritual that is culturally appropriate, support the patient emotionally, and identify how healing has occurred. But the site of the ritual process is the patient's body, and the ritual activities—words, actions, behaviors, or emotions—are felt experiences that both create change and signal that the therapy is effective. In this model, recovery occurs because the symbolism of healing is felt within patients as they move through the ritual.

This notion of embodiment probably sounds a lot like the previous explanation of how the placebo effect and ritual symbolism work to effect therapeutic outcomes. This makes sense because, yes indeed, these models converge neatly, especially for understanding the felt (embodied) experience of addiction and recovery. Cultural symbols are manipulated, altering the relationship between patient, practitioner, and community, causing patients to feel healed and the community to recognize them as healed. The healing process is experienced as well as understood: it is cognitive, physical, and social. The variables necessary for healing to occur are all present in most Anonymous practices, and they work by altering relationships between members; providing healing through ritual action, sacred empowerment, and community support; and validating the sense of being healed through shared narratives. Even the self-help books provide these benchmarks, since they usually provide the stories of the authors' distress, how they solved their problems, and how the reader can use their solution—all wrapped up in miles and miles of affirmations and testimonials. Self-help books, like self-help groups, rely on formulaic structures to convey legitimacy and authority—and those formulas are clearly a culturally defined and recognized ritual.

THE AFFLICTED HEALER AS SHAMAN

The final reason these ritual therapeutics work for food addiction is that they tap into a culturally meaningful structure of healing—the wounded healer as shaman. Here we'll argue that FAA members and food addiction authors function as modern-day shamans, having been granted the authority to legitimately help others to heal. Many people think of shamans as exotic, drug-taking, cultural "others," but the idea of the healer-shaman is quite universal.[125] Shamans identify (diagnose) the source of the problem, perform a ritual to redress the situation, provide the afflicted with ritual tasks to ensure good relations with the spirit realm, and offer symbolic reassurance of effective physical and spiritual treatment. The shaman connects to the divine to intercede on behalf of the afflicted; creates experiences that restore a sense of order, belief, and security by manipulating mythic stories; and helps to reconnect patient and community.[126] "The shaman rescues meaning from the diffuse, confusing, inchoate parts of existence. . . . Physical pain and bodily ailments are explained as localized manifestations of cosmological imbalance and disorder. . . . These bodily pains are but communications of a disturbance in the spiritual ecology of the world. The shaman's healing rituals provide existence with a moral interpretation and meaningfulness."[127] Shamans reinterpret the world for the patient; they reframe the meaning of the illness state and provide a set of protocols for the afflicted to maintain the good graces of the spiritual realm. These are the general steps of healing rituals writ large, but they are also typical of the steps taken within an Anonymous group. Fellowship members help addicts accept the guidance of a higher power, provide clear instructions for avoiding further affliction by maintaining sobriety, and welcome them into a caring community of empathic peers.

Almost universally, shamans derive their legitimacy from having experienced affliction themselves, often the same kind of distress as the patient. This is not a foreign cultural concept, but one baked into Western medicine through the Greek myth of Chiron, the god of healing. Chiron taught healing practices to Asklepios, who became the archetypical healer and the originator of the Greek healing cult of Asklepios. Both Chiron and Asklepios are wounded and unable to heal; both derive their ability to heal others from their ongoing distress. Indeed, both are uniquely gifted as doctors because of their own wounds.[128] The "initiatory illness" is essential to

begin the journey of a healer, and ethnographic accounts of shamanism make clear that each shaman begins as a patient.[129] Indeed, "having suffered from an illness can enhance one's credentials for treating others similarly afflicted. These studies provide frameworks for the construction of healing authority that derives in large part—though not solely—from experience. What these different cases have in common is that having been sick imbues and prepares one with the authority to care for and manipulate the bodies of others to assist them in moving from a state of affliction to health (just as one once made that move oneself)."[130] The healer can help in healing because of "the opening of compassion and the awakening of empathy in the healer."[131] Having been ill, the shaman-healer then gains the knowledge and the power—and the capacity for caring—to assist others.

Shamanistic healing works through metaphor and meaning, manipulating ritual symbols at each stage of the transformative process. Kirmeyer provides the steps within the process that create and legitimize the shaman:

1. The healer is unaware of or reluctant to confront his own woundedness. He sees himself as quite different from those he helps.
2. The first trials of initiation lift the repression and denial of personal wounds and bring the sufferer into contact with his own shadow.
3. The healer may be overwhelmed by shadow and darkness and identify himself entirely with his own wounds. He looks outside himself for the cure.
4. Accepting this wound, the "inner healer" is evoked.
5. Realizing the wounded can only ever be partly healed, the healer-in-the-sufferer develops his power by remaining in contact with the inner wound. The healer does not remain aloof . . . he comes to see this process, limited and incomplete as it is, as a way to continue.[132]

These steps on the journey are replicated within the standard narrative arc of becoming a member of an Anonymous group and of accepting the self as an addicted person prior to developing the self as in recovery. The narrative includes the denial of the problem, the inability to accept that one is addicted, the growing awareness that the problem is shared, with a shared solution, the acceptance of a new status within fellowship and as an addict, the potential for slips, and the continuation of the healing process by helping others. Even the stories in the books are similar—the authors describe a growing awareness of their own problem, they solve it, and they

then reach out to diagnose and help cure others—but they are never cured themselves; they must always maintain the steps (rituals) to stay healthy.

Finally, Winkelman lists three aspects of shamanic healing that also mirror the variables of the addiction and recovery process. They are ecstasy marked by altered consciousness; the presence of guiding spirits; and "community rituals and totemism, providing mechanisms for social coordination . . . modifying self and other identity dynamics, and providing social identification."[133] He maintains that these aspects each work to alter the neurological pathways of the healer-shaman and to create the same neurobiological alterations in those treated. To draw a parallel to food addiction, while the ecstasy might be muted and subsumed by a general sense of healing and well-being, we could also argue that the altered consciousness is that forced upon the afflicted by their addiction—the loss of control that leads to abnormal intakes. The guiding spirit is of course the higher power, and the community rituals involve fellowship to facilitate sobriety. And these suspiciously resemble the narrative arc of accepting the addiction status, working through the steps, and helping others in fellowship.

ARE DIET GURUS SHAMANS?

These parallels between food addiction and traditional shamanic ritual cause us to ask: Are diet gurus and self-help authors also functioning as modern-day shamans for their afflicted readers and followers? Are they providing the same services the traditional shaman provides: diagnosis, intercession, curative rituals, and reassurance? And if so, are the readers and followers also experiencing their relationship with the author as they would with a healer-shaman? We suspect this is the case, although we are speculating. Not all the aspects and variables of shamanic practice are present, of course, but many core functions overlap—especially for those authors who have a strong following, provide online services and counseling, and attend conferences or conventions where they meet with their adherents. For instance, Julia Ross's *The Craving Cure* starts with dedicating the book "to prayer," thereby invoking a higher power. The first chapter provides a description of a problem, assures readers they are not alone and that it's not their fault, lists the reasons that the problem is happening (processed foods, mostly), assures that the problem has a reason and a solution (diagnosis and treatment), explains why the reader should trust her (because she's very

experienced and uses established therapies derived from addiction treatment), and reassures readers that the program will work for them because it has worked for thousands already.[134] Pam Peeke's volume *The Hunger Fix* starts with a foreword from Tara Costa, a successful graduate of the TV show *The Biggest Loser*. She introduces Dr. Peeke as a miracle worker: "I will never forget the day I met Dr. Peeke. . . . She was surrounded by a huge group of women, all standing in a circle, just laughing out loud!" She states that "instantly I could see she was a woman with a commanding presence, a truthful force who was also extremely compassionate. . . . She's the doc who truly walks her talk." And finally, she says, "Take it from me—a fellow food addict . . . this book can change your life, if you allow it. You *can* get better . . . you can do this. Now is your time. Let's get started on your road to recovery."[135] These reassurances and testimonials are core structural elements of how healer-shamans establish legitimacy, and without these warmhearted assurances, readers might doubt the capacity of the author to aid them. Simply presenting a course of action (a medical or dietary therapy) absent the testimonials would not provide symbolic effectiveness; the authors are authentic because they provide the metaphors necessary to convince others they can heal. Are they modern-day shamans? Maybe they are.

IS FOOD ADDICTION REAL?

Is food addiction real? Is it a legitimate disease, with biophysical manifestations that overwhelm control, or is it an idiom of distress that describes inchoate worries about the safety of food and alienation from community? Does it matter? Here, the authors of this book may disagree; Kima might argue that food addiction is not a real biophysical condition and disease, while Janet will maintain that it's a culturally meaningful illness state with clear therapeutics of care. Food addiction channels the powerful cultural symbolism of the addiction concept to imbue dietary components with destructive power like that of restricted drugs. And to cure it, food addicts call upon those same metaphors of healing to alter their behaviors and their identities. It seems that the therapies employed do indeed work for those who identify as food addicts. Is it a disease or an illness? Does it matter? After all, if the afflicted experience embodied distress, they are phenomenologically ill, and we need to respect their distress and applaud their healing processes.

Chapter Four

CLEAN EATING

While there is much disagreement about what Clean Eating actually means, it is generally described as a dietary practice designed to decrease the intake of substances added to food that are considered to be dangerous and increase the intake of foods that are whole, natural, organic, and minimally processed. Many adherents of Clean Eating also abjure white sugars, wheat products, and other foods they consider harmful to the body; in this aspect, the movement often overlaps with diets that restrict macronutrients or gluten, advocate for vegetarian or vegan dietary regimes, or promote a "Paleo" or constructed old-fashioned diet thought to reflect evolutionary physical needs. Clean Eating is often linked to other bodily practices designed to protect the individual from harmful environmental toxins or to promote well-being, such as detoxification, yoga, massage, alternative medicine, and other regimes of self-care. Practicing Clean Eating can be relatively innocuous and in harmony with sensible and orthodox nutritional advice, but it can also tip into orthorexia, behavior that is driven by an obsessive need to consume "healthy" foods. Clean Eating is, ultimately, a means to control anxiety about dietary intakes, food safety, overconsumption, and health. Ingesting food can be scary, and choosing the "right" foods can become a disorienting and frightening task in a world with seemingly unlimited choices, especially when that world is also considered to be environmentally polluted and potentially dangerous. In that context, Clean

Eating channels anxiety by providing food rituals and systems that, when followed, allow adherents to feel that they are doing everything possible to protect themselves from environmental contaminants and ill-health.

After talking with people who have adopted Clean Eating practices and reading many books, blogs, and websites that advocate for Clean Eating, we have identified several themes that drive acceptance and adherence to Clean diets and lifestyles. First, there is a general fear or worry about additives and other agents perceived to be foreign to food but central to modern practices in agriculture, food processing, transportation, storage, preparation, and cooking. These processes are generally thought to encourage farmers, food companies, and chefs—home or professional—to use extrinsic chemical agents such as fertilizers, pesticides, food stabilizers, storage additives, and manufactured flavorings. These chemical agents are feared because they are perceived to cause negative health outcomes, including serious illnesses such as cancer, autism, and allergies. The choice of Clean thus mirrors interest in and purchase of organics, since many organics buyers are also worried about extrinsic agents in food, although adopting a Clean lifestyle includes actions beyond unitary support for organic food and farming. Clean Eating is a method for managing the intake of chemicals considered to be bad for the body, food workers, and the environment, although in accordance with the drivers for buying organic, most consumers are far more worried about personal health than about the environment or food justice. As a consequence, Clean Eating can be considered to belong to the constellation of behaviors that Andrew Szasz labels an "inverted quarantine," where consumers attempt to "shop their way to safety" on the individual level rather than using political action to decrease environmental hazards.[1] While the concept of Clean Eating wasn't culturally prominent at the time he wrote his book, the actions of people who adopt these lifestyle practices do fit neatly into the overall collection of beliefs and practices that alleviate fear of environmental harm by acting individually rather than collectively. In the case of Clean Eating, the neoliberal, individualistic responses to anxiety about extrinsic, possibly harmful elements within also allow for forms of virtue signaling that justify and reinforce these lifestyle choices.

A second theme is the power—and epistemological utility—of the word "clean." It's a very strong word and allows for the mental construction of a moral dichotomy, for what is the opposite of "clean" besides "dirty"? This

dichotomy is moral in that we have powerful cultural and psychological associations with these words because they map onto ideas about good and bad. These concepts have the potential to divide the entire world into one of two moral categories such as clean/dirty or good/bad, because even the association of something clean next to or with something dirty makes that food "dirty" in our understanding and evokes a disgust reaction.[2] While nutritionists might not consider foods good or bad (we tend to see them as contextualized and relational to the needs of the eater), the language about food places foods into inescapable categorizations that determine how we think about and utilize (or avoid) those foods. And labeling a food "clean" encourages purchase, use, and intake, a reality that food marketers have eagerly embraced because any adjective that distinguishes or brands food with a special characteristic makes it potentially more profitable.

Control is a theme closely allied to the concept of clean, since control over intake is critical if adherents are to remain clean themselves, and thus morally good. Because the moral dichotomy has been created, the choice of food becomes simple in many ways: to remain in control, one must always choose the foods considered "Clean." But the very act of choosing implies and demands the exercise of control, because one must make the right choice, and do so consistently. Indeed, the narrative arc of many of the writers who support Clean Eating indicates that it was when they lost control over their intakes ("my life went off the rails") that they gained weight and became ill and depressed and that applying the diet (regaining control) caused them to lose weight and feel great.[3] This is a narrative theme common within recovery literature as well, of course, and also connects us to the arguments made by Helen Zoe Veit about food rationing, patriotism, and the morality of the svelte body in twentieth-century America.[4] Her book connected the cultural construction of the morality of being slim to dichotomized notions of good and bad, particularly within the creation of national belonging and citizenry. To be in control is good, to be in control is to be clean, and to be clean is to be good. These tautologies become cultural mandates that are hard to refute because they interpenetrate and reinforce one another and deeply affect how we think about ourselves.

Because so much of Clean Eating aims to keep perceived contaminants out of the body, adherents are focused on the need to maintain bodily boundaries and to create a form of individualized and protected purity. Cultural ideas about the bounded body are also an important focus in

anthropology, since how a culture envisions the body's relationship to its environment critically affects social relations, medical theory, and diet. The concept of bodily purity, that the body serves as a barrier to harmful outside influences, is a common construct in many cultures. Indeed, belief in the sanctity of the body is so strong in the West that it has determined much of the theory and practice of Western medicine. As such, it's an unexamined, fully accepted reality for most people, resulting in a feeling of great distress if the porosity of the body is revealed. How we think about the relationship of our bodies to the outside world can increase or decrease anxiety about eating. Within the ideology of Clean Eating, the body is envisioned as a necessarily bounded whole, one that must be protected from the environment.

DEFINITION AND HISTORY OF CLEAN EATING

Prior to 1994, most published works that used the term "Clean Eating" and its variants were books on the laws of kosher, halal, and other religion-based systems of eating. Then in the mid-1990s the term came into use among bodybuilders.[5] Widespread awareness is generally credited to Tosca Reno, who published *The Eat-Clean Diet*, advocating for the consumption of whole fruits and vegetables and fewer processed foods. At around the same time, Michael Pollan published *The Omnivore's Dilemma* and *In Defense of Food*, both arguing for a return to eating fewer packaged foods and a rejection of the overly engineered and manufactured foods that had come to line supermarket shelves.[6] Although Pollan did not use the term "Clean Eating," his argument fell along similar lines, which he distilled as: "Eat food. Not too much. Mostly plants." He later followed up with *Food Rules*, a wildly popular compendium of folksy wisdom, with such cautions as "don't eat anything your great grandmother wouldn't recognize as food" and "don't eat cereal that turns your milk blue."[7] Clearly both Pollan and Reno struck a poignant cultural chord just as Americans were beginning to understand the epidemiology of excess weight, obesity, and diabetes.

In subsequent years, the idea of Clean Eating has solidified but still lacks a concrete definition. The magazine *Clean Eating* began in 2008 and defines the practice as "consuming food the way nature delivered it, or as close to it as possible. It is not a diet; it's a lifestyle approach to food and its preparation. It's about eating real food, for a healthy, happy life."[8] This definition,

which is placed prominently on the editor's page at the front of each edition, continues with the following points: eat when hungry, stop when full; choose organic whenever possible; drink at least two liters of water a day; limit your alcohol intake to one glass of antioxidant-rich red wine a day; get label savvy; avoid processed and refined foods such as white flour, sugar, bread, and pasta; know your enemies: steer clear of trans fats, fried foods, and food high in sugar; avoid preservatives, color additives, and toxic binders, stabilizers, emulsifiers, and fat replacers; and reduce your carbon footprint by eating local and seasonal. This definition ties together a series of aspirational wellness goals and defines good and bad foods, as well as good and bad ingredients within foods. It's also a nearly impossible list to adhere to, given that few people are in the position to grow, cook, and eat most of their own food.

Some of the earlier or more established writers about Clean Eating were registered dietitians (RDs) and provided definitions that are less extreme than those of later writers and advocates. Michelle Dudash, author of *Clean Eating for Busy Families*, defines it simply as "choose foods closest to their natural state, enjoy a colorful array of seasonal foods, eat local and seasonal, choose humanely produced foods that are good for the planet, and enjoy every bite."[9] While she also suggests avoiding partially hydrogenated oil, artificial food coloring and sweeteners, nitrates, and large amounts of refined added sugars and salt, these suggestions are well within the scope of general nutrition advice provided by RDs and nutritionists working with people who desire to improve their diets for long-term health. Similarly, Diane Welland defines the diet as "eating whole, natural foods that are not *processed*. This means they do not contain any man-made ingredients or unnecessary *food additives*" (italics original). She continues with a definition of those italicized words, as well as of refined foods, which she maintains include white flour, white rice, and white sugar, and then adds that Clean Eating means eating naturally balanced meals "not loaded with saturated fat and calories." Clean Eaters should eat small portions, but more frequently, and engage in exercise every day. She also acknowledges that some people "believe that Clean Eating is more than just removing processed and refined foods. They seek out only organic and naturally raised food, excluding anything grown or raised with synthetic pesticides, fertilizers, and hormones. For others clean eating encompasses being wheat-free and dairy free."[10] The second edition of *Eating Clean for Dummies* provides an

online cheat sheet that lays out the basic principles: eat whole foods, avoid processed foods, eliminate refined sugar, eat five or six small meals a day, cook your own meals, and combine protein with carbs.[11] Taken as a group, these aren't problematic instructions, although the use of words such as "eliminate" (rather than "reduce" or "avoid") can cause issues for people attempting to practice the diet and could encourage orthorexia because they suggest absolutist behaviors. But from a nutritional standpoint they aren't terribly problematic, as long as they are practiced with moderation and good sense.

CLEAN CAPITALISM

A fair number of recent articles and op-ed essays have criticized the Clean Eating trend, and with good reason. Many, like *The Angry Chef*, are concerned about the confusion the name creates, a perceived antiscience perspective, or misleading statements about the health and wellness outcomes of the diet.[12] A review of blogs and books indicates that too many Clean Eating authors fail to understand basic nutritional principles, such as what it means to have "chemicals" in food.[13] But the greatest problem with Clean may be how deeply it's been monetized. Many books and blogs seem to function as advertising agents for food retailers by promoting products considered clean, such as the preferred retail sources in Epstein and Leibson's book *Good Clean Food*, or the extensive list of must-have products provided by Tiffany McCauley of *The Gracious Pantry*. McCauley also offers three methods for eating clean, and she disavows any inaccuracies by stating that she is "simply supplying information for you to consider. . . . The Gracious Pantry does not endorse one method over another."[14] This is problematic for licensed experts in medicine, psychology, and nutrition. What McCauley and many other so-called wellness experts are doing is presenting themselves as specialists yet disavowing any responsibility for their recommendations or the consequences of following them. For academic scholars and licensed professionals, the consequences of dispensing inappropriate or dangerous professional advice are dire, including professional ruin and revocation of their clinical licensing. Yet these "wellness experts" are able to operate outside regulatory frameworks because of social media.

In McCauley's *Method One*, she declares that "chemicals, additives, GMOs, preservatives and other not-so-natural fake foods seem to rule the

grocery store aisles these days."[15] This statement reveals a belief that many foods in grocery stores are fake because they contain despised ingredients. She also indicates that in the past food was real, clean, and good, or at least not as fake as it is now. This position sets up the potential for anxiety, for how can one avoid fake foods in the grocery store if that's all there is in the aisles? But no fear, McCauley has the solution, because she offers (like many other online diet advocates) nutritional, lifestyle, and wellness coaching in addition to a paid, members-only forum for additional hints and help. McCauley is not a nutritionist; she is, according to her website, a "cookbook author, recipe developer, and work-at-home-mom."[16] Tosca Reno also offers a paid membership that provides a forum and additional paywalled advice (see https://toscareno.com/blog/), as well as fee-based online classes and spa retreats about food and exercise or lifestyle improvement. In fact, it's very hard to find a blog that doesn't offer the "shop" option for a range of products: coaching, publications, food items, and lifestyle or wellness enhancements. The poster child for this business model is, of course, the much-discussed Goop brand from Gwyneth Paltrow. A search for "clean" on the website garners hundreds of products for sale, from a blender for $650 to the comparably affordable "Activated Charcoal Mouth Paste" for $5.99. For dedicated and brand-loyal Goopettes, the shopping options range from food to beauty aids, books, clothing, and travel accessories.

Clean Eating practices may encourage absolutist mental labeling, potentially leading to food anxieties and disordered eating. For instance, "Clean" is the theme for the Goop January 2019 Detox, which "follows the basic elimination diet rules outlined in Dr. Alejandro Junger's *Clean Program*: no caffeine, alcohol, dairy, gluten, corn, nightshades (tomatoes, eggplants, peppers, potatoes), soy, refined sugar, shellfish, white rice, or eggs. The 'nos' are replaced with nutrient-dense leafy greens, cruciferous veggies, hearty grains, seeds, and lean proteins."[17] Goop's list of food items to be avoided removes a great many dietary elements, making social eating problematic and adherence difficult. Junger's volume is the most popular "Clean" book in the Delaware County Library system, with six copies having circulated over one hundred times as of July 2019 (Tosca Reno's volumes are in second place for circulation numbers). Junger's program is different from most of the Clean Eating plans because he focuses on how foods supposedly affect the body rather than on the nutritional or chemical makeup of the food. That's perhaps oversimplified, but he promises to treat a series of

symptoms that he says are caused by toxins in food and the environment and that (he says) create acidity in the gut, leading to a cascade of negative health effects. The symptoms that indicate the need for Clean Eating are vague but alarming: a slower recovery from illness, difficulty getting out of bed in the morning, a sense of fatigue, sensitivity to cold, a sense of anxiety, and the tendency to bruise.[18] Interestingly, these symptoms correspond almost exactly to the old-fashioned psychological term "neurasthenia" that fell out of favor in the early 1900s but had largely been used to describe women suffering from weakness, dizziness, and fatigue. The term eventually earned the nickname "Americanitis," popularized by William James, because of the widespread belief that Americans were particularly prone to neurasthenia (an idea that parallels our argument that Americans are particularly prone to following fad diets!).[19]

Junger's focus on acidity and alkalinity is different from the original Clean Eating paradigm, which sought to improve dietary intake by increasing the intake of whole foods. Instead, Junger encourages adherents to shift from practices of doing (increase whole fruit and vegetable intakes, etc.) to avoidance of foods he considers toxic. His program also shifts the meaning of food from something to be chosen carefully for optimal health to something that operates as a medicine or toxin within the body. Kima once worked with a patient who jumped from diet to diet, hoping that one of them would be the answer to her fertility problems. Junger's diet was one of many, and for a period she believed that pH imbalance was the culprit in not being able to conceive. After starting this diet (and all the others), she said that she immediately felt better, had more energy, and was sleeping better. In the luteal phase of her menstrual cycle (the time in which a woman can be newly pregnant and not know it yet), she often thought she was experiencing early signs of implantation or pregnancy, such as nausea or swollen breasts. Sadly, she never was able to conceive, and she and Kima understood that these symptoms were probably some combination of wishful thinking and a placebo effect. In many ways, food and diets have more potential than pharmaceuticals to function as a placebo, at least in real-world practice. This is largely because physicians, at least in the United States, are not legally allowed to prescribe placebos. Therefore, the use of placebos is relegated to clinical trials. By contrast, diets, supplements, functional foods, and nutraceuticals are almost entirely unregulated in the United States and widely used, thereby amplifying their potential to create

placebo effects. Kima has worked with many patients struggling with infertility over the years, and one thing nearly all of them have in common is the frequent and heavy use of fad diets to solve fertility problems. In fact, there is a growing industry of "fertility nutritionists" who often peddle unsupported dietary claims to desperate women. This is not to say, of course, that diet has no effect on fertility. Certainly diet, vitamins, minerals, and activity have the potential to impact a variety of health and disease factors.

As one can surmise, problems arise when authors and advocates focus on the foods they believe to be bad, dirty, or toxic. One of the most popular Clean Eating books in the Delaware County Library system, *Good Clean Food*, explains, in stark and uncompromising terms, how specific foods have become toxic. The topics include milk, beef, "the dirty dozen" (which is all about pesticides), corn and soybeans, chickens and eggs, avoidance of genetically modified organisms (GMOs), and the need to detox the body from various ills. The authors conclude with chapters about future trends (a compendium of commercial sites for finding clean food) and producers who are trustworthy. It's this last bit that is truly revealing, since it seems to be an advertisement for Whole Foods Market and other favored retailers. Earlier in the book the authors state authoritatively that "the notion of moderation in all things doesn't work for the human body," giving this as an explanation for the need to "detox" to remove toxins derived from conventional foods. Here we are presented with the dualism of good versus bad and clean versus toxic as an epistemology to manage the body.[20] Their analysis of good and bad is reminiscent of the Environmental Working Group's annual lists of the "dirty dozen and clean fifteen," which they reference in their chapter about pesticides.[21] These lists and proscriptions of good and bad foods are linked to health outcomes and to associated social and moral categories for living a good life and being a good person. The connection between Clean Eating and disordered eating (orthorexia) and even formal eating disorders (anorexia nervosa) has been explored in the scientific literature[22] and in the popular press.[23]

UNDERSTANDING THE APPEAL OF CLEAN

It is our experience that the worry consumers have about "toxins" in their food is quite real and caused by a realistic assessment of potential danger that is based on contradictory information about how food is produced

and how it affects the body and the earth. Since the 1960s there has been a notable public awareness of pesticides in food and of the potential problems linked to processing, and both authors were raised in environments in which parents worried about food additives causing health problems, especially hyperactivity in children.[24] While that connection was debunked, over the years there have been enough food scares to create a public environment in which a significant percentage of the population believes that modern food can cause health problems. There are even very active organizations, such as the Weston A. Price Foundation, that attract large numbers of members who believe that modern food is toxic and dangerous and that dietary patterns closer to Clean Eating (and Paleo) will preserve or restore health. It has been Janet's experience that the ideas of this organization are extremely popular among local and organic food enthusiasts and often serve as justification for sourcing organic, local, and clean foods. In Pennsylvania, many members of the farming and Pennsylvania Dutch communities are strong followers of Weston A. Price, and the books and journals issued are considered to be scientifically sound by many who support local food. Adherents often cite the founder as having said that "we can spend all our money on health care or we can spend our money on good food," and the organization's website clearly lists a set of directions for safe and healthy eating that predate the popularity of Clean Eating but mimic many of its core directives and reproduce most of the toxic food lists found in later Clean Eating publications.[25] And Weston A. Price is only one of many organizations, like the Environmental Working Group (which provides a far more factual scientific perspective), that have alerted the public to the danger of additives and pesticides in foods. The discourse is prevalent and very powerful, and often valid.[26]

The increased popularity of Clean Eating was not random, but a response to changes in the food system and to the perceived ill-effects of those foods on the body. In other words, something was happening in the culture in the mid-2000s that made the concept and language of Clean Eating resonate broadly. According to the Hartman Group (a prominent consultancy and marketing firm specializing in natural, organic, and wellness foods), consumers expect "Clean" to be uncontaminated (natural, organic, and less processed), transparent (knowable and forthcoming about ingredients), and "authentic, real, simple and fresh."[27] Furthermore, the group reports that it's a "natural evolution of their interest in, and adoption of,

organic and natural products" and part of the premium food marketplace.[28] The group acknowledges the remarkable power of the idea of Clean for marketing food in the modern retail environment. Words like "clean" and "natural" are particularly meaningful for consumers. Paul Rozin and his associates have examined the linguistics of the "natural" label among Europeans and Americans and find that most consumers have very positive associations with the word and assume that "natural" means no additives and no GMOs.[29] They also discovered that for most people the concept of natural is more closely tied to the process of production than to the intrinsic components of food, thus identifying "natural" as food not altered by human activities. People tend not to worry about subtractives as much—or processes that remove components from food during processing—which is interesting because subtractives often negatively alter the quality of foodstuffs and render them unnatural, such as low-fat cheeses or milk. Rozin and associates surmise that this occurs because most languages contain commonly used words for additives and additive processes but not for subtractive processes. They call this linguistic peccadillo "additivity dominance" and suggest that this is why ideas about purity are so important to the perception of food quality and naturalness.[30] We argue that it is this notion of cleanliness and purity with regard to food that provides both an antidote for and talisman against something that has come to feel sullied, dirty, and even dangerous about eating.

