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Eating in Exile: Dysfunction in the World of Food

The willingness to abuse other bodies is the willingness to abuse one's own. To damage the earth is to damage your children. To despise the ground is to despise its fruit: to despise the fruit is to despise its eaters. The wholeness of health is broken by despite.¹

We no longer live in a world of single threats to the food economy... we may well be on a course for a perfect storm of sequential or even simultaneous food-related calamities that fundamentally change our ability to maintain food security.²

The anorexic body seems to say: I do not need. It says: Power over the self. And our culture, in such a startlingly brief period of time, has come to take literally the idea that power over the body has a ripple effect: power over the body, over the life, over the people around you, power over a world gone berserk.³

Today's global, industrial food culture is a culture in exile because it exhibits the marks of injustice, estrangement, and bewilderment. What should we eat, *really*? Why do many *still* not have enough to eat when sufficient food is being produced to feed everyone? Why is so much "food" so unhealthy? How long will our soil be able to grow food? Why are there now nearly 500 "dead zones" in our oceans and deltas? Will the spinach, the quintessential symbol of healthy food, make us ill or even kill us? These questions reveal that food's production and consumption, rather than being wholesome

¹ Wendell Berry, *The Unsettling of America: Culture and Agriculture* (San Francisco: Sierra Club Books, 1977), 106.

² Paul Roberts, The End of Food (Boston: Houghton Mifflin, 2008), 301.

³ Marya Hornbacher, Wasted: A Memoir of Anorexia and Bulimia (New York: Harper-Flamingo, 1998), 85.

means of connecting with the world and each other, have in many instances become sites of contention, ill-health, and destruction.

To be in exile does not simply mean that we are in the wrong place – a problem of location and logistics. It also means that the ways and manners of our being anywhere do not exhibit a harmonious fit – a problem of moral and spiritual discernment. As I will use the term here, to be in exile marks an inability to live peaceably, sustainably, and joyfully in one's place. Not knowing or loving *where* we are and *who* we are with, we don't know *how* to live in ways that foster mutual flourishing and delight. More specifically, we don't know how *through our eating* to live sympathetically in the memberships that make creation a life-giving home. As a result, we now face a situation in which industrial, global patterns of food production and eating are undermining creation's overall health. To be in exile is to find oneself in a world that is increasingly inhospitable or unlivable.

Those who live in developed countries have not had to think much about food. Walking into a supermarket reveals an abundance of attractive and relatively inexpensive food. Rarely does one find an empty shelf of anything. In large part, this abundance is attributable to the Green Revolution associated with the work of Norman Borlaug. This revolution in agriculture nearly doubled corn, wheat, and rice yields between the 1950s and 1990s. To achieve this record output, farmers used newly developed seed varieties in combination with increased irrigation and the application of fertilizers and pesticides.⁴ Small farms growing a variety of foods using manual labor were replaced with large farms growing one crop using heavy machinery. All in all, the Green Revolution was hailed as a production and efficiency success story. Borlaug received the Nobel Peace Prize in 1970.

All is not well with this revolution. The problem is not simply that the world's human population is continuing to rise (prompting some food analysts to say we need to double yields again). A deeper problem is that this revolution is not really "green" or sustainable. For instance, the Green Revolution should also be called the "brown" revolution because it is saturated with the use of fossil fuels to provide fertilizers and pesticides and to run the equipment to irrigate, cultivate, harvest, transport, and process whatever commodities are grown. We should not pretend that our burning of oil and gas does not have atmospheric consequences. We also

⁴ Vaclav Smil has described how the world's growing population would not have been possible without the invention of synthetic fertilizers (particularly nitrogen). See Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food (Cambridge, MA: MIT Press, 2000).

need to register that steadily increased yields have now plateaued or are declining, suggesting that wheat, corn, and rice varieties have likely reached or are near reaching their maximum productivity. When we add ecological indicators to the mix, factors like climate change, soil erosion and toxification, water depletion and pollution, and disease drift, the hope for dramatically increased yields in the future looks unrealistic.⁵ Though some point to biotechnology and the genetic development of super-productive seed varieties as agriculture's best hope, the vast majority of genetically modified seed grown today is not to increase yield but to withstand herbicide use.⁶ It is unrealistic, if not fanciful, to put our hope in "super-seeds" grown on an exhausted, degraded, and poisoned planet.

Reflecting on the costs and limits of industrial agriculture reveals the naivety of the hope many people have that food will always be available and cheap. It is not a solution to expect farmers, many of them already poor, to become dependent on patented seeds and expensive fossil-fuel-derived inputs.⁷ It is not a solution to increase yields at the cost of an overall *decrease* in soil fertility, freshwater availability, and species diversity.⁸ It is not a

- ⁵ Punjab, India, once considered by many the symbol of Green Revolution success, is now poised (because of water depletion and soil degradation) to become a dustbowl, an agricultural catastrophe. Indian farmers use three times as much fertilizer as they did thirty years ago to achieve the same yields, while insects have grown resistant to pesticides. Cancer rates among farmers, along with farmer debt and suicide, have grown dramatically. For more on this story see the series of news reports carried by National Public Radio at www.npr.org/templates/story/story.php?storyID=102893816. Scientists now suggest that the Green Revolution needs to undergo its own "greening" to bring it into alignment with ecological principles. See David Tilman's "The Greening of the Green Revolution," *Nature*, 396 (November 19, 1998), 211–212. See also Joel K. Bourne's assessment of the legacy of the Green Revolution in India in *The End of Plenty: The Race to Feed a Crowded World* (New York: W. W. Norton & Company, Inc., 2015), 77–97.
- ⁶ The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), after considerable wrangling over the promise and drawbacks of genetically modified seed (Monsanto and Syngenta pulled out of discussions), concluded that the use of these technologies can have significant adverse health effects for environments and people. Biotechnology has not made more food available for the world's billion poor. Moreover, the use of seed patents puts small-scale farmers who cannot pay licensing fees in jeopardy. For the Executive Summary of the IAASTD report, see www.agassessment .org/docs/SR_Exec_Sum_280508_English.htm.
- ⁷ See chapter 2 of Raj Patel's Stuffed and Starved: The Hidden Battle for the World Food System (Brooklyn: Melville House, 2007) for a journalistic account of how farmers around the world are committing suicide, often by using the pesticides they would spray on their fields, because they are mired in the debt accumulated to pay for agricultural inputs like seed, fertilizers, and herbicides.
- ⁸ For detailed accounting of the destruction of ecosystems and the loss of biodiversity, see the reports of the Millennium Ecosystem Assessment, www.millenniumassessment.org/en/ index.aspx.

solution to champion farming systems and economies that funnel wealth to an ever smaller number of people and corporations, and thereby produce what has sometimes been called the "Greed Revolution."9 It is not a solution to erode food democracy around the world and further consolidate the world's food supply in the hands of a very small number of very large companies,¹⁰ or to establish international trade agreements that siphon resources from the Global South to northern countries, thereby leaving the world's poor impoverished and unable to feed themselves." While it is certainly true that modern society has relieved many people of the need to think about food's production and availability, the upshot of this ignorance is that we have condoned and supported food systems that are degrading to land, animals, and people alike. To be cut off from a practical understanding of how food is grown and what is needed (ecologically but also culturally) to keep good food in plentiful supply is to put ourselves in a position of exile, a position in which our eating and food production practices precipitate alienation, ill-health, and injustice.

Our food confusion is not confined to the production side. Consider the multiple, often contradictory dieting fads that regularly sweep the nation. Dire warnings about red meat are followed by a popular, mostly meat diet. Bread, a several millennia-old staple, is proclaimed the dieter's enemy. Meanwhile, governments, though proclaiming the health benefits of a fruit and vegetable diet, give massive subsidies to the very food sectors that fill our stores and schools with high-fructose corn-syrup-laden sodas and candy. It is no wonder that people don't know what or how to eat. Michael Pollan has described this situation as the American paradox of food: "a notably unhealthy people obsessed by the idea of eating healthily."¹² Degraded land, sick bodies, and mass confusion indicate that we are ill at ease in the worlds of food.

¹⁰ The concept of "food democracy" is described in *The Paradox of Plenty: Hunger in a Bountiful World*, ed. Douglas H. Boucher (Oakland, CA: Food First Books, 1999) and by the Institute for Food and Development Policy. For a recent tabulation of how food consolidation is taking place in the various food sectors of our economy, see the report by Mary Hendrickson and Bill Heffernan at www.nfu.org/wp-content/2007-heffernanreport.pdf.

¹¹ For a discussion of how Third World activists (including Martin Khor, Walden Bello, Vandana Shiva, Dot Keet, Sara Larrain, and Oronto Douglas) are viewing the policies and effects of global trade agreements and international monetary policy, see Views from the South: The Effects of Globalization and the WTO on Third World Countries, ed. Sarah Anderson (Mitford, CT: Food First Books and International Forum on Globalization, 2000).

¹² Michael Pollan, *The Omnivore's Dilemma: A Natural History of Four Meals* (New York: Penguin Press, 2006), 3.

⁹ Bourne, The End of Plenty, 73-74.

Because we are among the world's most ignorant and confused eaters, it is difficult for us to identify, let alone understand, our exilic condition as a problem. Marketing professionals have worked very hard to convince us that unhealthy food is normal (there is simply too much money to be made from people who are vaguely unhappy and functionally ill). Not knowing where food comes from or the biophysical and socioeconomic conditions under which it is produced makes it difficult to advocate a more just, healthy, and sustainable food system. When food is reduced to a commodity and we to consumers, it is inevitable that our primary concern will be that food be inexpensive, convenient, and in plentiful supply. The ease of exilic eating and the facility with which the unjust and destructive dimensions of our food economies can be hidden and ignored make it likely that we will learn to prefer the state of exile, forgetting, perhaps even forsaking, our foodproviding home.

When describing today's exilic condition it is important to underscore that being in exile isn't simply a matter of personal choice. In her important study *Weighing In*, Julie Guthman has rightly criticized leaders of the food movement who suggest that if people eat local and eat organic then personal health and the health of farmland and ecosystems will naturally follow. This recommendation fails because it does not attend to the political systems and the economic structures that doom (especially poor) bodies to unhealthy food. It does not attend to how government policies, most notably through the USA Farm Bill, virtually guarantee the growth of commodities (rather than food) and the closure of small farms. If we are to correct our exilic condition, we have to address the systems and structures that produce, distribute, and recommend particular foods and particular kinds of eating. We need to correct economic injustice, and appreciate that perhaps the best means to healthy food, healthy bodies, and healthy lands will be to eliminate poverty and income inequality.¹³

EXILES FROM THE GARDEN

It is important to note that the first human transgression is an eating transgression. Adam and Eve were exiled from the Garden of Eden

¹³ Julie Guthman, Weighing In: Obesity, Food Justice, and the Limits of Capitalism (Berkeley: University of California Press, 2001). Guthman argues that our food system is part of a political economy that produces inequality and ill-health. Educating individuals to eat differently, as important as that is, is not enough. The "political economy of bulimia" must be addressed head-on by people working to change the laws and policies that perpetuate the system.

because they ate from the tree of the knowledge of good and evil, the fruit of the one tree that God expressly forbade them to eat. How are we to understand this refusal to eat and live appropriately in the garden? Why do people rebel against the limits, demands, and joy that gardens embody?

The knowledge of good and evil represents one of the oldest and most pervasive forms people have for marking and understanding boundaries. To transgress a boundary is to do evil. To observe a boundary is to do what is right. To have no bounds is to be a god. Because we are God's creatures we are clearly finite and in need of the help of others, which means that we live within and in terms of memberships of nurture, memberships that make life possible but also entail certain responsibilities on our part to serve and protect the garden (Genesis 2:15). We know this because we have to eat, demonstrating in each bite that we depend on others for our sustenance and life. As creatures that eat, we have to live in terms of what a nourishing garden allows and requires of us. Eating introduces us to a fundamental law: to eat well, people must nurture the land that nurtures them.

