



eating beside ourselves

HEATHER
PAXSON
editor

thresholds of
foods and bodies

**EATING
BESIDE
OURSELVES**

BUY

eating beside ourselves

THRESHOLDS
OF FOODS
AND BODIES

Heather Paxson, editor

DUKE

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coral gardens and their metabolism

Conquistadors landing in the Caribbean used to note that the white sand beaches looked like sugar. But the sand they likened to sugar turned out to be dead coral, most grains having passed through the digestive system of a parrotfish. It was part of the fishes' metabolism.

In *Coral Gardens and Their Magic*—Bronislaw Malinowski's colonial account of agricultural practices as related to gardening techniques, ancestral meals, land fertility, and uses of coral from the nearby reef—Malinowski . . . observed people in the Trobriand Islands feeding their ancestors by burying food in the earth. He wrote, with more than a hint of judgment, "The Trobriander's misapprehension of the fundamentals of human procreation is here matched by his misunderstanding of the processes of nutrition and metabolism." . . . Of course, this interpretation reveals most of all Malinowski's own assumptions about what processes of nutrition and metabolism entail, informed by the sciences of his era: a single human body, processing intentionally eaten food.

Where does any one body's eating begin or end?

—AMY MORAN-THOMAS, *TRAVELING WITH SUGAR*

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Ahead of you lies *Eating beside Ourselves*, a selection of research essays and intercalary conversations that pursue the relations, thresholds, and boundaries of food and eating. Relations abound in food studies, yet they are all too often taken for granted as a *savoir faire* in studying food *in relation to* other social domains, whether the body, commensality, ritual, political economy, migration, or the structures of the mind—but what of relations themselves? To query the natures and specifications of food's relations with more-than-human life, I organized the symposium “Food's Entanglements with Life,” from which this volume took root. The symposium took place in Oslo, Norway, in September 2016; it was generously supported by the European Research Council and the Wenner-Gren Foundation for Anthropological Research, and it became just one event in a larger process, preceded by intense preparations and discussions among panelists and followed by the further concoction of this volume, edited by Heather Paxson.

The symposium began from the premise that *entanglement* offers a more relationally and materially grounded approach to the study of food than does the well-known credo that food is “good to think.” Recognizing that food is not merely a passive mirror in which to study society, and inspired by the insights of such scholars as Karen Barad, Annemarie Mol, and Manuel Delanda, my aim with the symposium was to highlight the ways food both is enacted by and takes part in shaping society through its entanglements with life. Food thus emerges as a key agent with which to work anthropologically in studying life, social and biological, as reflected in the symposium's full title, “Food's Entanglements with Life: How Is It Good to Work With?” The symposium was organized around three panel workshops that examined related themes: (1) the fragility and precariousness of food's entanglements in health and well-being, chaired by philosopher Lisa Heldke; (2) the tensions between sensorial intimacies and scaled abstractions in food as it entangles with different social contexts, chaired by anthropologist David Sutton;

and (3) the entanglements forged by food between humans and nonhumans, chaired by anthropologist Heather Paxson. That third workshop is the basis of the present volume.

Eating beside Ourselves takes food studies beyond food to detail relations of eating. The very distinction between food and eating is actually peculiar as each is implied in the other. We need only look at the Dutch word—*eten*—which merges the substantive of food and the verb of eating: food/eating, as it were. This volume's focus on eating, *and* on the multiplicities it entails, is a fresh elaboration of food/eating; drawing on rich and vivid empirical research, it offers a much-needed contribution to food studies. Moreover, the chapters encompass eaters besides human beings (as multiple as “we” are), discussing nonhuman and other-than-human agents as varied as cows, cats, reindeer, sugarcane, ventilators, stars, and the placenta. Throughout, the chapters are themselves connected by intercalary pieces in which the contributors collegially converse with one another to move forward together, yet in a nonunitary way. *Eating beside Ourselves* is a singular plural.

Relations may be everywhere, but they acquire a special qualification in the intimacy of both eating and in-*corpo*-ration. Relating joins food/eating in being plural, heterogeneous, and ambivalent. As Marilyn Strathern has taught us, relations do more work than just relating. These chapters expand the field of relations to query *thresholds* in a double sense: as relational boundaries and as tipping points catalyzing transformation. In the first sense, we can think of relations as carrying boundaries within them while boundaries also connect the two aspects they separate, as in a door that both separates and connects two rooms. The notion of the threshold in the second sense, as a tipping point, complexifies the opposition between relation and boundary, and between stability and transformation, as it involves multiple intensities and degrees of each. Suffused with relations in the forms of thresholds and transformations, *Eating beside Ourselves* demonstrates these to be generative apparatuses indeed with which to work.

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X · WIM VAN DAELE

acknowledgments

This book began as a workshop, “Human/Non-human Boundary Work,” conceived and convened as part of the symposium “Food’s Entanglements with Life: How Is It Good to Work With?” organized by Wim van Daele in collaboration with Thomas Hylland Eriksen, Marianne Elisabeth Lien, and Harry West. Held in Oslo, Norway, in September 2016, the three-day symposium was generously funded by a research grant from the European Research Council on Overheating (no. 295843, grantee Thomas Hylland Eriksen). After a sudden drop in global oil prices months before the event depreciated the Norwegian kronor and the symposium’s budget, in relation to the US dollar, by 30 percent, Wim van Daele submitted a secondary grant and won additional support from the Wenner-Gren Foundation for Anthropological Research (CONF-722). We express our warm gratitude to Wim for his creative vision and steadfast leadership in convening the symposium, and to Thomas Hylland Eriksen and the Department of Social Anthropology at the University of Oslo for the gracious hosting. Our lively and inspiring discussions with other participants at the symposium—David Sutton, Lisa Heldke, Cristina Grasseni, Julie Guthman, Abby Wilkerson, and many others—galvanized us to pursue this book project.

The following year, 2017, nearly all of this volume’s contributors reconvened for a roundtable discussion, “Eating beside the Human: Intercalary Exchanges on Food’s Thresholds,” at the meeting of the Society for Social Studies of Science, held in Boston, Massachusetts. Here we worked out a plan for the short intercalary exchanges that, as thresholds, both border and connect the traditional research chapters that otherwise constitute this volume.