THE MEANING AND UTILITY OF "CLEAN"

"Clean" is a powerful word in our culture, especially when applied to consumables in general and even more to things ingested. Clean and Dirty are oppositional and are contextualized by cultural meanings and processes that also place them into moral categories of good versus bad, and even right versus wrong. This dualism infuses every object, idea, and even person we encounter; we have the tendency to assign a value linked to perceptions of clean/dirty, good/bad. In anthropology, this is known as a "binary opposition," and it means that a culture creates natural linguistic categories that are oppositional yet paired and irretrievably linked both relationally and conceptually. We only understand one word in relation to its opposite: for example, the culturally constructed concepts "hero" and "villain."[31] Cultures devise numerical means to categorize and manage interactions with

the world, and a dichotomy provides seemingly natural patterns and divisions. Another example is the trinity of Christianity, an example of thinking in three (such as "past, present, future"; "ready, set, go"; "mind, body, spirit"); five has the same resonance in Japan. As we become enculturated, we learn to organize the world into appropriate numbers of characteristics and grouped categories, what psychologists call *schemata*. And while three is powerful for grouping things, two has become an even more powerful means of morally categorizing almost any cultural construct, a dichotomizing process that channels our actions and thoughts into dualistic constructs. Perhaps this is natural in a cultural system that professes to believe in a single, all-powerful god (monotheism). But the idea of that unitary god creates a mental category that is "not god"; and in many monotheistic world religions, "not god" is the evil opposite of God. In Christianity that is an actively evil entity called Satan who causes much fear and anxiety among believers. As a consequence, all of creation belongs to either God (and is good) or Satan (and is evil). We are mentally programmed by our culture to place almost all concepts, actions, and things into one of those two categories, from the seemingly innocuous to the profoundly serious. We even work to create situations where two sides exist; the two-party political system is a good example, a system that seems to map onto naturally opposing policies and directives. But there is often far more overlap than the creation of the dichotomies would suggest, even if the political process encourages voters to view policies as completely oppositional. Dichotomization is so powerful that we have a hard time thinking through the possibility of more categories and unwittingly and automatically insert almost every imaginable idea, thing, or process into essentialized concepts of good and bad (or good and evil in older terminology). For instance, can you even think of something as "good" without mentally mapping it onto "not bad"?

Now, think about these dualisms in relation to food, and how many times you've been encouraged to think of one food as "good" and another as "bad." It seems that quite a lot of online clickbait is devoted to messages about food that you should never eat or always eat—with the message "Doctors say you should never eat this food again!" often accompanied by a picture of an easily recognized food item, generally a fruit (banana) or vegetable (tomato). Indeed, some of the most popular books for Clean Eating advocates are the *"Eat this, not that!"* series by David Zinczenko and Matt Goulding (the editors of *Men's Health* magazine), which sorts almost

every food into categories to enjoy or avoid. One of them is even subtitled "the best and worst foods in America," a choice of words that really nails the metaphor of good and bad foods. Tosca Reno creates an even starker dichotomy between "dead food and living food."[32] Clean Eating food is living; dead food is refined, is processed, contains chemicals, was grown with pesticides, and so on. These divisions are enormously powerful ways to divide up food; we can't fully list all the times that subjects and patients have declared a food "bad" or "good" and then illustrated how they manage to either avoid or enjoy it. Janet is almost always asked, the minute people learn she knows about nutrition, "Is it true that (food item) is bad for you?" The best response to this query is one that educates, such as "Where did you learn that?" and "Does that fit in with what you know about how food works in the body?" to be followed by an open-ended conversation about food choice and dietetics. But most of the time the questioner doesn't want a complicated answer, preferring Janet to validate suspicions or to provide permission to continue enjoying a favorite food. Janet has taken to simply responding, "That's complicated; why do you ask?" in hopes that a real conversation can be started.

Now imagine how powerful this dualism is when applied to the word "clean." After all, how many times have you heard "cleanliness is next to godliness"? The mental categories are clear: if clean is like god, and god is good, then anything not-clean (dirty, toxic, etc.) is evil, because that which is not-god must be the opposite of god, or evil. The simple act of labeling a diet "Clean" automatically renders every food imaginable either good or bad because our brain can't escape the divisions; they are too deeply embedded in our culture and psyches. And since "we are what we eat," if we eat clean foods, we are good, but if we eat dirty foods, we are bad. One of the more prominent and popular Clean Eating books is even titled *Good Clean Food*; the subtitle defines the genre: *Shopping Smart to Avoid GMOs, rBGH, and Products That May Cause Cancer and Other Diseases*.[33] This title transforms a catchy diet fad label into a concept that determines how we think about ourselves and other people and that governs our sense of self-worth and decency. If you believe in this diet, and you see someone eating a food you believe to be dirty or bad, you probably are going to attach a moral value to the person that reflects the action the person is taking, because for you, eating has become a dichotomized moral act.[34] No food is neutral, and thus no dietary action can escape creating a good or bad person. No wonder the

label "Clean" has become one of the most powerful advertising tools in the last few years; no one in their right mind can pass up the injunction to buy "clean" and thus become clean and good themselves.[35]

CLEANLINESS AND PROJECTION

Unlike many of the other diets addressed in this book, Clean Eating has no clearly agreed-upon doctrine or set of food rules. In fact, when we began our research, we knew that Clean Eating was extremely popular, with countless magazines, books, blogs, and social media accounts devoted to it, but we couldn't figure out exactly what it was. Some sources describe it as eating organic, non-GMO foods, while others describe it as eating no "processed foods." (While most people understand "processed" food to mean manufactured, packaged foods or junk foods, we prefer to use the term "ultraprocessed" for heavily refined foods like chips, cookies, crackers, and sweets. Technically, any food that has been cooked, pickled, smoked, or cured—that is, not raw—is processed.) Others describe Clean Eating as eating foods with no additives, sugar, dairy, or gluten. To be sure, all diets have their fair share of disagreement over doctrine, yet Clean Eating appears to have very little concordance among its followers.

But if a diet has no real definition or set of rules, then what on earth would draw millions of adherents to it? In a word, we think it's the term "clean." There is something going on in which the concept of cleanliness with regard to eating has spoken to people and spoken loudly. What can we understand about the current zeitgeist that makes cleanliness such a powerful desire for people? We think the word activates powerful psychological associations and allows people to project their own ideas about contamination and purification onto it. As a reminder, *projection* is an old-fashioned psychoanalytic concept dating back to Freud, who argued that in the face of ambiguous or minimal information about someone, we have a tendency to ascribe qualities from our own imagination or unconscious to that person. In its original sense, "projection" referred to forbidden thoughts, motivations, desires, and feelings that cannot be accepted as one's own that are dealt with by being placed, or projected, onto the outside world and attributed to someone else. Over time the term has come to be used more generally to describe the process of ascribing *any* characteristics to neutral or ambiguous stimuli. In other words, projection allows us to create

an external world that meets our internal needs. The more ambiguous the external stimulus, the more it is like a "blank screen" that allows our imagination to fill it. This is why psychoanalysts have gained a reputation for being silent and unexpressive therapists, a stereotype reinforced by countless New Yorker cartoons and Woody Allen movies. In classical Freudian psychoanalysis, the idea was that if psychoanalysts concealed their personality from the patient, they would be like a blank screen and therefore more freely elicit projection from their patient. A more contemporary example of this idea might be the commonly held belief that email and text messages are rife with misunderstandings. With no expressions or tone of voice to temper language, it's easy for us to mistakenly project unintended emotions onto the sender (we can thank the invention of emoji for partially solving this problem). It's not just people who can serve as these blank screens, ready for our projections. Art, music, and, yes, food can function as blank screens. We argue that Clean Eating, more than other fad diets, serves as just such a blank screen, allowing its adherents to imagine their own version of cleanliness, such that the corresponding diet addresses the internal psychological distress of feeling unclean or impure.

We know from extensive research by the aforementioned psychologist Paul Rozin and his colleagues that disgust originates in part or whole as a food rejection system and that the avoidance of pathogens plays a role in the emotion of disgust. While there are many types of disgust, food-related disgust involves an offensive object that is viewed as a contaminant, and the behavior that follows the emotion is distancing or rejection. In the case of Clean Eating, the belief systems, although vague and varied depending on whom you ask, all circle around ideas of purity and contamination, and the consequent behavior is the diet—rejecting and even morally disavowing the impure foods. Rozin also argues that the threat of ingesting impure foods is framed by a widespread belief that one takes on the properties of the food one eats (i.e., you are what you eat).[36] It is also noteworthy that many other psychological researchers have found both disgust and fear to be involved in eating disorders.[37] In this book we have mentioned orthorexia—an obsession with healthy eating; however, orthorexia is not yet a formally recognized eating disorder, in spite of mounting evidence and scientific arguments that it should be recognized.[38]

This desire for purification is perhaps archetypal, in that most religions and cultures have rituals for purification, cleansing, and redemption. The

Christian baptism, for example, is a washing away of sin, intended to be a rebirth or fresh beginning. The Catholic confessional is intended to negate moral transgressions and restore the confessor to a state of cleanliness or holiness. Similarly, we understand Clean Eating as a phenomenon in which people feel sullied by their food habits and desire an undoing or purification ritual. We might trace this modern desire for purification in part to recent food scares and evidence of environmental contamination.

CLEANLINESS AS A RESPONSE TO FEAR OF CONTAMINATION AND TOXINS

In *Factfulness*, Hans Rosling argues that contamination of the food chain by DDT in the 1950s prompted the beginning of *chemophobia*: a public fear of contamination that resembles paranoia.[39] Rosling connects this fear to a deep mistrust of regulation and a dangerous antiscience worldview expressed in other movements, such as in the antivaccination campaign. We see strains of chemophobia as well as an antiscience view expressed in some of the rhetoric of the Clean Eating movement. For example, *Clean Eating Made Simple* introduces the concept of Clean Eating with this: "Several decades ago, science began to bombard people with recommendations about what nutrients to eat for long-term wellness. The problem with this proliferation of research is that recommendations kept changing, leaving people more confused than ever about what to eat. Every day another study pinpoints a specific benefit of a nutrient . . . and people scramble to add doses of these nutrients into their diet, at least until the next transformative study comes along."[40] The book describes Clean Eating as a "back to basics" solution to unreliable science and dubious research claims. What's extraordinary about this passage, however, is that it comes from a book with no listed author and offers no information about the credentials or training of the person or people providing its dietary recommendations. The book is published by Rockridge Press, a publisher that has released a number of other diet books with no author. This is one of the more popular books on Clean Eating at both public libraries and on Amazon, but paradoxically it makes no claim to authority while at the same time squarely rejecting the idea that scientists have any nutritional authority.

As the quotation demonstrates, *Clean Eating Made Simple* encourages the reader to throw the baby out with the bathwater by rejecting all

scientific advice. This is something that both Kima and Janet encounter frequently—the general public feeling confused over seemingly contradictory nutritional messages and guidelines. We agree that it is frustrating and confusing to see public health guidelines appear inconsistent and shift over time, but this is simply how science is done in any field. One thing we both strive for in the classroom is to teach our students that science is a dialogue, sometimes an argument, that is constantly growing and evolving. If you needed surgery, you wouldn't want a surgeon who had been doing the exact same procedure with no change or improvement for twenty years. You'd want the most up-to-date procedure, sutures, and anesthesia available. That improvement requires that scientists constantly test and debate their theories and methodologies in peer-reviewed journals, so if we want to benefit from science, we have to accept that it's a messy process of testing and refining knowledge. What is concerning to Kima and Janet is that one of the reader reviews of *Clean Eating Made Simple*, not one of them commented on the lack of a named author. It seemed that no one noticed or cared who actually wrote the book! On the contrary, one reader noted, "Every year MyPlate.gov and the food pyramid changes, as well as the nutrition recommendations from 'doctors' and 'experts' that are themselves diseased, depleted, and devitalized."[41] At best, this view expresses the general fatigue and confusion that many people experience in trying to sift through decades of inconsistent dietary advice; at worst, it expresses doubt about science and government regulation, suggesting instead that everyone ought to be out for themselves in determining the truth.

The historian Harvey Levenstein made just that argument, documenting how constantly changing dietary advice has created a population of anxious and confused eaters following arbitrary dietary rules.[42] Other scholars have explained this anxiety by suggesting that the increasing distance between the consumer and the production of food has heightened anxiety because the supply chain is hidden, thus creating more space for mistrust and suspicion.[43]

It is perhaps this undercurrent of antiscience thinking among some followers of Clean Eating that explains a surprising finding. When we were researching the history of the Clean Eating movement, we used Google Trends to analyze its popularity over time and by region. Google Trends examines the relative frequency of a term searched in Google over time and has emerged as an extraordinary research tool, often far better at revealing

and predicting human behavior than conventional research tools such as surveys and interviews.[44] Given that Clean Eating has been strongly associated with celebrities and affluent urbanites living in coastal cities, we were surprised to find, up to July 2018 (when we conducted the analysis), that interest in Clean Eating was highest in Alaska, New Hampshire, Idaho, and North Dakota, after statistically adjusting for population density. This finding did not square with much of the popular language and imagery representing Clean Eating, which appeared to be associated with urban affluence. These sparsely populated states all share rugged, individualist cultures, best expressed in New Hampshire's "Live Free or Die" motto. They share high rates of libertarianism and moderately low rates of vaccinated children.[45] We speculate that Clean Eating may hold appeal in these parts because it is consistent with self-reliance and skepticism of government power. Other states high on the list were Alabama, West Virginia, and Mississippi. These results made more sense, as they are regions with high rates of excess weight and obesity as well as high intake of soda and ultra-processed foods.[46] They generally show up high on the list for *any* diet in Google Trends, suggesting that people in those regions are struggling with knowing what to eat and are curious about different diets.

While the data show that Clean Eating is, adjusting for population density, of interest to folks in rural, less cosmopolitan areas, it is nonetheless more strongly associated with so-called wellness bloggers and celebrities, most notably Gwyenth Paltrow and her Goop empire. In fact, when searching for Clean Eating and its variants on social media outlets, one finds mostly images of green smoothies and young, slender white women. It is these wellness bloggers who further popularized the term and solidified its association with white, urban, affluent elites. We think that because of this imagery and association, Clean Eating has become a marker of what Elizabeth Currid-Halkett calls the *aspirational class*.[47] While the old cultural elite used conspicuous consumption to signal status, the aspirational class signifies hierarchy through ideas, social awareness, and a rarefied set of collectively held beliefs and behaviors. These new elite aspire to use their rarefied knowledge to be better humans through what Currid-Halkett calls *inconspicuous consumption*. While inconspicuous consumption may have come to recently signify class and social standing, it is also likely a psychological tool to manage the large volume of consumption of late-stage capitalism. Inconspicuous consumption makes sense as a response to

increasing prosperity and the glut of material possessions in industrialized Western nations. In fact, we see Clean Eating as part of a larger cultural struggle with having too much and part of an emerging discourse of order versus disorder or calm versus anxiety. It is also likely that the aspirational social media dimension of Clean Eating has caused a backlash against the movement, insofar as one person's publicly proclaimed aspiration can be experienced by another as sanctimonious judgment.

In *Life at Home in the Twenty-First Century*, social scientists using archeological and ethnographic methods studied contemporary middle-class American families to better understand their material worlds.[48] Among many other findings, they discovered that families struggled with the sheer quantity of possessions, stockpiles of convenience foods, and a sense of vanishing leisure time. In terms of material possessions, they found that the accumulation of physical merchandise took its toll well beyond the financial burden of unrelenting shopping. Families' homes were overflowing with clutter that created intense psychological stress and increased depression for the parents, especially the mothers, as measured by the stress hormone cortisol. Of course, the massive growth of the storage industry in the United States is a direct result of the difficulty we face in managing so many possessions. We might think of storage units as functioning not only as warehouses of goods, but also as psychological defense mechanisms that allow us to externalize the stress of overconsumption. Putting things in storage means we don't have to face the difficult act of letting things go, and it also allows us to compartmentalize the problem of acquisition by keeping the objects out of sight. Similarly, many of us feel overwhelmed by food and food choices—a problem that has given rise not just to fad diets but also to liposuction, supplements that promise weight loss, and medi-spas providing all kinds of supposed slimming and wellness treatments.

We see Clean Eating as part of this broader movement focused on decluttering and minimalism. Notably, at the same time that Clean Eating rose in popularity, so did magazines like *Real Simple* and books such as *The Life-Changing Magic of Tidying Up* and *The Gentle Art of Swedish Death Cleaning*.[49] Interestingly, we see the same imagery and aesthetic in the books, magazines, and social media of the decluttering or minimalist movement as we do in Clean Eating. For example, if one were to spread out the top ten or fifteen most popular books and magazines on Clean Eating (which we've done), all of them have imagery like white tile, bamboo

bowls, galvanized steel buckets, wood crates, rustic twine, and tiny spoons. This is the same minimalist aesthetic displayed in *Real Simple*, the magazine devoted to "making life simpler." Similarly, the lifestyle blog *Goop* says that it curates and sells a tightly edited array of products that adhere to its brand values: "that the mind/body/spirit is inextricably linked and that it's better to buy fewer things that are better."[50] We have therefore come to see Clean Eating and decluttering as both signals for affluence and a response to decades of culture-wide overconsumption.

Another way to think about it is to realize that humans are hardwired to accumulate tools, food, belongings, and wealth. For most of human history, there were checks on these "accumulation behaviors," namely, a limited supply of resources. But for most readers (and writers) of this book, there are few checks on consumption. We can easily fill our homes and bellies with consumer goods, devices, clothing, Ben and Jerry's ice cream, and Biscuits and Gravy potato chips. Because there are few checks on these impulses, other than our own willpower, they can feel wild and out of control, thereby causing us anxiety. This anxiety directs itself toward things like Clean Eating and decluttering—they are defense mechanisms that help us cope with powerful internal forces that sometimes feel like they will overwhelm us.

ORGANIC FOODS AND CLEAN EATING: A CASE STUDY

Many advocates of Clean Eating maintain that using organic products decreases intake of pesticides, fertilizers, preservatives, and genetically modified organisms (GMOs). And while not all authors and influencers demand adoption of organics, most indicate that organic is preferable and advise avoiding GMOs. That's a simplistic way to think about Clean Eating, but for many people it's a first step to altering their lifestyle to embrace the wellness principles of the diet. Many advocates consider conventional agriculture processes dangerous, and adopting organic food is a way to decrease intakes of distrusted and feared chemicals.[51] Because avoidance of these chemicals is the primary goal of most Clean Eaters, buying organic foods becomes central to the performance of the diet. For instance, many shoppers at Janet's farmers' market carry their list of the "dirty dozen and the clean fifteen" from the Environmental Working Group to ensure that they buy organic for the fruits and vegetables that might have pesticide residues. Tosca Reno provides a version of this list in her second volume,

The Eat-Clean Diet Recharged![52] Earlier authors called for whole, unprocessed foods, while later books and bloggers more frequently suggested that organics protected Clean Eaters from chemicals. Eating organics is now so important that it's number three of the "What is Clean Eating?" definitions from *Clean Eating* magazine, right after "consuming food the way nature delivered it" and "eat when hungry, stop when full."[53] And it could be argued that *Clean Eating* magazine's number one definition references organic food as well, since many people associate organics with food that is unadulterated and natural. At the farmers' market, shoppers often ask producers if they "are" organic, if they spray (although they rarely ask WHAT is sprayed), or if they "use GMOs." The reasons that customers prefer organics overlap with the reasons that many people adopt Clean Eating, and the fears that animate those choices are similar. Thus the meanings and use of organics can be used as a proxy for exploring why and how Clean Eaters manage food anxiety by buying trusted products.

Two recent exchanges at the market illustrate the interconnection of Clean Eating and organics, at least for this population. A customer asked one of the farmers, "Do you spray your crops?" The farmer replied, "We use integrated pest management systems to decrease our need for spraying but yes, some crops must be sprayed to protect the trees." The customer replied, in a very angry tone of voice, "Then why are you here at the farmers' market if your food isn't clean? This food should all be organic, clean!," and she left without buying. It was a troublesome exchange because it demonstrated the customer's lack of understanding about organic processes. Similarly, one day Janet pointed out to a regular customer of the market that a certain farmer's strawberries were tasty. She looked at Janet in horror and said, "Oh, no, I can't eat that. I only eat clean, only organic. I am so sensitive that conventional food makes me really ill. I break out immediately. I'm just too sensitive." Again, the customer demonstrated a lack of understanding about food reactions, but her response conformed with a narrative about possible dangers in food and about what kind of food buyer—and what kind of person—she considered herself to be. On more than one occasion, younger patrons have engaged Janet in long discussions about their choice to "go clean" and "chemical free" by buying organic foods. Their strategies include buying organic, following the Environmental Working Group guidelines, buying grass-fed meats and dairy, and cooking meals rather than relying on fast or processed foods.

Curious about motivations for organic buying, in 2015 and 2016 Janet included scaled and open-ended questions about food preferences and motivations in farmers' market customer surveys (660 survey responses, seven in-depth interviews of organic buyers). These surveys illustrated that customers bought organics to protect themselves from environmental toxins and to avoid health problems they believed were caused by chemicals in conventional foods. According to the surveys, 74 percent of respondents preferred to buy organics, 55 percent attended the market in order to buy organic foods, and 88 percent would like to see more organics at the market. An open-ended question explored motivation: "If you do prefer to buy organic food, please tell us why." This question elicited 200 free-form text responses; Janet used grounded theory to group the comments into six broad categories based on the first reason mentioned in the response. These categories included "Avoiding Pesticides, GMOs, or Chemicals" (48.5 percent); "Health Concerns," triggered by words such as "healthier" or "better nutrition" or avoidance of a disease state (28 percent); "Environmental" (10 percent); "Clean and/or Pure" (3.5 percent); and "Taste" (2.5 percent). The remaining 8 percent was mixed, but mostly referenced "Local Food" or "Support of Local Farms." Combining the health-related answers together, including "Clean," resulted in 80 percent of respondents buying organics for personal health reasons.

Janet was surprised by these findings, since she had anticipated that more people would buy organics for environmental reasons, but most studies have found that people buy organics for individual health reasons (to avoid pesticides and other potential food toxins) even more than for altruistic (environmental) ones.[54] Many studies that explore motivations also document a desire for purity, cleanliness, and health, although these motivations predate the Clean Eating movement and are not related to Clean Eating as a lifestyle choice.[55] More recently, the Hartman Group reports that almost half (46 percent) of all U.S. consumers wish to avoid GMOs and can do so by buying organics and Eating Clean.[56] These examples illustrate that the motivations for adopting organics are very similar to the motivations for adopting Clean Eating and that the individuals who make such choices are likely to share a similar set of beliefs, values, and fears about the food supply.

Janet was surprised to realize that customers were motivated by health fears more than a desire to protect the environment, but such findings indicate the depths of the cognitive and emotional concerns about chemicals

in food shared by Clean Eaters and organics buyers. These results demonstrate that the cultural narrative about potentially contaminated food has transformed into an accepted and socially validated reality that drives Clean Eating and the purchase of organics. Just as the word "clean" is very powerful, so is the word "organic," and both operate as heuristic symbols that signal safety to consumers, even if the consumer doesn't always know precisely what the words mean.[57] Eight of the replies used the word "clean" in their text description of motivations for purchasing organics, some simply wrote "clean" or "cleaner eating for my family," and others linked "clean" to a decrease in chemical usage: "I prefer not to ingest unnecessary chemicals in my body and want to encourage farmers to find ways to grow 'clean' foods when possible," and "I want to eat fresh produce that is 'clean' and without chemicals." Thirty-five responses mentioned the desire to avoid chemicals, fifty-five cited avoidance of pesticides, and fifty-three mentioned a need to avoid fertilizers. Over and over, customers expressed that they are concerned with safety: "It's healthier, is the only label I trust to find foods that have not used pesticides," "I try not to buy conventional produce on the Dirty Dozen list as I worry about the amount of pesticides used," and "I try to buy produce that isn't covered with pesticides. Especially with the so-called dirty ones, like apples, I will go organic." We don't have the space to reproduce the full list of responses, but the takeaway is clear: the vast majority of the responses demonstrate a desire to avoid pesticides, additives, chemicals, GMOs, and "substances that are harmful to my body," prescriptions shared by Clean Eating. For many of these eaters, the words "clean" and "organic" may signify a safety created from what Clean Eating isn't, rather than what it is; it's a shorthand, Good Housekeeping–style seal of approval that reduces anxiety about what might be "in" the food we eat.

THE BOUNDED BODY

The concordance between "organic" and Clean Eating became even stronger when Janet examined the transcripts from interviews of organic buyers. These interviews were of self-selected survey respondents who agreed to talk about their use of organic foods, so the concept of Clean Eating was not addressed directly. However, the comments made by respondents resemble the goals of Clean Eating and revealed how consumers create identity and a sense of wellness through food purchases. Several themes were prominent

and repeated by all subjects: a desire to avoid diseases thought to be caused by chemicals in food (especially cancer), a desire to make themselves and their families safe from dangerous chemicals, and the belief that the body needed to be actively protected from chemicals that would harm it and cause disease. The focus on guarding the self revealed modern food fears and demonstrated that Clean Eating and buying organic were perceived as rational responses to prominent cultural worries about contamination, the body, and health.

Anthropology recognizes that the body is culturally constructed and experienced and that physicality, both social and individual, is understood through systems of semiotic meanings and actions. Just as food is good to think with, so is the body because it provides a structure for symbolically organizing the world.[58] This is a very big topic in anthropology, but we're going to focus on just a few pertinent theories that help to explain why Clean Eating makes cultural sense. First is the idea of contamination or dirt, what Mary Douglas has described as "matter out of place" in her seminal volume *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*.[59] The second concept is whether we envision the body as a fortress that protects us from the environment, or as a more permeable entity capable of metaphorical and biophysical blending. Is a human being an island, or one element of a polymorphous ocean? Thinking about bodily boundaries is a very dense topic as well, and it differs between cultures.[60] A final concept is that of the "Risk Society," the idea that in modern societies humans are increasingly exposed to man-made risks such as pollution, crime, and pathogens created by manufactured, industrial, and agricultural processes. These risks are attenuated by class and educational levels contributing to differential exposure: the higher, wealthier, and better-educated classes increasingly live in environments marked by risk aversion and environmental protection.[61] Perceptions of risk underpin the other two concepts and explain many of the fears about contaminated food expressed by Clean Eaters and organics buyers.

Mary Douglas understood the perception of risk to be a cultural response to exposure to danger, which is, of course, precisely the point of the Risk Society.[62] Danger occurs when matter is out of place, when something that shouldn't be part of something (according to cultural categories and rules) is found with or within something else. The latter loses its purity and sanctity; the former becomes dangerous dirt and has the potential to

contaminate, defile, and destroy.[63] Our understanding about dirt—matter out of place—is determined by our culture, which categorizes things, concepts, and even people by creating systems of semiotic or symbolic order. Matter that isn't where it is supposed to be is considered dangerous dirt, as are things that defy easy classification. Danger occurs because symbolic systems are moral classifications in which impure things are characterized as inherently evil, and exposure leads to the negative social and physical consequences caused by breaking a moral code. Defilement is caused when people, things, or concepts are infiltrated or contaminated, and the consequences can range from moral outrage, social ostracism, and abandonment to disease and death. To quote Douglas: "If uncleanness is matter out of place, we must approach it through order. Uncleanness or dirt is that which must not be included if a pattern is to be maintained."[64]

With the help of Mary Douglas, we can understand how deeply and immorally contaminated food becomes when "chemicals" are used in agriculture and food processing, according to the classification systems created by our respondents. These substances are foreign, defiling matter within food, and causing disease. Cancer is especially feared and is systematically linked to chemicals in food, as these quotes indicate:

> "All the chemicals used aren't good for people, there are a lot of health issues caused by all of those chemicals, I think. There weren't cancers like there are now in the past—I think it's because of all the chemicals in the food we eat that affecting us and causing cancer."