The temptation to eat from the tree of the knowledge of good and evil, and the potential it brings that we will consume *and thus erase* the very idea of boundaries altogether, proves too great. Adam and Eve eat the forbidden fruit, believing that in their eating they will become like gods who know no bounds and are accountable to no one. In their act, we find a symbolic expression of the dreams that have guided and continue to inspire much of our histories: that we can live in a garden home without responsibility for it; that we can exceed the carrying capacity of ecosystems and habitats by ceaseless taking; that we can eat without discipline and much cost or effort; and that we can overcome impotence and forestall death by living in a techno-virtual paradise. What we fail to realize is that dreams of this sort keep us in a state of perpetual exile.

Every time we deny the memberships of need and nurture that define us as creatures, and refuse the responsibilities that accompany our membership, we reach again, much like Adam and Eve did. for the alluring fruit of the forbidden tree. This tree remains lodged in our dreams as the possibility that one day we will cease to be creatures and instead live the life of a god. What we don't understand is that as long as we try to live like gods we banish ourselves from the garden. We don't need God to drive us out. We go willingly in a desperate search for a limitless, carefree life we cannot have, while the land of nurture and delight beneath our feet suffers the neglect and destruction of our anxious ways. Though we may be successful for a while, it is impossible to refuse the care of creation and expect it to be a long-term, life-giving home. If we are to enjoy the abundant, delectable life God makes possible, we must first become disciples or apprentices of God the gardener.¹⁴ Perhaps this is why the prophet Jeremiah, speaking to people who knew intimately the pain and place of exile, admonished them to plant gardens and seek the welfare of the city as a sign of hope (Jeremiah 29:5–7). Insofar as people practice the attention and discipline of good work, work that honors the Creator and affirms the need and nurture of creation's memberships, they share in the life-giving ways of God. The crucial point, however, is that human hope for a good life and a healthy home depends on the affirmation of creatureliness and the embrace of the memberships of life. The path out of exile is a path inspired and directed by God's own care-full, life-creating work in the world.

Eating, along with the work and sharing that all eating presupposes, is the most fundamental means we know for understanding and appreciating the range and depth of creation's memberships. When we are involved in food production, and when we eat with intelligence and sympathy, we learn about our place in the world. We discover that creation is an indescribably complex, vast, and deep food web, and that others intersect with us at multiple points as sources of inspiration and nurture. We begin to see and taste how some patterns of life are inappropriate because they compromise, exhaust, or destroy this food web. We determine that some skills and practices further life and so are to be commended. Recall that it is as Adam tends God's garden that he learns about what it means to enjoy life as a creature. He experiences through his stomach what it is to belong and be at home where he is.

Adam failed in his responsibility to care for his fellow creatures, and in his failure we are all introduced to the place of exile. We "fall" into patterns of relating to each other that invariably harm and diminish creation's good. Dietrich Bonhoeffer described our situation clearly in the following way: "The Fall ... is revolt ... it is the creature's becoming Creator, it is the destruction of creatureliness. It is defection, it is the fall from being held in creatureliness ... it is not simply a moral lapse but the destruction of creature."¹⁵ Another way to put this is to say that in a fallen state people suffer the *anxiety of membership*. We know that we belong to

Nicholas Lash describes this life as discipleship, as life that allows God's love to order and shape all our loves. "Discipleship is a matter of learning to display, in the school that we call Christianity, that courtesy to creatures in which reverence for the Creator finds expression" ("Creation, Courtesy and Contemplation," in *The Beginning and the End of "Religion"* [Cambridge: Cambridge University Press, 1996], 173).

¹⁵ Dietrich Bonhoeffer, Creation and Fall (New York: Macmillan, 1959), 76.

others, that they need us just as we need them, and that we need to work to take care of each other, but we can't bear the responsibility or the gift. We take flight before the prospects and the obligations of interdependent need. We prefer to think we can stand on our own, not realizing that in denying need and responsibility we also forfeit the joy of belonging. Denying memberships, we become profoundly lost.

The truth, of course, is that none of us can stand alone. To try is invariably to flail about and fall. It is also to die by starvation. Each of us is "held in creatureliness" through the multiple food webs that constitute and circulate through every living organism. Eating is the daily confirmation that we need others and are vulnerable to them. When we eat well, we honor and accept responsibility for the gifts of God given to each other for the furtherance of life. We move more deeply and more sympathetically into the memberships of creation. But when we eat in exile we eat alone and with considerable violence, without deep connection or affection, experiencing food and each other as mere objects and threats or as the means to our power, control, and convenience.

Scripture characterizes this crisis in eating and responsibility as sin Sir is a disoriented life and a misdirected desire. According to traditional accounts, the first sin is pride, the naïve and arrogant disposition in which sinners think more of themselves than they ought. Adam and Eve did not want to dwell among creatures all joined together by their interdependent need but instead wanted to have life on their own terms. This is why shortly after eating the forbidden fruit Adam and Eve felt shame. Shame is the realization that our freedom has gone wrong. It is the painful knowledge that a decision cannot be justified before another because it violates God and another's freedom to be. When we are ashamed of ourselves we understand that our desire has broken faith with the memberships that constitute and enrich our life.

Bonhoeffer observed that Adam and Eve's shame is both a recognition that they are limited creatures and that they have transgressed their limits. Having transgressed, they are no longer able to appreciate limit – what we have been calling mutual interdependence and the knowledge that we are constituted and sustained through our relationships with others – as the grace of God that holds all together in creaturely unity. Limit of any kind is now perceived as the wrath, hatred, and envy of God. They cannot engage each other in love because now others appear as a threat. The memberships of creation are broken and death takes on a character previously unknown. Understood this way, we can appreciate Adam and Eve's desire to cover their nakedness: 'Nakedness is the essence of unity and of understanding, of being for the other, of objectivity, of the recognition of the other in his right, in his limiting me and in his creatureliness ... Nakedness is innocence.³¹⁶ Though Adam and Eve tried, in some sense, to become as God, they quickly came to know their effort to have been a disaster. Their only recourse was to hide.

Interpreting the garden story as we have, we can now see that sin is a form of rebellion against our creaturely condition and calling. When we turn away from the creation that God has made, preferring instead the worlds of our own making, and when we refuse the humble life of service and care, preferring instead a life of convenience and self-glorification, we at the same time separate ourselves from the world and the God of life at work in it. We twist and distort God's life-giving power so that it serves the very narrow register of our own fear, ambition, and vanity. In this alienating gesture we deprive ourselves and other creatures of their ability to be and to flourish. Slowly we turn the whole world, even our own bodies, into a place of exile.

Another way to put this is to say that sin is a refusal of relationship and a refusal of responsibility for the well-being of others. Consider Lash's formulation: "All things exist as expressions of God's knowledge and love; as finite refractions of the absolute relation – eternal utterance, inexhaustible donation – that God is. Sin is refusal of relation, self-enclosure in a futile search for safety."¹⁷ Of course, our search is not only for safety. Sometimes we are simply lazy or angry or arrogant or bored or afraid. The knowledge that we will die, that we live by the dying of others, and that we must care for the dying can be a terrifying realization. It gives rise to all kinds of selfdeception and flattery but also arrogance and our lashing out at others. Herbert McCabe has put this point succinctly:

The root of all sin is fear: the very deep fear that we are nothing; the compulsion, therefore, to make something of ourselves, to construct a self-flattering image of ourselves we can worship, to believe in ourselves – our fantasy selves. I think all sins are failures in being realistic; even the simple everyday sins of the flesh, that seem to move from mere childish greed for pleasure, have their deepest origin in anxiety about whether we really matter, the anxiety that makes us desperate for self-reassurance.¹⁸

¹⁶ Ibid., 78–79. In his later work Bonhoeffer states, "Shame can be overcome only where the original unity is restored" (Bonhoeffer, Works: Vol. 6, Ethics [Minneapolis: Fortress Press, 2005], 306).

¹⁷ Lash, *Believing Three Ways in the One God*, 101. As Lash goes on to explain, sin is a refusal of God's love as it is made concrete in the life-building and life-sustaining ways of creation. To refuse this love is also to refuse life. This is why it can be said that "sin snuffs out the breath of God, extinguishes the Spirit" (115).

¹⁸ Herbert McCabe, God, Christ and Us, ed. Brian Davies (London: Continuum, 2003), 17-18.

For many people, the creaturely world of finitude, impotence, and vulnerability but also membership and gift is too hard to bear. And so we feel compelled to construct and flee to the more controlled, convenient, and comfortable worlds of our own making, worlds in which life can be experienced on our own terms.

Our dwelling, however, does not need to be fearful and destructive. We do not have to live the exilic patterns of dislocation and disaffection that, as we will now see, are reflected in ecological, economic, and physiological ways. God calls humanity to a life of membership informed by mercy and care, fidelity and love. Our dwelling in creation is to be inspired by the God who dwelt among us, and in that dwelling showed us the ways of forgiveness and peace and joy. We need to recall here the divine love and delight that first brought creation into being: "God 'delights' creation into life. To hear God's Word of life, to take God's utterance to heart, is to find all things 'delectable,' to delight each other in the light of God."¹⁹

ECOLOGICAL EXILE

It is difficult for us to appreciate the fact that we have entered a fundamentally new period in the earth's history. People prefer to believe, and have been trained to think, that because natural processes have been going on for millennia, they will continue in the same way for millennia to come. Nature's ways are sure, its gifts unlimited, and its capacity to absorb human assault without end. Nothing people do could possibly threaten the vast resources and capacities of the earth, or so we naively, and sometimes desperately, hope. Life will hold together and continue as it always has.

This "hope" is both ignorant and dangerous. It is ignorant because it is maintained in the face of considerable evidence showing the world's ecosystems to be in crisis, and in some cases on the verge of collapse. It is dangerous because our blindness prevents us from making the political, economic, and personal changes that can halt, and in some cases potentially reverse, the destruction.

An ecosystem is most basically a food system, a place in terms of which nutrient energy flows through one creature after another. When an ecosystem suffers or collapses, so too does the food chain it embodies. How distressing, then, to discover that vast regions of the earth are dying or are in serious distress, and that our food-producing habitats are being exhausted and degraded at an alarming rate (often in the wake of our food production techniques). All around us the memberships of creation are coming apart. Species are going extinct 1,000 times faster than the normal rate, with the result that as many as half of the earth's species will be severely diminished or completely disappear in the next 100 years.²⁰ Much of the degradation is the direct result of a global economy that has grown so dramatically that it boggles the mind. James Gustave Speth tells us that it took all of human history to build the \$7 trillion economy of 1950. Today, economic activity grows by that same amount every decade.²¹

Economies cannot grow at rates like this without exacting a heavy toll on our lands and waters. J. R. McNeill, a leading environmental historian, has documented this toll in terms of more specific indicators: from 1800 to 1990, energy use saw a 75-fold increase, with coal production accounting for a 500fold increase; human population grew from a billion in 1820 to over seven billion today (and remember that the overall appetite of today's citizen is far greater than it was nearly 200 years ago); world gross domestic product (GDP) increased more than a hundred-fold from 1500 to 1990; global freshwater use jumped from 110 cubic kilometers in 1700 to 5,190 in the year 2000, a nearly fifty-fold increase; and soil degradation, either through mining or agriculture, has effectively compromised two billion hectares, an area roughly the size of the United States and Canada combined. Much of the growth in consumption was centered in Europe and North America, but since World War II the economies of countries around the world, especially India and in Asia, have exploded.²²

The scope and scale of today's ecological degradation is one of the clearest signs that the memberships of creation are broken. It is becoming harder and harder for many species of life to find their places a life-giving, stomach-satisfying home. To be sure, much of the economic and agricultural development of the last 200 years has made it possible for millions of people to crawl out from under the constant threat of starvation and its accompanying social and personal, psychic and bodily effects. A growing global economy, and the international food system that grew within it – a system built on vast trading routes, new food preservation and storage techniques, new plant

²⁰ For more on how today's extinction patterns and rates differ from previous extinction events, see Elizabeth Kolbert's *The Sixth Extinction: An Unnatural History* (New York: Henry Holt and Company, 2014).

²¹ James Gustave Speth, The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability (New Haven: Yale University Press, 2008), x.