We are indebted to Ken Wissoker and Joshua Tranen at Duke University Press for supporting this project and patiently waiting for it all finally to come together, and to Lisl Hampton for ushering it through the production process.

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We give thanks to our families, friends, and messmates, and for renewed opportunities for commensality.

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Introduction

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EATING BESIDE OURSELVES

HEATHER PAXSON

Eating is a liminal activity, occurring at the threshold between “inside” and “outside” the body. . . . As such it represents both opportunity and danger, and so it stands to reason that it would be freighted with significance that bears upon values and the relative worth of different ways of life.

—CAROLYN KORSMEYER, “INTRODUCTION:
PERSPECTIVES ON TASTE,” *THE TASTE CULTURE READER*

TRANSFORMATIVE ACTS AND PROCESSES OF EATING—TASTING, ingesting, digesting, metabolizing—serve to nourish bodies, but they accomplish much else besides. They nourish relations and in this way share features with acts of care (Abbots, Lavis, and Attala 2015). They materialize social differences and in this way participate in gendered (and sexist), racializing (and racist), and classed (and classist) body politics (e.g., Bourdieu 1984; Counihan 1999; Witt 1999; Williams-Forsen 2006; Bobrow-Strain 2012; Tompkins 2012; Garth and Reese 2020). They take forms understood to be “normal” or “abnormal” and in this way contribute to the stigmatization of conditions that interfere with “ordinary” living, whether these conditions stem from disability (Lance 2007; Taylor 2017), chronic illness (Solomon 2016; Moran-Thomas 2019), or acute poverty (Fitchen 1997; Mansfield and Guthman 2015; Bowen, Brenton, and Elliott 2019). Building on and expanding the work of food studies, this volume approaches eating and feeding as sites

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of transformation across a variety of bodies and selves, not only among but also beside ourselves, as humans.

Eating, after all, is not strictly a human activity. *Eating beside Ourselves* asks what can be learned by recognizing that what makes food *food*, in both substance and significance, concerns its relation to a myriad of eaters—not only human eaters but others besides. In turning organic substances into food, acts of eating create webs of relations, interconnected food chains organized by relative conditions of edibility, through which eaters may in turn become eaten. “As a mode of doing,” note Sebastian Abrahamsson, Filippo Bertoni, Annemarie Mol, and Rebeca Ibáñez Martín (2015, 15), “eating crucially includes transforming: food into eater and eater into a well-fed rather than an undernourished creature. But, as it is through eating and feeding that diverse beings or substances fuse, in the end you never quite know who or what has done it.” Hannah Landecker (2015, 257) writes similarly, “‘You’ and ‘what you eat’ are difficult to define, if you contain both generations and multitudes, and what you eat turns out . . . to itself contain worlds of industry and production.” As both myriad and cumulative, the eating self recalls the digital self described by Brian Rotman in *Becoming beside Ourselves*. In the digital age, he writes, “Self-other boundaries thought previously to be uncrossable” are increasingly breaking down; the “I” of the digital self “is *porous*, spilling out of itself, traversed by other I’s networked to it, permeated by the collectives of other selves.” Plural and distributed, the “I” is “becoming beside itself” (2008, 8). For Rotman, becoming “beside oneself” is “a form of temporal change, becoming party to a condition other than one’s own” (103). The digital self is a condition of living at the threshold of self and other(s), present and future. The condition of eating, we propose, is similar.

Eating beside Ourselves explores how acts and processes of eating partake in the ongoing making and unmaking of ontologies (the body, the self), taxonomies (food/not-food, raw/fermented), and judgments (inedible, delicious, disgusting). To bring to the center of our analyses the various forms of ingestion enacted by other-than-human animals, plants, and microbes—as well as by a diversity of humans—we must expand our view of “eating.” Eating, in this volume, may not always enlist mouth or tongue. Eating, for example, may in placental mammals take place within a pregnant body, across the threshold of the placenta (Yates-Doerr, chapter 6), or it may transpire across the fungal matrix providing the rootstock of grapevines access to minerals in surrounding soil (Heath, chapter 7). Eating may extend, too, to unexpected and even counterintuitive processes, describing, for instance, how trauma or COVID-19 patients may be “fed” oxygen through a ventilator (Solomon, chapter 5).

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Contributors to this volume build on their own previous work on the sciences of food and nutrition to think through questions of difference-making and boundary-crossing. Amy Moran-Thomas, Harris Solomon, and Emily Yates-Doerr have all studied manifestations of the global diabetes epidemic as a metabolic condition, without presuming the matter to be a problem of overconsumption or “poor dietary choices.” Hannah Landecker, Alex Blanchette, Marianne Elisabeth Lien, Deborah Heath, and I have written variously about agriculture’s or aquaculture’s manifold, multispecies ecologies of food production, including its “nested metabolisms” (Landecker 2011, 187). As part of the 2016 Oslo symposium “Food’s Entanglements with Life,” the idea behind the workshop “Human/Non-human Boundary Work,” from which this volume emerged, was to bring together insights about the transformative agency of metabolism with the holistic perspective exemplified by multispecies ethnographies of agricultural relations. What resulted from that workshop, as our ongoing discussions have made clear, is a keen sense that eating is not a singular thing. Our contribution to food studies goes beyond bringing to it a multispecies approach inflected by science and technology studies (STS). Our intervention, instead, is to call attention to the many kinds of ingestions and transcorporealities that are often overlooked when we think of eating as thoughtfully deliberate, a fundamentally *cultural* matter of intention and meaning.