> "I stopped eating conventional when I learned about how produce is grown and the fungicides and pesticides and things that you can't get rid of because they go systemically into the product. These chemicals can't be washed off the food, they are systemic."

> "I think it's better for my health personally to consume food that hasn't been poisoned by various chemicals and . . . so it's not poisoned with pesticides and chemicals and more likely to be nutrient rich. So many poisons in our environment, the more we can control how much we're affected by them, the better. Our air, water, land is poisoned, and the less risk I get is better because these are all cancer risks. Our environment is causing cancer because we've poisoned the planet. And I want to avoid GMOs since there is no labeling of GMOs in this country."

> "I started because we have a child and I have an autoimmune condition and I do believe that pesticides are very inflammatory. Things have changed so much over the years and I don't want to expose my son to toxins. I keep seeing people in our country getting sicker and sicker and I think our food supply is part of the problem."

> "Ever since my husband was diagnosed with cancer, I have tried to buy organic whenever possible."

Cancer and other health problems—diabetes, autism, kidney disease—came up repeatedly in the survey results; people perceive that "chemicals" in food cause health problems, and so avoiding chemicals protects from illness.

This is an oft-repeated theme in Clean Eating books. Tosca Reno discusses ill-health tied to pesticides and other additives frequently, including links to cancer, and Junger explicitly links eating modern, "adulterated" conventional foods to illness.[65] These explanatory models posit that food is defiled by extrinsic chemicals (dirt), or matter out of place, and thus dangerous. Avoiding these chemicals requires vigilance and effort because they infiltrate the food and breach the boundary of the body, causing irreparable harm. Systems of moral order are also systems of social order, and maintenance of these realms of order requires strong bodily control and policing of the boundaries between body and environment.[66] The beliefs and practices expressed by respondents reflect Mary Douglas's ideas and make clear cultural sense.

This explanatory model depends on believing that the body needs strong, protective boundaries and that breaching the boundaries results in disease. This is, of course, a primary way to understand the immune system, which is bounded by skin and protects the body from incursions of pathogens (contaminants). According to Emily Martin, the cultural model of our immune system is war: the body is besieged, the white blood cells and other immune agents fight back, the pathogen is ejected from the body (the body is detoxed), and thus the body is returned to its natural bounded state.[67] "Besieged by a vast array of invisible enemies, the human body enlists a remarkably complex corps of internal bodyguards to battle the invaders."[68] The bounded body was also a focus of Douglas's work as she explored the symbolic boundaries that defined social spaces, in metaphor (purity and danger) and in the practice of food sharing.[69] Janet once heard her speak about the body's metaphorical boundaries, and she posed several

questions: How do you think about your body? Is it a fortress, in need of protection, or is it somehow permeable? Because how you think about your body will determine how you think about health and illness and your position within the social world. Is the body in need of borders, a metaphor for the nation-state, where only vigilance and might will protect it from invading armies (pathogens)?[70] According to Martin, we are enculturated to believe we must establish a clear boundary between our self-body and the nonself (the outside world), a boundary that must be maintained through the systematic killing of the nonself by the immune system.[71] The self is only healthy when all potential invaders are driven off; it is only healthy when it is "naturally" only of itself.

The need for an impermeable fortress-body is apparent in how authors write about the body and the reasons for Clean Eating, and it is obvious in how Janet's subjects speak of their motivations for buying organic food. They feel a strong need to protect themselves from invasion and to remove all potentially harmful chemicals from the body:

> GMOs are problematic because they have been engineered to resist weedkiller and then the weedkiller is put on the plants and we get those weedkillers into our bodies and they wreak havoc on our bodies. GMO plants have been engineered to be stronger and when they are in our system, they are stronger and they attack our system. Modified to be fighters and then they do damage to us.

> It's really frightening how sick people are getting. To me it's a shame that organics are not the norm rather than the exception, it doesn't make any sense at all. Older generations don't believe that, they think the pesticides don't hurt us. They grew up in a different time when all those chemicals were thought to be good. . . . I switched to organics because I was fearful of exposure to pesticides not knowing what kind of damage they could be doing to us. And I have grown to be sick in my forty-seven years on this planet.

A similar sentiment is found in the *Humans of New York* Facebook post of July 21, 2019:

> My parents didn't know any better. They just bought the food that they saw in the market: the cereals, the cookies, the canned foods. And I didn't know any better either. I was just a kid. I ate the food that I saw in my house. There

> were words on the label that I didn't understand: added this, added that, chemicals to make it last longer, chemicals to make it cheaper, chemicals to make it thicker, chemicals to hold everything together. But I didn't question any of it. Because they used kids in the advertisements. I always saw other kids eating the food and promoting it. The government wasn't helping. With their pyramids and their charts that everyone follows. It all seemed OK. But it was all junk and sugar. Now my mom and dad and brother have diabetes. I have fibroids and stuff like that. Recently they took out my thyroid because it was showing signs of cancer. I'm starting to think that it's all linked. They sell us poison so they can sell us pills. I'm trying to eat better now. I'm trying to learn. But the more I learn, the less I know where to go. I know that everything in the aisles is killer. But even the fruits and vegetables have chemicals. If I wanted to be completely sure, I'd have to have my own farm. It's just not possible.

Such comments describe a desire to create a barrier around the body because respondents are convinced that the environment is hazardous. This conviction also leads to the rationality of "detoxing" the body, because pathogens (chemicals and impurities) must be ejected if bodily sanctity and wellness are to be restored.[72] A slipup that permits encroachment must be met by increased vigilance and removal of the offending substance, so the January Detox suggested by Goop is a natural response to the indulgences of the holiday season.

THE BODY AS FORTRESS

Another tip-off that the body is perceived as an embattled fortress is the references to the importance of shiny, healthy skin. If skin is the first layer of protection, its health is a symbol of the condition of the underlying body-fortress. The *Made of Human* podcast quotes Pixie Turner, a recovered Clean Eater, describing her belief that the diet would make her "shiny" because advocates appeared so "shiny" and clean in pictures.[73] Indeed, one of Janet's survey respondents explained: "I feel better physically and mentally when I eat organic foods. My skin looks clearer, and I have more energy." Books and blogs provide endless photos of clear-skinned, smiling people (almost always women, and often wearing exercise gear or bathing suits) with frequent references to clean skin, shiny skin, and healthy

skin.[74] Reno says this about skin: "I do find that my skin has improved greatly thanks to Eating Clean. . . . Think of your fleshy outer envelope . . . as a thick mattress-like layer, which is how skin achieves both its resiliency and its barrier-like qualities." And furthermore: "That Coke you just drank is attacking your skin and making the elastin and collagen glob together. Now the fibers can no longer do their job because they have lost their flexibility. The result? Over time the skin begins to look sallow, haggard, less resilient and even greyish in tone. Make no mistake—sugar ages the skin."[75] On the back of Junger's 2012 expanded edition of his 2009 volume *Clean*, an editorial testimonial quoted from Vogue.com states: "Done properly, compliments on your glowing skin and svelte figure are just frosting on the cake; your body's natural healing abilities will be restored, insulin levels regulated, and your liver detoxified." And finally, from *Harper's Bazaar Magazine*, there is this quote from Beyoncé's makeup artist: "If you look at everyone's diet now, it's cleaner than it was in previous years because we're so afraid of pesticides, hormones, and even our food, that we pay a lot more attention as a society to our diet—in turn it helps with our skin."[76] These quotes establish that the skin defends the body, fighting off the dangerous attackers that weaken its impermeability. Skin becomes the first border or barrier, and how it looks reveals the health of the body beneath. Vibrant, shiny skin is proof that the diet is working, that health is optimized, and that the barriers against defilement are strong.

The firm conviction that the environment is dangerous and that individuals must protect themselves is central to understanding the Risk Society and its response, the inverted quarantine. The latter is a theory presented by sociologist Andrew Szasz in his volume *Shopping Our Way to Safety*.[77] He maintains that the response to awareness of environmental contaminants and safety problems has shifted from the public to the private, with citizens opting for individual purchase and consumption of safe goods (such as organic and "clean" foods) rather than public action that would strengthen environmental protections or regulate potential safety concerns. Citizens increasingly feel themselves to be on their own rather than able to act effectively in a collective manner, which is a reaction to and cultural acceptance of the Risk Society.[78] If exposure to risk agents is determined by class, education, and social position, the better-off are less likely to be affected by environmental contaminants because they can afford to consume goods that ensure safety, such as organics. While use of these labeled items also is

tied to identity, virtue signaling, and other aspects of social performance, they are often experienced as premium goods preferred by the well-off and educated, as these interview quotes indicate:

> My MIL thinks I'm a little crazy doing this organics stuff. This is so scary, her sister told her you could make your produce organic by washing it in bleach. Can you believe it? What people believe without education, they are very frightening, not understanding the whole picture and how things are grown. My brother thinks it's a complete waste of money. . . . But I have to be understanding with him, because he doesn't have any money, if he did might he buy organics? I know that we're fortunate to be able to buy organic food because it is more expensive, but it also just makes sense for us.

> We never talk about organic production. To be honest talking about it with family because they feel offended because they aren't doing it and they feel it as judgement, and I feel that they judge me, not everyone can buy organics because not everyone can afford that. I think they think I am preaching or judging them and looking down on them for not buying organics, and I think they don't know any better, they aren't educated.

These comments establish the purchase of organics as part of a larger, potentially upper-middle-class performance of identity and consumption, one rooted in the protection of the self and family from outside dangers. Indeed, evidence indicates that upper-middle-class status and education level are correlated with more time spent on family meals and, by extension, the likelihood that home-cooked, potentially healthier, and less processed foods are a more prominent part of the family diet.[79] Cooking meals and providing organic foods to children are virtuous cultural actions because the value of protecting offspring from contaminants is an important part of the social construction of being a good parent, a good mother. But it's also tied to the economic ability (and time) to do so, as well as to the cultural capital to be aware of the dangers that threaten the family and channel favored consumption choices. Ultimately these parents are creating a boundary around the family, an inverted quarantine designed to repel environmental pathogens and dangers. They are attempting to create an impermeable social space that reflects their explanatory model of how the bounded body protects individuals from physical harm. Indeed,

as anthropologists know, the body is good to think with, and how we understand our bodies and their vulnerabilities informs how we view our social and physical environments. In these examples, the body as fortress becomes the family defended by organic and clean food.

THE NUTRITION OF CLEAN

But what are the nutritional outcomes of Clean Eating? Does following the diet improve nutritional health? Many bloggers, cookbook authors, and followers say it does, but that's because they project good health onto their recommended foods and not because those foods are more nutritious than foods in the average well-balanced diet. However, nutritionists know that what one is supposed to eat, what one says one eats, and what one actually eats are often widely divergent. Nutritional quality is very important to adherents, and preparation techniques are discussed in blogs and books, leading to many Clean Eating cookbooks. At best, these cookbooks and online sources provide new kitchen and food shopping skills and encourage intake of whole foods. Unfortunately, while Clean Eating is described as a simple way to manage bodily health and weight, practicing the diet also can create anxiety and lead to disordered eating.

The general squishiness of the diet—it is so poorly defined—has made studying its nutritional qualities difficult. Janet searched in peer-reviewed journals and found not a single study that examined the actual food intakes of adherents. One study examined the nutritional content of the recipes in blogs, and some have tested attitudes about Clean Eating, but there are no accounts of actual dietary intakes.[80] That makes sense because, from a methodological standpoint, how would interested researchers define or operationalize Clean Eating in order to study it? It seems that most followers attribute positive outcomes to the diet that are not linked directly to nutritional intake, even if better-quality nutrition is their rationale for choosing the diet. For instance, Alicia Tyler, the editor of *Clean Eating* magazine, has written a very popular cookbook titled *Clean Eating for Every Season: Fresh, Simple Everyday Meals*. She provides "10 (Very Good) Reasons to Eat Clean," and not one is about food—they are all about hypothesized outcomes. Each bullet point offers a promise: "you'll become more mindful; you'll be smarter; you'll save money; you'll live longer; you'll have better relationships; you'll have more energy; you'll be better in bed; you'll help the planet survive;

you'll be stronger; you'll be happier."[81] These are talismanic outcomes magically hitched to dietary change without proof, but with a great deal of wishful thinking and hope—in fact, notice how they traffic in the same territory as fortune cookies, promising longevity and vigorous libido. Each bullet point offers a tidbit of nutritional information that sounds authoritative but is not technically linked to Clean Eating, such as the assurance that women in Italy enjoy better sex lives because they eat more vegetables. And given such exciting and desirable results, the reader doesn't really need to wonder about the actual diet; the promises made are too good to ignore.

The first problem is that we don't really know what the diet consists of because the meanings and practices attached to the term "Clean Eating" are varied and personal.[82] As a result, we can't capture its nutritional value except obliquely by measuring the nutritional qualities of the recipes. A comparative study revealed that, in comparison with World Health Organization standards for dietary intakes for chronic disease prevention, recipes from Clean Eating sources contained more fat, protein, and fiber than reference recipes.[83] While an increase in fiber is always a good idea, an increase in fat is not, and too much protein is wasteful and can be problematic for kidney function. But recipes are guidelines and not what people are actually eating, so we don't know if the recipes are representative of the lived diet experience. This study demonstrated that Clean Eating meals aren't necessarily as healthy as a nutritionist would like, but they aren't problematic in the context of a well-balanced diet.

An examination of the recommendations and recipes in Clean Eating volumes reveals that the diet can be, from Janet's perspective, perfectly safe, promoting higher intakes of whole foods. Most recipes are simple, focus on teaching techniques for cooking fresh foods, and could easily fulfill daily requirements for macro- and micronutrient intakes. The recipes provided in *Clean Eating* magazine closely resemble the recipes that, in the past, would have been found in the magazines *Eating Well* and *Cooking Light*. In other words, there are no red flags for a nutritionist. In contrast, "Tosca's Typical Day of Eating Clean" lays out a full-day menu of six meals that eliminate wheat and sugar but provide carbohydrates with oatmeal and vegetables.[84] The meal plan is very high in protein, calling for four egg whites for breakfast, five ounces of tuna for lunch, five ounces of chicken for a snack, five ounces of salmon for dinner, five tablespoons of nut butters overall, and a snack of kefir (which also contains protein). This menu plan

is expensive and provides far more protein daily than the average active woman needs. Carbohydrates are included, so it will not lead to immediate ketosis (unlike Atkins and other "Keto" diets), and it does call for a very high intake of mixed vegetables, but the fat content is also high due to nut butters, salad dressings, and oils used as condiments. It is probably doable on a short-term basis, but overall, it might not be sustainable due to preparation time, potential dietary boredom, and problematic levels of protein. Nor does it lend itself to food sharing or social events.

Similarly, Goop's January Detox diets are severely limited in content and variability and would make social eating very difficult. They also condone food restriction extreme enough to count as a form of eating disorder; on a very short-term basis, the diet won't cause much damage, but longer use could be psychologically and nutritionally problematic. On the other hand, many cookbooks provide interesting, workable recipes appropriate for shared meals and could teach important kitchen skills to amateur home cooks. Most recipes and diet hints aren't going to hurt anyone, but they might not achieve the stated elevated goals, even for weight loss. If they encourage a decrease in processed foods and an increase in vegetable intake, they can promote better dietary habits and potentially better health. And some of the recipes in Alicia Tyler's cookbook look genuinely yummy.

This leads us back to the core of the matter: how people practice this diet may be very different from what the books and blogs recommend, and that may be a problem. Shifting from a fast food diet to eating whole foods is always a good idea, but what if eaters take it too far and become obsessive about healthy eating? Indeed, the pushback against this diet has implicated a rise in orthorexia among Clean Eaters, and Janet has observed many adherents who seem to exhibit signs of disordered eating patterns. Clean Eating and other similar healthism practices can lead to a fear of eating foods that aren't clean, or aren't healthy, or aren't produced the right way.[85] Pixie Turner, a former prominent Clean Eating blogger, explains how practicing the diet creates identity and self-value, so that rejecting its mandates leads to a loss of sense of self and fear of becoming defiled or dirty. She describes Clean Eating as a form of religious faith with an accompanying fear of sin and its consequences if practices are abandoned.[86] This is a perfect example of Mary Douglas's analysis of defilement and danger. It demonstrates that the pressure to adhere to the diet's prescriptions can be extremely strong and can cause anxiety and behavioral rigidity.

Janet has observed real food anxiety among Clean Eaters. On one occasion, she was part of a conversation at the farmers' market between a young woman and one of the farmers. The woman asked the farmer, "So I see you have a lot of fruit and vegetables here; do you spray them?" The farmer replied that the vegetables were grown organically, but not certified because he couldn't afford certification and the fruit came from trees that were treated with copper sulfate and quicklime (the Bordeaux mixture) to protect against downy mildew, allowed under organic specifications. She looked confused and said, "If you spray, you are not organic." He responded, "No, we use organic farming methods, so we are organic, but we aren't certified because our farm is too small." The young woman became visibly agitated and repeated the question: "Why are you saying you are organic and clean if you spray? You can't use chemicals and sprays if you are organic and clean!" He reiterated, "No, we are organic, just not certified. We use organic farming methods, and this formulation is allowed and necessary in this area." At this point the conversation broke down; the young lady repeated, "You are making bad food; I can't eat that," and walked off. Janet watched her among the market vendors; at each stall she posed a series of questions to the vendors, clearly confusing the vendors because her understanding of farming practices was minimal but emotional. When Janet caught up with her later, she had nothing in her bags and said, "I just moved here and was told there was a farmers' market where I could buy food to eat, but this food is all contaminated. I am a Clean Eater and this food will poison me." She was very emotional and visibly upset, and nothing Janet said about how people farmed and how organic processes worked had an impression. She knew so little about how food was produced that she had reduced her fears to a binary dualism: was food "sprayed" or was it not? But she truly had no idea what "spraying" meant. Her explanatory model labeled any type of spray as a poison that would render food dangerous, an example of *chemophobia*.[87] And as long as she asked honest farmers about spraying, she would hear an unsatisfactory response because in Pennsylvania organic farmers spray approved mixtures to combat mildew. Perhaps in her case food was a proxy for fears that couldn't easily be articulated because they weren't understood or identified.

Another experience also highlights how the orthorexia connected to Clean Eating is about anxiety and not really about food. Janet gave a barbeque at her house, and one of the guests, a teenage girl, asked her where

she had purchased the meat for the hamburgers. Janet told her it came from the farmers' market and named the farmer. She was then asked, "Is the meat clean? Because I am a Clean Eater." Janet asked her what she meant by "clean," and the young woman looked confused and repeated, "It has to be clean if I am going to eat it." When asked again to define clean, she looked upset, wrung her hands, and said, "You know, no chemicals." When asked what she meant by chemicals, she also couldn't answer. She looked so troubled that Janet told her about the farmer and his farm, that she had personally visited the farm and it was very well managed, and that the meat was grass-fed and pastured. The teenager replied, "Oh, so you don't know about the chemicals. . . . I'd better not eat it." This was repeated with the vegetables as well, and when told that the tomatoes and the salads were grown organically in Janet's garden, she looked relieved for a second. Then she asked if any of Janet's neighbors sprayed their yards, since "those chemicals drift, and infect the food." In the end she walked away without any food on her plate, a worrisome sign of a possible eating disorder. Many observations could be made about this exchange, but it was clear to Janet that the conversation was not about food. Food was a proxy for fears that couldn't easily be articulated because they weren't understood or identified. The teenager, like the woman at the farmers' market, was afraid of what might be in food or what might have been added to food, but knew almost nothing about how food was produced. The lack of knowledge fueled intense fears that couldn't be assuaged because they didn't know enough about farm processes to understand what might be safe. "Clean" had become a talismanic category that existed only to soothe anxiety about ingestion.

A final vignette reveals how powerfully "Clean" functions as a ritualistic symbol that can be harnessed by food marketing companies and how it can alter dietary patterns and nutritional intakes. A few years ago, an organic-only supermarket opened not far from the farmers' market, and on opening day Janet was given a private tour by the owner. While there, she ran into a woman who had stopped shopping at the farmers' market because she thought that the foods offered there weren't healthy enough—she wanted all organic, gluten-free, no GMO, no snacks, sweets, or cakes, and so on. At the new supermarket she was accompanied by her three children, and her cart was filled with canned, frozen, and packaged foods, including many bags of potato chips, candy, and cookies. She looked at Janet with a huge smile on her face and proudly announced, "Isn't this wonderful!

These foods are organic, they are clean, and look at the selection! This is what the farmers' market should provide but doesn't. This is clean food!" Janet was stunned because the food was processed and mostly sweet or salty snacks, including the pastries and cakes that the woman had earlier labeled unhealthy and condemned the market for selling. Janet realized that the power of the symbolic words "organic" and "clean" created a safe-and-healthy category for foods that otherwise (and from the standpoint of a nutritionist) would be considered special occasion treats, and those categories had nothing to do with any discourse about dietary health. She also realized that having faith in those symbols could shift eating patterns and nutritional intakes away from whole foods in favor of snack foods, and that the labels could induce parents to allow children to eat junk foods labeled organic or clean. Believing in food categories like "clean" could shift food behaviors toward favored labels and brands and away from farmed whole foods, especially if eaters had very little knowledge of farm practices. And that could negatively affect nutritional intake and physical health.

The upshot? Clean Eating is not a well-defined diet and difficult to test for nutritional content. The most basic mandates of Clean Eating—eat whole foods in season, cook more meals, and so on—are excellent advice for all eaters but may require additional kitchen labor to source and prepare. Unfortunately, the diet is so nebulous that it can contribute to the development of disordered eating patterns, including orthorexia. Faith in the diet may function as a self-soothing practice to assuage psychological anxieties about food intake, rather than a process that contributes to nutritional health.

THE BACKLASH AGAINST CLEAN EATING

The backlash against Clean Eating has been swift and dramatic, with claims that it is pseudoscientific, judgmental, and an incitement to eating disorders. Anthony Warner, the so-called Angry Chef, was one of the first public voices to challenge many of the assumptions of the Clean Eating movement. Through his books and social media presence, Warner has sought to humorously challenge dietary superstitions, conspiracy theories, and "dangerous dumbfuckery." Warner is especially merciless when it comes to people's perceptions of toxins and their wish to be free of them. For example, he writes, "The concept that we can detoxify our bodies by

controlling our dietary intake is benchmark pseudoscientific bullshit. In terms of biology, it makes absolutely no sense at all, it has no basis in fact and there is virtually no evidence that its effects are real." Warner continues to express his indignation, challenging a number of ill-founded, highly profitable dietary trends.[88]

Unlike the Angry Chef, we do not find ourselves angry at the people who have these beliefs and underlying fears. On the contrary, we take a compassionate approach and seek to understand what these fears and their accompanying behaviors say about these individuals and our culture. This is where the converging lenses of anthropology and psychology allow us to step back and examine individual beliefs and behaviors as an expression of cultural and political phenomena, such that the individuals are serving as proxies for the entire culture. This way of thinking comes from philosopher Susan Bordo, who argued in the 1980s that anorexia nervosa was not simply an individual psychiatric disorder but a disorder that crystallized the psychopathology of a culture. She wrote that anorexia "appears less as the extreme expression of a character structure than as a remarkably overdetermined symptom of some of the multifaceted and heterogeneous distresses of our age. Just as anorexia functions in a variety of ways in the psychic economy of the anorexic individual, so a variety of cultural currents or streams converge in anorexia, find their perfect, precise expression in it."[89] Using similar logic, we might think of the fears of toxins and food contamination as a new crystallization of cultural psychopathology. Anytime a culture has extreme values or practices, there will be individuals in that culture who express those extremes in what appear to be individual pathology but simultaneously serve as proxies for all of us.

These proxy disorders are sometimes referred to as "culture-bound syndromes" or "idioms of distress," which are illness metaphors accompanied by a set of recognized behaviors, symptoms, and expressions that communicate sickness. As we discussed in our examination of the idea of food addiction, culturally recognized medical problems can arise from categories of distress that reflect the larger social concerns and worries of the people of that culture. Clean Eating seems to manage fears particular to our place and our time: fatness, toxins, clutter. All cultures have such tacit symptom repertoires offered to people as a means of expressing distress—an internalized "menu" from which we unconsciously choose sets of symptoms as ways to express the difficulties of living. It is with this understanding of dietary fads

and trends that we approach adherents with compassion. For example, we would not ridicule someone suffering from obsessive-compulsive disorder (OCD) who washed his or her hands forty times a day. While compulsive handwashing is only one manifestation of OCD, it is a common one that is driven by obsessive fears of contamination, illness, and pollution. Such fears can only be stopped or managed by the compulsion of handwashing. In other words, the obsessions are anxious, tormenting thoughts, and the compulsions are meant to calm down or stop these thoughts. The compulsions are self-soothing and bring about relief, if only temporarily. Clean Eating, while less extreme than the clinical disorder of OCD, is governed by a similar dynamic: anxieties are managed through behaviors that are intended to be calming and purifying. Eating Clean feels good because it soothes the self, although, like other self-soothing behaviors, the calm is often short-lived and the underlying anxieties continue to torment. We see these fears as logical, at least to the people who struggle with them, and the consequent behavior of "eating clean" to manage and calm these anxieties makes sense psychologically.

Clean Eating can be thought of as a way to manage fears of contamination and toxicity as well as a response to decades of overconsumption of food and material goods. It also reflects very real worries about environmental degradation and pollution caused by industrial and agricultural production processes. While it may provide an incentive to eat a more balanced and whole-food diet, it can also create anxiety about intake and promote orthorexia. For many it is probably an adaptive and effective mechanism for dealing with anxieties about the self and environmental contamination. For others, it may be less adaptive and cause harm to the body, a waste of money and time, or an obsession with "clean" food.

Chapter Five

PALEO DIETS

The wildly popular Paleolithic diet (Paleo, for short) encourages consumers to eat those foods (or their modern near-equivalents) that preagricultural Paleolithic humans are imagined to have eaten. In this chapter we group Paleo, Primal, Stone Age, Evolutionary, Ancestral, and Caveman diets together, using "Paleo" as a shorthand to refer to all of them. We understand that adherents may define them differently, and we mean no disrespect to the followers for whom the differences among them are meaningful and important.

Generally, the rationale underpinning these diets is that our bodies haven't evolved as quickly as have our agricultural and food systems and that, consequently, humans are not genetically equipped to stay healthy eating a diet that provides foods for which our bodies aren't adapted. Paleo enthusiasts argue that much of modern degenerative disease is due to modern foods and that a state of preagricultural health can be encouraged with a return to an older diet. This is sometimes referred to as the "mismatch theory": that our bodies are evolutionarily mismatched to the era in which we live.[1] Paleo advocates posit that the human diet should consist of more raw, unprocessed, and wild foods; that meats should be pastured or wild caught; and that dairy should be avoided, as should grains and other carbohydrates. In terms of its macronutrient profile, the Paleo diet is similar to Atkins/low-glycemic/low-carb diets. Atkins-type diets are focused solely

on weight loss, whereas Paleo diets speak to more than just food, often prescribing a complete "back to basics" lifestyle. As such, the imagery and language of Paleo are very different, evoking a broader set of cultural and psychological beliefs and practices.