²² J. R. McNeill, Something New under the Sun: An Environmental History of the Twentieth-Century World (New Haven: Yale University Press, 2000), particularly chapter 1.

varieties, massive amounts of fertilizer and pesticide, machine invention, and "free" trade – has made possible many more food calories than people have ever seen before. But the ecological costs of our vast production are monumentally high, so high that our temporary productive "success" threatens to undermine future possibilities.²³

When we consider several key environmental indicators, it becomes apparent that the human anxiety of membership has developed in ways that Adam could never have anticipated.²⁴ To appreciate this we will examine, in summary form, the state of our earth's atmosphere, forests, soil, water, fisheries, and genetic diversity. Our main concern will be to see how ecological degradation in these areas affects food sustainability and security.

The Atmosphere

The importance of the atmosphere becomes apparent the moment we hold our breath. Air circulates through our bodies, making possible the burning of food energy and thus the movement of our life. When we breathe, we share in the life of all living creatures that surround us with their own breath. The concentrations of elements within our atmosphere are precisely tuned so that life can flourish: mostly nitrogen (78 percent), then oxygen (21 percent), a very small amount of argon, and then much smaller amounts of carbon dioxide (0.035 percent), neon, helium, methane, hydrogen, and ozone (and a few others). It is of the utmost importance that the balances be maintained. One of the simplest ways to kill life is to deprive it of its breath, or alter the composition (however slightly) of what an organism breathes.

When something like an environmental consciousness emerged in the 1960s, the atmosphere was often in the forefront. The concern at the time was pollution and air quality. More recently, however, the dominant concern has been the unprecedented release of carbon dioxide into the atmosphere. As people have burned carbon, either in the form of trees or fossil fuels like coal, oil, and natural gas, they have dramatically altered the atmosphere's

Paul Roberts's The End of Food is a superb exposition on the interrelationship between eating, agriculture, and the world economy. It informs this chapter throughout. Bourne's recent The End of Plenty does an excellent job documenting the challenges and opportunities that farmers face in a degraded world.

²⁴ A great number of scientific and environmental organizations are documenting the earth's degradation. The following account depends most often on the findings of the Union of Concerned Scientists, the Worldwatch Institute, the UN's Millennium Ecosystem Assessment, and the Institute for Agriculture and Trade Policy. A succinct, up-to-date summary can be found in Speth's *The Bridge at the Edge of the World*, chapter 1.

 $\rm CO_2$ concentrations.²⁵ This development is so significant because $\rm CO_2$ is a heattrapping gas. As heat radiates from the earth, $\rm CO_2$ molecules reflect it back, causing the earth's overall surface temperature to increase. As the earth warms, and as climate patterns change as a result of the warming (more violent storms, unpredictable rains), food systems are disrupted. Vegetation dies either through drought, too much heat, or flooding. Fish species decline as oceans warm, currents are disrupted, and coral reefs bleach and die. Animals suffer from heat and from the spread of disease-carrying insects that flourish under warmer conditions. Agricultural productivity drops as plants are stressed by even slight increases in temperature (it is estimated that for every 1 °C increase in temperature, wheat, rice, and corn harvests will decrease by 10 percent).²⁶

It is impossible to predict exactly all the adverse effects that will follow in the wake of climate change.²⁷ We can't fully anticipate the sorts of social, political, economic, agricultural, and technological modifications that will become necessary as societies respond to region-specific change. What we do know, however, is that plant and animal species already under stress from human encroachment and habitat loss will suffer even more. Unpredictable weather cycles will jeopardize the plants that have adapted to relatively stable climate conditions and temperate zones. Glaciers and mountain snowpacks will melt, decreasing freshwater supplies and stalling irrigation agriculture. Rising ocean levels will erode or completely inundate coastal zones and islands, creating millions of refugees among the people who have settled near ocean developments. All this will happen in the context of a still-growing human population that will need more, not less, food. Never before has humanity faced the prospect of such ominous ecological change or collapse.

Forests

It is hard to imagine that forests once covered most of the land on which we currently live (well over half of North America, most of Europe, Brazil, Asia,

²⁵ For a clear treatment on how humans have changed the earth's climate see William F. Ruddiman's Plows, Plagues, and Petroleum: How Humans Took Control of the Climate (Princeton: Princeton University Press, 2005). The literature on climate change and global warming is now immense. For an up-to-date assessment, see Joseph Romm's Climate Change: What Everyone Needs to Know (Oxford; Oxford University Press, 2015).

²⁶ See Lester R. Brown's Outgrowing the Earth: The Food Security Challenge in an Age of Falling Water Tables and Rising Temperatures (New York: W. W. Norton, 2004).

²⁷ The most thorough and up-to-date treatment of these matters is in the reports of the Intergovernmental Panel on Climate Change, particularly the Working Group II Report, "Impacts, Adaptation and Vulnerability." It can be accessed at www.ipcc.ch/-ipccreports/ ar4-wg2.htm.

and Indonesia). Forests play an indispensable role in the maintenance and preservation of life. They are home to countless species of plants and animals.²⁸ Here the diverse forms of food and fiber many creatures need are generated. Trees are like the lungs of the planet, breathing in carbon dioxide (and sequestering carbon) and emitting the oxygen we all need.

Over the last several centuries, but even more dramatically in the last decades, people have been felling forests to make room for agriculture, mines, and roads, and to feed our need for wood, paper, and fiber. Deforestation rates in the tropics have been as high as one acre lost per second. Roughly one-third of the world's forests are now gone. This is a tragedy of monumental proportions because of the numerous "ecosystem services" that forests provide: soil stabilization, water retention and flow stabilization, climate modulation, disease buffering, and biodiversity protection.²⁹ As the forests disappear, land is exposed to the forces of erosion, while less of the sun's heat energy is absorbed and stored in plant growth (coal can be understood as the sun's energy stored in plants and then used thousands of years later). The latter point is especially important because vegetation manages and reflects sunlight to promote evapotranspiration, cloud cover, and subsequently rainfall. Deforestation thus contributes to decreased rainfall, which leads to less vegetation, which eventually leads to the growth of deserts.

Deforestation is not simply about the loss of a few trees. It is about the massive disruption of food and energy flows. It is about the loss of habitat and the extinction of countless species, many of which we have never met, let alone appreciated. It is about the alteration of the world's climate systems. Forests play such a vital role in the health of global ecosystems that we simply cannot expect a viable human future without them.

Soil

Soil has been under assault for roughly ten thousand years, since the agricultural revolution in human societies began. In our thoughtless alteration of the ground, our literal turning of the soil-holding roots upside down, we have unleashed tremendous destructive potential. Given enough

²⁹ Ecosystem services refer to the conditions and processes at work in a habitat that enable the feeding and flourishing of life, especially human life. See the essay by Norman Myers, "The World's Forests and Their Ecosystem Services," in *Nature's Services: Societal Dependence on Natural Ecosystems*, ed. Gretchen C. Dailey (Washington, DC: Island Press, 1997). 215-235.

²⁸ The classic book on forests as a source of food is J. Russell Smith's *Tree Crops: A Permanent Agriculture* (New York: The Devin-Adair Company, 1950).

years of till agricultural practice, people would gradually erode, and thus render relatively lifeless, vast stretches of the world. The United Nations estimates that an area roughly the size of China suffers from varying degrees of desertification (land that otherwise would account for one-fifth of the world's food production), while each year an area the size of Nebraska becomes too degraded for crop production or is lost to urban sprawl.

The problem is not simply soil erosion. Soil quality is equally important. Industrial agricultural techniques compromise vital soil structure, rendering it incapable of sustained plant growth. For instance, excessive irrigation waterlogs the soil, which then brings mineral elements in the water to the surface. As the water evaporates, soils become saline and thus essentially lifeless. In addition, the use of heavy machinery, a staple of modern industrial agribusiness, compacts the soil so that water cannot be absorbed (further exacerbating erosion), roots cannot grow, and microorganisms fail to flourish. Within a short time span, soil fertility and crop yields decline significantly.

The preferred method to increase soil fertility has been to apply heavy amounts of fossil-fuel-based fertilizers, especially nitrogen. But as soil scientists study the effects of steady streams of fertilizer application, it is becoming apparent that dirt is not simply a lifeless, chemical receptacle for nitrogen, potassium, and phosphorous.³⁰ Good soil, the kind of soil that enables healthy, vigorous plant growth, depends on a complex mix of organic matter and microbial life. In the soil's rich humus, nutrients cycle through each other. Dead organic bodies are transformed into the basis for yet more life. The soil physicist Daniel Hillel characterizes it this way:

[Soil is] a rich mix of mineral particles, organic matter, gases, and nutrients which, when infused with vital water, constitutes a fertile substrate for the initiation and maintenance of life. The soil is thus a self-regulating biological factory, utilizing its own materials, water, and energy from the sun ... The soil also acts as our earth's primary cleansing and recycling medium, in effect as a "living filter," wherein pathogens and toxins that might otherwise foul our environment are rendered harmless and transmuted into nutrients.³¹

³⁰ New research is suggesting that the use of synthetic nitrogen reduces the quantity and quality of a soil's organic matter. See www.grist.org/article/2010-02-23-new-research-syn thetic-nitrogen-destroys-soil-carbon-undermines-/. See also David R. Montgomery's work on soil health and agriculture in *Growing A Revolution: Bringing Our Soil Back to Life* (New York: W. W. Norton & Company, Inc., 2017).

³¹ Daniel Hillel, Out of the Earth: Civilization and the Life of Soil (London: Aurum Press, 1991), 23-24.

Today's industrial agricultural techniques short-circuit these soil processes, making it much more difficult to maintain crop yields. In the meantime, however, as ever more fertilizer is applied in hopes of improving productivity, vast amounts of nitrogen-rich fertilizer run off or leach into our groundwater and streams, killing aquatic life and making the water unfit to drink. Eventually the nitrogen-fortified water accumulates in coastal regions, creating massive "dead zones." These dead zones suffocate aquatic life or lower oxygen levels so much that the reproductive capacities of fish are severely impaired.

Our culture has not trained us to see how vital the human connection with soil is. But if we remember that food is absolutely essential, and that all terrestrial nourishment comes from the carcasses and plant debris that are continually being reconstituted in the soil, then we can begin to appreciate that our coming from and returning to the soil is not simply a metaphor. Every time we take a bite we incorporate soil: "death turns into life, grows up, feeds life and dies again, returning to the workshop underground to be restored to life."³²

Water and Fisheries

Nearly 75 percent of the earth's surface is covered in water. When babies are born, 75 percent of their body weight is water. The flow of water is everywhere in our world, even the places that on the surface seem dry to us. Waterways are the planet's circulatory system. Rain falls, enters the soil, evaporates, or is absorbed by plants that are eaten by animals. The absorption and evaporation of water forms a vast hydrological cycle that circulates through all living tissues like a system of arteries, veins, and capillaries: "water circulates endlessly from the heavens to the oceans and land, held briefly within all living things before continuing the cycle. You might see the whole enterprise of life as just a vehicle for the transformation of water."³³

Though water is everywhere on earth, only the tiniest percentage of it is fresh water that is available for human use. Over 97 percent of the world's water is in oceans too salty for us to consume. Another 2 percent is locked in glaciers and icecaps, leaving less than 1 percent of the water for terrestrial (and freshwater aquatic) life to share. Even so, the water that people need is not equally distributed. Regions of Africa and Asia, though having large

³² David Suzuki, The Sacred Balance: Discovering Our Place in Nature (Vancouver: Greystone Books, 1997), 80.

growing populations, have too little, while Canada, with its relatively small population, has nearly 20 percent of the earth's fresh water by volume. Wherever the water is, however, it is being depleted, diverted, squandered, or polluted.