Consider the notion, by now a commonplace, that eating is an act of incorporation, of taking into the body elements of the surrounding world. As Anna Meigs observed in her 1987 article “Food as a Cultural Construction,” anthropologists have often presumed that what *food* is, culturally speaking—what makes substances edible and palatable to some but not to other groups of people—has largely to do with cultural perceptions of those intrinsic qualities, material and symbolic, that are understood to be incorporated through eating into bodies and selves (e.g., Fischler 1988). Human commensality, the collective experience of “eating at the same table,” has thereby been taken to suggest that such incorporation is at once individual and corporate: “If eating a food makes one become more like that food, then those sharing the same food become more like each other” (Fischler 2011, 533).¹ But if, “for us humans,” culture means that “eating is never a ‘purely biological’ activity” (Mintz 1996, 7), eating is never a “purely cultural” activity either. If the human body of anthropology in the latter half of the twentieth century was “a recipient body that can be acted upon, rather than a dynamic site of interspecies mutuality and evolutionary change” (Lien, Swanson, and Ween 2018, 12), today’s anthropologists increasingly perceive “a fluidity between bodies and worlds that

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foregrounds relations instead of entities” (Ford 2019); on this view, “humans are inseparable from surrounding environments and also function as environments themselves” (Ford 2019). Questions of eating, then, expand further to probe the uneven metabolic and epigenetic inheritances from generations of industrial farming and food production; the gut microbiome’s connections to infrastructures of hygiene, sanitary water, and pharmaceutical care as well as to the predigestive role of fermentation; and bodily embeddedness in chemical ecologies that contribute to health risks and life chances.

Inside the body, too, as Annemarie Mol (2008, 30) observes, “the absorption of particles into its bloodstream is selective” but not as a matter of custom, volition, or personal taste: “I will never master which of [an apple’s] sugars, minerals, vitamins, fibres are absorbed; and which others I discard,” she writes. Biting, chewing, and swallowing may bring food substance into the (human) body via the threshold of the mouth, but further, involuntary activity by stomach acids and gut bacteria is required to break down that substance into small-enough bits to pass across the lining of the bowel and to complete the excretion that is required for proper digestion and absorption. The digestive tract is, perhaps surprisingly, the largest endocrine organ in the human body, lined with cells bearing “taste” receptors that sense what is ingested, triggering manifold digestive responses and shaping appetite, nausea, and satiation, all well beyond conscious perception (Sternini, Anselmi, and Rozengurt 2008). This amazing gut lining, assisted by its more-than-human microbiome, is a body threshold, serving as much as a selectively protective skin against internalized elements from the outside as it is a site and means of absorption of welcome nutrients. The multifarious digestive tract is also asked to do *cultural* work. Pointing to a shift in “culinary imperialism” from advancing the cultural distinction of taste (Heldke 2012) to the privileged imperative of health, Hi’ilei Julia Hobart and Stephanie Maroney (2019) analyze, for example, how Indigenous “cures”—from Hawaiian Taroena marketed as an easily “assimilable” superfood to the promotion of “ancestral” fecal microbiota transplants derived from the excrement of Hadza people “hunting and gathering” in East Africa (see also Rest 2021)—draw on primitivist ideologies in promising to soothe dyspeptic or revive dysbiotic “white digestive systems” degraded by a “modern” diet of highly processed foods.

At the same time, Donna Haraway’s (2008, 301) recognition that those with whom we humans “share a table” include other, more or less companionate species leads us to a revised notion of commensality. Commensality, we note, is an ecological concept as well as a gastronomic one. In biology a commensal relation obtains between individuals of two species in which one derives food

or other necessities from the other without either harming or benefiting the latter directly; commensal relations are neither parasitic nor mutualist but something in between. Whether species interactions among messmates are best characterized as commensal, parasitic, or mutualist is not always easy to determine (Lorimer 2018). Human “messmates,” as Haraway names them, include the bacteria that cause fermentation and enable digestion; the pets, vermin, and livestock that consume the scraps of human eating and industry; the mycorrhizal association between fungi and plant roots crucial to plants’ ability to draw nourishment from soils; and the animals, wild and domesticated, that end up on some people’s plates. Subject to changing conditions and pressures, relations among messmates are continuously being worked out.

To get at these relations, we aim to link materialist analyses of food’s composition, availability, and accessibility to ethnographic perspectives on how particular foods and other nutritive substances may be understood to nourish or deplete, to comfort or repulse particular eaters—human as well as other-than-human. Our contention is that, by doing so, we can gain greater political purchase on the complex, planetary politics of contemporary food systems, in which living things are variously, sometimes confusingly, implicated as eaters and feeders and as food.

At the Threshold of Eating...

Our key analytic is the *threshold*. One meaning of *threshold*, the line crossed in entering a space, signals a border crossing. Eating, in this sense, is readily viewed as a thresholding project: “The act of choosing what to put into our mouths is a kind of ‘boundary-work’ in which”—by differentiating “food” from “not-food”—“we sort out the line between what is us and what is other” (DuPuis, Garcia, and Mitchell 2017, 1; see also Lien, chapter 4). A second meaning of *threshold* marks a baseline or an upper limit beyond which a particular phenomenon will occur or “characteristic behaviors [will] deviate from known patterns or trends” (Petryna 2018, 571). Concerned more with volumes and intensities than with lines, thresholds of this sort test known limits or capacities—for example, a human body’s limited capacity to “tolerate” an allergen, toxic exposure, or high blood sugar—and they challenge established standards (tolerance levels, baselines) and protocols for standardization (Star and Lampland 2009). Our focus on the threshold is indebted to Amy Moran-Thomas, whose *Traveling with Sugar* (2019) chronicles diabetes in southern Belize, documenting how patients are able to manage (for a time) to live with off-the-charts blood sugar levels that challenge biomedical

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thresholds of survivability—a threshold put at stake by other thresholding projects, such as shopping for often unaffordable seafood and vegetables in a so-called tropical country whose local fisheries and agricultural economy have been compromised by ecological degradation and conditioned by a colonialist, export-oriented turn toward the Global North.