One of the challenges of practicing a Paleo diet is that a reconstruction of an ancient diet is difficult because of archeological processes that obscure food materials as well as the omnivorous nature of our species; humans have survived on a wide range of foods for millennia, making exact dietary reconstructions tenuous at best. While some elements of the Paleo diets do have nutritional merit and archeological validity, because of the difficulty of truly knowing what our ancestors ate and the lack of access to much of that food, understanding what was a true Paleo diet is difficult, even for those scientists who have expertise in reconstructing our human past.[2] For our part, however, we are less concerned with the accuracy with which people understand the Paleolithic era and more concerned about why this lifestyle is so appealing and what it means for people who "go Paleo." Because Paleo diets are uniquely different from many other diets we discuss in this book, in that they are a lifestyle that extends beyond food and nutrition, we have more information about their adherents. The broader repertoire of behaviors, such as sleep, exposure to light, sex, parenting, and even footwear, gives us more data to understand the psychological and anthropological underpinnings of this movement.

BACKLASH AND DEBUNKING OF PALEO DIETS

There are entire books and lectures devoted to debunking the Paleo diet. It is unusual for a diet to provoke the kinds of strong and widespread opinions that Paleo diets seem to inspire. That fact signals to us that there is cultural significance worth understanding. For example, in her TEDx Talk, the archeological geneticist Christina Warinner argues to an amused audience that the Paleo diet has no basis in archeological reality.[3] Using evidence from the archeological record, she proceeds to debunk commonly held beliefs by Paleo enthusiasts, such as that humans are evolved to eat meat and that Paleolithic people did not eat grains. She further explains that there was no single Paleolithic diet, but rather multiple diets that varied greatly based on climate and location. At its core the lecture is nothing more than a basic summary of what is known about Paleolithic peoples

within Dr. Warinner's field—hardly a barn burner. Presumably a talk called "Archeological Genetics 101" would not have become a TEDx Talk, much less one with nearly 2 million views. It was the framing of this content as "Debunking the Paleo Diet" that made it worthy of a TEDx Talk.

Similarly, in the introduction to her book *Paleofantasy*, the evolutionary biologist Marlene Zuk argues that Paleo adherents erroneously assume that humans have not evolved since the Paleolithic era, and she promises to provide evidence to the contrary.[4] She argues that it is not possible for scientists to make valid conclusions about what humans ate in our evolutionary past, which is why such ideas about the early human diet are "paleofantasies." The remainder of the book is essentially a primer on "what evolution really tells us about sex, diet, and how we live." Like Warinner's TEDx Talk, the content is interesting, but it's crossover science for the layperson. The popularity of these two works seems to derive from their framing as a counter-movement against Paleo diets.

We find it interesting that there is such a public hunger for a backlash against Paleo diets, as well as a seeming wish to prove their adherents wrong or make them seem foolish. For example, in *Jezebel*'s "Sorry, Neo Cavemen, but Your Paleo Diet Is Pretty Much Bullshit," Madeleine Davis writes, "An adult's personal diet isn't really anyone else's business. . . . unless we're talking about the paleo diet, which we can all agree is a dumb diet for dumb people who all need to be told how dumb they are."[5] We are less interested in proving people wrong or ridiculing them and more interested in what this belief system and set of practices mean for their practitioners. What is clear to us is that, irrespective of historical accuracy, terms like "Paleo," "ancestral," and "primal" are intuitively appealing to a great many people. Something *feels* right about them. If we step away from the mockery and skepticism, we can think about what these fantasies (if they are that) express that are legitimate and important.

One reason for all the misunderstanding of Paleo diets could be that much of the academic writing about Paleo often isn't accessible to the public because it was written by scientists for scientists. For example, the academic volume *Paleonutrition* neatly summarizes the known research about the Paleolithic diet and provides a top-notch review of the methods used to study and understand ancient dietary patterns and health.[6] However, it is comprehensive and academically dense, containing 238 pages of text accompanied by a whopping 124 pages of references, all cited within the

volume. Its lack of attractiveness to the general public is witnessed by the fact that Janet's copy is used and was retired from a public library in 2012. Given that the period from 2006 to 2015 may have been the peak of Paleolithic popularity, the fact that the book was withdrawn demonstrates that it simply wasn't checked out frequently by library patrons. It's in perfect shape and has barely been read.

Similarly, Timothy Johns's excellent book *The Origins of Human Diet and Medicine: Chemical Ecology* provides a scholarly review of the intersection of diet and health, focusing on ancient and Paleolithic diets. It's well written and accessible but clearly academic in style. The single Amazon reviewer (Marianne Jentilucci, who posted in 2018) gave it two stars and wrote, "Very technical. Very boring. If I can get through it I may find something interesting or of value but it is a very tough read. If you have trouble sleeping buy it."[7] Janet once assigned it to a graduate course in nutritional anthropology, and students found it fascinating. But they were not looking for a diet book. Herein lies the problem of providing accurate dietary information to the general diet-adopting public: the academic writer often lacks the capacity to write in a manner that's accessible and of interest to those curious about a diet and provides none of the promises or simplified unidirectional reasoning of the popular celebrity diet gurus.

PALEO AND *THE CULTURE OF FEAR*

In his book *The Culture of Fear*, the sociologist Barry Glassner demonstrates how Americans are burdened with overblown fears about the wrong things, such as pedophiles, cancer, and plane crashes, because they believe them to occur more frequently than they do—a common logical fallacy.[8] Glassner places contemporary fears in a historical context of other panics, arguing that they are usually projections and not based on reality. Glassner, in turn, was influenced by anthropologist Mary Douglas's work on how people interpret risk and how societies select specific dangers to focus on out of a larger repertoire of infinite dangers.[9] In other words, widely held fears and moral panics are a type of cultural practice performed by all societies. While it might sound odd that a diet could serve as a means to express fear, we believe just that.

Other recent evidence for such pessimism and misperception comes from the public health scholar Hans Rosling, who discovered that when

he gave people a twelve-item test on basic facts about poverty, vaccination rates, and climate change, most people only got two out of twelve questions right.[10] People generally thought that poverty, war, and illness were far more widespread than they actually are. Since random guessing would have yielded a score of four out of twelve, these results suggest that people have systematic biases that cause them to view the world as more frightening, more chaotic, and more violent than it actually is—what Rosling called the "overdramatic worldview." Neither can these results be explained by a lack of knowledge of global affairs. Rosling reported that even highly educated people, including scientists, doctors, and Nobel Laureates, got the facts so devastatingly wrong that this result could only be attributed to systematically held irrational fears.

Similarly, the psychologist Steven Pinker has dedicated much of his career to combating the idea that the world is getting worse, instead meticulously documenting how it is indisputably getting better.[11] He describes this corrosive fatalism, saying, "The second decade of the 21st century has seen the rise of political movements that depict their countries as being pulled into a hellish dystopia . . . in which the institutions of modernity have failed and every aspect of life is in deepening crisis."[12] Calling this view Progressophobia, Pinker traces it to intellectuals dating back to Schopenhauer, Sartre, and Heidegger, claiming that they began to spread undue pessimism and skepticism. This pessimism takes hold easily because we are extraordinarily susceptible to the so-called Optimism Gap—the tendency to overstate society's woes and understate personal problems. The Optimism Gap and a variety of other cognitive distortions cause us to misjudge the frequency and likelihood of bad things happening and thus to easily imagine that civilization is in a state of decline.

What all of these scholars have discovered is that we have systematic ways of viewing the present as worse than the past and a tendency to think that civilization is going to hell in a handbasket. While Pinker and others have devoted their research to disproving these beliefs, what they don't address is how we go about our lives while psychologically managing the anxiety generated by these myths, fears, and misperceptions. This is where diets, and especially fad diets, come in. We believe that dietary lifestyles are systems we've created for managing these anxieties. They are systems constructed out of fantasy, idealization, and nostalgia.

PALEO AS FANTASY, IDEALIZATION, AND NOSTALGIA

This brings us to wonder: Why might we imagine that cavemen ate the perfect human diet and lived in a sense of natural splendor—the way that humans are *supposed* to eat and live? *Because that fantasy feels good*. It helps us. Fantasy and idealization are both psychological defense mechanisms that serve as balms—they help us cope with the aspects of the present we experience as intolerable, confusing, or tragic. When we get into our cars every morning and face an hour commute to an office with fluorescent lighting, it feels good to imagine carefree hunter-gatherers roaming the plains in the sunshine. And when we go a step further and adopt what we imagine as a Paleo lifestyle, we are brought one step closer to the fantasy. It is a role play no different from any other role play that might offer us momentary reprieve from the drudgery of daily life. In other words, the rhetoric and imagery of Paleo diets, with their idealization of the past, are some of the myriad ways people deal with their fears and ambivalence about the present.

In her book *Diet and the Disease of Civilization*, Adrienne Rose Bitar writes, "Along the arc of the Fall of Man, these diets remember an original, innocent world and mourn the descent of the human race into modern disease." After analyzing over 400 diet books, Bitar concludes that "the entire weight loss genre has much to offer utopia studies, in that the rhetoric of diets, particularly Paleo diets, links corporeal and social transformation, promising a fictional utopian vision of the future."[13] In psychological terms, this fictional utopian vision is mediated by nostalgia and fantasy—both coping mechanisms we use to manage fear, loss, and grief.

The concept of nostalgia as an emotional state came from psychoanalysis and was originally defined as a bittersweet longing for home in which we yearn for an idealized or sanitized version of an earlier time.[14] It is a funny psychological phenomenon, in that nostalgia sometimes makes us long for something imagined or that *never actually existed*. For example, the sociologist Stephanie Coontz argues in her book *The Way We Never Were* that our collective understanding of how American families used to be is a myth that has largely been shaped by television shows such as *Leave It to Beaver* and *Ozzie and Harriet*.[15] Scholars have demonstrated that nostalgia creates an idealized past that is used to construct modern sociocultural phenomena and heritage projects, as well as potent discourses of idealized identity

and belonging.[16] And while these myths serve as shared stories and rituals to bring us closer together and reinforce social solidarity, we must never forget that they are a modern-day projection onto the past. They represent current values, desires, and fears sanitized by nostalgia and longing.

While nostalgia was initially construed as an emotional state based on autobiographical memories, more recently nostalgia scholars have distinguished "historical nostalgia" from "personal nostalgia." Historical nostalgia is defined as an escape fantasy expressing the desire to retreat from contemporary life by returning to a time in the past perceived as superior, simpler, or less corrupt than the present. It is a "desire to identify with a past era perceived as a repository of desirable traits and/or values . . . a kind of totemic identification permitting the extension of the self backwards into history."[17] Some food and drink rituals are intended to extend the self back into history in a kind of psychohistorical regression. In the highly ritualized Passover Seder, for example, the Seder plate contains important symbols of the holiday. Maror, the bitter herbs, are used as a symbol of the bitterness of slavery. Zeroa, a roasted shank bone, is a symbol of the Passover sacrifice. Saltwater is also used to symbolize the tears of slavery. The Seder is a ritual meant to bridge the cultural space and emotional experience between generations, faraway places, and one's ancestors.

Nostalgia serves as a psychological lens for the construction and reconstruction of our identities and, in the case of Paleo, perhaps a means of distinguishing ourselves from the perceived failures of contemporary humanity. Interestingly, nostalgia for the imagined Paleolithic period also happens to evoke a set of uniquely American characteristics associated with the exploration and expansion of the West: rugged individualism, self-reliance, isolation, living off the land, and thriving in harsh conditions. Writing in 1893, Frederick Turner described this so-called frontier culture, describing the frontier as the meeting point between savagery and civilization. He wrote, "The wilderness masters the colonist. It finds him a European in dress, industries, tools, modes of travel, and thought. It strips off the garments of civilization and arrays him in the hunting shirt and the moccasin. It puts him in the log cabin of the Cherokee and Iroquois and runs an Indian palisade around him."[18] In many ways, the caveman, the frontiersman, and later the American cowboy are cousin mythical archetypes, embodying a glorified past of strength and purity.

But there is a dark side to historical nostalgia. It can be used to justify patriarchy, whitewash the subjugation of others, and generally mask social ills of the past.[19] Most nostalgia researchers, however, have found that nostalgia serves a healthy function. In the case of Paleo as a practice of historical nostalgia, we think that for many it serves as a harmless and soothing fantasy, one that allows people to escape their current stressors and feel connected to past humanity. One of the most popular reasons for adopting a Paleo lifestyle is to ward off or treat illnesses ranging from nutrition-related conditions such as diabetes to chronic or life-threatening diseases like arthritis and cancer. Fear of chronic diseases is a potent everyday anxiety because the cultural narrative portrays them as irreversible and potentially deadly. Purveyors of Paleo often assure adopters that these so-called modern diseases can be avoided with seemingly simple changes in diet and everyday habits in accordance with an imagined and ideal past.

If we think about the practice of Paleo as a psychological means of coping with the threats and anxieties of modernity, we can see other potentially adaptive benefits of its practice. For example, one challenge that has come with advances in medical and nutritional science and technology is the danger of reductionism. Medical reductionism refers to both the specialization and fragmentation of knowledge, such that specialized doctors can often miss a holistic picture of health, instead focusing on testing, laboratory results, and the quantification of the body and its processes. Similarly, in popular understandings of nutrition science, there has been a clear trend toward "nutritionism," defined by Gyorgy Scrinis as "a way of seeing and encountering food primarily as a collection of nutrients, and in terms of a set of standardized nutritional concepts and categories, such that it overwhelms other ways of seeing and encountering food."[20] Understanding the components of food is fine, but Scrinis argues that decades of such a focus has devalued the authority of traditional and cultural dietary knowledge and undermined people's sensual and practical experience with food. Paleo is one of many dietary approaches that eschews the counting of calories or macronutrients and instead promotes a holistic understanding of food and whether it's good to eat. The world of exercise science has become similarly reductive, often focusing on quantifying the calories burned, the metabolic rate, and body mass index (BMI), rather than on functional strength and movement or whether a person's body serves them well. Here, too, Paleo adherents might be wise in their more natural, holistic approach to exercise.

ACADEMIC AND POPULAR ANALYSES OF PALEO DIETS

Entire books, podcasts, websites, blogs, and lectures are devoted to examining the Paleo diet, but before there was a "Paleo diet" there was anthropological and archeological research into Paleolithic eating habits, health, disease, and culture. While such studies are well known in anthropology, they are usually buried in academic journals that may be physically and conceptually inaccessible to the general public. Although earlier anthropological texts about the evolution of diet did have some crossover appeal, particularly Vilhjalmur Stefansson's *Not by Bread Alone* and *The Fat of the Land*, as well as the much later edited volume *Man the Hunter*, these volumes were not well known among the general reading public.[21] However, the publication in 1988 of *The Paleolithic Prescription* ignited interest in Paleo and paved the way for lay practitioners to reexamine the older texts and to selectively adopt academic studies in support of a constructed and potentially reproducible Paleolithic lifestyle.[22] This accessible and readable work examined the diet of modern foragers as a proxy for ancient diets and provided a public health analysis of the connections between diet and the chronic diseases of modernity, such as hypertension and heart disease. S. Eaton Boyd is a medical doctor, Marjorie Shostak was a social anthropologist who conducted extensive field research among the K'ung San, a hunter-gatherer culture, and Melvin Konner is a medical doctor and a biological anthropologist. While each had published extensively in scholarly journals, *The Paleolithic Prescription* provided a coherent text that outlined and integrated the academic research that had previously contributed to knowledge about forager diets.

Their volume started the fad for Paleo diet books written for the general public. Most of these early authors borrowed from *The Paleolithic Prescription* as well as from Eaton and Konnor's earlier journal article "Paleolithic Nutrition: A Consideration of Its Nature and Current Implications" and other studies that had been published during the 1980s heyday of anthropological enquiries into evolutionary health and development.[23] At that time there was widespread interest among biological anthropologists in understanding optimal diets for health in relation to human functioning and childbirth practices, and numerous researchers were using hunter-gatherer populations as analogues for early human bands. These interests arose out of enquiries into the developmental origins of health and disease (DOHaD)

model as researchers explored the antecedents of modern chronic disease and other physical and psychological maladies of modernity.[24] It is important to understand that these hunter-gatherer populations were not considered actual personifications of early humans but analogies; they are fully modern humans who live in environments that resemble the Paleolithic or Neolithic environment and so might serve as models for early human patterns of resource use and health. As ancient landscapes were studied via archeological and geological remains, their remaining skeletal populations were examined for evidence of disease and injury and analyzed in relation to studies of the health and diet of modern populations inhabiting similar environments. This approach created an opportunity for the triangulation of data that allowed academic researchers to propose testable hypotheses of the differences between current and Paleolithic living conditions and to link these hypotheses to known correlates of diet-related chronic diseases, such as hypertension and diabetes.

Janet started her training in biological anthropology during these heady days of evolutionary medicine and health, and her interest in nutrition was guided by the possibility of using evolutionary diet to improve modern diets for better public health. The problems researchers were presented with were largely in the realm of epidemiology, particularly Western health problems of the mid-twentieth century such as heart attacks, hypertension, and obesity. Understanding how our health was channeled by evolutionary patterns, ancient dietary opportunities, and the constraints of past environments seemed a marvelous way to improve health outcomes. That these studies would leak out into the wider world in a largely unstructured and noncontextualized manner was not anticipated.

Of course, outside the academy there was interest in a diet of the past, particularly in an imagined lapsarian golden past with perfect health and well-being. Often these narratives were constructed of idealism and fakelore, some of it racialized, as Mouton, Veit, and Bitar have demonstrated.[25] An early (and problematic) text was one that still influences Paleo proponents today, *Nutrition and Physical Degeneration* by Weston A. Price, a dentist who traveled around the world examining the teeth of different population groups.[26] In his volume he argued that "primitive" people rarely had the dental and health problems of "modern" peoples largely because their diets omitted sugars, flour, and processed foods. Although he used loose observational studies rather than established medical research

protocols, his volume provided strongly argued generalizations based on correlations between diet and health accompanied by a hundred-plus photographs and official-looking graphs. He was probably the most important early proponent of the problematic myth of the "healthy noble savage," although a contemporary volume by G. T. Wrench, *Wheel of Health: The Source of Long Life and Health Among the Hunza*, was also very popular.[27] Like Price, Wrench purported to document a dearth of illness combined with very long life spans among the remote peoples of Pakistan. He drew upon the medical studies of Sir Robert McCarrison, a doctor in the Indian Medical Service whose primary interest was documenting the damaging effects of modern and poorly balanced diets in Pakistan and Britain. These authors were read by Jerome Rodale (of Rodale Press); Levenstein outlines how the natural foods movement popularized by Rodale promoted the belief that the premodern "savage" was naturally healthy because of a superior diet and that current diets and modes of agricultural production were damaging to health.[28] The assumption that ancient diets and ancient lifestyles were healthier than modern ones then became central to the organic and alternative food belief system in the United States. Rodale Press used these volumes to support the rationale for organic farming, and they ended up forming an important part of the narrative of the value of organic food and agriculture.

WHO BELIEVES IN PALEO?

Belief in the value of premodern diets got bundled together with other belief systems and practices designed to improve health, some of them fringe. From the perspective of nutritional anthropology, this means that many people who are interested in organic food, diet, and health have read or heard, and often taken as fact, that premodern populations were healthier than modern peoples and that hunter-gatherer and early farming economies created sustainably healthy food systems. One of the early volumes about Paleolithic diets designed for the lay reader was the self-published *The Stone Age Diet: Based on In-Depth Studies of Human Ecology and the Diet of Man* by gastroenterologist Walter L. Voegtlin.[29] He argued that grains should be abjured in favor of meat and fat and that overall health was better in the past because a meat diet fit our evolutionary developmental needs. In fact, he maintained that ancient humans were exclusive meat

eaters. At the time this idea was considered quaint and was very much on the fringe because a high-fat diet was considered unhealthy: "We may or may not accept the validity of Dr. Voegtlin's advice, but the witty way he tells it makes for enjoyable reading."[30] A decade later Leon Chaitow published *Stone Age Diet: The Natural Way to Eat*, which was largely derived from Eaton and Konnor's 1985 article.[31] Chaitow was an osteopath who had published widely on many different topics in alternative medicine, including massage therapy, antivaccination, fringe nutrition, and hydrotherapy. These texts were generally available in natural food stores and other alternate shopping venues, like co-ops and hippie shops; they weren't mainstream.

Stone Age diet advocacy was limited to fringe interest groups until the late 1990s, when the Paleo diet began to attract notice online and mainstream presses made Paleo books available to the wider public. Janet first noticed this trend when she saw a copy of Loren Cordain's *The Paleo Diet* prominently displayed at a bookshop.[32] Joining it were several other more or less mainstream texts: *NeanderThin* by Ray Audette and *The Origin Diet* by Elizabeth Somer.[33] At about the same time, Paleo lifestyle web platforms and discussion groups began to form online communities around exercise physiology, optimal health, and diet, including one on evolutionary fitness hosted by Art De Vany. The first website devoted to Paleolithic lifestyle modeling was started in 1997, with the apt URL http://paleodiet.com. Paleo appealed most strongly to male fitness advocates, it seems, given the focus on physique and performance—an interest that continues today. Loren Cordain received his PhD in exercise physiology, and his interest in Paleo arose out of the quest for optimal performance. Ray Audette calls himself a "modern-day hunter-gatherer" and argues that we should all eat large amounts of meat and fat because that's what was available to our ancestors. He's a former computer salesman who started eating Paleo when diagnosed with Type 2 diabetes. He lives a "Paleo" lifestyle, and in an interview for the TV news show *48 Hours* he argued that if you couldn't pick it off a bush or kill it with a stick you shouldn't eat it.[34] Interest in a mostly meat, primal diet is currently so robust that Stefansson's midcentury books have been reissued in hardback and paperback, but this time *Not by Bread Alone* sports a catchy come-on added to the cover: "The All-Meat Classic!"

Today there are numerous volumes on Paleo and similar (mostly) low-carb diets published by small, offbeat presses specializing in health and

wellness, spirituality, and other allied topics, but the mainstream publishing houses have also benefited from the fad. A search for "Paleo diet" nets thousands of books, many self-published but many from thoroughly reputable presses. One of Rodale Press's most popular volumes on diet is De Vany's *The New Evolution Diet: What Our Paleolithic Ancestors Can Teach Us About Weight Loss, Fitness, and Aging*.[35] De Vany clarifies the connection between alternative health beliefs and Paleo enthusiasm, since his argument for going Paleo is tied to longevity, optimal health, and retention of a masculine physique into the sunset years. While something of a latecomer to the popular Paleo field, De Vany has been described as the "father of the Paleo diet" and the "grandfather of the Paleo diet" and even the "inventor of the Paleo diet," although we suspect that's a title he's given himself since we can't find publications that support his early support of the diet. After all, Loren Cordain also calls himself the "founder of the Paleo movement" on the cover of his books.[36] Like many authors who latched on to anthropological studies of past diets, De Vany has no expertise in nutrition or medicine; he is an economist. Regardless, he has built an empire providing talks and workshops on adopting Paleo for anti-aging optimal (male) fitness. While his work is solidly within the realm of the fringe health movement (in part because his claim to authority seems to be his personal health and vitality), his career demonstrates how the Paleo diet is inextricably linked to myths of ideal health and fitness. The linkage between Paleolithic lifestyles, diet, and optimal health is accepted as fact by most adherents.

MEN, MEAT, AND PALEO: FRAGILE MASCULINITY AND DIET

The connection to fitness and male performance is strong, with newer advocates like Mark Sisson providing enticing programs to guarantee masculine potency and power throughout the life cycle.[37] Sisson, whose background is in athletics, has labeled himself the "godfather" of Paleo and offers classes, lectures, and a variety of paid services promoting his Paleo lifestyle, which he calls "Primal Health." He has recently incorporated the mostly meat ketogenic diet into his previous Paleolithic diet model and has become a prime focus of the Keto and male bodybuilder community. Like others before him, he relies on anthropological studies and older texts for his dietary inspiration, but most of his site is devoted to pictures of him flexing his muscles while shirtless along with options to buy various

books, programs, and products. The overwhelming takeaway is that Paleo makes older white men virile and fit. Similarly, the legend of Art De Vany promotes an anti-aging narrative for men, and almost all online pictures of him show a fit, older male with muscles bulging.[38] When Tim Ferriss interviewed De Vany in 2017, he introduced him to the podcast audience by saying, "Dr. Arthur De Vany is nearly 80 years old and totally ripped."[39] Of course, Tim Ferriss is also well known for his "4-hour" volumes about maximizing personal potential. Like De Vany and Sisson, he is a strong proponent of Paleo, ketogenic diets, and intermittent fasting, which they all contend are core elements of the Paleolithic lifestyle and diet.

This mashup of Paleo, Keto, Primal, and meat-eating lifestyles has been described as predominantly white and male, and of interest to men who are invested in creating an identity defined by male dominance and virility. Analysis of the gendered food practices of masculinity, meat eating, and the caveman fantasy can be found elsewhere, and certainly we are aware that in many cultures meat eating is considered a masculine right.[40] How deeply Paleo adherents connect meat, a projected natural and masculine "golden past," and male dominance is clearly illustrated by De Vany:

> *Homo erectus*, our ancestor from almost 2 million years ago, could go out today and buy a suit (42 long) at Ralph Lauren and walk the streets of New York with little notice. He would be tall and lean, built like an NBA guard. A more modern Cro-Magnon, who roamed the earth 40,000 years ago, might buy an Armani (44 long)—he would have a better sense of style than Homo erectus, as evidenced in the art objects and cave paintings he left behind. A Cro-Magnon might look more like a rugby player; he would be taller than most males now and would be lean, muscular, and very powerful—a devastating athlete. . . . Similarly, a female Cro-Magnon would be slender and a bit taller than a modern female, with the classic hourglass shape and posture of a graceful woman. Based on the depictions of shapely females found in Cro-Magnon art, she might look like a supermodel, but not a skinny starved waif—more Cindy Crawford than Kate Moss.[41]

Unpacking this statement is painful yet revealing. First, there is the focus on male prowess, both physical and economic, followed by the nudge at cultural capital; the reader must know the value system that reveres Ralph Lauren and Armani. Situating the male ancestor as a professional athlete

cements health, physical prowess, and acclaim, for modern-day athletes are considered the height of manhood by many American males. Being able to buy an expensive suit reinforces that these men are economic winners and demonstrates power over others, because fancy suits and athletic builds are symbols of male hegemony. All of this implies that adopting the Paleo diet will make the average American male dominant over other males (and females). And finally, the female becomes merely an object, and one of lust. Unlike her Cro-Magnon conspecific, she has no clothes; she is described in terms of physical attributes that are sexual rather than dominant. She is reduced to an idealized personification of the male sexual gaze, the supermodel hanging on the arm of the successful male. She is an accessory or an appendage, not an agent; she is fantasy object to the male's dominating subject.

According to Tina Sikka, these themes are part of the narrative of Paleo diets and masculinity found on the Dark Web, which she argues are "founded on three interrelated cognitive and cultural frames: first, a troubling reassertion of hegemonic gender norms that perpetuate a powerful form of toxic masculinity and nationalism; second, racialized and racializing discourses rooted in debunked or discredited evolutionary science; and third, a particularly injurious neoliberal understanding of self that fetishizes autonomy, personal striving, and free speech, all of which coalesce on and in an overt hostility to the progressive Left (i.e. feminists, etc.)." She states that "this movement has brought together political ideologues, academics, public intellectuals, and young, largely white, men for whom particular foodways play a part in the reclamation of a perceived lost sense of dignity, status, and power."[42] Furthermore, there is an undercurrent of self-control (and implied control of others) throughout the writings of advocates, as demonstrated by the emphasis on a built and maintained hard-body physique as well as on strict adherence to dietary rules and regulations. The creation of a particular kind of masculine self through physical and mental regimentation proves the superiority of adopters, for if they are strong enough to dominate themselves, they are entitled to dominate others.