Nearly 70 percent of freshwater withdrawal is for agricultural purposes, which means that "Agriculture is a thirsty business."³⁴ As the need for increased food production continues, ever greater amounts of water will be necessary. The water is simply not there. Glaciers are receding, underground aquifers are being depleted at unsustainable rates, and many of the world's major rivers (the Colorado, Nile, Ganges, and Yellow rivers) periodically run dry before they reach their ocean destinations. Nearly 60 percent of the world's major rivers are now dammed or fragmented in some significant way, often for power generation or to create reservoirs for agriculture and recreation. Because so many of our waterways have been diverted or dammed, the immense forests, fields, and watersheds/wetlands that depend on water flow are compromised. These water stresses invariably work themselves out on the political stage. It is projected that by the year 2025, 65 percent of the world's people will be living in water-stressed countries. All this will occur in a context where the worldwide demand for water will double by the year 2050. Besides being a recipe for ecological and agricultural catastrophe (the Green Revolution is heavily dependent on irrigation), water shortages will lead to violent conflict and forced migrations as people grow thirsty, hungry, and desperate.35

It is not only freshwater systems we need to worry about. Ocean fisheries are also in serious distress. Many fishing grounds (estimated by some at 75 percent) have been fished to exhaustion. If current trends continue, scientists predict that by the year 2050 all commercial ocean fisheries will collapse. As Speth points out, however, our marine problems are not confined to overfishing. Coastal pollution, the destruction of mangroves, and the bleaching of coral reefs (due to global warming) are all taking a major destructive toll. For many people, fish are the major source of food and aquaculture a primary means of life. If people hope to continue to eat fish for long, various forms of sustainable aquaculture will need to develop quickly to meet the need.³⁶

³⁴ Bourne, The End of Plenty, 205.

³⁵ Speth, The Bridge at the Edge of the World, 32-33. Speth's treatment has been very informative throughout this section. See also Fred Pearce's When the Rivers Run Dry: Water - The Defining Crisis of the Twenty-First Century (Boston: Beacon Press, 2007), and Peter H. Gleick's The World's Water 2006-2007: The Biennial Report on Freshwater Resources (Washington, DC: Island Press, 2006).

³⁶ Bourne describes some of these efforts in *The End of Plenty*, 165-181.

Genetic Diversity and Integrity

An examination of the plant variety in today's typical diet reveals a dramatic shrinking of the gene pool. According to the FAO, humans can eat roughly 30,000 plant species. Ten thousand or so have been eaten at some time. Though 150 kinds of plants are eaten in diets around the world today, only four – corn, wheat, rice, and soy – provide the bulk (60 percent) of our plant calories and protein.³⁷ Even within species there are often hundreds of varieties of corn or potato or apple, but we actively grow and trade only the tiniest percentage. For instance, Andean farmers have bred over 3,000 varieties of potatoes. They come in all shapes and colors, having a distinct flavor and aroma. In the United States, it is estimated that over 7,000 varieties of apples have been grown at one time or another (6,000 of these are now completely gone). This diversity is not reflected on our fields or in our large grocery stores. Seventy-five percent of genetic diversity in our agricultural crops has been lost in the last century. Why?³⁸

The food gains of industrial agriculture have been premised on the homogenization of plant and animal specie. This has happened in two major ways. First farmers have been taught that to become as efficient as possible they must grow crops in monoculture.³⁹ This means that large fields are planted with one crop. Other farmers do the same, using the same crop varieties. The reasoning behind this practice is simple: it is much easier and more cost-effective to harvest one plant when using a large machine to do the work (a combine cannot simultaneously harvest peas, wheat, and corn because the crops are each harvested so differently and at different times). Of course, if the farmer is not dependent on large machine power, then it is possible to grow a variety of crops in the same area (picking what is ripe and leaving the rest for later, and using the manual dexterity of workers to adjust

www.fao.org/docrep/004/v1430e/V1430E04.htm/July 12, 2018

For a vigorous critique of global, industrial agriculture and its threat to genetic and cultural diversity, see Vandana Shiva's Stolen Harvest: The Hijacking of the Global Food Supply (Cambridge, MA: South End Press, 2000).

³⁹ There is vigorous debate on whether or not monoculture agriculture is in fact more efficient at producing food. A great number of variables need to be factored in, including the sustainability of industrial, chemical practices, and the fact that much industrial agriculture produces commodities for livestock or for industrial purposes (corn, for instance, has multiple uses). Intensive forms of agriculture that grow multiple crops in close succession and proximity with each other can sustainably produce much more food. See the work of Masanobu Fukuoka, *The One-Straw Revolution* (New York: New York Review Books, 1978) and Joel Salatin, *The Sheer Ecstasy of Being a Lunatic Farmer* (Swoope, VA: Polyface, 2010) as vivid examples of farmers who grow food at rates that exceed industrial counterparts and on a smaller carbon/land footprint.

to differing plant qualities). Second, the sale of seeds has been taken over by a very small number of companies that only make available certain varieties (most often those varieties that have been engineered to work in tandem with the same company's pesticide products). The age-old practice of farmers retaining and then trading their seed with others is gone. As agriculture has been transformed into big-scale agribusiness, the genetic pool from which seed stock is derived has shrunk dramatically.⁴⁰

A similar process is at work with respect to livestock. Americans eat roughly 400 million turkeys each year. Though many breeds of turkeys exist, 99 percent of those eaten will come from a single breed. The Broad-Breasted White is the turkey of choice because it is laden with white meat. It has also been bred to survive the rigors of large confinement operations (left on their own they would get so heavy they could not walk, forage, or mate).⁴¹ What can be said of turkeys also applies to cattle, pigs, chickens, sheep, and goats. Though many breeds have existed throughout the ages, only a fraction of them are raised today. Breeds are chosen because they can survive industrial production techniques.

As eaters, we should be concerned because monoculture farming, besides reflecting a centralized and controlled food economy, is highly vulnerable to disease and pest infestation. Healthy ecosystems contain a diverse mix of species: different plants benefit from each other's proximity. For instance, a nitrogen-fixing legume feeds cereal crops that cannot fix nitrogen on their own. Other species, in turn, are valuable because they possess traits that discourage pests. Moreover, growing polycultures means that the farmer or gardener is much less likely to suffer complete crop collapse: if one or two crops fail, others, because of their specific adaptive qualities, will survive. Species diversity is thus at the heart of food security. This is why a number of the world's leading food advocates drafted a "Manifesto on the Future of Seed": "Diversity is our highest form of security. Diversification has been the most successful and widespread strategy of agricultural innovation and survival over the past 10,000 years. It increases the array of options and the chances of adapting successfully to changing environmental conditions

⁴⁰ The story of the industrialization and commercial integration of agriculture is masterfully told by Pollan in *The Omnivore's Dilemma*. For an assessment of the long-term viability of industrial agricultural techniques, see Fred Kirschenmann's essay "The Current State of Agriculture: Does It Have a Future?" in *The Essential Agrarian Reader: The Future* of Culture, Community, and the Land, ed. Norman Wirzba (Lexington: University Press of Kentucky, 2003), 101–120.

⁴⁴ For a brief analysis of the turkey industry, see Barbara Kingsolver's Animal, Vegetable, Miracle: A Year of Food Life (New York: HarperCollins, 2007), chapters 6 and 19.

and human needs."⁴² When the world is sown in only one or two crops, we are only one pest or disease away from total food disaster.

A second major factor in the homogenization of today's food supply has to do with the genetic modification of species Biotechnology has become one of the fastest growing areas in science and industry because what is at stake is not only the development of new species but also their control (through patents, Monsanto controls 90 percent of all commercial genetically modified plant traits). When a company owns the patent to a seed's genetic code it is illegal for farmers to save and share seed.⁴³ All seed, as well as the fertilizers and herbicides needed to grow them, must now be purchased. Given this reality, we should not be surprised that major food companies are reaping windfall profits while farmers' earnings decrease steadily.

It would be foolish to be opposed to all genetic modification, since farmers have used cross-breeding for centuries to improve herds and plant varieties. Farmers have traditionally selected specimens from their crops and herds because they showed traits that made them stronger and more productive, more nutritious and tasty, or simply more beautiful. What makes today's genetic modification so ominous is that, among other problems, it threatens to unleash "genetic pollutants" into our natural habitats and so upset finely tuned balances that keep food chains resilient through time. Genetic engineers often fail to appreciate the diverse, complex environments in terms of which species develop and adapt.44 Ecosystems develop over millions of years. Their stability and resilience is a feature of unfathomably complex interactions. When we release new genetic material, especially material that would not have developed on its own (a number of our genetic designs cross species barriers), we often have no idea what the adverse effects might be. While it may be more profitable to grow super-salmon, we simply do not know all the ways in which these salmon will threaten the balances and the stability of other aquatic populations.

Another major problem with some forms of genetic engineering is the escalation of herbicide use. For instance, many of today's genetically modified plants are designed to withstand the application of herbicides

⁴² Manifestos on the Future of Food and Seed, ed. Vandana Shiva (Cambridge, MA: South End Press, 2007), 91.

⁴³ Ellen Davis has argued that the patenting of seed is a direct affront to the free provision of a generous God. See Scripture, Culture, and Agriculture: An Agrarian Reading of the Bible (New York: Cambridge University Press, 2009), 42–65.

⁴⁴ For an insightful discussion of these matters, see Craig Holdrege and Steve Talbott's Beyond Biotechnology: The Barren Promise of Genetic Engineering (Lexington: University Press of Kentucky, 2008).

(nutrition and food quality are not often the main drivers of biotech research and development). Monsanto's "Round-Up-Ready" seeds are a prime example. The Round-Up herbicide kills everything but the soy or corn designed to survive its application. The danger with these genetically modified plants is that they often cross-pollinate with other, often wild, plants, producing herbicide-resistant pests that will then require a more lethal poison to contain them. Or the genetically modified traits "drift" into fields of farmers who are trying to grow traditional varieties. Farmers thus find themselves in an escalating (and expensive) toxins race while the fields, streams, and animals suffer the effects.

The consolidation of the food sector into the hands of a few giant corporations, besides being a major ecological concern, is also clearly a global threat to food democracy and food security Should our global food system depend on the small variety of plants and animals they promote? Should seeds, the genetic codes of food, be patented and owned and controlled by anyone? What is to be said to the poor farmers around the world who cannot afford the expense of biotechnological invention?

N

This brief survey of ecological degradation suffices to show that people by providing for themselves often work against the very memberships that sustain them. In our often thoughtless and aggressive hoarding of the gifts of God we demonstrate again and again the anxiety of membership. We act as though we can thrive while the habitats and organisms that feed us can languish and die. In a fit of ecological amnesia, we have forsaken our natural neighborhoods and abdicated our responsibility to care for them. Having forfeited the opportunity to share in God's delight in a world wonderfully and beautifully made, we now find ourselves eating through a sick and poisoned world. This state of affairs did not just happen. It has been a planned and well-funded development reflected in political priorities, social institutions, and economic patterns that facilitate and reinforce the conditions of exile.

ECONOMIC EXILE

Economy, understood in the very broadest sense, refers to the laws or rules (*nomos*) by which people structure their activity and their places to make a home (*oikos*). Ecology refers to the orders and patterns (*logos*) that are at work within a habitat (*oikos*), enabling it to be a living and functioning whole. The etymology of these two terms indicates that it is essential for a human

economy to constantly have in view the potential and the limits implied in any created place. Economies do not exist in the abstract. They depend on particular watersheds, forests, fields, and the creatures that live in them. Put simply, there can be no food economy if there are no fields providing grain, no cows producing milk, and no workers transforming milk into cheese. There can be no sustainable economy if economic "success" presupposes the degradation of the *oikos* upon which cows and people depend.

As was the case with our thinking about the created world, it is important to emphasize how the context for economic activity has changed dramatically. If in the past our main concern was that we did not have enough labor, technology, and investment capital to exploit land and natural resources, the situation today is that we do not have enough resources to feed the appetites of a growing workforce and ballooning financial institutions. This means that the question of how a human economy fits within an ecological context has assumed profound importance. When we remember that creation forms a vast membership that envelops, infuses, and gives life to every part, and that this membership is governed by rules and powers that we have barely begun to appreciate, let alone understand, then it is imperative that we structure our economies with considerable caution, restraint, and humility, because the long-term success of our ambitions depends upon our practices being in alignment with creation. Alignment is crucial because the sources of life do not find their origin in us but in the God-given creation that constitutes and sustains us. People merely borrow or modify whatever good is first there. Wendell Berry has made this point clearly: "the human economy, if it is to be a good economy, must fit harmoniously within and must correspond to the Great Economy; in certain important ways, it must be an analogue of the Great Economy."45

In a variety of ways, today's global, free-market economy guarantees that we will disregard, diminish, and destroy the larger economy of creation, and so deprive ourselves of the experience of home. It does this by (1) encouraging patterns of life that keep us from seeing and correctly interpreting where we are, and by (2) forming groups of people who, because of their habits and dispositions, find it very difficult to live in any place with sympathy, affection, responsibility, and joy. Paradoxically, the economic disciplines and practices that are supposed to help us live long and well within our homes are now largely responsible for ensuring that we will live perpetually in a state of exile.