Far from being marginal to daily social life, critical thresholds are sites of intensification rather than attenuation, as Arnold van Gennep ([1909] 1960) and Victor Turner (1967) taught us of the limen. They may mark the beginning of transformative change, as in crossing from a state of health to a state of illness, or vice versa. Or they may affirm the limits of transformative potential, the point beyond which accommodation or adjustment is no longer possible, as when falling below a minimum threshold of nourishment to sustain life itself (Gremillion 2003; Solomon, chapter 5)—or to sustain “a particular kind of living,” adequate “for the social, cultural, and personal dimensions of a good life,” as Hanna Garth powerfully demonstrates in her *Food in Cuba* (2020, 5), or as Juliet Schor (2010) theorizes in terms of “plentitude,” emphasizing environmental as well as social sustainability. Food sovereignty movements set as a threshold a group’s ability to control the means and mechanisms of their own food’s production and distribution (Mares 2019; Mihesuah and Hoover 2019).

Edibility nicely illustrates the analytic of the threshold. Consider how both forms that thresholds take—as line crossed and as capacity limit—participate in the making and unmaking of edibility, determining the status of a given substance as food with respect to the identity and condition of a particular eater. The successful passage of a foodstuff *across* the bodily threshold of an eater, affirming edibility, depends on that eating body’s *capacity* to receive and incorporate it. A substance’s status as edible food and an organism’s status as an eater are thus mutually realized. Eating’s inherent liminality as a process by which edibility is rehearsed, or refuted, through ritual enactment has been much remarked on, as by Carolyn Korsmeyer in this chapter’s epigraph. “During the liminal period,” Victor Turner tells us, “neophytes”—or, here, eaters—“are alternately forced and encouraged to think about their society, their cosmos, and the powers that generate and sustain them” (1967, 105). In discerning edibility, palatability, food safety, sufficiency, and the like, potential eaters participate in a variety of gastro-political contests, on materially uneven grounds.

In exploring through the lens of the threshold “food’s power to entangle biological bodies within wider political and cultural structures” (Abbots 2017, 11), our focus is less on bodily incorporation than on mutual transformation,

less on the agency of “eating bodies” (Mol 2008) or the philosophical question of what it means to “be human” (Mol 2021) than on processes of world-making (Landecker, chapter 2; Van Daele 2013, 2018; Yates-Doerr 2015)—evoking the worlds of industry and global trade but also the unmaking and remaking of the everyday cultural and ecological worlds of myriad inhabitants (Bertoni 2013). The notion of the threshold, serving alternately as portal and as barrier, reminds us that if food brings entities together—makes commensal—it also delineates, holds apart (see Yates-Doerr, chapter 6). The threshold gives force to the partiality of food’s capacity to make and to relate, and to the messy unevenness of commensality (Abrahamsson and Bertoni 2014).

... Food Is a Medium of Contact

To get at eating’s threshold dynamics, we extend Arjun Appadurai’s notion of *gastro-politics*, by which he called attention to the ways foods serve as “important media of contact between human beings” (1981, 495), while offering an account of how such contact is socially regulated, policed, and exploited in domestic settings. Our interest is complementary, focusing on how foods serve as “media of contact” at other thresholds besides human social interactions. In particular, we regard food as a medium of multispecies relations, and we consider how food’s porosity connects organisms to their manifold environments.

The gastro-political thresholds in which we are interested are mediated by social rules but also by (micro)biopolitics, capitalism, and technoscience. The glucometer; the knife; the ventilator; the wood-fired grill; the scientifically formulated feed fed to the hogs destined to be reconstituted as pork chops, pet food, and a thousand other commercial products—such thresholding objects, featured in the chapters that follow, are densely embedded in relations of inequality and constrained choice. The “techno-intimacies” they mediate are not always chosen, or even wanted (Weston 2017). Such mediating devices reveal how eating, at the thresholds of the natural and the artificial, the human and the other-than-human, the individual and its milieu, often occurs beside ourselves, as culture-bearing humans with tastes and appetites, as we become party to the conditions of *other* transformations, standards, appetites, and forces.

By bringing into focus the fundamental porosity of bodies—be they organisms, social groups, or nations—the analytic of the threshold calls attention to the role of *regulatory* functions—metabolic, gastro-political, and state enacted—in reinscribing, redrawing, or rending constructions of bodily

integrity (Jusionyte 2018). Consider, for example, what food-safety scandals, as evidence of a lack of oversight, or *misregulation*, reveal about postsocialist states. Elizabeth Dunn (2008) has interpreted botulism-prone home canning practices in postsocialist Georgia as emblematic of the decaying post-Soviet state, arguing that the Soviet decline of centralized, industrial food production left Georgians with a taste for canned foods but not the practical knowledge of how to safely re-create those tastes (and that storage capacity) in domestic spaces. In postsocialist Bulgaria, Yuson Jung (2009, 2016) observed that food shoppers faced with unaccustomed consumer choice approached goods with suspicion, ever on the lookout for “fake” (*mente*) products, be they cheap knockoffs of name brands, physically adulterated items, or otherwise falsely advertised goods. Such skepticism about the “realness” of their food, in Jung’s analysis, reflects a postsocialist self-perception of marginalization, a feeling of being not fully included in the so-called global economy, and reveals the significance of food as a “medium for social trust and global belonging” (2016).

Recognizing that eating transpires across many forms of ingestion, not all of which entail choosing which foods to put into “our” mouths, this volume focuses on the ways eating and feeding mediate potential crossings and overtoppings at thresholds among (1) different conditions or states of being, (2) organisms of different species, and (3) living beings and their surrounding environment, or milieu (Canguilhem 2001).

BETWEEN CONDITIONS OR STATES OF BEING

Acts and processes of eating and feeding mediate thresholds between different conditions or states of being both for food substances (edible/inedible, safe/toxic) and for eaters (parasitic/commensal, autonomous/pregnant, healthy/ill, living/dying). Addressing how eating is understood to mediate *conditions of health and illness* in the human body could fill a volume of its own. By way of illustration, suffice it to point out the flaws of nutrition science’s dominant paradigm, the “energy balance theory,” in which “healthy” eating rests on a quantitative equilibrium of calories taken in through eating, and calories expended through physical activity (Mudry 2009; Gálvez 2018). From research into digestion and metabolism, it is becoming clear that a calorie from fat and a calorie from carbohydrate (sugar) do not move through the threshold that is metabolism in the same way; a calorie is *not* a calorie. Fantasies of universal exchange are increasingly challenged by the specificity of biochemical action: for example, carbohydrate cooked at high temperatures under dry conditions might ricochet off DNA in a damaging fashion, while fat may feed

or suppress inflammatory signals depending on its kind, the relative ratio to other fats in the diet, or the emulsifiers it travels with in any given foodstuff (Furman et al. 2019).