While he is not the most far right or strident of the Paleo advocates, Richard Nikoley's *Free the Animal* website, book, and blog are good examples of how such values are amalgamated to create a seemingly natural and culturally coherent male identity based on eating Paleo. Nikoley has self-published a digital volume titled *Free the Animal: How to Lose Weight and*

Fat on the Paleo Diet and has maintained a blog since 2003. He uses suppositions about Paleo lifestyles to create a "manifesto" that glorifies individualized personal power and control and the right of men to do exactly what they want (free the animal . . .), which he asserts is how one lives authentically and naturally. For instance, Nikoley states that "human beings possess the ability to *quickly* change everything about themselves, their society, and often even important aspects of their physical environment" (point 1) and that "the key to being lean, strong, and healthy is in your head. . . . You must craft your own diet, health and fitness paradigm. You must learn to regulate your hunger and satiation. The burden is squarely on you" (point 3). Furthermore, this lifestyle is ultimately a singular and individualistic one: "Health increases as self-determination and independence increase. . . . Striking out on your own means freeing yourself from these influences, but you'll be left to fend for yourself without the crowd to confirm and condone your actions" (point 10). This go-it-alone mentality is made even more clear when he asserts that in the past "we know ancient humans were individually and socially powerful, because they survived on their own" (point 18). His world is one where man is, indeed, an island.[43]

His ideal Paleo man is also a misogynist. A search of his site for the word "female" reveals posts that are blatantly sexist, including support of a social system based on "propertarianism," which seems to consist of making sure that people know their proper place, especially women.[44] There is clear support of heteronormative sexuality and male sexual aggression and a predictable call to reverse the Nineteenth Amendment. Negative descriptions of women's character and psychology are included: "Women use political, economic, and other power which they can obtain only by duplicity and parasitism. . . . Of course, males engage in the same political parasitism but, at least they have the role of attending to the storehouse of the commons; or, at least, slow down the rate of looting and raping by females."[45] His message is clear (and clearly a projection): men make, women take, and they "loot and rape" men. To reclaim rightful power, males must control themselves and control others, and the way to do this is by adopting a Paleo diet lifestyle that "frees the animal within" as the natural antidote for the problems of modern life.

Another male power advocate who sells dietary and performance enhancement supplements and Paleo-related nutrition advice is Mike Cernovich, a member of the alt-right and an openly misogynistic celebrator

of toxic masculinity. He's even earned a page on the Southern Poverty Law Center's hate crime registry.[46] His self-published book is titled *Gorilla Mindset*; while it's largely a pile of self-empowerment psychobabble factoids, it's also a paean to embracing the animal within, the powerful, independent ancestral (or pseudoancestral) primate: "A gorilla is a powerful, dominant animal. Rather than view our physical nature as something dirty or evil, I embrace my gorilla nature . . . to find dominance and power."[47] The book doesn't contain the white supremacist diatribes of his blog and website but instead focuses on creating a powerful physique and mindset that promote what he calls a "psychology of success." It is part of his effort to mainstream his alt-right persona and to promote a process of radicalization (a strategy also adopted by John Durant, whose book *The Paleo Manifesto* is largely apolitical, whereas his blog posts are alt-right).[48] His message is that the natural male life pattern is one of personal empowerment through dietary and physical self-control, leading to dominance over situations and other people, especially women. "Dominance over" is seen as natural because it is encoded in men through a primate ancestry that ensured that the most aggressive males were the most successful.

These examples support Sikka's argument, displaying all three of the cognitive frames she analyzes. The adoption of faux evolutionary theories to support male hegemony is also linked to the fetishization of personal autonomy, particularly the right of men to do what they want regardless of social expectations and cultural rules. And finally, there is the demonization of feminists, political activists, and others on what is considered the feminized "Left." It's the retrograde fantasy of confused and immature adolescent boys, but unfortunately these writers are fully grown and influencing thousands. Nikoley's and Cernovich's sites are not on the Dark Web; they are highly trafficked, seemingly mainstream websites that focus on nutritional and physical health. They are a core part of the online masculine Paleo culture because they frequently reference and discuss the other Paleo advocates—Mark Sisson, Tim Ferriss, John Durant, and Art De Vany—among interviews and postings about the work of other male advocacy gurus.

The nexus of male economic success, of making your own rules and practicing an all-meat hyper-Paleo Keto diet, appears in another subculture: the tech-bros who are into cryptocurrency.[49] There is an explicit link in the mainstream tech world between male dominance, libertarian or right-wing

politics, and alternative currencies: "For the Bitcoin carnivore, there is a kind of metaphysical parallel between decentralized digital ledgers and an imagined idea of what our ancestors ate, and by extension, how they lived. Politics, food, and money—it's all connected."[50] In these self-enclosed cultural zones, the overlaps between economic dominance through technology, personal dominance through bodily regulation, and social dominance through right-wing misogyny and hegemony often revolve around a Paleo-inspired diet that promises to return adherents to a cultural and individual space where certain men "naturally" dominate because of inborn evolutionary psychological advantages.[51] Eating Paleo makes men powerful, in charge, and successful; the belief that meat is male while plants are female means that John Durant, an alt-right apologist, considers an all-meat diet to be an alternative to the "left-wing plant-based movement."[52] Alt-right sites provide a coherent online reality and community because of the relentless looping and referencing of stock ideas, core celebrity advocates, and reader comments and discussions. And, unfortunately, online communities of this type can simultaneously radicalize susceptible young male seekers of information about diet and lifestyle improvement.[53]

FROM DIET TO IDENTITY

Readers may wonder why we are discussing broader social identities such as the alt-right and male dominance movements when we write about Paleo diets. Our reasoning is simple: as we explored the communities that advocate for Paleo, we were led, again and again, into platforms that provide a ready-made Paleo lifestyle that intersects with other interests and political identity groups. Obviously, the alt-right and its satellite belief systems are only one element of these belief and practice communities—others include back-to-the-landers and preppers, worried moms with allergic kids, environmental activists, and people who simply want to optimize their diet and health. What is striking is how strongly food adheres to identity construction for so many fad diets, and that truth is especially apparent for Paleo. We notice that when people describe their interest in Paleo, they don't tell us, "I'm adopting a Paleo diet"; instead they say, "I'm going Paleo," "I'm living Paleo," or "I can't eat that food because I am Paleo." These are strong statements about becoming and being, but they are commenting on more than food use. People are embracing an identity that includes food use rules, and the diet is only one

part of their self-conception. And like other dietary trends such as veganism, vegetarianism, and locavore-ism, performing a public identity related to food can be a form of virtue signaling. With Paleo the signaling includes a desire to avoid illness or to optimize health, to demonstrate that one is "living one's best life" to encourage success, or to perform appropriate self-care. Given the emphasis on status, self-determination, and the belief in the neoliberal, self-actualized person that is paramount in many of the peak performance Paleo sites, we can only imagine that part of the signaling is economic—the desire to let everyone know that one is successful and worthy of success because of personal identity practices and habits. We might think of these performances as social signaling about the worth of the individual as well as the importance of a self-transformation process that leads to economic and social success. In all cases these sites and communities reveal a truly determined belief in self-transformation via diet, mental habits, physical exercise, and self-control. Paleo and other similar diet practices (Keto and intermittent fasting) are telling us something important about the state of American culture, what it means to be a properly enculturated citizen and the relationship of the individual to the community.

Fad diets such as Paleo often start as part of an individual identity when someone chooses to adopt a diet for health reasons, but access to robust online and face-to face communities supports the rationality of the identity and can create a totalizing tribal identity or culture. Online communities present coherent, mutually reinforcing beliefs about the efficacy of diets and lifestyles, perhaps best described as a community of practice.[54] Similar mutually reinforcing beliefs can usually be found in books, online portals and websites, user interest groups, and other interactive venues that promote a diet and its related products, and these certainly exist for Paleo.[55] Indeed, once the curious person begins to poke into these avenues, the legitimacy and sensibility of the diet become seemingly transparent and incontrovertible, especially if the user or reader begins to participate in forums dedicated to shared experiences. Psychologically and culturally, users take on a new personal identity as they adopt the "Paleo lifestyle," which alters how they see themselves in the social and biological world; they state that they are "Paleo," using the diet to define not only their food or lifestyle but also their place in the larger social universe.

Another reinforcing process is the *decision-making* that results from attention economics, a concept developed by Herbert Simon and elaborated

for food by Signe Rousseau.[56] Given that each person has only so much time and energy to explore ideas in the face of almost unlimited information, people tend to make decisions based on a bounded rationality that narrows what and how they examine to make it conceptually manageable. Paradoxically, a bounded rationality allows us to experience and accept some level of irrationality in our belief systems by bundling outlier ideas with already accepted concepts. We also tend to accept the ideas of close friends, celebrities, and the influencers who create our favorite online chat boards and blogs, a process Simon terms "docility." Such mental shortcuts allow for the creation of a totalizing cultural space that justifies faith in the chosen lifestyle and reinforces the need to participate in its practices; it's diet as ideology because it is ontologically and epistemologically rational when supported by what appears to be so many differing lines of evidence.[57] Yet for us, these apparently different lines of evidence often look more like echo chambers.

Like Lave and Wenger's "communities of practice," these groups reinforce lifestyle choices through discourses of mutual engagement, joint activities involving negotiated practice norms, and shared repertories of habits.[58] One area of action (in this case, diet) can quickly become attached to other areas of belief and practice because the community presents them as part of a seamless whole. To us it seems that this is part of the process that has created the connections between the Paleo diet lifestyle and the support of hypermasculinity, virility, and male dominance discussed by Zuk and Sikka, and we think that a primary reason for these connections is the cultural linkage between protein eating and male identity.[59]

MAN THE HUNTER

Anthropology bears some responsibility for the linkage between Paleolithic diets, meat, and masculinity, perhaps even male dominance, although the perception that meat is "male" food is deeply embedded in American culture.[60] Early paleoanthropologists speculated about ancient man's food acquisition because food gathering is essential to individual and species persistence and tends to be a primary driver of evolutionary adaption. How an animal gets food affects *and* effects evolutionary processes, often determining essential phenotypic characteristics that ensure the ability to acquire food to grow, develop, and reproduce. Anthropologists could use the great

apes, our closest kin, as analogues for *Homo erectus* and Australopithecines, but most apes are largely vegetarian, whereas almost all human societies eat meat. Therefore, one of the behavioral factors speculated to have accelerated our evolutionary development into a large-brained, socially dominant species was hunting and meat eating. But because philosophical musings about man's essential nature vis-à-vis hunting, meat eating, and aggression predate the discipline of anthropology (for instance, see Michel de Montaigne's "Of Cannibals"), we must accept that Western notions about hunting and human nature influenced early (and later) anthropologists.[61] For instance, in *Primitive Culture*, E. B. Tylor proposed a process of unilinear cultural evolution and development, with early man, hunters, and hunter-gatherers less evolutionarily developed than later white, Western, farming men; in such theorizing, early man is by definition wilder and more animalistic than current populations, which supposedly have more complicated brains and cultures.[62] Tylor was working from analogy rather than from biology, although biological attributes were assumed, marking those deemed less culturally complicated also less biologically developed.

As more and more fossils of early hominids were found, attempts to trace evolutionary trajectories caused scientists to speculate about the advent of meat eating and hunting and what those behaviors meant for evolutionary processes. One of the more influential theories that posited early hunting (and aggression) was provided by Raymond Dart, who identified the first Australopithecine skull. Finding what appeared to be puncture marks in the cranium, he hypothesized that this early "missing link" was a hunter and very probably also a cannibal, making meat eating central to hominid life. He theorized that *Australopithecine africanus* used the upper jaws of carnivores to attack and kill their prey (in this case, their own species) and that "they were human not merely in having the facial form and dental apparatus of humanity; they were also human in their cave life, in their love of flesh, in hunting wild game to secure meat and in employing implements." He further argued, using his hominid evidence alongside analyses from Darwin, the Bible, and written history, that "man" is essentially aggressive and often murderous: "Wherever found, all prehistoric and the most primitive living human types are hunters, i.e. flesh-eaters," and "The loathsome cruelty of mankind to man forms one of his inescapable characteristics and differentiative features; and it is explicable only in terms of his carnivorous, and cannibalistic origin."[63] In effect, he argued—for decades—that meat

eating, hunting, aggression, and even cannibalistic murder were the core characteristics that propelled hominids from ape to man and that the skills required for hunting and killing allowed for the development of bipedality and the large brain we enjoy today. This idea is known as "the hunting hypothesis."[64]

However, in 1981 the paleontologist C. K. Brain pointed out that the marks found on the skulls of *Australopithecine africanus* rather neatly fit the upper canines of leopards, a species known to drag its prey into a tree for storage and eventual lunch. In other words, the accumulation of fossil skulls might not represent a cannibal kill zone but a leopard's larder, and these hominids were most probably prey rather than predator.[65] This hypothesis—eventually accepted by almost all paleontologists and anthropologists—created a tectonic shift in how fossils were interpreted and how anthropologists envisioned the nature of early man and the drivers of evolutionary developments leading to bipedality, large brains, and language. Rather than positing that killing created the best environment for these developments, paleoanthropologists began to suggest other potential causative agents, such as social exchange, care of children, and gathering as well as hunting.

But, unfortunately, the damage was done, and the concept of man the hunter as a murderous, meat-eating ape-man had entered common culture as the experts' take on how *Homo sapiens* evolved. The easy acceptance of the hunting hypothesis by anthropologists as well as the public meant that fossil evidence was most likely to be interpreted as contributing to its validation rather than attributed to a different mode of livelihood and development, one that includes the activities of women.[66] The concept of man the hunter moved neatly into the public sphere in part because of a series of popular books written by Robert Ardrey in the 1960s. Ardrey was a playwright and science writer rather than an anthropologist. But he was a good writer and was able to translate anthropological theory into language that was accessible and often thrilling. Influenced heavily by Raymond Dart (whom he visited in the 1950s), he wrote several books that explained his interpretation of hominid evolution, such as *African Genesis*, *The Territorial Imperative*, and *The Hunting Hypothesis*, part of a "Nature of Man" series published by Atheneum.[67] He was a primary advocate of the idea that male hominid aggression was the impetus for evolutionary development, what he called "innate aggression."[68]

His account of aggression wasn't the only one that was popular at the time; his book was followed by volumes from academics from a variety of disciplines. In other words, these ideas met with broad approval and became an unexamined trope, a just-so story accepted as truth; Lorenz's *On Aggression* was particularly well known beyond the academy and was influenced by Ardrey's writing.[69] Ardrey considered human aggression to be the cause for the development of civilization as well as the impetus for the evolution of human characteristics such as a large brain, social systems, a desire to control territory, and the technical aptitude to create tools, including weapons. He maintained that without the desire to kill, none of these essential *human* characteristics would have developed. But his vision was strictly a male one. In his conception, only males were innately aggressive; therefore, only males, and male desires and capacities, were responsible for the evolution of *Homo sapiens*. Women were, we presume, only along for the ride—as inactive passengers in the development of mankind. Ardrey's books were enormously popular; we are quite sure that if you look in your grandparents' bookshelves, you will probably find a copy of at least one of his volumes. And because they were so popular and so accessible, they cemented the notion of the violent, wild, meat-eating male hunter as ancestor that has been adopted by some Paleo proponents with very little embellishment today.[70]

In addition, in the 1960s studies were published that examined early food economies in relation to health, gender, and social role formation. These were part of a burgeoning interest in biocultural studies to better explain the mechanisms of evolution, health, demographics, and optimal foraging theories. Perhaps most influential was the 1966 symposium *Man the Hunter*.[71] Enormously influential in physical and biological anthropology, it is also notorious for promulgating the "man the hunter, woman the gatherer" myth.[72] In an analysis that was largely speculative, the authors used known assemblages of fossils and tools combined with anthropological studies of living foragers to propose a vision of evolutionary development based on gendered hunting and gathering strategies. They assumed that many tools were used for hunting and that males and females performed very different tasks in the domestic and food economies. Furthermore, like Ardrey and Dart, they blindly accepted that hunting behaviors were male, that hunting was paramount to the Paleolithic diet, and that hunting created a set of behavioral needs that synergistically propelled the

evolutionary development of hominid species. Their analysis concluded that males were largely responsible for producing food for Paleolithic protohuman bands, with women relegated to waiting at a base camp for the hunter-daddy to "bring home the bacon."

Washburn and Lancaster wrote: "Hunting and butchering animals put a maximum premium on cooperation among males, a behavior that is at an absolute minimum among non-human primates." Furthermore, "because females and juveniles may be involved in hunting small creatures, the social organization of big-game hunting would lead to an intensification of a sexual division of labor. It is important to stress . . . that human hunting is a set of ways of life. It involves divisions of labor between male and female, sharing according to custom, cooperation among males, planning."[73] They linked food sharing between the sexes as a core characteristic of hominids, an evolutionary pattern new and very different from other animals. They argued that males bring home food to share with their mates and children, so in the assemblages of the past, the (male) anthropologists saw evidence of their own demographic life patterns. Paleolithic evidence was interpreted to support a family and economic system remarkably like the midcentury, middle-class American family—with mom taking care of children and dad, the economically productive partner, working outside the home.

These authors further expanded upon the division of labor: "If women are to gather while men hunt, the results of the labors of both sexes must be carried back to some agreed upon location. Meat can be carried away easily, but the development of some sort of receptacles for carrying vegetable products must have been one of the most fundamental advances in human evolution. . . . We believe that it is in hunting large animals that all these aspects of human behavior . . . separate man so sharply from the other primates." They also wrote that "this activity, which we are told depends on the psychology, biology and customs of our species, is strictly male."[74] In this vision, women might provide small bits of food while men drag home a large haunch of wildebeest over their shoulder, a common image of the imagined caveman. But then, channeling Ardrey, Washburn and Lancaster expanded from hunting to aggression: "Men enjoy hunting and killing, . . . and, therefore, the evolutionary success of hunting exerted a profound effect on human psychology." They linked hunting to warfare and the enjoyment of killing other creatures, often their own species, which has resulted in social systems that prioritize aggression, writing that "almost

every human society has regarded killing members of certain other human societies as desirable." "These basic biological differences are reinforced in man by a division of labor which makes adult sex roles differ far more in humans than they do in nonhuman primates." From this point the authors explained how hunting and food sharing led to the development of the human family structure (i.e., the nuclear family) as a means to support children and thus continue the species. "The biology, psychology, and customs that separate us from the apes—all these we owe to the hunters of time past."[75]

To sum up from our perspective: hunting was the impetus for the evolutionary development of our species and the creation of the social systems that make us different from other animals, and only men hunt, so, presumably, only men are responsible for the development of the species, and their activities define what it means to be human. In addition, these divided gender patterns of behavior are normal and natural and typical of our species because males and females are essentially different in psychology and biology. Men hunt, they kill, and they bring home meat so that females of the species will mate with them, and that is the basic behavior of our species, and thus meat is our most basic food. This is also a vision that cements male dominance as a deeply normative part of our psyches, one that is hardwired by evolutionary processes. But the authors of these theories had no evidence for any of these theories; they projected onto the archeological record their assumptions about the biology, social structure, and food economies of the evolutionary past.

And while this vision of Paleolithic life is still dominant among the public, the response within anthropology was swift, negative, and very productive, encouraging researchers to actively examine gender and sex roles in relation to optimal foraging theories and human demographic patterns. Sally Slocum, author of "Woman the Gatherer: Male Bias in Anthropology," documented how the male understanding of the world limits the ability to see women's contributions and how these logical gaps are driven by normative cultural biases.[76] Slocum assured readers that the scientific arguments used to explain the evolutionary importance of male behaviors didn't make sense given the science of genetics: "The skills usually spoken of as being necessary to, or developed through, hunting are things like coordination, endurance, good vision, and the ability to plan, communicate, and cooperate. I have heard of no evidence to indicate that these skills are either

carried on the Y chromosome, or are triggered into existence by the influence of the Y chromosome."[77] She also pointed out that women can gather enough food to support themselves and their children, that hunting, a learned (not innate) skill, is not a solely male behavior, that tools assumed to be for hunting can easily be used for other activities, and that aggression is not limited to males. These arguments were expanded in the book *Woman the Gatherer*, particularly in Adrienne Zihlman's chapter, "Women as Shapers of Human Adaption."[78] Her argument is nicely summed up with this quote: "Women and children constitute at least 75 percent of human society; women are the primary socializers; the human diet is omnivorous, not carnivorous; and meat and other protein can be obtained in numerous ways besides hunting."[79] Zihlman, Slocum, and others also point out that it is most likely the development of a long childhood period (and its attendant need for familial and community nurture) that influenced our particular evolutionary trajectory and that ample evidence exists to demonstrate that human and primate societies employ a variety of dietary patterns, family groupings, and gender roles to ensure childhood survival.

This academic firefight was productive because it gave rise to further studies to better understand sex roles in the context of paleoanthropology, to test optimal foraging patterns and hunter-gatherer dietary strategies, and to integrate female contributions to evolution into scientific research. These ideas are still being examined today and can be thought of as part of the intellectual outcomes of second-wave feminism.[80] The philosophical enquiries into the nature of human gender roles were a dominant part of anthropological research during the 1970s and 1980s, influencing a wide range of studies, sociocultural to biological, and deeply influencing Janet's intellectual development as an anthropologist. When she attended UC Berkeley as an undergraduate, Dr. Washburn was an active emeritus professor and an enormously supportive mentor of students, male and female alike. Janet remembers a formative seminar in which Sherry Washburn and Dr. Nancy Scheper-Hughes debated his 1968 paper, gender roles, and male bias. He willingly explained that he made mistakes in his logic, had not examined his assumptions, and made analytical errors as a result. He then warmly discussed the many academics who had refuted his ideas and how much he had learned from them in the years since; indeed, some of his fiercest critics had become his colleagues and academic collaborators.

This exchange deeply affected Janet because it taught her that the scientific method caused ideas and theories to be tested again and again, allowing for hypotheses and analyses to be continuously improved, updated, and refined. She also learned about epistemology, or the philosophical study of how we acquire, use, test, and understand knowledge. The fact that our positionality influences how we ask questions and analyze data was a heady intellectual eye-opener and reveals how easily we can interpret research in a manner that supports our desires, models of the world, or preconceived ideas and ideals. Thus, if we understand the world to be constructed by males, we will *see* evidence of male superiority and rightful hegemony in processes as universal as nutrition and health, while if we *see* the world as equally (or multiply) gendered, we may not. And this tendency has very much influenced the interpretation of the Paleolithic diet today. If we believe that our ancestors mostly ate meat because they relied on hunting for food, we'll look for and believe those studies that indicate that the Paleolithic diet was largely carnivorous, while if we conceive of the human diet as omnivorous, we'll ask different kinds of questions—perhaps questions about dietary intake in relation to environment or possible ranges of hominid hunter-gatherers—or take a life-history approach to exploring gender roles in food acquisition. In short, it's far too easy to look for what we want to find, and to find what we expect.

IMAGINING THE CAVEMAN

And what do we think our ancient ancestors looked like, and how do we envision their behaviors? It's an important question, because that image influences how we think about their diet and lifestyle—and our diets and lifestyles today. The terms "caveman" and "noble savage" come up again and again in Paleo writings, but what do those words mean, and how do people imagine the ancestors so labeled? This is really two questions, of course; we are querying both physiognomy and character, or biology and psyche. So let's do a mental exercise: think of what comes to mind when someone says "caveman." What did you just imagine? Was it a heavy-browed, hirsute, squat male wearing a shaggy hide tunic and carrying a club? Or was it a tall, lean uber-athlete with an admirable six-pack and a come-hither look in his eye? Were you imagining an early hominid or primate such as an Australopithecine, a Neanderthal-esque archetypical "caveman," or our more recent

kin, Cro-Magnon? Perhaps you thought of Fred Flintstone? Search "caveman" under Google Images and we guarantee you'll see all these tropes, and more.

And what about "cavewoman"? Do you have an image of her as well? Is she hairy and squat with a prominent brow and bulging eyes, or more like Daryl Hannah from the film *Clan of the Cave Bear*? Again, use Google Images to search "cavewoman," and the difference is telling: rather than hairy re-creations of a feminine Neanderthal, one gets dozens of photos of sexy cavewomen in Halloween costumes. These are photos of modern women dressed in scanty leopard print minidresses (or bikinis) with tousled hair and a flirty eye; the images are erotic. Judith Berman has queried these concepts and maintains that "the distinction between the scientific and popular Cave Man has diverged only recently. However, the shaggy, grunting Cave Man, who fights dinosaurs, talks 'rock,' and woos prehistoric-bikini-clad Cave Women with a club, is firmly in place."[81] Her analysis of visual images highlights that almost all ancient hominid species, from any era, are portrayed as very hairy. For males, this portrayal signifies a virile, close-to-nature wild man, while for females (whose hair is limited to the head), the signal is fecundity and sexual attractiveness . . . especially those tousled bed-head images in Google!

The imagery of the hairy, muscled caveman predates anthropology by centuries and can be found in Renaissance paintings portraying wild men as hirsute and living in caves. However, these images are not of our ancestors (because evolution was not yet understood) but of an archetypal wild man, a savage "other." These paintings, and the folklore and beliefs that inspired them, were stories about monsters and the ungovernable, the dangerous people and beings outside of society, or the bogeymen good for frightening misbehaving children. Later, these imaginary visual tropes were used to represent many human populations found in areas colonized by Western Europeans, thereby conflating the wild man or outsider and the anthropological "other." Berman argues that these tropes influenced the scientific imagination about early man, particularly distilled in paintings from the nineteenth century that depicted Cain as a barely human wild man. In effect, the concept of the sinful and dangerous outsider, hirsute and ungoverned, morphed into both the scientific and popular imagination: "The 'truth' of the Cave Man image is derived from his Wild Man forebear and not from the archaeological record." Berman sums up the process

neatly: "The Cave Man is a representation of our ancestors; the fact of evolution forces us to acknowledge that the Cave Man resides within each of us. He is our animal, primitive self, before the limits of society."[82]

But what is the wild man, if his character lives within us? Is he the ungovernable and dangerous other or a noble savage who is independent, authentic, and strong? We often think of the idea of man before society as a question belonging to philosophy; this assumption betrays an underlying belief that man is essentially good and that left alone, without provocation, would act morally and ethically. This idea has its origin in Genesis, of course—it's the prelapsarian Garden fantasy or man before the fall. The term "noble savage" was used by John Dryden in his play *The Conquest of Granada*: "I am as free as nature first made man, Ere the base laws of servitude began, when wild in woods the noble savage ran," a statement that posits that man was naturally free and authentic before the constraints of society corrupted him.[83] Earlier mentions by French writers place the concept squarely in the realm of that medieval wild man about which Berman writes, a natural creature whose acts are spontaneous, emotional, and authentic. Montaigne's essay "Of Cannibals" describes a mythical and idealized Brazilian tribe whose members live in harmony with one another and nature, know almost no illness or hunger because nature provides, share possessions, exhibit no jealousy or envy, and seem to live a Garden of Eden existence (aside from that sticky bit about cannibalism). To quote Montaigne: "Those 'savages' are only wild in the sense that we call fruits wild when they are produced by Nature in their ordinary course: whereas it is fruit which we have artificially perverted and misled from the common order which we ought to call savage. It is in the first kind that we find their true, vigorous, living, most natural and most useful properties and virtues, which we have bastardized on the other hand by merely adapting them to our corrupt tastes."[84] This message is clear; the wild man is better than the civilized man because his essential nature—a good one—can shine in the absence of culture's tarnish.

This notion seems to be part of the image that is adopted by Paleo advocates, especially the idea that the noble savage as caveman analogue is authentic, natural, and acting according to internal directives that ensure health and his "best life." The imaginary caveman has deep roots in popular mythology, whether derived from medieval myths about wild men, the green man, or other forest-dwelling outsiders or envisioned by

philosophers, colonizers, and the Enlightenment. According to Joel Pfister, a romanticized (noble) caveman trope was envisioned as the embodiment of the emotional authentic inner self by psychologists and urban intellectuals during the early and mid-twentieth century. The idea and reality of the "primitive within" created acceptance of an inner caveman who was self-motivated, sexualized, and individualized, characteristics then thought to be essential to the real essence of *Homo sapiens*. These ideals also reflected social and psychological processes valued at that time, making the "caveman within" a pseudoscientific simulacrum of the ideal psychological type.[85] Certainly, when we seek to create concepts about the past, we often think we are re-creating the past; we project onto the past an idealized pattern of life and being that reflects an Edenic utopia where the perceived negative influences of the present day are absent; de Montaigne's essay was little more than a projection of the perfection of the human state.[86]

When we do attempt to re-create the past, be it near or far, we tend to cherry-pick the elements that appeal. For instance, Vanessa Agnew analyzed the re-creation of a Paleo lifestyle for a German historical reality TV series in 2007. As she explained, "We are looking for the moment when it all went wrong, that turning point in the human order of things that divided before from thereafter—a time when life was simpler, the body healthier, and social life more transparent." The re-created Stone Age settlement was home to a small group of adults and children who were to reenact the lifestyle of "Otzi," the Stone Age mummified body found in the Italian Alps in 1991. But re-creation proved elusive even for the better-known Neolithic age, and many details of Otzi's existence were glossed over or ignored. The Paleolithic is far more shrouded in prehistoric myth, because much less is known: "The Paleo movement informs, and is informed by, experimental archaeology, living history displays, open-air museums, television documentaries, and 'themed walks' to historical sites, all of which attempt to generate and loosely test hypotheses by re-creating historical artifacts and practices."[87] But each of these elements is created, performed, and interpreted by modern processes and modern culture in the image of modern society's notion of the past.