First, how does our economy prevent us from seeing and appreciating where we are? In many respects, the success of today's consumer economy depends on the inattentiveness of its consumers. Very few people appreciate the extent to which their shopping decisions contribute to the degradation of the world's ecosystems. Fewer still understand how this ecological degradation has the potential to catastrophically jeopardize long-term food safety and sustainability. Current rates of soil erosion, water contamination and depletion, deforestation, and species and habitat loss - all in the context of a rapidly warming and volatile climate - make it much less likely that we will be able to grow the food we need. In spite of this reality, economists and the political leaders who champion their versions of order continue to pronounce the need for a "growth economy," apparently oblivious to the fact that an acceleration of the current economic machine can only hasten our collective ruin.⁴⁶ Speaking of American farm and food policy that encourages overproduction (and therefore the destruction of our land base), Paul Roberts says our economic strategy is "very much like outfitting your teenage son's car with a turbocharger and then replacing the brake with a bigger insurance policy."47

How the mania behind the mantra for growth became so strong makes for a very long and complex story about what people think "progress" means and entails. But if we turn to the origins of modern economic theory, and then more specifically to today's food economy, we can begin to see more clearly how our collective blindness develops.

In a sustainable food economy, growers make sure they do not exhaust or degrade the land, water, livestock, and workers upon which their livelihood rests, for to violate these ecological and social boundaries is to put their wellbeing in jeopardy. To take these precautions, however, farmers or gardeners must have intimate knowledge of the land in terms of which they live. Without detailed and patient attention they cannot assess the effects of their labor. They can't really see when and where abuse is happening or take the steps to correct it. To order their economic lives well they have to know

⁴⁶ In remarks presented at the Hudson Institute, Herman Daly referred to the inability of leading economists to understand basic ecological realities. He quotes Nobel laureate Thomas Schelling, who said, "In the developed world, hardly any component of the national income is affected by climate. Agriculture is practically the only sector of the economy affected by climate, and it contributes only a small percentage – three percent in the United States – of national income. If agricultural productivity were drastically reduced by climate change, the cost of living would rise by one or two percent, and at a time when per capita income would likely have doubled." See www.hudson.org/files/documents/ BradleyCenter/Transcript_2008_06_30_Rural_Philanthropy.pdf.

⁴⁷ Roberts, The End of Food, 121.

where they are and what their place allows. They have to regulate their work and priorities in terms of the larger ecology at work around them.

The modernization of the food economy has worked steadily to undermine our care for places. This is because a growth economy's overriding concern is to increase production while keeping costs as low as possible. Sustainability, which we can here define as the dynamic economic activity that conserves the potential and respects the limits of a place and community, was simply dismissed by classical economists as an obstacle to progress.⁴⁸ In their view, scarcity could only be overcome by growth. As Herman Daly has shown, the crucial shift in modern economic theory that had to happen was for people to take their eyes off the natural resources and labor that feed the economic machine, and instead focus on maximum exchange and efficiency. This shift made possible the externalization (and forgetting) of ecological and social costs like degraded habitats and ruined communities.⁴⁹ Put broadly, modern economic practice would encourage us to ignore or deny that our economic decisions as producers and consumers always occur within and in terms of a place, and that economies, no matter how large or small, are always a subset of the larger economy of a created, sourceproviding world.50

If the goal is steady growth, and maximum productivity and efficiency are the means, then it is only a matter of time before the carrying capacity of a place has to be overridden. Consider again small farmers. As long as they are committed to keeping the land and livestock healthy and productive, limits will be respected. The farmers will know that a pasture can feed only ten cows, and that to try to feed fifteen or twenty will gradually deplete and destroy the pasture. To make up for the degraded pasture the farmers might put their fields on steroids through the application of fossil-fuel-derived fertilizers, or simply walk away and begin on a fresh piece of land that has

⁴⁸ In The Wealth of Nature: Environmental History and the Ecological Imagination (New York: Oxford University Press, 1993) Donald Worster has observed that Adam Smith developed his position "in total disregard of the economy of nature" (214).

⁴⁹ Herman E. Daly, Beyond Growth: The Economics of Sustainable Development (Boston: Beacon Press, 1996), writes: "The whole idea of sustainable development is that the economic subsystem must not grow beyond the scale at which it can be permanently sustained or supported by the containing ecosystem" (28).

⁵⁰ It is important to remember that for centuries prior to the invention of the modern idea of growth there was, in addition to the larger natural context, a moral context that shaped and restrained economic patterns and priorities. Appetite was to be constrained by concerns for justice and moderation. The idea that appetites could be unlimited was widely condemned as sin. For a still helpful discussion of the transformation in moral sensibility that had to occur to make room for the growth economy, see R. H. Tawney's *Religion and the Rise of Capitalism* (New Brunswick: Transaction, 1998), first published in 1926.

not yet been exhausted or degraded. In either case, the result is the same: the integrity of a place, its potential and possibility, has been denied for the sake of increased production. What few economists seem to realize is that these practices of artificial life support and relocation cannot go on indefinitely. We have run out of fresh places to move to, while the places we are in are suffering from toxic overload.

The theory of comparative advantage took the growth economy to an international stage. According to this theory, first formulated by the nineteenth-century economist David Ricardo, economic growth is maximized when nations specialize their productive activity and then trade for the rest (Adam Smith had argued that specialization leads to efficiency). If Brazil can produce beef cheaper than Italy, then Italians should stop beef production and instead concentrate their energy and resources on commodities they can produce more efficiently. Similarly, Brazil should stop its production of commodities that are being produced more efficiently somewhere else. Owing to the spread of maximum efficiency, the volume of productivity will increase while the costs (to consumers) of that productivity will go down.

The spread of global efficiency has often gone hand in hand with monoculture crop production and massive government planning and intervention. But as areas C. Scott has shown, this simplified yet highly controlled economic structure turns out to be far less productive because it does not allow for local adaptation, complexity, diversity, and ingenuity. Modern industrial agriculture is the handmaid of both communism and large-scale capitalism. It depends on violence and destruction. Speaking of the Soviet effort to increase farm production through efficiency techniques, Scott observes:

What must strike even a casual student of collectivization, however, is how it largely failed in *each* of its high modernist aims, despite huge investments in machinery, infrastructure, and agronomic research. Its successes, paradoxically, were in the domain of traditional statecraft. The state managed to get its hands on enough grain to push rapid industrialization, even while contending with staggering inefficiencies, stagnant yields, and ecological devastation. The state also managed, at great human cost, to eliminate the social basis of organized, public opposition from the rural population. On the other hand, the state's capacity for realizing its vision of large, productive, efficient, scientifically advanced farms growing high quality products for market was virtually nil.⁵¹

It is hard not to see the recent efforts of the World Trade Organization (WTO), when combined with the centralizing, consolidating thrust of multinational corporations, as leading us to the exact same result as that witnessed by Soviet collectivization: "large-scale capitalism is just as much an agency of homogenization, uniformity, grids, and heroic simplification as the state is, with the difference being that, for capitalists, simplification must pay."⁵²

In the abstract, it looks like the theory of comparative advantage leads to a win-win situation, particularly when it comes to food systems. It does lead to more and cheaper food. The problems with this approach, however, emerge as we begin to pay attention to the particular places and communities that are affected by growth policies of this sort. Consider, as an example, the production of coffee. According to the growth models espoused by the World Bank, only those countries that can grow coffee the most efficiently should grow it. Since there is a large market for coffee, several countries will vie to get the largest contracts. The large contracts will go to the producers with the lowest price. Achieving the lowest price, however, will dictate that environmental safeguards and worker safety and compensation be at the barest minimum. If a new competitor enters the market with a yet cheaper product (a product often made cheaper by government price supports or foreign investments), longstanding producers must look to produce another commodity more cheaply.

The people of Peru and Colombia, for instance, discovered that the theory of comparative advantage can work directly against their well-being. Because Vietnam could sell coffee more cheaply on international markets,⁵³ Peruvians and Colombians resorted to growing coca for the production of cocaine, thereby creating serious social problems. One might argue that they should simply find another commodity to sell. But economies, especially economies that take ecological realities and social traditions seriously, cannot switch overnight. It takes years to develop fields or orchards or factories. In the meantime, opportunity has often passed a people or nation by. This misfortune can easily be justified on economic terms. Economist Brink Lindsey argues that "creative destruction lies at the very heart of the market process; it is not a market failure."⁵⁴ Put another way, people should

⁵² Ibid., 8.

⁵³ Vietnam's success in coffee production did not occur in a vacuum. Foreign investment and government policy played an important role. For the story, see Roberts, *The End of Food*, 157–160.

⁵⁴ Quoted in Stephen A. Marglin's The Dismal Science: How Thinking Like an Economist Undermines Community (Cambridge, MA: Harvard University Press, 2008), 233. Marglin also quotes a leaked memorandum from Lawrence Summers, one-time chief economist at

expect that communities and places will be destroyed for the sake of the growth idea. Exile is at the heart of economic normalcy.

As the reach of food markets and trade agreements has expanded to include most countries in the world, the potential for destruction has increased dramatically. The danger is not with trade itself, since food has been crossing borders for centuries.⁵⁵ More significant is the prospect of global food production being tied to the profit-driven interests of multi-national corporations.⁵⁶ When this happens, land, water, minerals, energy, genetic diversity, as well as the many forms of social capital, are consolidated and then managed by a small number of elites. Because poor people cannot afford to enter the global economy, they are easily abandoned and forgotten, or they are made the objects of charity and relief efforts.

The politics and economics of world hunger are enormously complex.⁵⁷ What is becoming clear, however, is that market globalization simply must be matched by responsible governance that safeguards human rights. The United Nation's (UN) Food and Agriculture Organization (FAO) has stated that freedom from hunger and the right to adequate food is a basic human right that belongs to everyone. The FAO's panel advises that "the international community, through its institutions and organizations, must recognize its duties to offset the negative consequences of globalization on a very un-level playing field, and to advance conditions that generate equal opportunity for all."⁵⁸ Many of these negative consequences are directly tied

the World Bank and president of Harvard University, demonstrating that the logics of economic efficiency and growth will require the destruction of places: "A given amount of health-impairing pollution should be done in the country with the lowest cost, which will be the country with the lowest wages. I think the economic logic behind dumping a load of toxic waste in the lowest-wage country is impeccable and we should face up to that" (37). Economic logic of this sort indicates that no place is safe unless it has the financial resources to prevent exploitation.

- ⁵⁵ See the essays gathered in *Food and Globalization: Consumption, Markets and Politics in the Modern World*, ed. Alexander Nützenadel and Frank Trentmann (Oxford: Berg, 2008). At times food trade has been linked to imperial power, but at other times it has been linked to the movements of migrant populations that settle around the world. In other words, the tension between preserving local food economies and opening food markets to the world is very old.
- ⁵⁶ For a useful summary on the geopolitics and political economics of global food production, see Peter Atkins and Ian Bowler's *Food in Society: Economy, Culture, Geography* (London: Arnold, 2001).
- ⁵⁷ See here the classic treatment by Francis Moore Lappé in World Hunger: Twelve Myths, rev. edition (New York: Grove, 1998), as well as Tony Weis's The Global Food Economy: The Battle for the Future of Farming (London: Zed Books, 2007) and Thomas J. Bassett and Alex Winter-Nelson's The Atlas of World Hunger (Chicago: University of Chicago Press, 2010).
- ⁵⁸ Quoted by Mary Robinson in "Social Justice, Ethics, and Hunger: What Are the Key Messages?," in *Ethics, Hunger and Globalization: In Search of Appropriate Policies*, ed. Per Pinstrup-Andersen and Peter Sandøe (Dordrecht: Springer, 2007), xii. See also William

to economic policies like trade liberalization, privatization, the deregulation of national industries, and the opening of markets to foreign companies. Critics of "free" market ideology point out that the freedoms are all stacked in favor of the wealthy, making global trade a new form of colonialism, when what is needed is the kind of freedom that enables people to feed and provide for themselves. According to advocates of food sovereignty, communities can only be healthy and whole (it is important to underscore how much illness is directly correlated with nutritional defects) when respect for the environment, cultural diversity, and mutual dependence are affirmed. Global hunger cannot be adequately addressed so long as trade and production are tied only to market mechanisms that greatly privilege the powerful and the wealthy.