Both nutritional paradigms—weighing all food calories as equivalent sources of potential energy and excess, and distinguishing between the metabolic effects of fats and carbohydrates when ingested by the body—are based on ideal-typic notions of foods. Standard dietary advice consistently “overlooks the chemical composition of processed foods and beverages and the effects of consuming those chemicals” (Gálvez 2018, 111). If a fat-free fruit popsicle with added sugars is no better an alternative for weight loss than a creamy ice cream bar, a lime-green popsicle might well be a better choice than a cherry pop with Red Dye 40—at least for young eaters with attention-deficit/hyperactivity disorder (ADHD). Nutritionism has yet to catch up with the fact that so much of our food today inescapably contains *nonfood* in the form of added flavorings and colorings, nutritional fortifications, preservatives, and fillers (González Turmo 2007, 45), if not also harmful contaminants, such as pesticide residues or adulterants introduced to processed foods to reduce costs (Yan 2012).

A forceful example of this is given by Emily Yates-Doerr (2012) in tracking what happens when the “nutritional black-boxing” that informs public health campaigns developed in the United States crosses national, economic, and cultural thresholds to reach Guatemala. Nutritionists working in Guatemala present what they imagine to be straightforward lessons in how to identify nutritionally “good” and “bad” foods—green vegetables, since they have vitamins, are good and should be eaten; sugar, because it is sweet, is also bad and should be avoided—and so they are flummoxed when the classificatory reductions (calories, vitamins) of “nutritionism” (Scrinis 2008) fail to take hold. Yates-Doerr not only explains how reductive thinking about food remains disconnected from people’s everyday social and sensory experiences of cooking and eating but also demonstrates how, in Elizabeth Dunn’s (2009, 119) words, a “standard without an appropriate infrastructure cannot be put into force without major upheavals in the physical environment and the social organization of production.” The government of Guatemala requires sugar fortification as a means of preventing nutritional deficiencies; the box of sugar found on the kitchen table of most households is thus labeled “Sugar with Iron.” Consequently, Yates-Doerr (2012, 297) watched women spoon sugar into their drinks, explaining it was “for the vitamins.”

In *Traveling with Sugar*, Amy Moran-Thomas (2019, 89) reflects on the ironies attached to “normal sugar” levels for diabetic patients in Belize, who often

live with levels of blood sugar and pressure “beyond the ranges programmed into devices like glucometers and digital home blood pressure cuffs.” “What does ‘normal’ sugar even mean here?” she asks (90, see also chapter 1), reminding us again that standards without an infrastructure to uphold them lose their significance (Dunn 2009). Jessica Hardin (2021) relatedly analyzes “the problem of vegetables” in Samoa. Grown in household gardens for cash trade and nutritionally promoted as “good” vitamin-rich foods, vegetables register the subjunctive quality of both health and wealth by promising the possibility of health *as if* they were affordable to eat. “Health,” Hardin (2021, 435) writes, “is impossible to achieve because of the doubling of ever-receding thresholds whereby vegetables index both the promise of wealth (despite the presence of poverty) and the promise of health (despite the presence sickness). . . . As these thresholds shift, their definitions change, making them all the more impossible to achieve.”

Picking up on the involuntary dimensions of ingestion, Harris Solomon (2016, 5), in his study of diabetes and “metabolic living” in India, forwards an analytic of *absorption*, by which he means “the possibility for bodies, substances, and environments to mingle, draw attention to each other, and even shift definitional parameters in the process.” He writes, “A study of metabolic illness grounded in absorption, in contrast to one that assumes overconsumption as its starting point . . . can open up key questions in the context of chronic diseases connected to food: Who and what become the eater and the eaten? What is nutrition and what is poison? Who and what set the boundaries of inside and outside, delineating organism and environment?” (5). Such questions take us beyond ourselves, as humans, to consider species and other boundaries.

AMONG SPECIES

Theories of domestication have long grappled with the role of food as a medium of contact among species (Lien 2015; Swanson, Lien, and Ween 2018). Domestication is not taming, nor is it making placid. Domestication is about (unequal) cohabitation within a given environment, including modifications made to the conditions of eating, resulting in the coevolution of species and concomitant transformations of lands and watersheds (Noske 1989; Tsing 2012). Such changes entail not only “biological processes of alteration to organisms” but also “social and cultural changes in both humans and animals” (Russell 2007, 30; see also Leach 2003; Anderson 2004)—including changes in eating and in producing bodily and other wastes. A multispecies relation, domestication may be simultaneously beneficial and deleterious to inhabitants,

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for commensal organisms that share environments may have different needs and conditions of flourishing. At the same time, “many of the effects associated with human domestication practices,” including metabolic effects, “are unintended” and may go unrecognized (Lien, Swanson, and Ween 2018, 17).

We often imagine food as a medium of transmission conveying sustaining matter and energy into eating bodies from the surrounding environment, including the organisms of other species. Yet the scientific term for the assimilation and generation of nutrients, *metabolism*, is capacious and includes the processing of toxicants and oxygen within and between cells, bodies, and species. These relations are both spatial and temporal; metabolism reformats the matter of living beings in ways that are understood further to impact not-yet-living beings, through epigenetic processes (Valdez 2018). Metabolically speaking, plants and other animals are just as much “eaters” as are people and are equally reliant on the metabolic activity of microbes. What can we understand better about eating “by allowing metabolic relations writ large to decenter human food as the object of inquiry?” (Landecker, chapter 2). One thing we can see is that food chains unfold not only laterally across species but also generationally, mutually transforming bodies and environments over time (Moran-Thomas, chapter 1; Yates-Doerr, chapter 6; Heath, chapter 7). At the level of everyday practice, too, eating and its effects—providing nourishment, producing interconnectedness as well as difference—are similarly species interdependent.