The elements of Paleo fit neatly into the imaginings of the current Paleo lifestyle, one that can absorb our wishes for an ideal life or reflect cultural values some would like to consider natural and normative, such as patriarchy and male dominance. Even de Montaigne was not exempt in

his building of an ideal metaphorical world. His Brazilian tribe exhibited a profound expression of patriarchal values, so much so that the society was polygamous, and the women (co-wives) wished only to please their husbands: "Being more concerned for their husband's reputation than for anything else, they take care and trouble to have as many fellow-wives as possible, since that is a testimony to their husband's valour." He explains that this is natural per the Bible: "the wives of Jacob all made their fair handmaidens available to their husbands."[88] This passage establishes a powerful trope of some of the male Paleo adherents: that the natural state of men is power and success, which allows access to multiple females. The "animal must be freed" (Nikoley) and the "gorilla within" (Cernovich) must be unleashed because the authentic man is dominant and oversexed. And how to make this happen? By eating Paleo, of course.

WAS THE PALEOLITHIC FOOD ECONOMY GENDERED?

Archeological assemblages can indicate dietary patterns, but they can't pinpoint who was providing the food, or even who was consuming the food. In other words, we don't know if man was a hunter and woman a gatherer; it's pure speculation on our part, based, as we hope we've illustrated, on contemporary beliefs and social patterns and expected or preferred divisions of labor. Archeological evidence does not come neatly labeled with a producer's name, so we have no idea who was hunting or gathering, or their gender, as Slocum and Zihlman cogently argued.[89] What we can do, however, is use analogy with modern hunter-gatherer populations to create a speculative model about gendered food acquisition. But that also proves problematic since modern populations are modern humans, so they are physiologically and cognitively very different from early Paleolithic species and even, potentially, later Homo species presumably more like modern humans. In addition, the environmental and economic conditions of early man might have been very different from those of current foraging people. Choosing the appropriate comparative data is problematic because of the time depth of the evolutionary period within the Paleolithic—an Australopithecine dietary strategy is different from that of early *Homo sapiens*. In effect, analogy only points to the possibilities but does not reveal the shape of past diet behaviors. And unfortunately, we have no idea about how ancient Homo species understood gender or gender roles, so ascribing

modern-day hunter-gatherer sex and gender practices is faulty logic and potentially misleading. Again, the evidence from the present day can only *point to* patterns of behavior that might have existed in the past.

And what do we know about hunting, gathering, and gender? To start, we know that it's far more complicated than dad ranging far and wide to hunt and mom staying at base camp, watching babies and gathering vegetables. And while many, many studies of diet have examined gendered contributions to the familial larder, those studies have also reported highly varied and variable patterns of food economy that differ between groups, locations, environments, cultures, and seasons. What follows is a *very* short overview of what is known about gender roles and procurement outcomes in hunter-gatherer populations, but it is meant to be a possibility rather than a definitive statement. It reveals that some of the assumptions made by male dominance Paleo advocates about food economies are rooted not in science or known cultural behaviors but in their own fantasies about gendered relationships. Some prefer to think that men produce and that women consume, and they project that economic profile onto the past. But in most hunter-gatherer societies, both males and females contribute to dietary and other needs, and male dominance is often less prominent than it is in capitalistic societies in which access to the means of production is controlled by patriarchy.[90]

First, even the *Man the Hunter* volume did not argue that males provided most of the food for hunter-gatherer groups. Richard Lee's influential chapter clearly stated that the diet of the Dobe !Kung of the Kalahari was 60 to 80 percent vegetal and that

> collecting involves two to three days of work per woman per week. Meat provided only 20–40 percent of the diet, and much of that was from small animals (also collected by women) rather than large ones. The men also collect plants and small animals, but their major contribution to the diet is the hunting of medium and large game. The men are conscientious but not particularly successful hunters; although men's and women's work input is roughly equivalent in terms of effort, the women provide two to three times as much food by weight as the men.

His meta-analysis of fifty-eight foraging cultures indicates that hunting provides about 35 percent of the diet, with gathering fulfilling the other

65 percent of food needs, meaning that *if* women are gatherers, they are responsible for most of the food procured in hunter-gatherer societies.[91] But Lee and Devore still maintain that hunting is universally male and always culturally important, even if dietary returns are less than for women's gathering.[92] Such assertions often reflect a projection of gendered activities rather than observations from hunter-gatherer dietary studies, but they were consistent with the anthropological theory of the time.[93]

Woman the Gatherer, published in 1981, provided ethnographic case studies demonstrating that women did indeed hunt.[94] The Agta, who live in the Philippines, derive much of their diet from meat, and women hunt and fish.[95] Similarly, Mbuti women in the Democratic Republic of the Congo are responsible for gathering and procuring food alongside males and have equal status with men because motherhood is prestigious and accords respect.[96] It is implied that their contributions to food and group economy are equivalent to those of males. In an opposing case, Sharp describes the Chipewyan culture of northern Canada, in which 90 percent of the diet is meat, all procured by male hunters. And in this culture, women are devalued and oppressed even though they also have much responsibility for preparing food, caring for children, and maintaining the household.[97] The conundrum faced by these case studies is that status seems to adhere to food procurement activities, creating social systems that value or devalue the gender that is perceived to provide or not to provide. We use the word "perceived" deliberately here, because in many cultures the work of women is often ignored and sidelined or considered to be no work at all ("just a housewife"). However, time studies demonstrate that women, on average, work more hours than men in almost all cultures—on average 4.5 hours of extra (usually unpaid) food work, housework, and childcare per day.[98] One of the conclusions of *Woman the Gatherer* was that when women contribute to food acquisition, their status within the culture is higher and the society is more egalitarian.[99]

We are grappling with intersecting diet and gender questions at this point, both relating to women's contributions to the household and group food economy. First, how much do women contribute? Second, what do they contribute, and how does that contribution affect the dietary intake of the group? Third, how and where might this information apply to our hominid ancestors? The first two questions are made somewhat clearer by Nancy Howell, who examined the demographics of the Dobe !Kung.[100] By using

a life-history approach, she was able to chart gender and age contributions over time, and her conclusions are virtually opposite what we, as "modern" Americans, think about who contributes to the economy. She calculates that older !Kung women (aged forty to sixty) provide more calories per day than other age groups of women and that older men (aged thirty-five to sixty) also contribute more calories per day than younger men.[101] Men younger than twenty-five produce only 80 percent of the calories provided by women of that age group, in part because they have a steep learning curve to acquire hunting skills. Overall, !Kung women contribute 55 percent of all calories plus an additional 4 percent in the form of breastmilk, while men produce 30 percent of calories from meat plus an additional 13 percent of gathered calories. Howell estimated that males produce about 20 percent more calories than females at their peak productivity, and they spend more hours hunting but bring in fewer calories; their success rate in finding food is lower. In effect, while !Kung women do not hunt large game, they still manage to produce equal and perhaps greater amounts of calories than !Kung males, and this pattern results in a calorie balance of 30 percent meat and 70 percent gathered vegetal foods.[102]

Other hunter-gatherer groups invert this outcome, with men producing more calories than women once hunting skills are acquired, and in other cultures females hunt, often for smaller animals and fish and shellfish.[103] In other words, because cultures and ecosystems vary widely, it is impossible to state unequivocally that males are more productive than females or vice versa, or even if the pattern is male hunting and female gathering. Hunting seems to be more important in colder climates, but an all-meat diet would not meet human nutritional needs during seasonal cold stress in which hunted animals are of low weight.[104] Vegetable material tends to be more prominent in the diet within tropical zones.[105] Overall, it's estimated that meat provides about 35 percent of calories with a typical range of 20 to 50 percent in foraging societies, with plants providing 65 percent of calories.[106] And while in some societies this breaks down neatly into gendered production patterns (or seems to), in other societies both males and females gather and hunt. In other words, we can't comfortably agree with the male empowerment Paleo advocates that a hunter-gatherer lifestyle privileges meat over plants, or males over females. Even with the mythology of man the hunter influencing our understanding of the present and past, we can't conclude that males are "naturally" dominant because they provide the vast

bulk of food for the family. Indeed, evidence from twentieth-century foraging populations indicates that the dietary economy is shared and socially complex and that both males and females contribute substantially to the food balance of the household and group.[107]

HOW DO WE KNOW WHAT PALEOLITHIC HOMINIDS ATE?

The economist John Maynard Keynes said: "The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. *Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist*" (italics added).[108] This quote presents two related principles. The first is that epistemological truths are constructed from past philosophical reasonings and that we are often unaware of those influences upon our current ideas. The second is more explicitly anthropological and causes us to ponder how the economy of the past influences the reality of the present. Indeed, much of the research that examines current dietary and nutritional outcomes is dependent on understanding something of past economies of diet, just as our modern morphology is the result of successful adaptations to the dietary conditions of the past. Of course, therein lies the reasoning of many Paleo adherents. They are not incorrect; but their understanding of the past may be overly influenced, as were Keynes's economists, by the cultural understandings of the philosophers and anthropologists of the past and by their own wishful thinking about ideal cultures and lifestyles.

But how do we understand past diet, and how do we reconstruct the biological and cultural variables that allow us to estimate past diet and health? We've already hinted at many of the methods, but understanding how anthropologists and other scientists re-create the past is important if we are to examine current beliefs about Paleo. We need to ask in-depth questions about past diet as well, rather than assuming that one or two analyses can answer all of our questions and point us to what we "should" be eating today if our bodies are truly Paleolithic. Questions that aren't asked frequently include the following: Are there different kinds of ancient diets? Are there differences between the primate diet, the early hominid diet, and the late Paleolithic diet, and do those differences matter for our health? Do these diets really affect our health today, or are we creating a strawman

argument to explain other modern public health problems? Do the diets really point to what we "should" eat? And is there really a "should," or is diet far more complicated? We find that too often these more contextualized questions aren't asked by current-day Paleo adherents and that they rely on a dichotomized construction of past versus modern diet that obscures the complexities of the role of past diet in modern-day health issues.[109]

Anthropologists and the other scientists who query past diets rely on an established set of conceptual methods to explore what our ancestors might have eaten. They include analogy, which we've already encountered, or what modern foragers eat and what other primates eat; comparative morphology of ancient and modern bodies to tease out differences in biology and practice; archeological evidence such as site assemblages, tools, other physical remains (such as coprolites), and evidence for past environmental conditions; nutritional and medical studies of comparative growth, nutrient balance, and disease; and finally, behavior as analogy in that human food habits are compared with those of other higher primates. When employed to answer specific questions, these diverse disciplines can be triangulated to indicate the shape and consequences of Paleolithic lifestyles.

Analogy has been used extensively to understand Paleolithic diet and health. We've already encountered analogy in the arguments for "man the hunter" in which current forager cultures were examined to provide models for past foraging populations. Philosophically, analogy is an inference that if things agree in some respects, they probably agree in others and that we can draw a comparison to demonstrate similarities. Doing so allows us to explain an unfamiliar or difficult idea or object by showing how the idea or object is similar to a more familiar one. For instance, knowing about prehistoric past lives is impossible, so we compare modern hunter-gatherer cultures and living primates to the archeological evidence to create a composite picture of the past.[110] However, many current foraging populations are living in marginal ecological zones because they have been displaced from more productive or temperate areas. Their potential food sources may be severely constrained in relation to what would have been possible for earlier groups of Paleolithic hominids. Nevertheless, we can use them as an analogy for Paleolithic hunter-gatherer food acquisition.

Anthropologists and others have used forager comparative data to create a hypothetical past diet. Anthropologists working with the !Kung, Ache, Hadza, and other hunter-gatherers have tested hypotheses about food use

patterns, dietary and nutritional intakes, the caloric expenditure used in food-gathering activities, the skills and capacities needed for effective foraging, and cultural belief and practice systems that determine what's "good to eat," who eats it, and how much they eat. These studies create a far more complex understanding of dietary habits and outcomes and more reliably point to how foragers in the past may have lived and dined. The most influential of the comparative studies are those of Eaton, Konner, and Shostak, in which they used dietary intake and nutrient composition data to calculate nutritional intake patterns.[111] Kaplan, Hill, Lancaster, and Hurtado similarly analyzed dietary intakes and how they may have altered over the course of evolution.[112] Kristen Hawkes and her colleagues used a life-history approach to chronicle diet, health, and child development among the Hadza, examining topics as diverse as food sharing, time use, and childcare.[113] These are only a few of the literally thousands of articles and books published that query the relationships between modern forager diets and the past; and, as we shall see, their conclusions are somewhat more complicated than the popular books might indicate.

Analogy has also been used to compare living primates to Paleolithic diet and health, focusing on morphology, foraging behaviors, and diet habit. Using primates as analogues has a rich history but presents numerous epistemological problems.[114] Simply put, it's far too easy to assume that early Homo species were more like primates than they were and to attribute primate characteristics to them, but it is still worthwhile to ask which morphological attributes of nonhuman primates relate to evolutionary processes and the adaptations that separated our various lines, specifically those connected to diet. Comparative examinations of gut morphology and brain size indicate how the divergence may have been influenced by diet. Differences between the guts of human and nonhuman primates illustrate dissimilarities in diet and behavior, since gut size is determined by overall body size as well as diet. Food of low digestibility (grasses, high-fiber leaves, etc.) requires relatively large guts with elaborated fermenting chambers, while food of high digestibility (such as sugary fruits, protein- and oil-rich seeds and animal material) requires smaller guts and simple stomachs but longer small intestines.[115] Carnivores tend to have short guts and a small stomach since their food is nutrient dense. The size and proportion of the human gut reveal *Homo sapiens* to be dietary generalists or omnivores capable of consuming fruits, vegetables, and meats and to require a wide

variety of foods to meet nutritional needs.[116] In comparison, the large gut of the lowland gorilla demonstrates a high-fiber, low-density diet—and its essentially vegetarian and grazing nature, a fact overlooked by Mike Cernovich when he uses the gorilla as a metaphor for a hard-charging, aggressive Type A human male. Of course, the gorilla is also very large and very hairy, which signifies male aggression.[117]

Another difference between the past and present *Homo* species and apes is the size of the brain in relation to the size of the body, which is important because brains are nutritionally expensive to grow and to maintain. The evolution of the large hominid brain concurred with the adoption of a nutrient-dense and omnivorous diet because the energy needed for brain metabolism is positively correlated with diet quality, also known as the "expensive tissue hypothesis."[118] The additional nutritional resources required by the large brain fueled a need for better-quality foods, which fostered better hunting and gathering strategies, leading to a positive feedback loop that promoted the evolution of the larger brain. Maternal metabolic output during pregnancy and lactation largely determines achieved adult brain size, and human mothers carry and nurse infants for approximately the same amount of time as the great apes but produce larger babies with correspondingly larger brains. Since the brain continues to grow until roughly the fourth year, the denser human diet may allow mothers to provide the nutrients necessary for brain development during the period of greatest growth.[119] It makes sense that hominids would eat a better-quality diet if they had to build better brains, and building better brains allowed them to forage more effectively, and for more difficult prey and more elusive gathered foods. The larger brain allowed them to efficiently utilize their environment and to nurture large-brained babies, and so they persisted and got smarter with each new species. Indeed, the evolution of the human diet and the evolution of the species depended upon eating an omnivorous, highly nutritious diet.[120] So meat has probably always been an important part of our species' needs because it's nutrient dense, but so is honey, which was also an important, if episodic, source of the sugars and concentrated energy required to power the enlarged Homo brain, even if committed Paleo adherents think that sugars aren't part of the ancient diet.[121] The bottom line is that we remain committed omnivores, as demonstrated by our morphology, and diet versatility was probably an important part of our evolutionary process.[122]

Scientists have examined many other variables to make comparisons and to gather raw data from archeological assemblages. Sutton, Sobolik, and Gardner explain the methods used to estimate and understand past diet in *Paleonutrition*, providing not only a review of the archeological data but also analyses and case studies of past diet.[123] Fossilized bones are only one type of data that tells us about diet—also important are paleoethnobotany, bioarcheology, and paleopathology.[124] And there are thousands of studies that examine archeological evidence for past diet parameters, looking at bones, tools, artifacts, fire remains, use patterns (processing, microwear), food leavings (garbage), pollen and phytoliths, and even coprolites, which are fossilized pieces of excrement. In human and protohuman living sites there are often thousands of years' worth of bones, arrowheads, charcoal pieces, and other evidence of kitchen activities. Therein lies one problem—bones tend to persist in the environment far better than other kinds of food garbage. Similarly, the tools often associated with meat eating might typically be made of stone (blades, scrapers, arrowheads, etc.), and those preserve better than food preparation tools like woven baskets, digging sticks, and other wooden or perishable items. This means that the assemblages are skewed for evidence of hunting and meat eating and skewed against evidence for a more omnivorous diet. In addition, the assemblages change over time as their evidence degrades, making definitive statements about past diet difficult.[125] These problems translate into "we can't observe what happened then and we don't know what happened to the garbage left behind," although sometimes we can make an educated guess by triangulating data.

Studies of direct archeological data hint at these complexities. A very early sample (approximately 780,000 BCE) of botanical remains in the Hula Valley provided fifty-five taxa of food plant materials apparently used by the inhabitants, suggesting that these hominids were processing and eating a wide range of plant materials as food, including carbohydrate-rich underground tubers.[126] Studies of microwear patterns and plaque on Neanderthal dental remains suggest that they ate an omnivorous diet, including complex carbohydrates from grains and tubers.[127] Ecological variation also played a role in dietary intake because populations living in open grassland tended to have higher meat intakes while those living in a wooded environment ate more grains and tubers, with microwear patterns that resemble current forager groups living in ecologically similar areas.[128] Analysis of the

bacterial contents of tooth plaque from a population living in what is now Spain showed that they ate mushrooms, moss, pine nuts, and other woodland foods. In contrast, a population living in an open, northern location in Belgium ate more meat, specifically woolly rhinoceros and wild sheep.[129] In effect, the diet of the Paleolithic Neanderthal contained a wide variety of foods, and dietary change over time was minimal; the most salient influence on intake was environment.

We also have direct evidence of diet through analysis of the stomach contents of Otzi, the Neolithic hunter who was killed in the Alps 5,300 years ago. His population had access to either cultivated or wild stands of grain as well as all the resources of a trans-Alpine ecosystem. His stomach contents included red deer, ibex, goat, einkorn grain, and bracken fern, which might have been a medicine.[130] Pollen analysis indicates that he was omnivorous and that his diet reflected a broad range of available foodstuffs from the region.[131] Otzi belonged to a later human group that gathered or even grew grains and that ate both wild and domesticated meats. The point is that his diet was mixed and that meat intake was balanced by a diet of grains and vegetables typical of modern foragers. The balance of his last meal might not have been terribly different from meals enjoyed by the earlier European Neanderthals.

Anthropologists and biologists rely on multiple lines of evidence to create composite images of past diet and health. The range of scientific methods and theories is broad, and the means of accessing, interpreting, and analyzing remains include analogy with primates and foragers, comparative morphology and function, archeology and fossil studies, environmental reconstruction, isotope analysis, and nutritional analysis. Scientists have used—and continue to use—every form of technology and methodology, as well as deductive and inductive analysis, to increase evidence about past diets and how nutrition influenced evolution. The analysis is complicated by deep history, multiple species of primates and hominids, and profoundly diverse ecological and cultural environments that make simple, assured conclusions nearly impossible. The dietary history of *Homo sapiens* is far too complicated to distill neatly into a Paleolithic lifestyle cookbook, and so scientists don't even try to provide a blueprint for a Paleo diet. Just as the diets of living cultures are wildly diverse, so were the diets of the past. But what we do know is that all human populations share certain diet-related variables that are largely

absent in primate species, and that meat alone cannot supply the nutrients we need to be healthy because the brain relies on glucose, the gut requires fiber, and not all essential nutrients are available in flesh.[132] Humans are profoundly omnivorous, require a large variety of essential nutrients, create cuisines with specific food preferences and taboos, transport and store food, create and use complex technology and a division of labor for the acquisition and preparation of meals, share food, and employ potential foods in non-nutritional rituals.[133] For each of these variables, human ancestors created new patterns of behavior and biology that differentiated them from their nearest relatives, the apes, and thus we know that these cultural correlates of past and present diet might be as important as dietary content for our evolution.

WHAT WAS MORE IMPORTANT: WHAT PALEOLITHIC PEOPLE ATE OR HOW THEY ATE IT?

Consider, for a moment, that *what* was eaten may not have been as important to our health and evolutionary development as *how* we ate it. We often imagine that the components of foods are more important than the culture of eating, because nutritionism tells us to think about the nutrients rather than the whole of the diet, and what is in the food must be more important to our evolution than the context of its intake.[134] But that is probably a very incorrect assumption, because without fire and food sharing, we would simply not have been able to grow large brains, nurture offspring with long childhoods, and outcompete and outbreed other large primates.

You've probably seen artistic renderings of cavemen eyeing a burning branch with wonder and awe; these images are often used to depict the discovery of fire as an important threshold in evolution. Being able to harness heat for warmth, to set grassland fires to drive game, and to cook food has completely altered how we live and eat.[135] There is a reason that the hearth is considered the heart of the home and that many cultures revere their "hearth gods" as essential to the well-being of the family. The anthropologist Claude Lévi-Strauss argued that cooking was the start of humanity.[136] Fire is culturally symbolic and biologically important because cooking renders food easily digestible and increases its nutritional value. And, according to many paleoanthropologists, it may be one of the reasons we were able to develop a large brain.

Richard Wrangham and his colleagues have proposed that cooking made possible the increased body size and brain development of *Homo erectus* by expanding dietary options and the bioavailability of food nutrients, particularly by rendering tubers and other vegetable matter edible.[137] They note that tooth and gut size decreased at about the same relative time as brains began to expand, bodies enlarged, sexual dimorphism diminished, and fire was adopted, indicating that food was providing more nutrients at less physical cost. Wrangham tells us that this allows for more calories with less effort by swapping "guts for brains," thus supporting the "expensive tissue" hypothesis. These biological changes were accompanied by social changes that altered hominid mating patterns and precipitated the development of food-sharing family units and sexual bonds. These ideas, tested and expanded over the last several decades, demonstrate that cooking and cooked food are essential to *Homo sapiens* because we have adapted our biophysical development to require the concentrated nutrients of cooked foods.[138] In summation, fire not only made the home cozy and warm; it also created a social focus (the hearth) and improved nutrition, creating a feedback loop that favored larger brains, increased social bonding, and better utilization of environmental resources.

But what about that social focus? Because of our long childhood period and expensive brain, mothers and children need a lot of good food to ensure growth and health. And mothers' food needs are high because of infant care and lactation. While mothers have been shown to be able to forage adequately for themselves and their children, this foraging does place a burden on them; mothers and children probably do better if they are fed by others, a form of inclusive fitness. Additional aspects of human life history include a long childhood (the period when children are not able to feed themselves adequately), the need to learn more cognitive tasks in order to function effectively in human groups, the fertility enhancement benefits of women shortening breastfeeding in order to return to fecundity, and the observation that we are the only species that feeds it young past weaning.[139] Studies (including Janet's) exploring food provisioning are extremely numerous, so we'll simplify the discussion. Moreover, these theories dovetail with the fire theory, and so we are really thinking through a suite of mutually reinforcing behavioral adaptations.

It has been hypothesized that food sharing among early hominids was the behavioral change that improved the survival of children, allowing the

big brain and long learning period of childhood to become a mark of our species. C. Owen Lovejoy hypothesizes that when males began to provision their mates and infants, their overall fitness increased because more children survived; these children were able to develop larger (expensive) brains, and their mothers could go back into estrus faster (have babies more frequently), creating a positive feedback loop that propelled an adaptive suite unique to Homo species.[140] It was food sharing that determined evolutionary development, not what was eaten; humans probably evolved because they shared high-quality food.[141]

Anthropologists exploring inclusive fitness then turned to hunter-gatherer cultures to examine the food-sharing patterns that improve survivability. Often these theories are lumped into two camps, the "grandmother" hypothesis and "embodied capital," although there is significant overlap and the outcomes are analogous. The first was articulated by Kristen Hawkes to explain long human life spans, especially those of older postmenopausal women. She argued that the differences between humans and the great apes are our potential longevity, late maturity, midlife menopause, and early weaning.[142] Hawkes and her colleagues measured food sharing and child-caring behaviors among the Ache and Hadza and noted that mothers and grandmothers frequently provisioned weaned children. Since women are responsible for most of the food given to young children, any time shifted to nursing a baby may have health consequences for older children because it decreases the time available for foraging. And, indeed, in their sample there were differences in child weight corresponding to the mother's foraging time. Grandmothers respond by increasing foraging time, provisioning, and childcare when the newest child is nursing, thereby increasing weaned children's weight. Consequently, children eat better and have better health, leading to increased rates of survival, potentially greater numbers of offspring themselves, and greater fitness in general.[143] Food-sharing networks tend to improve maternal and child health.[144] This form of cooperative feeding leads to what is often called cooperative breeding, or an increase in inclusive fitness through caring and sharing for kin.

The "embodied capital" model, presented by Hillard Kaplan, proposes that male food provisioning of women and children creates fitness differentials leading to human patterns of evolutionary development.[145] Male food sharing, particularly of meat and fat from hunting, results in greater physical size, better health, and greater potential reproductive success and inclusive

fitness—all of which nurtures children through a long, slow growth period while they learn the skills necessary to succeed. Kaplan also argues that as resource niches become more complex and require greater skills for food acquisition, parental investment increases to improve offspring capacities. Learning to hunt successfully requires a long period of training, and the child must be nurtured, taught, and fed during this period. Using food acquisition data from the Hadza and the Ache, Kaplan links nutrient density to food sharing: "Those foods that are easy to procure are acquired by human and primate young alike, and those that are difficult to extract or procure are not acquired by young and are provisioned by parents. . . . As a result, human children are provisioned."[146] Male provisioning also decreases the age at weaning (because children are cooperatively fed) and increases women's nutritional health, allowing more babies to be born and to survive.[147] Since these authors studied foraging groups in which men hunt in order to bring home large game animals, their arguments mirror "man the hunter" theories, but they do not support the old myth that males became hunters to gain sexual access to females; instead, males may have become hunters to ensure the health of their mates and children, thereby increasing their inclusive fitness. This is a subtle but important difference.

Of course, all three theories dovetail neatly and suggest that fire as well as food sharing (males, grandmothers, aunts, uncles, etc.) work together synergistically to create the unique human life histories and evolutionary advantages that have made our species more successful than other great apes.[148] By feeding one another cooked, easily digested morsels of high-quality foods (meat, vegetables, tubers, etc.), we have made it possible to have smaller guts, bigger brains, and longer childhoods and to successfully exploit our foraging environment to ensure that our families are well fed and healthy. The theories of when and how males provision, and when and how female relatives provision, illuminate cultural patterns that teach us that sharing food is how to be a "good person" within a family and community. When food sharing is encoded as cultural and biological characteristics of *Homo sapiens*, we see that every culture and family prioritizes the feeding of children and one another, and we also see why and how we evolved from *Homo erectus* to *Homo sapiens*. While this may all sound like a lot of evolutionary theory, we hope we've convinced you that *what* we ate might not be nearly as important as *how* we ate it, making the firefights over what foods should be considered Paleo rather pointless. The bottom

line is that we ate whatever our environment provided if we recognized it as food, and because we shared with friends and family, we survived. It was human nurturing and fire rather than male aggression that provided the oomph that caused evolutionary development, according to paleoanthropologists. So the cornerstone of the male dominance fantasy has been neatly eviscerated, although the Cernovichs and Nikoleys who promote toxic masculinity will probably never accept or believe the science that has proven them wrong.

BUT WHAT WERE OUR PALEOLITHIC ANCESTORS ACTUALLY EATING?