So far we have seen how the production side of economic life – the relentless drive for growth – creates a condition in which the integrity of places and communities ceases to register. Having little or no significance, other than as fodder for the growing economic machine, they effectively disappear from moral view. On the consumption side, however, the situation is no better. Today's global food economy, with its lengthy distribution networks traversing continents and oceans, makes it difficult for eaters to know the places and communities that produce and prepare food. Having so little knowledge or direct contact with food's contexts – the fields and waters, livestock crates and pens, the factories and distribution centers, worker communities and restaurants – it is next to impossible for us to act in ways that would promote the good of any place or community.

Many people today eat food they have never seen in the ground or water. This is because as modern forms of storage (especially refrigeration) and transport developed in the late nineteenth and early twentieth centuries they could purchase food produced far away. The supply lines that stock our stores have steadily gotten longer, particularly as Ricardo's theory of comparative advantage took hold internationally. Because salad can be grown efficiently in California, California growers have made this one of the state's specialties. The result, however, is that a resident on the east coast of the United States must have salad fixings shipped a great distance. Besides being

D. Schanbacher's *The Politics of Food: The Global Conflict between Food Security and Food Sovereignty* (Santa Barbara: Praeger, 2010), where the case is made that a country's peoples, rather than foreign or international lending agencies (like the World Trade Organization) and corporations, should have control over the production of food, and *Stuffed and Starved*, where Raj Patel gives numerous stories of how world hunger connects with economic policies.

hugely wasteful of energy⁵⁹ – applying the logic of economic efficiency, we would be much smarter if we simply drank oil! – residents of Boston no longer know or care about what it takes to produce a head of lettuce. They have no idea if the land was laced with toxic chemicals, if it was near lagoons of animal waste that are the by-products of large feedlot and animal confinement operations (and so susceptible to E. coli contamination), if its production is wasting or depleting water resources, or if the farm laborers were treated fairly and paid a just wage. The eating of lettuce in Boston thus takes place within a fog of ignorance and blindness. The places and communities that provide the salad have disappeared.

What can be said about lettuce can also be said about most food products today. Ours is, as Wendell Berry once put it, an anonymous economy of the "one-night stand": "I had a good time,' says the industrial lover, 'but don't ask me my last name.' Just so, the industrial eater says to the svelte industrial hog, 'We'll be together at breakfast. I don't want to see you before then, and I won't care to remember you afterwards."⁶⁰ We don't want to know the social, ecological, or health costs associated with our ignorant consumption because if we knew them we would need to give up the idea of "cheap" food "on demand." Meanwhile, as the previous section showed, the real costs to places and communities around the world are mounting.

Having seen how current economic practices make it very difficult for us to know and thus care for any place, we now need to consider how consumer habits and priorities, along with the policies and structures that recommend them, undermine the possibility of living into a given place with understanding, affection, and care. Harvard economist Stephen Marglin has described how the mainstream teaching and practice of economics today presupposes a world consisting of self-interested, calculating individuals who use markets to satisfy self-chosen goals. Economists do not consider how extreme forms of individualism undermine the development of communal relationships,

⁵⁹ Brian Halweil gives this summary: "The transcontinental head of lettuce, grown in the Salinas Valley of California and shipped nearly 5,000 kilometers to Washington, DC, requires about 36 times as much fossil fuel energy in transport as it provides in food energy when it arrives. By the time this lettuce gets to London (and California lettuce does get shipped to the United Kingdom), the ratio of energy consumed to calories provided jumps to 127" (*Eat Here: Reclaiming Homegrown Pleasures in a Global Supermarket* [New York: W. W. Norton, 2004], 37). The inefficiency of energy use is not restricted to transport. Michael Pollan observes: "From the standpoint of industrial efficiency, it's too bad we can't simply drink the petroleum directly, because there's a lot less energy in a bushel of corn (measured in calories) than there is in the half gallon or so of oil required to produce it" (*The Omnivore's Dilemma*, 46).

⁶⁰ Wendell Berry, "The Whole Horse," in The Art of the Commonplace, 236.

nor do they have the tools for integrating community concerns into their accounting. "By promoting market relationships, economics undermines reciprocity, altruism, and mutual obligation, and therewith the necessity of community."⁶¹ Even though experience tells us that community and place really matter, those practices and priorities that would facilitate their nurture and growth are systematically ignored and excluded. Moreover, in promoting an economic program that emphasizes individualism and consumer acquisition, economists are creating (distorting) a world in their own image. Economists don't just describe a world for us. As their ubiquitous presence in political discussions shows, their pronouncements shape public policy and opinion.

Marglin's point is that the economic systems we have today, especially their emphasis on "free" markets, did not just happen. People had to learn to think differently about human behavior and the aims of a good human life. As the incursion of free-market ideology moves across the globe, we can see that this is a painful, sometimes violent, learning, coming often as a shock to native people who prize more communal values.⁶² In fact, the vices of the great moral and spiritual traditions – pride, greed, prodigality – first had to be transformed into economic virtues for Adam Smith's ideas about production, acquisition, and work to take hold. Today's economies, in other words, are planned. They depend on founding myths or assumptions that need to be seriously questioned if we are to make significant changes in the way we live.

Of these founding assumptions, one of the most important would have to be self-interest as the major driving force of economic life. Smith famously said that we should not count on the benevolence of the butcher to provide us our meat. Instead, we should look to the butcher's interest in making money as the chief reason for their work. One could ask: have not butchers always sought to make money? It depends on what one means by "making money."

Making money is not the same as providing for one's living. In the latter case, the context of consideration is larger because it is the *living* that matters most, and the variables that factor into good living can extend fairly wide: a good living can include having enough rest, having time with family and friends, securing the needs of the community, honoring God in one's work,

⁶¹ Marglin, The Dismal Science, 27.

⁶² See Walden Bello's *The Food Wars* (London: Verso, 2009), and *People-First Economics: Making a Clean Start for Jobs, Justice, and Climate*, ed. David Ransom (Oxford: New International Publications, 2009).

protecting a field, and so on. When one is concerned first about making a good living, one acknowledges that larger (social and ecological) factors in life matter greatly and to a considerable extent shape and define what personal success looks like. In other words, one learns to see that it is silly to claim personal success if one's family, community, or home place are in ruins. This is because success is primarily a well-functioning community and a thriving habitat. A well-cared-for community leads to a healthy membership. It presupposes a regard for others.

For self-interest to take hold in the economic imagination, a radically different view of the person had to emerge, a view that defined success in terms of the individual's private profit rather than a community's or place's health. This new view on self-interest was slow in the making, requiring several changes in manners and customs to develop alongside it. Marglin identifies the following: "The transition from war to peace, the discovery of growth, the growing familiarity of individualism, the emergence of consequentialism, the mutation of passions into interests, and the idea that demand was unproblematic – all these developments created a climate in which self-interest became not only legitimate but praiseworthy."⁶³ People needed to measure personal worth in terms of private wealth. Once this mindset was firmly in place, then making as much money as possible could become the overriding goal, even if it meant that one's efforts would undermine the nurture of communities and the health of habitats.

It is a short step from the legitimation of self-interest to the enshrinement of competition and destruction as the normal, even necessary, courses of economic life. Again, one could ask if competition is not a great good since it promotes economic efficiency and development. To address this issue we need to widen the scope of consideration. In the abstract, competition is clearly good because competitors will stretch their potential and squeeze every resource to get ahead. Their getting ahead makes it possible for us to benefit from their success. Problems emerge, however, when the competitive drive diminishes the communal and ecological contexts in terms of which our common life together is possible.

To appreciate this concern we need to return to the idea of the economy of creation, or what Berry calls the Great Economy, as the ultimate context for understanding and evaluation:

We cannot *afford* maximum profit or power with minimum responsibility because, in the Great Economy, the loser's losses finally afflict the winner.

Now the ideal must be "the maximum of well-being with the minimum of consumption," which both defines and requires neighborly love. Competition cannot be the ruling principle, for the Great Economy is not a "side" that we can join nor are there "sides" within it. Thus, it is not the "sum of its parts" but a *membership* of parts inextricably joined to each other, indebted to each other, receiving significance and worth from each other and from the whole.⁶⁴

The problem with making competition an economic ideal is that it finally leads us into a state of war against each other and against our home. Virtues like kindness and neighborliness, virtues that are indispensable in community life, have no room in a world where competition is king. Moreover, when people espouse competition as an economic ideal they fail to appreciate the necessity of membership. Winners of a competition are mistaken if they think they can stand alone, separated from the pack, because it is our creatureliness, our being held in multiple chains of nurture (food, education, support, friendship) that is always fundamental. The logic of competition, when taken to the extreme of the winner who is dependent upon and beholden to no one, results in individuals who must finally starve and die.

Put another way, when competition reigns it becomes virtually impossible for people to practice Sabbath Recall that Sabbath observance is about learning to rest in God's generous goodness and receive the world as a gift. As Barth said, it requires the sacrifice of sinful desire. Competition, however, resists reliance on anyone because the basic assumption of competitors is that they must secure success for themselves. Competition encourages us to think of our work as a project in selfsalvation, a project in which we control the world in hopes of securing a satisfying end. What this vision denies is that human work, whatever form it takes, rests fundamentally in God's prior creative and sustaining work. When we move into a Sabbath frame of mind we are freed from the anxiety of being successful. Brian Brock has captured this transformation well when he writes:

Separating our work sharply from responsibility for its success allows Christians to praise God who alone can make it fruitful. This renders work a discipline of responsibly preparing for *God's* sustenance, combating the illusion that it is our work which is actually sustaining us. Maintaining this gap between work and its success simultaneously frees us from falling into work as an arena in which we must fight for survival, and provides a new appreciation of the rich ability of creation to sustain life. 65

Consumers most experience the anxiety of membership as the anxiety of ownership. If in previous times people secured their identity primarily by the care of a field, their participation in a guild, or their work in a community, transformations in modern life (most notably the breakdown of social structures and communal networks) made it necessary for people to express themselves in other ways. One of the most popular was through consumption practices. Through one's purchases one could now acquire an identity. It did not matter which social class one belonged to. Consumer products became the vocabulary that framed thinking about success and progress. The historian Gary Cross describes this transformation as it was taking hold in late nineteenth- and early twentieth-century American life in the following: "Americans experienced a loss of communal culture with its personal but fixed roles and witnessed the birth of a mass society in which relations were more impersonal and ephemeral but also more individualistic and even expressive. Products gave Americans ways of identifying themselves in groups when the old associations of family and neighborhood no longer worked."66

In a consumeristic culture one of the overriding worries, even obsessions, is whether or not as individuals we have enough. People learn to crave the success and notoriety of being the one who stands out and rises above the pack, yearning to have the newest product, possess more than our neighbor, and lack for no consumer thing.⁶⁷ It can turn into an intensely lonely quest because to be at one's competitive best one must eschew sharing and neighborliness. It is also a frustrating quest because as a consumer one is

⁶⁵ Brian Brock, Christian Ethics in a Technological Age (Grand Rapids: William B. Eerdmans, 2010), 296–297.

⁶⁶ Gary Cross, An All-Consuming Century: Why Commercialism Won in Modern America (New York: Columbia University Press, 2000), 38.