Consider fermented foods. Biological anthropologists and nutrition scientists view fermentation as a form of predigestion, meaning that eaters of fermented foods benefit from the added bioavailability of minerals and vitamins made possible by the prior microbial metabolism (Amato et al. 2021). As Megan Tracy writes, “Fermentation, then, is not simply about converting matter but is also about the transformations it effects on its ‘eaters’ and ‘eatens’” (2021, s277; see also Yamin-Pasternak et al. 2014). Harnessing the transformative agencies of bacteria, yeasts, and fungi, agriculturalists and pastoralists, no less than scientists working in industrial food labs, endeavor to manipulate metabolic processes toward better (human) living through systematically designed and integrated feeding practices for livestock, plants, and microbes (Heath, chapter 7; Lee 2015; Raffaetà 2021). What makes for “better” living through fermentation is, of course, a (microbio-)political question, as Daniel Münster (2021) tellingly demonstrates in his study of how an agricultural ferment (see also chapter 7) popular in South India—concocted from the microbially rich dung of native cows, nourished with “cow urine, ground pulses, sugar, soil, and water”—is employed by farmers both to

revitalize depleted agricultural soils and to make exclusionary, “bionativist” claims in support of Hindu nationalism.

Cheese making is an ancient fermentation-based biotechnology for food preservation. “Whereas industrial cheese makers seal off their productive process from the surrounding environment,” writes Harry West (2013, 322) “artisan producers seek to engage actively with their environment” (see also Paxson 2013). They do so “in the vat” by adjusting their recipe, tweaking temperature, technique, and the timing of various steps to work *with* rather than *against* “natural” variability in both their milk and their ambient environments, conditioned by seasonal, weather-dependent, and climatological factors as well as by the effects of human activity.² In aging facilities, too, artisans manage the microbial environment through control of humidity, air circulation, and temperature to cultivate conditions in which wheels of cheese may grow so-called natural rinds. Created by successive waves of bacteria and fungi colonizing the surface of a cheese, a cheese rind or crust is what microbiologists call a *biofilm*, or microbial mat (Wolfe et al. 2014). But not all microbes are welcome. Just as organic farmers cultivate the habitats of owls and hawks so that *they* might take care of rodent pest control in the field, artisan cheese makers cultivate the “good” microbes that might outcompete “bad” ones (not only pathogens but also bacteria judged to produce malodorous decomposition) for nutrients in a cheese, resulting in competitive exclusion. As one cheese maker explained to me, evoking a microcosmic farm, “We want to cultivate the right soil, if you will, for the right things to grow.” I have described this approach to cheese making as “post-Pasteurian” (2008, 2013) to highlight how it takes *after* and, indeed, carries on the Pasteurian ethos of hygiene by dutifully enacting proper sanitation, while also moving *beyond* an antiseptic food-safety orthodoxy informed by industrial scales and methods of manufacturing to embrace the aid of ambient fermentative and flavor-generating microbes, including uncharacterized or “wild” ones. Post-Pasteurian cheese making is an exercise in microbial domestication. Harry West (2013) calls it learning to “think like a cheese.”

Dairy milk, in turn, is the outcome of domesticated cows, goats, or sheep feeding on dry and fermented hay and pasture grasses containing cellulose, which ruminants (unlike other mammals) are able to digest owing to the metabolic assistance of microbes residing in their four-chambered guts. Thanks to further activity by microbes, the fodder that healthy dairy animals eat and digest—hay and fresh grasses, pulses, wild onions or flowers, fermented corn silage, or total mixed rations—directly influences the nutritional composition and taste of their milk and the subsequent flavor profile of a raw-milk

cheese (or the meat of a suckling lamb or calf, known as *veal*). Ruminating and lactating cows, sheep, and goats are, with microbes and people, symbiotically essential to cheese “ecologies of production,” assemblages of multispecies, metabolic, social-economic, and political forces that are enlisted into agricultural value-making projects (Paxson 2013, 31). Writing of raw-milk cheese making in the Italian Alps, Roberta Raffaetà details “how fermentation participates in the composition of different human, more-than-human, and microbial spacetimes” (2021, s323)—what she calls *utopias*, *heterotopias*, and *atopias*—through which cheese’s ecologies of production are variously fetishized, valorized, or transcended in the service of distinct ideological visions and economic endeavors.

Beyond what dairy animals eat, the habituated, species-specific *manner* in which they graze and selectively take in food further contributes to the quality characteristics of their milk (Paxson 2013, 45–46). Goats, I was told by their keepers, are nervous animals; fearful of lacking enough to eat, they wind up eating everything in sight. If the flavor of goats’ milk is of concern, goats’ eating should be monitored. Sheep, in contrast, nibble delicately at the tops of pasture grasses; as a sheep dairy farmer explained, cheese made from their milk thus tends to be uniformly flavored and relatively mild.

Cows dig into it when out on pasture, taking into their mouths hunks of sod with bits of soil still clinging to the root structures of grasses. When cows chew their cud, what they are chewing is previously swallowed food that has been microbially fermented (predigested) in the reticulum, the second of a cow’s four stomach compartments, and then regurgitated (burped up) for further mechanical processing. All that chewing further breaks down the cellulose in hay and grasses, enabling further digestion as well as releasing additional flavor compounds. For this reason some scientists point to the particular potential of cheese made from cow’s milk to express pronounced flavors of pasturage—one element of what the French call the *terroir* of a cheese. Along with grinding teeth, antiacid saliva, and a muscular tongue for pushing around cud, the chambers of a cow’s stomach, including their varied microbiomes, are all agents of cow “eating.” In turn, the composite agency of cow eating, in addition to the material composition of cow feed, influences the flavor of cheese made from cow’s milk, particularly when spared the heat treatment of pasteurization.