We've already answered this question, using analogy, taphonomy, and direct archeological evidence. They were eating anything they recognized as food and could capture, dig, pluck, cook, chew, and digest. Their environments were diverse and so were their diets, and they expanded throughout the world because they could eat many different foods from many different ecosystems. They were omnivores with big brains and learned which foods were safe and tasty from one another, and they created cuisines that enhanced the palatability and nutritional qualities of their meals. They ate together, sharing food and making sure that the little ones were fed. Those are human food patterns now and, we must assume, hominid food patterns then.

The studies cited in this chapter demonstrate that hominids were omnivorous and that, in contrast to Paleo fantasies about all-meat diets, they ate tubers, grains, and other carbohydrate foods. But perhaps that's not the right question. Perhaps the more important question is how their diet was different from modern diets and how that difference affected health. By asking that question, we have returned to diet and food and can ask how the omnivory of the past was different from the omnivory of the present. And that is, indeed, an interesting and important question.

WHAT DIDN'T CAVEMEN EAT?

Cavemen didn't eat Cheetos or Pringles or many of the modern processed foods we call snacks. They may or may not have eaten dairy; we just don't know. They didn't eat gingerbread cookies, Coca-Cola, or Starbuck's Pumpkin Spice Lattes, but they may have eaten other glucose- and

fructose-containing sweets such as honey and fruit. They certainly didn't eat the modern additives that are now employed to make food, such as trans fats, stabilizers, and flavoring agents. Their diet was probably far more varied and episodic than ours because we rely on only a few agricultural crops. The number of foods they ate (on average) was greater, and so their nutrient intake was more varied, and some of the foods they ate contained very different nutrient balances than their modern equivalents. Indeed, their nutritional intake was different from ours, as demonstrated in *The Paleolithic Prescription*.[149]

Using modern-day foraging groups as analogues, the authors of *The Paleolithic Prescription* calculated food and nutrient intakes using observational studies and nutrient tables. The most important takeaways from their analysis were that ancient humans ate much less sodium and far more potassium in relation to sodium; daily calcium intakes would also have been higher. They probably ate less fat overall, but that fat had a different fatty acid profile than the fat of modern farmed animals.[150] Because of their higher intake of whole plants, the intake of Vitamin C and fiber (both cellulose and hemicellulose) would have been much greater than that of modern American diets. They would have eaten much less refined sugar and carbohydrates and probably no or very little alcohol.[151] As researchers point out, the differences between these forager diets and the American diet often correlate with intakes known to cause today's public health nutrition problems, especially hypertension, obesity, diabetes, and heart disease.[152] Indeed, nutrition studies that replaced a standard diet with a Paleo diet found that blood pressure, blood glucose, insulin response, and low-density lipoproteins were reduced after only a short time.[153] In a reexamination and reprisal of this earlier work, Konner and Eaton adjusted some findings but pointed out that core differences remained: ancient humans ate much less sodium and refined sugars or carbohydrates, ate much more fiber and protein, and ate very different kinds of fats.[154]

In 2016 Konnor summed up the findings in this way: "Recent data on these issues make me more comfortable today saying what not to eat. Our ancestors had no refined carbs, which are killing us. We'd be wise to limit salt and saturated fat, which our ancestors' prey had little of, and fiber and omega-three fatty acids seem to be good. Most humans avoid dairy; many must avoid wheat. Find out if you're one of them. Exercise. That's about it."[155] Pithy and concise, that statement neatly sums up the nutrient intake

differences between modern and ancient diets, although the statements about dairy and wheat are problematic. A better word choice would be: "many humans have to avoid milk as adults, and a small percentage must avoid wheat." Konner misleads readers about dairy when he assumes that all dairy contains lactose because the process of making cheese eliminates almost all lactose. He also exaggerates the problems associated with the gluten in wheat, which affects only a small number of people worldwide. His statement is philosophically important, however, because it points us to the kinds of absolutist language that has informed the discussions—and the arguments—about the Paleo diet. In the 1990s Ray Audette used Eaton, Konnor, and others to provide a list of foods to eat (meat, fruit, vegetables, nuts, and berries) and to avoid (grains, beans, tubers, dairy, and sugar) that presaged the more extreme Paleo recommendations of the second decade of the twentieth century.[156] Disagreements over which foods to eat, when, and how have mired advocates in arguments over what is truly "Paleo" and confused the casually curious. Furthermore, since we don't know exactly what individuals and groups of ancient hominids ate, or their resulting nutrient profiles, we rely largely on analogy and indirect evidence to hypothesize intake amounts and nutrient profiles.[157] Modern foragers provide nutrient intake data, but translating nutrients into foods has proven contentious, as the innumerable books, blogs, user groups, and endless arguments over the Paleo diet can attest. Consumers are desirous of a Paleo-influenced diet but are presented with a food system that provides food profoundly different from what was available in the past.[158]

PALEO-ADVOCACY NUTRITION IN ACTION

There are literally thousands of Paleo diet books available, ranging from recipe books to wellness programs to health plans created by medical (and pseudomedical) doctors who promise to reverse aging, cure disease, and prevent most—if not all—of the physical problems that scare us the most. These books tend to fall into two categories: cookbooks and diet or health makeover plans. The former have lots of pictures and kitchen workarounds for "going Paleo," and the latter promise a revitalized and fully healthy you, if adopted. Searching online, in bookstores, and in the community library revealed the most popular volumes, and Janet reviewed the books with the highest circulation numbers from the Delaware County Library system. In

many cases the Paleo books overlap with other diet books, particularly for Keto, gluten-free, antiwheat, and antidairy diets (and those written by doctors, such as Gundry, Wahl, and Perricone, who publish Paleo-like health regimes), because these practices have become conflated in the minds of advocates, no doubt because of statements from experts such as Melvin Konner. Janet rather likes *The Complete Idiot's Guide to Eating Paleo*, but it hasn't been checked out nearly as many times (249) as has William Davis's *Wheat Belly: Lose the Wheat, Lose the Weight, and Find Your Path Back to Health* (685). The diet books provide a similar structure: some background on eating in the Paleolithic, the health benefits of eating Paleo, what to eat and what to avoid, recipes, and usually a section on how to navigate cravings for non-Paleo snacks and desserts. The recipes are usually simplistic, with a small ingredient list made of substitution foods such as almond flour in place of wheat and coconut oil instead of corn or soy oils. While *The Complete Idiot's Guide* forbids all grains, legumes, refined sugars, most cooking oils, and potatoes and other foods of the nightshade family, it provides relief by allowing alcohol, since (they tell us) the Maasai drink it.[159] This diet replicates other fad diets' dislike of members of the nightshade family, although there is no evidence that the wild ancestors of tomatoes and eggplant were not a part of ancient diets. Neither author is a nutritionist, although Quinn did get a "nutrition therapy" certificate from Seven Bowls School of Nutrition, Nourishment and Healing in Boulder, Colorado—a nonaccredited institution. Glaspey came to Paleo via Crossfit but works in "tech start-ups." Both advocate for Paleo because they suffered from various health ailments that were healed, they assure readers, by eating Paleo. Janet is unsure how Paleo pizza made with almond flour might cure disease, or how chorizo scrambled eggs and shrimp-avocado omelets might have been eaten by hunter-gatherers, but they do sound tasty.

The most popular cookbooks provide largely repetitive recipes, but Janet noticed a trend over time. Earlier books tend to allow moderate amounts of food later banned, such as grains and tubers. In *The Origin Diet*, Elizabeth Somer provides a food pyramid that places carbohydrate foods at the bottom as a staple, and the pyramid resembles the then-current USDA food pyramid but with lean red meat (bison) in place of beef and few processed foods.[160] She even allows soy and legumes, foods forbidden by later authors. Somer is a nutritionist, however, and was calling upon her knowledge and training to adapt professional recommendations to the guidelines

of Boyd, Shostak, and Konnor. By 2015, Loren Cordain was making clear that no one should eat these foods, or sugars of any kind (including maple, coconut, date, and honey), or even oils not specifically allowed. He's against nut flours as well, even though they tend to be a substitution staple of many other writers' Paleo recipes. His earlier books provided a less defined list, calling for no diary, grains, legumes, or processed foods.[161]

Similarly, *The Big Book of Paleo Recipes* by Linda Larsen disallows all grains, tubers, and peanuts, asserting that Paleolithic hunter-gatherers never ate them and that they are toxic because of the presence of lectin, which she states causes "leaky gut"; that connection is repeated by many authors, including Cordain.[162] Larsen argues against but allows dairy, but only if organic. Julie and Charles Mayfield have built a publishing mini-empire and lifestyle brand around family-friendly Paleo, and in *Weeknight Paleo* they make clear that gluten, grains, dairy, legumes, sugars, processed foods, and alcohol are forbidden, but tubers are allowed.[163] In effect, as the years rolled on, the diet became more restrictive, more contentious, and more doctrinaire, with even Cordain acknowledging the intense disagreements within the Paleo community over allowed foods.[164] Perhaps the practice has truly moved in that direction, or perhaps authors and advocates are successively latching on to new diet fads (such as gluten-free and Keto) to continue selling books. Recipes in these books tend to be simple, with few ingredients and spices. They also are designed to be broadly popular, including favorite American foods like tacos, burgers, and casseroles. They resemble the recipes Rachel Ray promotes and often are labeled easy and family-friendly or use words designed to convey approachability and no surprises.

Most of the recipes seem perfectly healthy according to nutritional guidelines, especially since they abjure the use of processed foods. Adding more whole vegetables to a meal is always a good idea, as is decreasing the intake of simple and refined carbohydrates. Janet is surprised to read that lean meat, the cornerstone of diet advice from *The Paleolithic Prescription*, is not always promoted because many diet gurus advocate for higher fat intake. Audette, Quinn and Glaspey, the Mayfields, and even Larsen provide many recipes that contain quite large amounts of bacon. Wild meat tends to be lean with far more polyunsaturated fatty acids than modern farmed animal meat, one of the reasons that pastured meat is popular among Paleo advocates.[165] While Somer advocates for pastured and wild meats, many others

don't emphasize such substitution, which makes sense given that many cookbooks provide broadly accessible recipes and pastured meat is significantly more expensive. Nor are most writers particularly careful about sodium intake, another key difference, according to Eaton and Konner. The cookbooks seem decent, if basic, and provide the kinds of recipes often found in cooking magazines aimed at health-conscious home cooks. What makes them "Paleo," it seems, is the omission of dairy and carbohydrates (particularly wheat) and the use of substitution ingredients such as coconut oil, arrowroot starch, almond flour, and the like. Take out the bacon and these recipes could be found in the healthy low-fat cookbooks of the 1980s; remove the esoteric ingredients and you have recipes from the 1990s from *Healthy Eating*, *Eating Well*, and other diet magazines. Janet suspects that "healthy" recipes are like fruitcakes; there are only a few on earth, but they are endlessly recycled, regifted, and reworked as fashion dictates.

THE PALEO MAKEOVER

Other popular books about Paleo are medical or pseudomedical and focus on curing health conditions or promoting health, vitality, and longevity; perhaps we should consider them lifestyle plans rather than diets. Some of the volumes that are coded as Paleo aren't technically a part of the movement but share so many ideas that they are nearly seamless to adherents. The best example of this phenomenon is *The Whole30*, a publishing juggernaut and lifestyle brand that has dominated the diet industry for several years. Within the manifesto the cofounders make clear that there is to be no intake of sugar, sweeteners, alcohol, grains, legumes (including peanuts and soy), or dairy.[166] There are so many lifestyle books that contain Paleo elements, far too many to review here. Three of the most popular reference "Paleo" in their titles: Cordain's *Paleo Answer*, Kresser's *Your Personal Paleo Code* (later reissued as *The Paleo Cure*), and *The Wahls Protocol*.[167] On the covers, each promises to treat, reverse, or cure health problems (multiple sclerosis, chronic autoimmune conditions) and to help the reader "lose weight, feel great, stay young") rapidly (in seven days!) with simple changes (3-step plan!) using Paleo principles.

Cordain's lifestyle volume *The Paleo Answer: 7 Days to Lose Weight, Feel Great, Stay Young* offers "Paleo 2.0," a sly reference to Web2.0 processes that is sure to be recognized by the tech-bros who already believe in Paleo.[168]

Cordain seeks to balance his lifestyle suggestions with the reality of living in the real (modern) world, so much of the book is devoted to explaining when, where, and how one can fudge a Paleo diet to accommodate everyday living. Each chapter contains several first-person testimonial "true stories" of people whose medical problems were cured using his diet recommendations, and the case studies anchor lessons about ingredients, foods, and cooking processes that flesh out what is—and is not—Paleo 2.0. There are many descriptions of scientific articles that allegedly prove the connections between eating a certain kind of food and either a health problem or a health benefit. According to Cordain, dieters should avoid grains, potatoes, cassava, corn, and all legumes, including beans, peas, peanuts, and soy, as well as sugars, artificial sugars, vegetarianism, and dairy. One is left with fresh vegetables and fruits, meats, fish, eggs, nuts, something called "spa water," dietary supplements to increase intakes of particular nutrients, and, surprisingly, wine; his 7-Day Plan allows a glass of wine with dinner each day. There is nothing wrong with the diet plan; it is adequate for health and provides enough macronutrients and micronutrients to sustain a healthy adult. It's not likely to cause problems and may induce weight loss. However, the problems occur with the reported outcomes of the diet, because according to Cordain, his diet will mitigate or cure almost every health condition imaginable, from high blood pressure, heart disease, metabolic syndrome, ulcers, acne, and immune diseases to gestational diabetes and glaucoma. He also claims that vegetarian diets cause menstrual problems and low sperm count (although presumably not in the same person). The problem with his program is that the science rests on correlation (eating X is correlated with a higher risk of Y) and the proof is found in personal testimonials—the always-alluring N of one, which assumes correlation is causation in individual outcomes. His particular Paleo diet may indeed correlate with positive health outcomes, but we must point out that reliance on testimonials and correlation does not provide definitive scientific causation.

Similarly, Chris Kresser promises a "3-Step Plan to Lose Weight, Reverse Disease, and Stay Fit and Healthy for Life" in his series of Personal Paleo volumes. Like many other diet gurus, he has no training in nutrition but does have a compelling story of ill-health and personal healing. And, like many other kinds of gurus, he became an Esalen Institute adherent. This was followed by interest in the Weston A. Price Foundation.[169] Using those

diet principles, he cured himself of all his chronic diseases. Thus, appropriately armed with the capacity to influence and guide others, he created an online counseling empire that led to a talk circuit, book deals, and more. He advocates a thirty-day reset plan that eliminates "the modern foods that humans aren't genetically designed to eat." In his explanation of Paleo, he emphasizes that meat "made us human," using the expensive tissue hypothesis and the startling assertion that gathering vegetable foods wouldn't have supplied human needs because "gathering food was both dangerous and time-consuming, so it is unlikely that our ancestors had a completely vegetarian raw diet,"[170] a muddled and inaccurate mashup of the anthropological data on the energetics of hunting, gathering, and early human diet. His reset disallows industrial food, which he says is full of toxins, and one must avoid all dairy, grains, legumes, sweeteners, chocolate, processed foods, "industrial" seed and vegetable oils, sodas, alcohol, and processed sauces and seasonings. One may eat meats, organ meats, bone broths, fish, eggs, starchy plants (except for potatoes), vegetables, "traditional" fats, olives, avocados and coconuts, and sea salts. At all times one must avoid the foods he labels as toxic: gluten, industrial seed oils, and refined sugar. The goal is to avoid all sugars, most carbohydrates, and all processed foods. All in all, it's very similar to Cordain's program, and almost word for word the Whole30, although Kresser uses more anthropology to justify his protocols. Kresser blends food fears about pesticides and fertilizers with an imagined Paleolithic diet to label some foods toxic, and he provides testimonials about cures caused by removal of these poisons from the diet. Kresser has combined the ideas of the Weston A. Price Foundation with the Paleo recommendations of Cordain and others to create a diet plan that rejects modernity and promises ideal health.

A final popular diet is the Wahls Protocol, which promises to cure autoimmune diseases through "Paleo principles and functional medicine."[171] Terry Wahls provides the usual Afflicted Healer testimonial; she was diagnosed with progressive multiple sclerosis and ended up in a wheelchair. She is also a medical doctor, and when conventional therapies did not help, she explored research on drug and nutrient trials to reverse brain and neural degeneration in mice. She scaled up the effective supplements and applied them to her diet to develop a protocol that increases targeted nutrients. Her diet focuses on higher intakes of essential micronutrients, particularly ones that are used by neurotransmitter cells. There are three levels of action,

from one that is "adding some things and taking some things away" to the most committed and admittedly difficult, the Wahls Paleo Plus "for those who want serious and rapid intervention."[172] Rather than starting from the whole-food Paleo ideal and assuming related nutrient intakes, she focuses on increasing specific micronutrients and then finds Paleo foods that provide those nutrients. She maintains that her diets are different from standard Paleo because they emphasize nutrient density, are high fat, forbid dairy, eggs, gluten, and legumes, and encourage local foods to ensure nutrient retention. Level One (of the Wahls Diet) avoids gluten and dairy but mandates nine cups of vegetables a day and organic, wild-caught, and grass-fed meats. Level Two reduces all grains, legumes, and potatoes to two servings per week and adds seaweed, algae, fermented foods, organ meats, nuts, seeds, and raw foods. Level Three (Paleo Plus) removes all grains, potatoes, and legumes; reduces starchy vegetables and fruits; adds coconut milk and oils; mandates six cups of vegetables daily; and reduces meals to twice a day, with a twelve- to sixteen-hour fast each night. No fast foods, sodas, sugars, or microwaved foods are allowed. This is indeed a reduction diet, not in calories (because of the added fats) but certainly in food types.

The Wahls Protocol is by far the most restrictive of the Paleo-type diets, and while many of the suggestions are excellent (nine cups of vegetables daily would benefit us all), following the diet requires a remarkable shift in behaviors and practices. The *Cooking for Life* recipe book simplifies this regimen by providing workable meal plans and recipes, and the dishes are, as in many other Paleo cookbooks, short and easy.[173] Most consist of chopped vegetables with a protein, served as a salad, soup, or skillet fry-up. They are often low calorie but aren't going to hurt anyone, and they may encourage weight loss. However, this plan is more therapy than diet, and that's reflected in the emphasis on nutrients, supplements, and clinical practices over food talk, even though Wahls asserts that the diet is the medicine. The epilogue of the 2014 volume acknowledges that while she'd like to conduct clinical trials, she can't get the funding and the papers she's written haven't been accepted by peer-reviewed journals. That her medical advice might be questionable is clear when she advocates avoiding tests given by regular medical doctors (for gluten sensitivity, for example) because they aren't accurate and provide false negatives. The upshot? This program is diet as therapy, promising near-miraculous cures based on correlative and questionable science. While the diet won't hurt anyone, it's hard to

maintain, and we shudder to think that people might adopt it in place of conventional medical care.

IF GOING PALEO IS SO DIFFICULT, WHY IS IT SO POPULAR?

These diets and lifestyle plans have broad similarities, and certain notable trends contribute to the popularity of Paleo. First, the cookbooks are very different from the all-meat, all-fat diet promoted by many online advocates and practice communities. Indeed, the assumption that a Paleo diet is mostly meat seems to be a cultural construction often not questioned. This problem may have occurred because many Paleo advocates are also low-carb proselytizers and because what people say they eat is often quite different from actual daily habits. The recipes and lifestyle plan books include vegetable carbohydrates that make meals palatable and more nutritionally balanced. Janet wouldn't hesitate to recommend these cookbooks to people who want to change how they eat; they aren't advocating a dangerous diet. So perhaps there is a disconnect between how people think about their Paleo practices and what they really do eat, which makes following Paleo manageable for a longer period. Decreasing (or eliminating) fast and processed foods and refined sugars is almost always a good idea, especially for American eaters. Diets that make people think through their choices tend to encourage more careful and reflexive intakes. And eating lots of whole vegetables is always a very good thing for better nutritional health. Janet wouldn't necessarily recommend that someone "go Paleo," but she would recommend these cookbooks for weight loss and for encouraging thoughtful eating patterns. They won't do harm.

However, other trends are less positive. First, these diets encourage intakes of obscure and expensive specialty food items such as coconut oils, ersatz flours, "spa waters," pharmaceutical supplements, and branded product tie-ins. These foods might not be the nutritional panaceas suggested, although they are probably economically productive for their creators. Second, these diets seem to have become more restrictive over time by piling on evolving and newer pop narratives about dietary practice. This trend can lead to neuroses about intakes and worries about good and bad foods—the perfect cultural and psychological launchpad for the orthodoxy and orthopraxy that lead to orthorexia or avoidant/restrictive food intake disorder (ARFID). The robust online firefights about what is or is not

Paleo demonstrate these processes perfectly. Because progressive restriction (such as the Wahls Paleo Plus) is framed as healthful for all, failure to adopt may cause anxiety about harming one's health by not being careful or pure enough. And because following the most restrictive plans is difficult, users may find themselves locked into a terrible cycle of "being good" or "being bad" with their daily food choices and developing problematic long-term diet habits. There is a potential double bind with these diet-as-medicine programs in which ill-health begets more restrictive behaviors and self-blame rather than a measured dietary and clinical health response.

And finally, the two most problematic aspects are related: these are expensive diets for well-off people and are precisely the kinds of privileged food choices that contribute to global warming. Any examination of Paleo foods reveals that they are expensive (meat, organic vegetables, esoteric ingredients). The various iterations of the Paleo food pyramid recommend that the broadest bottom section (the staple foods) consists of meat, eggs, and fish—all expensive items. The rank above consists of ideally organic whole vegetables, fruits, fats, and nuts, which are also pricey in comparison with foods produced using industrially farmed staple grains. To add further economic insult, the meats are free-range, wild, or organic, production methods that double or triple their per-pound consumer price.[174] Many of these pyramid images make it clear that affordable grain-based foods and off-the-shelf supermarket foods are forbidden. Because meat, vegetables, and whole fruits (especially if organic) are some of the more expensive items in a food budget, this diet is not available to anyone without a high income. And a protein-heavy diet is expensive for the planet. Recent reports on the drivers of climate change indicate that meat production is a major global source of greenhouse gases.[175] These reports make clear that a meat-heavy diet—the First World diet that defines Paleo—is not ecologically or socially sustainable. Many of the esoteric ingredients, such as cashew butters, avocado oils, and almond milks, require immense amounts of water and contribute to colony collapse disorder in bees.[176] Their production encourages destruction of wetlands and forests, which releases greenhouse gases and displaces other food crops. What seems to be a diet rooted in "wise traditions" and evolutionary rationality is ecologically ruinous, propelling ecosystem collapse. Paleo is the dietary equivalent of driving an SUV in a world running out of petroleum; it's only available to the rich and destroys the common good.

We suspect that the elitism of Paleo plays a significant role in creating its appeal. These meals are exactly the kind of food that rich people valorize because they are expensive and typical of what is served in high-end restaurants. A chef's table omakase or a meal at a Michelin-starred restaurant provides a lot of pricey meat (venison filet, tuna belly, day boat scallops) and farm-to-table-in-season vegetables, but almost no starch. The staple foods that fill the bellies of the middle and lower classes are conspicuously absent. While such meals might be special occasion splurges, they also define good food and the good life to those able to enjoy them; they become a way to perform identities of wealth and power. The gentlemen wearing the designer suits lauded by Art De Vany eat in restaurants that serve something akin to the "primal" diet he advocates, and dining in that manner signals wealth, power, and privilege. Furthermore, this diet allows the rich to presume that what they eat is conceptually superior to what other (poorer) people eat, although which came first—the privilege or the narrative—is hard to determine. Perhaps we can acknowledge that a culture of exceptional privilege shapes approved food choices in such a way that rich people create faux-scientific reasons for believing that their preferred diet—one that signals exceptionalism precisely because it is unobtainable by most—creates perfect health. Then, what's eaten by the less fortunate becomes socially and biologically toxic. Grains, fast foods, supermarket foods, products of industrial agriculture—all the foods that feed the bottom 99 percent—are toxic to the performance of economic success. Paleo's connections to prestige, power, privilege, and dominance make it the perfect diet for the up-and-coming and already-there who feel a need to demonstrate power over others. That it comes bundled with a narrative of difficult-to-practice health and wellness makes it functionally essential to the individual actualization, personal control, and self-satisfaction that assures the rich that they are better than the rest.

We've tiptoed back into the performance of identity as a reason to adopt a diet. Social success and power can be conceptualized many ways, but public performance of Paleo becomes part of an idealized example of "making it" because it signifies wealth and a certain type of gender identity. Real men eat meat, and real men are financially successful and physically dominant, with a muscled physique symbolic of the "gorilla within"; muscles (made of protein) signify male success. Protein is power, so an all-protein diet (or the fiction of one) confers power, which creates success. And it's an

irresistible example of cultural programming, so accepted that even a biological anthropologist writing about Paleo gushes over Mark Sisson's body and food habits: "Mark Sisson bounces into the Malibu Café looking like a movie star: loose t-shirt, long wavy white hair, well-tanned. He orders an omelet with avocado, bacon, chicken, feta cheese, mushrooms and onions. The dish is served with potatoes, but Mark mostly ignores these. A former long-distance runner, triathlete, and Ironman competitor . . ."[177] How compelling, especially if you might be an insecure male in a postcapitalist economy where only the 1 percent thrive. Clearly, the path to looking like a movie star (in Malibu, a very expensive place) is to become a Paleo warrior. A very compelling kind of male identity is signified by eating lots of meat, and this powerful cultural trope supports a fantasy about the Paleolithic that projects modern values and sentiments onto an idealized past. The cultural construction of Paleo has obscured the archeological reality of past diets and behaviors, paradoxically creating a problematic, biologically and socially inaccurate simulacrum. We certainly can learn a great deal about health and disease from a better understanding of an evolutionary diet, but we will never do so by projecting our present onto the past.

PALEO DOGS

We discovered a popular book at our public library called *Paleo Dog*, written by a veterinarian and a PhD-level nutritionist, and found it to be an interesting case study in how popular diet and nutrition books illustrate many of the themes discussed in this chapter.[178] Although the book is about canine nutrition, we assume its readers are human and that the arguments and rhetoric are appealing to the same human fantasies and longings that govern how we think about all diets.

Paleo Dog starts with "There was a time in human history when we operated more like our animal kin, a time when we humans and wolves were more alike than different. . . . We traveled in packs, and wolves did, too." Already we see an appeal to the primitivist fantasy of wild, untamed packs of wolves, with uncivilized humans characterized as primal and wild. The writers go on to say,

> We grew up in the 1950's which is often thought of as a more innocent time. . . . Back then, we believed our doctors and veterinarians had the answers to

> everything. We all operated from a belief system that simply made it easy for us to turn over our health and well-being to these specialists. . . . But then, everything got more and more complex. . . . New medical models and standard of care were developed. Vaccinations became the preventive care of choice, and we accepted this without question. The problem is that the new specialists did not deserve the trust we placed in them.[179]

Here we see nostalgia for an innocent recent past, the 1950s, when there was good reason to trust authorities and life was purer and simpler. Then the authors voice a common anxiety, that technology and science became too complex: daunting even. The response is an antimodernist mistrust of the new, coupled with an idealization of and longing for the past.

Next, the authors raise another common refrain, similar to Scrinis's nutritionism, that the focus on quantification and testing has undermined medicine. They write, "Modern medicine does too much for little gain. There is an obsession about naming the disease, or localizing the lesion, or finding out *exactly* what the problem is, whether or not such knowledge will have any practical consequences." They advocate a return to simple, instinctive knowledge as a solution to medical reductionism. "Since we were babies, we've all been consistently pushed and brainwashed—with any occasional spark of Paleo-instinctive thinking stifled—and driven to turn over our nutritional and medical needs to others." Here we see the age-old debate between rationality and instinct used to explain modern alienation and ill-health.[180]

If we return to the idea that diet books are cultural artifacts that are responses to historical and political events, *Paleo Dog* tells the story of a culture struggling with age-old fears about modernity and worries about the ill-effects of technology and civilization. Medical and nutritional reductionism are identified, and then, as often happens, fear, doom, and catastrophe are invoked. Historical nostalgia is used as a balm to idealize the past, evoking the archetype of the noble savage. Finally, a specific dietary ideology is recommended as a behavioral talisman against these dangers.