⁶⁷ Cross is right to point out that the consumerist transformation of American culture was a social event. Shopping became a means to identify with others who were also on the journey toward fulfillment of the American Dream. Consumerism helped overcome ethnic and ideological differences. In this respect, it acted like a great social equalizer. Social equality, however, does not amount to social memberships in which the good of one's life is understood to depend on the good of the membership of which one is a part. There is a major distinction to be made between a collection of individuals, an association of relatively like-minded people, and a genuine community in which people work for the good of the whole as the first priority. On this score, Cross admits that few Americans have the psychological and social resources for the long-lasting commitments that constitute community (239). My point is that today's economic practices deliberately undermine the acquisition of these resources.

at the mercy of products that are designed to make us quickly tired of them (the improved version has already come along). The paradoxical result is that we are committed to a life of consumer fulfillment that keeps us perpetually unfulfilled. Meanwhile, the ecological and communal sources that feed our cravings are increasingly exhausted and degraded.

The consumer desire to have more is an inherently frustrating and insidious desire. Because it so often rests on comparisons with what others have, one inevitably comes up short since someone else will always have more or better. It is essential to remember that many in today's developed economies enjoy a range and quantity of consumer products that would have been unimaginable to the cultural elites in previous generations, and still we are not satisfied. The problem, in many instances, is not with what we don't have but in being unsatisfied with what we do have.

We need to appreciate that today's consumer economy trains us to be discontented and ungrateful. Rather than being consumers who discover and learn to embrace their memberships with each other (by seeing and then appreciating how these memberships feed and nurture us), today's shoppers find themselves growing further apart, suspicious of each other as competitors who may have more or better than we have. In this context it becomes very difficult for any of us to live deeply, or with affection and responsibility, in the places where we are. The habits of our economic lives point us in the opposite direction: the direction of exile.

BODIES IN EXILE

The division and destruction we are working out on the land and in our economies must finally be worked out in our bodies too. The damage cannot be neatly confined to an external sphere. We should recall here Berry's fundamental maxim: "you cannot damage what you are dependent upon without damaging yourself."⁶⁸ To compromise and destroy food systems is *necessarily* also to compromise or destroy the life of all human and nonhuman eaters. We do not appreciate this because we have turned food into a commodity and our bodies into something like a self-standing machine. We seem unable to understand that we are biological beings, and that our bodies are alive because of eating relationships with other bodies of creation.⁶⁹

⁶⁸ Berry, The Unsettling of America, 116.

⁶⁹ We should not be surprised that modern philosophical and scientific traditions that reduced nature to a lifeless, telos-free machine, would also reduce the human body to a

The damage we are doing to ourselves is not only done by accident or as the unanticipated side effect of damage done elsewhere. The destructive logics of division, competition, and inordinate ambition that drive our economic life can also be seen at work in the ways we treat our bodies. Seeing them much like a commodity, people have come to understand their bodies as sites for improved performance or aesthetic enhancement, while marketers see every body as a site to maximize profitability. Large sums of money are spent to enlarge breasts, lengthen penises, shorten digestive tracts, suck fat, and redesign body parts.⁷⁰ While some of these procedures may not be life-threatening, some, like the voluntary amputation of limbs,⁷¹ clearly are. Together they indicate that many people are not at home in their bodies. They find them unsatisfying or inherently objectionable.

What we are witnessing today is the industrialization and politicization of human bodies in unique ways.⁷² Rather than being practical and intimate places where the biological and social gifts of nurture are perpetually received and given again, bodies have become the objects of competing, often contradictory, designs. What nutritionists tell us about eating (eat less, eat better) is often in direct violation of what our food industry promotes (eat more, especially cheap, unhealthy calories). Our own experience that bodies come in all shapes and sizes is daily negated by media images that idolize the thin, sleek physique. If the bodies we are given do not suit the

mechanism in which the primary medical concern becomes the prolonging of "life" at whatever cost. Jeffrey P. Bishop argues that, "Medicine's metaphysical stance, then, is a metaphysics of material and efficient causation, concerned with the empirical realm of matter, effects, and the rational working out of their causes for the purposes of finding ways to control the material of bodies ... For Western medicine, and perhaps for scientific and technological thinking, the important problem ... is how to manipulate the body or psyche in order to get the effects we desire. Bodies have no purpose or meaning in themselves, except insofar as we direct those bodies according to our desires" (*The Anticipatory Corpse: Medicine, Power, and the Care of the Dying* [Notre Dame, IN: University of Notre Dame Press, 2011], 20–21). When the body's manipulation is worked out in a capitalist framework, with its relentless need to grow markets, then it becomes inevitable that bodies will be the targets of unending solicitation and assault.

- ⁷⁰ See Lauren Slater's "Dr. Daedalus: A Radical Plastic Surgeon Wants to Give You Wings," in Harper's (July 2001), www.harpers.org/archive/2001/07/0072395. Slater raises questions about normalcy and what is permitted in the realm of plastic surgery. The surgeon interviewed notes that while it is okay for him to remove an extra thumb, he's not allowed to add one!
- ⁷¹ Carl Elliott, "A New Way to Be Mad," in *The Atlantic Monthly* (December 2000), www .theatlantic.com/magazine/archive/2000/12/a-new-way-to-be-mad/4671/.
- ⁷² For an introduction to the wide range of analyses that have been brought to bear on human bodies, what they are, how they signify, what they mean, and how these meanings are contested, see Alan Petersen's *The Body in Question: A Socio-Cultural Approach* (London: Routledge, 2007).

latest fashion, we are encouraged (through surgical technique, genetic therapy, extreme dieting or exercise) to sculpt or design new ones. The competition, disorder, and destruction we witness in our lands and economies are clearly being worked out in our bodies and in our eating. People are often made to feel so insecure about their bodies that eating disorders have become an expected, even normal, path in the development of large sectors of our populations.

The industrial logic that governs our world today is a natural outgrowth of the refusal of membership. It is a logic that expresses itself in several key ways. One of its most significant forms is the idea that we are each selfstanding, self-legislating beings in control of our own fate. Our lives, and thus also our bodies, are ours to do with as we please. The main purpose of governments is to give us the space, freedom, and protection to carry out the plans we choose. The main objectives of science and economy are to bring more and more of the world within our control. Successful education is judged by the student's ability to consume more. Within this logic there is little room for a deep consideration of what it means to live responsibly and gratefully within a community, or to make of any place a welcoming home.

What makes this picture of persons so striking is its inability to characterize life in terms of membership and interdependent need. There is little appreciation for the fact that we live through our bodies, and that each individual body is necessarily dependent on a bewildering diversity of other bodies for its nurture and life.⁷³ Bodies are not things or commodities that we have or possess. In the most fundamental sense, *every body is a place of gift*. It is a vulnerable and potentially nurturing site in terms of which we come to know and experience life as the perpetual exchange of gift upon gift. This realization inevitably leads to the conclusion that bodies are therefore also places of responsibility. How have we received what we have been given, and what have we done with these gifts of nurture? Through our bodies we learn that who we are is a feature of where we are and what we receive. Through our bodies we discover that what we become is a feature of what we have given in return. Bodies are the physical and intimate places where we learn that life is a membership rather than a solitary quest.

The anxiety of membership, what we have described as the fear of interdependent need and responsibility, compels us to see bodies (in some extreme cases even our own bodies) as alien and as a threat. We worry that

⁷³ For a thoughtful theological reflection on the place of bodies in spiritual development see Stephanie Paulsell's *Honoring the Body: Meditations on a Christian Practice* (San Francisco: Jossey-Bass, 2002).

the fragility of life will be the occasion for someone else to take advantage of us. Recoiling before our own vulnerability and need, we come to view others with suspicion. We become filled with the desire to control every body that we can. Modern food systems, but also the patterns of our eating, demonstrate that the best way to exercise control is to transform what is first and foremost a gift into an object or commodity.

It is no accident that an industrial food system works very hard to "obscure the histories of the foods it produces by processing them to such an extent that they appear as products of culture rather than nature."⁷⁴ When food is a product of culture, it is then a product of our own hands. Liberated from nature, it is not susceptible to biological realities, needs, or vulnerabilities. Food that may have begun in the ground must lose all traces of soil, sunlight, and fragile plant and animal life so that it can be redesigned, engineered, improved, packaged, stored, and delivered in whatever ways the food producer sees fit. While being hugely profitable to food companies, the commodification of food has led to the paradoxical result that consumers now need protection from the food industry if they are to be healthy. How has this come about?

Healthy bodies grow up in relation to other bodies. Scientifically speaking, what this means is that a human body develops in relation with other natural bodies, most basically through what it eats. When we eat well, consuming a diet of whole food that reflects a healthy food chain of well-nourished plants and animals, we stand the best chance of being whole and healthy too.⁷⁵ An industrial food system, however, disrupts the continuity between eaters and what they eat, severely damaging both in the process.⁷⁶ By unnecessarily

- ⁷⁵ The position developed here owes much to Michael Pollan's *In Defense of Food*. Pollan shows how disastrous it has been to think of eating as a machine's ingestion of a few isolatable nutrients. Foods and bodies are complex in themselves and in their relations to one another. This is why the best strategy because it is the one that acknowledges the complexity of food and the limits to what we can know is to eat whole foods, foods that honor the depth of memberships that feed into every bite. Every link in a food chain, even the ones we do not currently know or appreciate, is vitally important. "Food consists not just in piles of chemicals; it also comprises a set of social and ecological relationships, reaching back to the land and outward to other people" (144). The surest sign of the degradation of food is that it has been "improved" by a food executive!
- ⁷⁶ It is important to underscore that the disruption also applies to animals and plants. Industrial agriculture, with its heavy reliance on chemical fertilizers and pesticides, produces plants that are less vital and nutrient-complex, whereas the regimens of confinement and feeding produce animals that are often sick and near death. For a detailed description of the ill effects for plants and animals resulting from our industrial food system, see *The Omnivore's Dilemma* (especially chapters 4 and 9), and Andrew Kimbrell's *The Fatal Harvest Reader* (Washington, DC: Island Press, 2002).

⁷⁴ Pollan, The Omnivore's Dilemma, 115.

processing foods, or by designing food products from synthetic compounds, food providers have found multiple ways to give us food that is, as Roberts says (with some understatement), "ill-suited to our physiology":

Our scientifically bred produce grows so quickly that it contains measurably fewer micronutrients. Our processed foods are often packed with large quantities of salt, fat, and sweeteners, not to mention hundreds of chemical additives, some of which, such as the preservative sodium benzoate and yellow food coloring, are definitively linked to medical problems, such as hyperactivity. And where the wild animals our ancestors gnawed on were naturally lean, our grain-fed livestock is specially bred not only to put on lots of fat, but to partition that fat *inside* the muscle.⁷⁷

Without doubt, our industrial food systems, though giving us less whole (unprocessed) food, are giving us more calories than ever before. The problem is that these calories, while relatively inexpensive, are making us obese and sick. The plentitude of calories, though a boon to the economy – Roberts quotes Tomas Philipson, a University of Chicago economist: "the obesity problem is really a side effect of things that are good for the economy" – has in fact become a major worldwide health concern.⁷⁸

The National Institutes of Health reports that approximately two-thirds of Americans are either overweight or obese. Even if we grant that this is a contested statistic, recognizing that the measurement of obesity has political, medical, and financial ramifications (the healing and dieting industries are multibillion dollar ventures),⁷⁹ we cannot overlook the fact that industrial patterns of eating pose a serious health threat to the individuals involved. Eating a high-fat, high-sodium, and highly sweetened and processed diet contributes to (among other conditions) cardiovascular problems and early onset diabetes. American eating leads to an estimated 100,000 diet-related deaths each year. If in the past it was primarily the rich who were fat, we now face a situation in which a disproportionate percentage of obesity and diet-related disease is found among the poor. The economics of food production means that the cheapest food is also the most fattening and unhealthy.

⁷⁷ Roberts, The End of Food, 83. See also David Kessler's The End of Overeating: Taking Control of the Insatiable American Appetite (New York: Rodale Books, 2009).

⁷⁸ Roberts, *The End of Food*, 95.