At the same time, “cow taste,” that is, bovine taste for cow feed, is itself influenced by the human manipulations of domesticated husbandry. Describing the sensory work employed by dairy farmers in selecting optimal feed, Katy Overstreet (2018a, 2018b) introduces us to a Wisconsin farmer who pokes at

bales of hay at auction, searching for the right mix of grasses and legumes, in optimally dry condition, to promote his cows' digestive health without compromising the high-volume milk production that the industry has come to expect. On most dairy farms today, feed optimization is accomplished in the form of total mixed rations (TMR), industrially manufactured, standardized feed composed of vitamins, minerals, nutritional components, and possibly medicines and growth promoters, bulked up with the by-products of industrial agriculture and manufacturing (see Landecker, chapter 2). Although "TMR diets are designed to deliver an optimally balanced nutritional package in every bite," Overstreet observed that cows often thwarted this design by eating on their own terms—"cows often push the feed around with their noses and tongues in order to eat the pieces that they prefer"—or by refusing to eat the rations altogether (2018b, 72). Chopping TMR into smaller bits might undercut choosy cow eating, but by reducing roughage it would also cause them digestive problems. Instead, she explains, Wisconsin dairy farmers attempt to mask the bitter taste of medicated feed rations by applying a "dressing" of synthetic flavor enhancers (see Blanchette, chapter 3). Overstreet interprets Wisconsin farmers' tendency to apply feed dressings with commercial names like "Caramel Delight" as a projection of their own Midwestern taste for sweetness—a regional proclivity that Overstreet (2018a, 64–65) registered ethnographically as a culinary outsider from California. In the end, she proposes to regard cow "taste" as "transcorporeal," something that "moves through and across bodies," human and bovine (2018a, 54). Similarly, the tastes and appetites of animals not only contribute to the flavor of flesh eaten by humans (Weiss 2016) but may also, for example, lead "farmers to send their sheep up hills where herbs are growing" and "butchers to buy lambs from farmers with hillside land" (Yates-Doerr and Mol 2012, 53)—or such proclivities may participate in the mobility of migrating herds, as with reindeer, whose taste for mushrooms facilitates their herding by humans (Lien, chapter 4). This book explores the significance of transcorporeal taste not only for eaters thus connected but also for the wider political, economic, and environmental worlds in which they dwell.

BETWEEN ORGANISM AND ENVIRONMENT

Cheese, I have suggested, may be regarded as the living manifestation of ruminant and microbial bodies incorporating and transforming bits of their environment: eating, digesting, metabolizing. This may be cause for celebration, as in claims to terroir foods and wine, valued for expressing distinctive

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characteristics “typical” of their place and customary method of production (Paxson 2013, 282–83; see also Barham 2003; Trubek 2008; Demossier 2011). It can also be cause for alarm. Some years ago, the safety of buffalo-milk mozzarella made in its home region of Campania was called into doubt when the Italian Ministry of Health announced that buffalo-milk mozzarella from twenty-five facilities tested positive for dioxins, chemical compounds known as persistent environmental pollutants, noting “the strong likelihood that the dioxin contamination was due to local forage and feed” (Biasetti 2008, 2). Fingers were pointed at years of profitable and largely illegal trade in toxic waste dominated by another local product of Campania: the Camorra (Italian mafia); surely, illegal landfills were the cause of dioxins seeping into the groundwater that fed water buffalo via “forage and feed.”

A focus on the threshold helps make clear that while eating and feeding can be intentional (if contingent) acts of crossing borders, of actively bringing into the body elements of the surrounding world, they nonetheless share features with the more passive process of environmental or toxic *exposure* (Landecker 2011, 173; Agard-Jones 2014; Shapiro 2015; Murphy 2017; Liboiron, Tironi, and Calvillo 2018; Creager and Gaudillière 2021; Moran-Thomas, chapter 1). Toxins, absorbed into living organisms, are often eaten. The nonfood substances that many foods today contain, “which they used not to contain” (González Turmo 2007, 45), include added fillers and nutritional supplements but also uninvited contaminants, antibiotics, and pesticides. Becky Mansfield (2011) notes that decades of industrial waste runoff into waterways has meant that heavy metals such as mercury have become an essential part of the nutritional composition of top-predator fish, such as tuna and swordfish. Such toxicants not only cross thresholds but can reorder or disrupt them, affecting biological and cultural foodways alike (Hoover 2017). Describing a marine ecology of production, Elspeth Probyn (2016, 15–16) writes, “There is no privileging the inside or outside of any individual body. If one eats bluefin tuna, one eats at the top of the trophic system, ingesting the heavy metals the tuna has eaten across this history. Human eaters get a taste of what we have wreaked. We eat oil slicks, and the chemicals used to disperse them eat into our flesh. Fish eat the microplastics used in daily skin care; humans eat the fish and the microplastics; and fish and human bodies intermingle. And of course that ‘we’ gets eaten up too, differentiated, fragmented, and fractured.” Precisely because “bodies and environments are porous to each other” (Solomon 2015, 178), the health of organisms and of species is fully enmeshed with the health of marine, land, and atmospheric environments. Consequently, “laboratory and policy

concern for ‘eating well’ increasingly entails consideration for how foods are cultivated, transported, packaged and processed by a range of human and non-human bodies” (Sanabria and Yates-Doerr 2015, 119).

Moreover, the indeterminacy of the threshold reminds us to regard ingestion as a site of not only incorporation, willful or otherwise, but also its antitheses: rejection, indigestion, revulsion. Food allergies and autoimmune diseases alike are understood to occur when a body’s immune system has trouble distinguishing among “self,” “food” (“food” being that which can safely become incorporated into “self”), and “nonfood” (that which is toxic or pathogenic to self). “Food allergic living,” as Danya Glabau (2019) observes, is often oriented around keeping “nonfood” out of the allergic body by keeping it out of the allergenic home, maintaining a domestic threshold of bodily safety through persistent hygiene. An alternative strategy is to “teach” the immune system to tolerate potentially dangerous substances through repeated low-dose exposure. As Richard Cone and Emily Martin write, the gut’s immune system “learns to recognize and accept (‘tolerate’) food, allowing it to be absorbed into the blood and lymph. It also learns to recognize dangerous pathogens and toxins ingested along with food and helps prevent them from being absorbed” (2003, 239)—that is, by causing people to be sick. That ingesting small amounts of a “foreign” substance can “train” the immune system to tolerate it is the reasoning behind ingesting local honey (full of environmental pollen) to reduce suffering associated with hay fever.