Chapter Six

FINAL THOUGHTS

GWYNETH AND GOOP

The cover image and title of Gwyneth Paltrow's cookbook *The Clean Plate: Eat, Reset, Heal*, "with over 100 recipes and six doctor-approved cleanses," illustrates the appealing cultural message of fad diets.[1] The photo on the cover is of a luminous, smiling Gwyneth, wielding a knife sideways to loosen the skins of a head of garlic (even her kitchen prep is safe!). She's wearing all white, with a loose-fitting natural-looking linen fabric—a dress that looks simultaneously professional and festive. The kitchen this goddess inhabits is all white, clear glass cabinets reveal white dishes, and the counters hold white appliances and blond wood spoons. The pots are reflective stainless steel, and the glasses are clear, chunky, and wholesome looking. The minimal spots of color come from a bunch of herbs placed in the center of the worktable and mostly beige raw ingredients, all held in clear glass containers. There are a few home canning jars filled with green pickles and red and orange jams, but these are on the edge of the photo and obscured by a clean, French-café-style water glass. It is the most sanitary kitchen imaginable, filled with "all good things" for you and your body. The implied naturalness and purity of the ingredients and process are revealed by the immaculate clarity of the kitchen *context*, lovingly embracing the centered green of the food *content*—the living herbs that form the basis of a healthy, clean diet. It is not a subtle image, but it is a very pleasing one.

Notably, this image does not contain any food; there are ingredients, but they appear to be spices or condiments, not the actual bulky, sloppy foodstuffs that form the backbone of most recipes and diets. The ethereality of our heroine is mirrored by the insubstantiality of the modeled diet—one of flavors, spices, condiments, and light. It is all very (symbolically) light, as the reader will be rendered (literally) light by following the recipes and lifestyle advice of Gwyneth and the doctors who recommend the Goop protocols. The recipes reflect the dominant Clean prescriptions: they are flourless, carbless, and whole. The introduction proudly announces that "NOWHERE IN THIS BOOK WILL YOU FIND ANY" (yes, in all caps) "alcohol, caffeine, dairy, gluten, nightshades, peanuts, processed foods or sugars, red meat, or soy." Page after page of a smiling Gwyneth is contrasted by glistening up-close images of fresh, uncooked vegetables, artfully staged images of a finished dish, or photos of nature: waves, beach, sky, trees. The cleansing plans provide questions and answers with doctors and focus on removing fat and heavy metals from the body and providing "adrenal support," a "candida reset," "heart health," and "veg-friendly Ayurveda." Each plan comes with a list of foods to avoid and a "goopified" menu for seven days of food planning guaranteed to achieve the targeted cleanse goal.

While the recipes look tasty, they also need a lot of prep work, chopping, and gathering of fresh and expensive ingredients: a point highlighted by Lindy West in her hilarious analysis of Goop culture.[2] Frankly, it all looks rather exhausting, although the rewards are probably worth it—if one can be like Gwyneth. As West has pointed out: "Gwyneth glows like a radioactive swan."[3] The frontispiece image is Gwyneth, smiling, looking away into the distance. She wears a bright yellow sweatshirt and she has no eyes. Her eyes have been replaced by the rays of the sun because she has been photographed in profile, with sun glare illuminating her face so that her eyes seem to be the sun's very rays. She seems to create light. The symbolism of enlightenment can't be missed here; it sets the tone for the book. And after all, what is enlightenment but to be light? To not be heavy, but to be willowy, graceful, lithe, and tall. What is clean but to be pure? Light, clean, pure: those are all the goals of the Clean Eating diet.

Ah, to be like Gwyneth; that is what this "Clean" diet is really selling. There are thirty-one full-page photos of her, including the cover; almost all show her smiling gleefully. In one, she smiles wistfully and looks thoughtfully spiritual. There are even three pictures of her in bed; her sheets are

white. There is a double-page photo of her eating breakfast with an attractive man; they both have bed head and look deeply satisfied—you can make your own conclusions about what is implied. Otherwise, the only human images are of Gwyneth: she is alone in this perfect world, in a perfect body. Her life demonstrates why we should chop vegetables, gather obscure ingredients, and give up coffee and scotch. And still, the food looks delicious, the recipes seem workable and very simple, and the dishes do read as *healthy*, with lots of colorful vegetables, herbs, and spices. It's all very glossy and slick and seems to make sense. It is very, very appealing. And she makes it seem so simple! Between the gushing prose and the aspirational imagery, this cookbook seduces with the promise that even the lowly reader can transform her life to be more like this gleaming goddess. Just adopt the Clean Plate program, and health, relationships, and (presumably) body size will be transformed into a similarly perfect self with an idealized life.

This book exemplifies the fad diet. In our introduction we told you about fad diets, which, according to the Pennington Biomedical Research Group:

- Ask the user to eliminate one or several food groups.
- Promise quick results, such as five or more pounds of weight loss a week.
- Use personal testimonies as proof of effectiveness.
- Use only certain or special foods that claim to offer advantages for weight loss.
- Recommend supplements or pills as part of the diet.
- Are endorsed or advertised by a celebrity.
- Sound too good to be true.[4]

We think Gwyneth's book and lifestyle diet ticks pretty much every point, even if getting rid of toxins is emphasized over (implied) weight loss. Each section is littered with unproven recommendations for supplements and special foods that allegedly remove toxins, fight candida, or help those pesky adrenal glands. Of particular salience in this case is the use of personal testimonies, since Gwyneth provides all the testimony necessary for the miraculous results of the diet. Her glowing, organic, and blissed-out smile demonstrates (thirty-one times!) her diet's efficacy and a promise to transform the reader. This is a book for Clean Warriors and Wellness Winners, who relax in spotless homes near upmarket beaches. It provides a deeply appealing aspirational lifestyle made possible by an individualized consumerist model of ideal health. Buy it, prep it, eat it, be it: instant clean, instant new you!

This cookbook reveals the core themes and cultural processes that drive the popularity of the fad diets reviewed in this volume. Perhaps these play a preternaturally strong role among American eaters, but they do demonstrate global appeal: control, status, health, identity, purity, and transformation. The text of *The Clean Plate* is explicitly aimed at transforming health and purports to be medically effective. In case the reader had any doubts about the latter, the interviews of medical practitioners reassure. Yet their recommendations do not rely on or reference peer-reviewed clinical studies—the gold standard of scientific evidence. The claims are anecdotal and pseudoscientific. The images reference and signal purity: the overwhelming use of white, the crisp photos of raw, unprocessed vegetables, and the nature scenes. The overuse of the word "clean" throughout the text also indicates purity, since "clean" and "pure" are linked linguistically and metaphorically. Photos of Gwyneth are usually backlit by natural light—a window, the sun, or clear daylight—causing her to glow, thus mirroring the iconography used in images of religious saints, holy figures, and gurus. Gwyneth is a shaman of American self-transformation and consumerism.

Control is implied by Gwyneth's thin body and adherence to clean lifestyle ideals, practices, and products, and also by the fact that she is always, always living her Goop existence, which, by branding definition, maximizes consumerist control over the environment to ensure individual health. And finally, status and identity are linked and explicit. To adopt a "clean" identity is to embody a certain form of aspirational status: professionally successful and upper middle class, with ample access to fresh ingredients and the time to appreciate and prepare them. Social class is not just income or identity: it's also a performance designed to fulfil the expectations of those who gaze upon the performance. If that seems absolutist and overgeneralized, try to imagine Gwyneth eating a McDonald's cheeseburger with fries. In the car. Not only are most of the ingredients on the volume's no-fly list, but they are so down-market that to indulge would cause class slippage. This food is the food of the privileged, the health-aware, the self-aware, the self-concerned. It is the food of people who wish to emulate Gwyneth's status and place within the cultural hierarchy. To Eat Clean is deeply aspirational, and to adopt the strictures of the Clean Plate is to buy into the American Dream of transformational consumption and the possibility of the transformable, malleable self.

IT'S NOT REALLY ABOUT THE FOOD

Gwyneth and the other lifestyle diet gurus discussed in this volume are both a symptom and an expression of deep cultural anxieties about the self, the body, and our relationships to one another—they are not the cause. They are the crystallization of cultural pathology.[5] In reading the fad diet books and talking to people who have embraced them, it's clear that these diets really aren't about the food. Their popularity arises from a deeper cultural zeitgeist: at this time and place, food has become the focus of our worries about much larger social, political, and economic changes—changes that we don't control and that feel overwhelming. Perhaps people are aware that they can't control world crises (such as climate change, war, economic inequalities, and other external stressors), but they can control what they put in their mouths. That's an overgeneralized statement, and one that imbues our topic with potentially more importance than it deserves. We're not trying to be grandiose, merely to point out that food is one of (perhaps many) sites of social behavior that have taken on a vast amount of cultural freight, and that by examining food use and fears we reveal larger structures of distress. People are genuinely worried about what is "in their food" and how it affects their health. They are also genuinely worried about their bodies: not just size and shape, but also the general state of "wellness" and how that determines their everyday functioning, sense of self, and potential health. They are genuinely worried about how *what* they eat signals *who* they are—what kind of individual and what kind of citizen, and with what kind of social status.

These issues are revealed by how people think about and use the diets. We've noticed that because people are very concerned about control, status, health (wellness), identity, and purity, so are the diets. Fad diets are a cultural artifact, and the books, websites, and social media accounts are the texts. Which is the chicken and which the egg? is a question that can't be answered because the reasons for adopting a diet are both constitutive and constituting. For each of these topics, the food is often secondary to the meanings ascribed to it; food as symbol and signal have subsumed food as nourishment. People project onto food metaphorical categories that replace the actual utility (or use value) of food, and then experience those symbolic categories as if they were biological. Of course, this is nothing new; anthropologists are fully aware that much of culture is an

intersecting web of symbols made of myth and moonshine that determine how we think, feel, and behave. Indeed, the symbolism of food has been pondered by anthropologists for decades, as shown by the work of Claude Levi-Strauss, Mary Douglas, Judith Goode, Janet Theophano, and many others discussed in this volume. Their research often focused on symbolism as cultural action; however, fad diets reveal how symbolism is filtered through cultural tropes and enacted to create outcomes that are socially constructed but individually embodied. As such, the food symbolism of fad diets provides clues about how broad cultural metaphors are adopted and adapted by individuals, how they become a crystallization of potential and meaning that links culture and person.

IDENTITY

It is perhaps a cliché that capitalistic societies encourage us to create our identities through consumption—but they do, and thus we embrace that we are what we buy, what we display, and what we ingest. We become what we consume, and in the case of food, that becoming is literal as well as symbolic. What we eat also serves as symbol and signal to others about who or what we are. These diets allow us to project upon the world our sense of self and our vision of who we wish to be. Many people describe themselves as being their diet: "I'm Paleo," "I am a Clean Eater," or even "I'm a Food Addict." Motivations for adoption range far beyond a desire to modify the body—these diets promise to modify the self and how that self functions within society. The wanna-be alpha males who adopt a Paleo diet because they hope it will make them virile, powerful, and in control of themselves and others probably have a sense that the social performance of the diet is just as culturally meaningful as any potential biological benefits. Eating meat allows them to perform an act of biocultural embodiment that is supposed to be physically, emotionally, and mentally transformative. And even if it doesn't build big muscles and release "the gorilla within," it's guaranteed to signal virility and power to others—which just might be enough. Similarly, those who adopt a Clean Eating diet are "purifying" themselves and indicating that they are deeply concerned about their health and well-being, practices essential to the aspirational lifestyles of the upper middle classes. They are also virtue-signaling their concern about the planet and their families by insisting upon eating foods that are natural, clean, pure,

and whole. Indeed, performing good motherhood in some circles demands that one publicly abjure processed and fast foods—serving anything less to little Jared or Ashley could potentially damage the child's future potential as well as current body. In these examples, food stands in for a desired future identity and self—a perfectible and perfected new you.

STATUS

Of course, the flip side of identity—especially in a capitalistic, consumerist society—is the performance of status. By this we mean status ascribed as well as achieved, status as indelible to the individual, in relation to others, but also aspirational as a process of transformation. These diets reveal the need to eat *up* to the level of status desired. Performance of future self requires adoption of the food of the class above and the rigid denunciation of those foods that represent the class below. Just as Gwyneth would never eat at McDonald's, nor should you—if you want to be successful like Gwyneth. For this reason alone, it makes sense that diets calling for removal of specific foods focus on staple agricultural products that are cheap, abundant, and easily available—or on the equally cheap and abundant processed foods made from them. Paleo and Clean, in particular, are *expensive* diets to maintain and out of reach for the average earner. Peasant foods are to be avoided in favor of the foods of the ruling classes, and any foods that adhere to subaltern social categories, say, a fluffernutter sandwich, can only be eaten ironically. The fall from grace and the rock bottom of the food addict are social as well as physical; only by avoiding wheats, sweets, and processed foods can the sufferer transform from illness to recovery and wellness, from fat loser to svelte winner.

PURITY

It seems we are afraid of our food. The desire to "eat clean" is symbolic but also real: there is a deep desire to optimize health and avoid disease by avoiding the bad things perceived to be in food. Whether organic, gluten-free, natural, unprocessed, whatever the category might be, the desire for pure, whole foods is real. And yes, whole foods are indeed better for the body than hyperprocessed foods; we all know that to be true. We also know that organic agriculture can protect the environment, farm workers, and consumers by

eliminating potential biological hazards. We suspect that this is also a deeper metaphor, that fear of environmental pollution stands for fear of social or cultural pollution—or at least a fear of the damage that it can do to the future self. People who eat "clean and organic" to avoid cancer aren't just expressing trepidation about health; they are experiencing the environment as dangerous and penetrating, perhaps even willfully so. They are expressing a need to control *how* the outer world engages with their bodies and their minds. Eating Clean is a purity ritual that rejects elements of the world outside of the self in order to protect the barriers that define embodiment—the "living in the world" that we all do as biocultural players on a larger environmental stage. While this might be a normal response to a world that's increasingly polluted, it's also problematic because it locates the solution within individual buying options (choice) rather than with political and environmental community action that could decrease pollution levels for all.[6] An individualistic, consumer response to perceived threats can only partially mitigate the problem of toxic encroachment. Real solutions are located in collective action leading to preemptive reduction of the threat—and taking a solitary choice-based approach could decrease the desire to work with others to make a better world. At a certain point, there is no amount of clean eating or organic food that can protect the self from climate change, pollution, and environmental degradation. We can't buy our way to safety, although it's hard to resist that very American thinking that buying things solves problems.

Purity concerns reveal parallels between Clean Eating, food removal, and food addiction diets. All three seek to remove perceived toxins by avoiding clearly marked substances. The first protects from pollution located in the environment, the second from components believed to cause intrinsic harm to all bodies, and the third from macronutrients thought to affect a uniquely afflicted body. They also provide quasi-religious systems to organize the self and frame good versus bad behavior. All three seek to strengthen the biophysical barriers between self and other, although the *other* is conceptualized as arising from different sources: the world, or food, or the self as addicted (that is, an alter ego or *bad self* that needs to be regulated and suppressed). Clean Eating rejects broad categories of the outer world as dangerous to the self, while food removal rejects foods thought of as damaging and understands the self as vulnerable to that which is taken inside the body. Food addiction rejects the parts of the world that harm the addicted, or the self potentially damaged by the world.

Recall the concept of "idiom of distress" as a means to understand food addiction—the collective, shared ways of experiencing and talking about psychological distress and locally perceived causes, as well as coping strategies and patterns of help seeking. It is also an appropriate way to think about how we frame and avoid pollution and how we protect the self from perceived harm. That we are afraid of our food, that intimate substance we take into our body daily, represents a locus of distress that is metaphorically much larger than our diet.

CONTROL

Ultimately, most of these diets are about controlling the body, or at least controlling what goes into the body to transform the body. Control held and lost comes up again and again in the diets: control over the self to abjure sweets, or bread, or processed foods, and the control necessary to eat the right foods at all times. Control is both required by the diet and a positive outcome of maintaining the diet. The need for control is made clear by the lists of foods allowed or avoided; each item is a point where the dieter takes control and rejects or accepts. It's a conscious decision, a good food/bad food dichotomy that marks compliance and success. Even diets that do not proscribe or prohibit specific foods, such as intermittent fasting or time-restricted eating, are about control of time and the body.

Avoiding or including targeted foods is a dietary ritual, of course, and one that signals to the self and others that a special diet is being followed, a diet that also marks the dieter as special. Adopting diets that require continual vigilance also signals that one is in control, a quality much admired in the United States, and reminds us of the mythical archetypal frontiersman that has shaped the American collective identity into one that exalts individuality and mastery over the environment. A diet may also be adopted to establish control, such as with men who wish to use the symbolism of Paleo meat eating to let people know they are in control of themselves and thus deserve to dominate others. In some cases, control is solitary, as with Clean, food removal, and Paleo, where the individual eater makes the choices that determine control or loss of control, establishing a sense of self-efficacy and strong internal locus of control. With food addiction, the afflicted works with others (peers and a higher power) to stay sober and abstinent, although the site of control remains the individual body.

We've discussed the extreme value that Americans place on control, both of the self and, it could be argued, over others. Control rituals have reached new prominence with biohacking and intermittent fasting, practices adopted by successful "tech-bros" to demonstrate self-optimization, status, and their right to "be in charge." Biohacking combines multiple loci of control (over time, body shape, work, diet, and health) and asserts that the economically powerful are ultimately more in control than others: indeed, the source of their success is their control.[7] It's circular but deeply symbolic, and signals earned hegemony. Biohacking converges with the Paleo diet and Clean by adopting many of their dietary mandates and by assuming that hunting and gathering resulted in episodic fasting. The elimination or careful regulation of intake combined with a rigid daily time schedule represents a sharply bounded life and body; embodiment is closely guarded and policed, and body barriers are paramount for self-definition.

Paradoxically, we also see the opposite occurring: a Rabelaisian abandonment of control in the growing popularity of eating contests and Mukbang. The latter is an online, often interactive (social) binge of vast amounts of food—almost always fast or processed foods like fried chicken, ramen, or other down-market comestibles.[8] It is the absolute opposite of intermittent fasting, a competitive diet culture, or the fad diets discussed in this book and represents a shared, embodied rejection of the narratives of control and purity prominent among the aspiring classes. While these diets are tangential to this volume, they potentially represent the apotheosis of the trends observed with fad diets: the ever-growing list of forbidden foods resulting in a diet difficult to maintain because it removes core staples, and the utter rejection of such tightly controlled diets in favor of a public gorging on those forbidden foods. As with any religion, the forbidden becomes sinful and pornographic. It is perhaps no mystery why Gwyneth's book cover contains little real food—are we moving toward a cultural space where food is absent, either timed into submission or eliminated in favor of high-end condiments?

Control is also critical to the wellness industry in general, and these diets are absolutely a part of wellness culture and its profitability. The rituals of self-care embraced by the wellness industry focus on the individual body and person through the adoption of diets, products, and practices that are, ultimately, designed to modify embodiment. And each practice, to be enacted fully, requires control over the body, or the mind, or

even space and time to guarantee the right environment for the correct result. According to Sophie McBain, "The wellness practitioner's body is a temple, nourished only by food that is 'clean' or 'whole' or 'pure.' The well celebrity is someone who once struggled with their weight but now learned to embrace their 'strength.' "[9] That's a lot of choices to be made and maintained, representing an enormous level of control over environment and body. The body-as-wellness-temple can't let go, even for a moment, of course—because then all progress would be lost. Gwyneth's personal trainer believes that one should work out two hours a day, six days a week.[10] That's an enormous time investment, one probably not available to, for instance, a working mom. That so many of the fad diets and wellness rituals require time and money—and lots of it—simply serves to remind us that wellness is an emblem of earned success: success that came about because of self-control, of course. Goop is a perfect example of this trend; the ethereality of Gwyneth is a *sign* of her control just as assuredly as it is an *outcome* of her success.

CONVERGENCE

These diets also replicate one another and, over the years, have converged on a set of practices that overlap, repeat, and reinforce. Much as you can expect peasant dresses to come back in style every few decades, you can reliably count on a low-fat diet resurgence, and soon. So, while Atkins and avoiding carbohydrates was de rigueur in the 1980s and 1990s, adopting Paleo (which rejects many carbs) became essential in the 2000s. Clean Eating then roared into prominence, and it required avoiding many carbs *and* eating the whole foods beloved of Paleo—and for many of the same reasons. The twelve-step programs for food addicts abjure carbs, which makes total sense given that those groups' practices became solidified in the 1980s—they are a product of their biocultural time and place. Recent diets like the Whole30 make sure that even more is eliminated—but only briefly—and dieters can endlessly cycle on and off protocols that become increasingly similar and in agreement with all the other wellness programs. The long lists of forbidden foods just got longer and longer as this century progressed, and the need for ever more vigilance became more and more compelling. This of course legitimates the diets to their users—there is precedence in the value of the health mandates and food practices.

Adoption of one diet allows you to adopt the next, especially if it builds on the ideas of the first. To the user, it begins to feel like a practice, similar to meditation or martial arts, where you study it as discipline and build on your practice over years and decades. Eventually, a clear cultural food zeitgeist forbids the foods that *everyone knows* are *bad for you* because every diet agrees that they are bad for you. Dieters can seamlessly skip from Paleo to Clean to Whole30 to Dukan to the Wahls Protocol, and each validates the next. Cultural acceptance and faith have been achieved, even if the dietary practices are difficult to follow or maintain. It doesn't matter—everyone *knows* that you need to avoid carbs, and processed foods, and tomatoes, and whatever. The mark of legitimacy is the borrowing from earlier models.

MAGICAL THINKING

It's clear that magical thinking supports faith in fad diets. Whether they involve a simple belief that supplements will cure a self-diagnosed malady or a more comprehensive assertion that carbohydrates are dangerous, most of these diets require a ritualistic, singular action to achieve an outsized, complicated response. Simple addition (supplements or proprietary products) or simple subtraction (avoid sugar, carbs, tomatoes, etc.) will allegedly achieve positive, multifactorial health responses, from weight loss to overall well-being. Of course, it is no accident that the solutions can be monetized by selling books, products, counseling services, or fan/client access to pay-walled websites and community boards. As the diet user participates in more of these platforms and purchases more of the products, their "sunk costs" become great enough that abandoning the beliefs—or even examining them—creates cognitive dissonance. Questioning the magical thinking could threaten faith in their actions, beliefs, health outcomes, and even their identity and sense of community as a user and advocate.

Magical thinking also imbues valued categories of food with outsized benefits, or qualities that are not necessarily intrinsic to the food item. For instance, in our chapter on Clean Eating we presented the results of a survey of organic food users; many of them reported a belief that organic food not only prevented cancer (which isn't proven) but also cured it (which is certainly not proven). They also professed a belief that organic food tastes better than conventional food, even though a hedonic category as complex

as flavor is largely dependent on agricultural and processing factors separate from organic production methods. Nevertheless, they believe, and because they believe, they perceive. This is magical thinking, and fad diets depend on it for their social validity.

SELF-TRANSFORMATION

Here we have the crux of the cultural zeitgeist: the need to transform the self into something better, finer, cleaner, more whole, more actualized, more authentically pure, and certainly more likely to live in a house that's pure and clean like Gwyneth's. But no fear—the diet guru as shaman will guide you through the rituals necessary for change and will ensure that your transformation is complete. Every one of these diets promises transformation—a brand new, dramatically better you. From losing weight to curing illness both minor and major, these diets will set you on the path to total wellness. All you have to do is follow a few protocols and you will become brand new and shiny, and more authentically you.

Unfortunately, the discipline of psychology, or at least the practice of American psychotherapy, has seeded this culture. What started, probably innocently enough, as the pursuit of personal growth in the prosperous post–World War II context has metastasized into the consumer-driven culture of self-transformation we see expressed in fad diets. In *The Culture of Narcissism*, Christopher Lasch lamented this turn toward self-transformation: "After the counter-culture movement of the sixties Americans have retreated purely to personal preoccupations. Having no hope of improving their lives in any of the ways that matter, people have convinced themselves that what matters is psychic self-improvement: getting in touch with their feelings, eating health food, taking lessons in ballet or belly-dancing, immersing themselves in the movements of the East. . . . Harmless in themselves, these pursuits elevated to a program and wrapped in the rhetoric of authenticity and awareness, signify a retreat from politics and a repudiation of the recent past."[11] Similarly, psychoanalyst Paul Wachtel argues that "personal growth" is simply another manifestation of a growth-obsessed society. He writes, "Psychology [itself] is a psychology of or for economic growth, with the same images of conquest and expansion, and the same highly individualistic assumptions that characterize the rest of our culture."[12] In other words, psychology is part of the engine of consumerism

and self-transformation that has shifted Americans or Westerners to becoming hyperconsumers. To be fair, we cannot place the blame squarely on the discipline of psychology because in all likelihood its development over the past one hundred years is as much a reflection of the culture as the cause of it.

That fad diets promise a new you isn't a new observation—scholars who analyze food habits almost universally state that a desire for transformation underlies their popularity. We all wish to better ourselves; it is intrinsic to the Protestant ethic as well as the practice of capitalism—values deeply important within the United States. Self-actualization is the religion of the aspiring classes, after all. Fad diets exist because they are about something other than food. They are about the perfectible self, the aspirational self, and the transformed self, but they are also about the deep cultural anxieties that inform our understanding of the current world. But the question we do need to ask is larger and more complicated: Why is it that diets are believed to be agents for transformation well beyond weight loss? Why has a cultural desire for betterment and change crystallized around diets and food practices as agents of physical, mental, spiritual, and even, yes, social transformation? Why has an (individual) quotidian practice such as choosing food become freighted with grander and more majestic meanings and consequences and expected to radically transform personality, capacity, and status? This is the question we think we need to ask of ourselves and our culture, and what we have tried to do in this volume.

In an article that came out the day we were finishing this book, a Welsh farmer wrote, "I've had the same supper for 10 years. I have two pieces of fish, an onion, an egg, baked beans and biscuits."[13] The article (captured as an oral account), describes Wilf Davies's seventy-two years as a farmer in the Teifi Valley, a place he has left only once for a visit to a farm in England. Mr. Davies, a man who has clearly escaped the cultural directives of wellness and self-improvement, says, "When I go to the supermarket, I know exactly what I want. I'm not interested in other food. I've never had Chinese, Indian, French food. Why change? I've already found the food I love. It would be a job to alter me." The article, of course, was published because Mr. Davies is so very different from most of us. For some reason he is not vulnerable to the same cultural forces of status signaling, or anxieties about purity or control. He is the anti-Gwyneth.

A FINAL THOUGHT

By this point it is hopefully clear that the reasons we believe in diets aren't always related to how we think about food. Many of our ideas about our diets are complicated and murky, and not consciously available to us when we choose our food. That's one of the reasons that we've examined narratives in this volume—we understand that the stories we tell about our food determine what we eat, just as the stories we use to describe ourselves can alter how we act. It's no accident that fad diets depend on testimonial narrative to encourage adoption. We are a social species, and personal stories are one of the primary ways we learn about the world; we are primed for narratives, testimonials, and folksy homilies. We use them to understand our world, to express who we are to others, and even to heal, as twelve-step programs demonstrate. We want to understand how those narratives about food influence what we eat and how we eat it. So we have a parting exercise to help you understand how you think about food.

Janet sometimes leads workshops on food values and beliefs to encourage people to think about their unconscious dietary habits. One of her favorite exercises is to ask people to batch foods into "good" and "bad" categories. This is not because Janet believes that foods are intrinsically good or bad (they mostly aren't, and besides, it's complicated), but because she wants people to understand how their mental constructions guide decisions about food. So why don't you try this for yourself? Get a nice big piece of paper and draw a horizontal line down the center. At the top write "Good" on one side, and "Bad" on the other. Now, start placing the names of foods in those columns. Don't think about it too much; just do a free association of foods and batch them dichotomously. Once you've populated your columns, put your pen down and take a deep breath. Starting with the "Good" column, examine each food individually and list the reasons you placed it in that column. Do the same for the "Bad" foods column. As you ponder your reasoning and categories, ask yourself, for every food, "How did I come to believe that this food is good or bad? What are my reasons for placing this food in this column, and are those reasons valid?" Finally, ask yourself, "What influenced me to think about this food in this manner?" We suspect that this mental game will reveal to you why you choose the foods you eat and why food it so weighed down with meaning and metaphor. We think it might help you answer for yourself why diets never are "just about the food."

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