⁷⁹ See J. Eric Oliver's Fat Politics: The Real Story behind America's Obesity Epidemic (New York: Oxford University Press, 2006), and Nortin M. Hadler's Worried Sick: A Prescription for Health in an Overtreated America (Chapel Hill: University of North Carolina Press, 2008).

more nutritious and higher quality food in them, to move into the suburbs where the poor cannot easily reach them. The economic divide between rich and poor is not confined to bank statements. It is being worked out in their bodies in the forms of good versus poor nutrition.⁸⁰

As healthcare professionals have warned us about an "obesity epidemic," they have often assumed that obesity is: a relatively new problem, a feature of eating too many calories, a public health threat, a drain on medical expenditures, an effect of not enough exercise, a problem that afflicts especially poor people and minorities, and the effect of low education and poor food choices. Depending on how much one listens to this diagnosis, one will readily come to believe that being obese is a moral failure, and that to be good is to be thin. The solution? Make more money, live in a better neighborhood (with better food options), get a membership at an athletic club, and show more personal discipline.

As Guthman has shown, this framing of the "obesity epidemic" fails to attend to the structures and systems that make and keep people poor, and that keep them working long hours, often in stressful conditions. It fails to attend to the environmental racism that privileges white and more affluent communities so that they have food choices people of color do not. It fails to consider the industrial forms of agriculture and food production that lace our foods with preservatives, artificial flavors, trans fats, and other chemicals (like endocrine disruptors that disturb hormone function) that have not been scrutinized for their health effects. And it fails to address the neoliberalist philosophy that elevates private wealth at the expense of the public goods and services (like education, health care, and environmental protection)

⁸⁰ Mark Winne has described this situation well in *Closing the Food Gap: Resetting the Table in the Land of Plenty* (Boston: Beacon Press, 2008). It should also be noted that the classism and racism evident in our food system is also being worked out more broadly in terms of neighborhoods and communities. Besides having minimal to no access to nutritious food, the poor often live in the places of the worst ecological degradation. For a discussion of what has come to be called ecological racism, see *The Quest for Environmental Justice: Human Rights and the Politics of Pollution*, ed. Robert D. Bullard (San Francisco: Sierra Club Books, 2005).

"/" "Neoliberal policies have helped produce many of the food qualities, built environments, and chemical exposures associated with obesogenesis. At the same time, these policies have made available for investment and marketing many (but by no means all possible) solutions to problems they have generated [for example, as when a company responsible for the production and marketing of high-fat foods makes available low-fat alternatives and dietary supplements]. Thus, the body has become a site for a spatial fix for capitalism's inherent growth problems" (Guthman, *Weighing In*, 164). If a body can only consume so much food, the solution is to design "foods" and pharmaceuticals that reduce food absorption, and That the eating of food has become in our time one of the major causes of anxiety, guilt, and disease ought to compel us to rethink what it means to be a healthy body. Why do so many people, young and old, feel badly about their bodies? There is no simple answer to this question. Market forces, personal/family histories, gender stereotypes, class location, genetic predispositions, emotional upheaval, low self-esteem, racial profiling, public shaming, athleticism, a perfectionist disposition – these are just some of the factors that contribute to our malaise. Industrial eating patterns – quick eating, much of it on the go – means that people are losing the ability to listen to and trust their bodies. Meanwhile, the various projections of what an ideal body should be mean that people can become unaccepting of the fact that body weights and shapes change naturally through time. Feeling bad about one's own body, feeling unloved and unaffirmed, makes it all the more likely that one will develop unhealthy eating habits as a response.

Can we experience health when the bodies we depend upon – soils, waterways, tomatoes, bees, chickens – are made sick by industrial processes? We could only think that we can be healthy while the memberships around us are sick if we believe that we are self-standing beings in control of our own fate. In holding this assumption we are mistaken. Whatever life we enjoy is the daily result of our receiving from each other the gifts of nurture and sustenance. Every time we eat we bear witness to our being benefited by the memberships of which we are a part. The prospect of our continuing health is thus made dependent on the strength of the relationships that bind us to each other. This is why Berry is correct in insisting that there can be no health without wholeness or convivality

Only by restoring the broken connections can we be healed. Connection *is* health. And what our society does its best to disguise from us is how ordinary, how commonly attainable, health is. We lose our health – and create profitable diseases and dependences – by failing to see the direct connections between living and eating, eating and working, working and loving. In gardening, for instance, one works with the body to feed the body. The work, if it is knowledgeable, makes for excellent food. And it makes one hungry. The work thus makes eating both nourishing and joyful,

thereby expand the need for more food products. "Ingesting nutritionally vacuous – or deleterious foods – that exist to solve the problems of profitability for the food industry puts the ecological burden on the body, as does inhaling fouled air or drinking fouled water ... bodies became a site for commodifiable cures to the conditions and illnesses created through these foods and exposures" (181). Obesity, in other words, and other food-related illnesses, are, in the minds of some people, highly desirable because they are also highly profitable.

not consumptive, and keeps the eater from getting fat and weak. This is health, wholeness, a source of delight. And such a solution, unlike the typical industrial solution, does not cause new problems.⁸²

An exilic eating condition takes its most extreme form when eaters become divided from and then turn against their own bodies. Marya Hornbacher, in her remarkable memoir detailing the suffering of bulimia and anorexia, describes the growing suspicion and then hatred she came to feel toward her own body: "the body – my body – was dangerous. The body was dark and possibly dank, and maybe dirty. And silent, the body was silent, not to be spoken of. I did not trust it. It seemed treacherous. I watched it with a wary eye."⁸³ In her mind, her body was deeply flawed (too fat, improperly proportioned, not having the right lines or curve). But not only her body: the world outside, with its many bodies, was also seen as a threat.⁸⁴

Food is the carrier of multiple meanings. What we eat, when, how much, and who with are all potent witnesses to what cultures and their people hold dear. In periods of history when hunger and scarcity are endemic, food registers very differently than in times of food abundance. So, for instance, in today's urban cultures of the West, "food has become a pervasive symbol of affluence and the contemporary ethic of pleasure-seeking."⁸⁵ Every occasion, it seems, is an occasion to eat. At the same time, however, the social contexts for eating and the traditions of instruction that enfolded eating habits within an overall picture of a good life have been eroding as people eat on their own more and more. Food has become a marker of one's personal style or fashion. Given the tremendous variety of food products, and the fact that international cuisines are now well represented in many settings, it is relatively easy for people to develop an individual identity around particular kinds of foods.

What is equally clear, however, is that the meaning of eating is also a market-manufactured reality. The abundance and variety of food, besides symbolizing prosperity, also mirrors the ambitions of food companies and marketers that clearly want us to eat more, even eat excessively (their economic livelihood depends on increased consumption). When the message to eat more is combined with the equally powerful current social

⁸⁴ It is dangerous to attempt a short, definitive account of the conditions and meanings of bulimia and anorexia because these are such complex disorders laden with physiological, psychiatric, personal, family, social, economic, gender, ethnic, and cultural dimensions. There is no single cause for these eating disorders.

⁸⁵ Richard A. Gordon, *Eating Disorders: Anatomy of a Social Epidemic*, 2nd edition (Oxford: Blackwell, 2000), 186.

⁸² Berry, The Unsettling of America, 138. ⁸³ Hornbacher, Wasted, 14.

message that fatness means stupidity, laziness, or lack of willpower,⁸⁶ it is easy to see how eaters are put in an impossible position. On the one hand they are encouraged to eat too much, while on the other hand they are told (by dieting gurus, a weight-reduction industry but also religious leaders) that thinness means self-control, refinement, intelligence, genuine faith, and what Richard Gordon called "the civilized containment of appetites." How is this contradictory set of messages to be handled?⁸⁷

In our culture, thinness has clearly won out as the overriding symbol of success and beauty. Thinness is linked to moral virtue and integrity. It is even viewed as the achievement of a higher spiritual state.⁸⁸ The achievement of thinness is thus widely seen as a triumph in personal power and self-control. Fat people are chastised because they "let themselves go" and have not exercised enough self-control. The overarching taboo, suggests Hornbacher, is not so much food or flesh but the loss of self-control.⁸⁹ Eating and then purging become means to exercise control over oneself, containing the body, and bringing oneself into self-possession. "The convenience in having

⁸⁶ For a multifaceted look at how fatness registers in societies through time, see Bodies Out of Bounds: Fatness and Transgression, ed. Jana Evans Braziel and Kathleen LeBesco (Berkeley: University of California Press, 2001). Its destructive register today can be seen in Michelle Mary Lelwica's observation: "The widespread belief that thinner is better is both cause and consequence of the dominant culture's war on fat in general, and the oppression of fat women in particular. Given the verbal abuse, scapegoating, social stigma, job discrimination, and internalized self-hatred that many fat women face on a daily basis, it is not astonishing that some women will do absolutely anything to be thin" (Starving for Salvation: The Spiritual Dimensions of Eating Problems among American Girls and Women [New York: Oxford University Press, 1999], 57).

⁸⁷ The fact that Western women have borne the greater brunt of this contradiction requires more careful, extended consideration than we can give here. Naomi Wolf's popular *The Beauty Myth: How Images of Female Beauty Are Used against Women* (New York: Morrow), first published in 1991, provoked a great amount of discussion and writing. A more scholarly treatment can be found in Susan Bordo's *Unbearable Weight: Feminism*, *Western Culture, and the Body* (Berkeley: University of California Press, 1993). What is clear from these and other studies is that obsessions about body image and size are intimately bound up with gender.

See Part 2 of Simona Giordano's Understanding Eating Disorders: Conceptual and Ethical Issues in the Treatment of Anorexia and Bulimia Nervosa (Oxford: Clarendon Press, 2005), 91-131. The adulation of thinness is here linked with a historically pervasive dualism of soul and body. Dieting is thus a form of religious asceticism elevating the soul at the expense of the body. In "The Fat Jesus: Feminist Explorations of Fleshy Christologies" (in Feminist Theology 19:1 [2010], 20-35), Lisa Isherwood develops a sustained critique of the Christian dieting industry and the shaming of bodies that are at work within them. She argues that God's affirmation of embodiment in Jesus, along with Jesus' embrace of fleshiness in the touching, healing, and feeding of bodies, especially the bodies of people at the margins of society, is a call to churches to stop body shaming of all kinds.

⁸⁹ "Our most hallowed virtue in modern society is self-control, personal 'power'" (Hornbacher, *Wasted*, 53).

an eating disorder is that you believe, by definition, that your eating disorder cannot *get* out of control, because it *is* control. It is, you believe, your only means of control, so how could it possibly control you?"⁹⁰ "By controlling the amount of food that goes into and out of you, you imagine that you are controlling the extent to which other people can access your brain, your heart."⁹¹ Control of the body and of food intake reaches its most tragic extreme in anorexia, when the person commits not to eat at all. Viewing oneself to be utterly without need and in complete control, the body is literally cut off from all nurture and meaning, bereft of all membership with other bodies. It is left alone to starve and die. It is a "thing" rather than a creature loved and nourished by God.

Hornbacher came to realize that the power of the bulimic and the anorectic person is an illusory power. The body and the natural realm of which it is a part cannot be conquered because the power finally to take one's own life does not amount to a conquest. It is a victory comprised entirely of loss. Nonetheless, the power a person thinks he or she has exerts an attractive, almost magical pull. One comes to think one can erase material, natural limits and take flight from bodies altogether and enter into a supernatural realm. Such flights, however, are a flight from life itself. A healthier life, Hornbacher came to realize, requires us to embrace life and resist the impulse of death.

The leap of faith is this: You have to believe, or at least pretend you believe until you *really* believe it, that you are strong enough to take life face on. Eating disorders, on any level, are a crutch. They are also an addiction and an illness, but there is no question at all that they are quite simply a way of avoiding the banal, daily, itchy pain of life.⁹²

The various forms of exile this chapter has described – ecological, economic, and physiological – share the belief that we can thrive alone and at the expense of others. They deny the fact that we eat, and so depend on each other for our health and well-being. Because of this denial we forfeit the hope of communion.

Food and Faith

A Theology of Eating

Second Edition

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