In a fascinating twist on the idea of oral tolerance, Elizabeth Roberts’s study of toxicity and persistence in an impoverished neighborhood in Mexico City demonstrates that selective “permeation” of bodies by toxic substances (sugary soda, drugs) can contribute to a “protective porosity, which sustains life at collective levels” (2017, 613). Sending a child to school with a water bottle filled with contraband soda may lead to a prediabetic state of health, but first—and foremost—it fills the child with the sustenance of a mother’s love (see also Fitchen 1997). In Roberts’s reading, the soda conveys material comfort as it is “let in” both bottle and body, while it also mediates the child’s persistence by throwing up a social-emotional protective barrier against an environment neglected by state care—an environment that, like the running water provided by a state government that is trusted by no one in the neighborhood, may indeed cause sickness and other harm. As such, the study demonstrates how toxic harm not only “disrupts order and existing relations” but sometimes “also *maintains* systems, including those that produce inequity and sacrifice” (Liboiron, Tironi, and Calvillo 2018, 333).

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Whereas Roberts argues that potential benefits can be gained by developing a tolerance for nutritionally “bad” foods, Annemarie Mol (2009) extends the notion of oral tolerance in a different direction, to entertain the possibility of “teaching” a body to accept, even to appreciate, food that is not only “good” for a healthy body but also “good” in an ethical sense, providing tangible benefits to communities of producers or to the environment. I have witnessed this notion play out in recreational taste education in which connoisseurship, the cultivation of a knowing palate, is retrained to include (selective) knowledge about the means and methods of food production. At the 2009 California Artisan Cheese Festival, for example (see Paxson 2016), Cowgirl Creamery’s founding cheese makers, Sue Conley and Peggy Smith, introduced a tasting session by explaining that they would “talk about cheeses in terms of the place they’re made in, and how place contributes to the cheese.” Their rhetoric points to how ethically, socially *good food* and food that *tastes good* are brought together through a taste education that promotes artisan practices no less than artisanal products (see also Weiss 2016). The Cowgirls’ cheese flight featured a simple, fresh cheese selected “to showcase [the] hard work” of the organic dairy farmer who provided the milk and “how he’s taken care of the land and his animals.” As tasters, we were invited to draw a causal connection between the “good, clean” milk flavor of the cheese and the farmer’s “good, clean,” environmentally conscious dairying practice. His pastures, we learned, are free of herbicides and chemical fertilizers; the cows are never treated with hormones or antibiotics to boost production volume. Conley and Smith went on to describe in some detail a newly installed methane digester, apparently without worry that our senses would suddenly register suggestive hints of manure in the odor and taste of the cheese. Instead, we were meant to taste the goodness of greenhouse gas mitigation! Including methane digesters in the “taste of place” (Trubek 2008) is a mode of “making taste public” (Counihan and Højlund 2018).

Here, in much the way Mol (2009) envisions cultivating the good taste of a consumer-citizen, eaters with “good taste” are enjoined to taste “good” qualities that materialize *beside* the food itself—and even to imagine, through the fantasy of tastes yet to come, the realization of more just and sustainable futures. But for whom? Cows, sheep, goats, bacteria, and fungi actively participate, through eating, in cheese making but not under conditions of their own choosing (Paxson 2013, 40). Among humans, eating continues to be enlisted in the social reproduction of class, caste, and gender and remains “a site of racial anxiety” (Tompkins 2012, 2). Exploring not only the plurality

but also the diversity of eating's agencies and actions requires constant attention to the uneven, world-making power dynamics in which they are enlisted. For this reason this book is as much about ingestion, digestion, indigestion, and incorporation—about bodies and the relations they enter into and contain—as it is about food and eating.

Thresholding Projects

The chapters that follow take up and address eating and feeding as *thresholding projects*, processes and activities that mediate or regulate border crossings, that test the limits and capacities of various sorts and scales of boundaries, and that may reveal hidden or overlooked borders or regulating mechanisms. These may be intentional or unintended, successful or failed. With the potential either to reinforce or to transgress, thresholding projects push up against and may expand established ways of doing, being, feeling, relating: “Boundaries can also be that place where new ways of being get worked out and incorporated into a new whole” (DuPuis, Garcia, and Mitchell 2017, 1). Nodding to Elizabeth Roberts's (2017, 615) call to take “into account not only the (often quantitative) practices that make boundaries but also what those boundaries have to offer,” thresholding projects also include efforts at boundary maintenance amid ongoing crossings and overflows.

Throughout the ethnographic cases presented here, we also see people confront *ethical thresholds* as they are pressed into moral trade-offs, or acquiesce to making moral accommodations, because that is what it takes to remain above or below a certain threshold to get by, to persist. People's decisions over eating and feeding are often decisions about who we are and would like to be as family members, caregivers, people of faith, professionals, communities, societies. Awareness of the persisting paradox of abundance and hunger that characterizes the contemporary global food system could drive any of us beside ourselves with worry over what and how to eat and to feed others (Poppendieck 1998; Levenstein 2003; Patel 2007).

The volume begins with Amy Moran-Thomas's composite reflections on the shape-shifting, world-making carbohydrate substance of sugar. Inspired by visiting the warehouses and factories of London's “sugar mile,” Moran-Thomas follows how sweetness's power spills far beyond the commodity chains described by Sidney Mintz (1985) to trace the mediations of sugar's life-sustaining and life-taking power in Belize from the afterlives of plantation labor to diabetic limb loss today. In her sweeping account of sugar's metabolic transformations—as something eaten and as itself all-consuming—bodies,

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chemistries, technologies, and environments are all shown to be entangled in the ecological webs of global, racial capitalism. Her exploration of imbricating thresholds serves as a sort of parallel introduction to the volume's broader themes.

Drilling down into technoscience histories, chapters by Hannah Landecker and Alex Blanchette update readings of animal domestication and commensality for an era of industrially processed foods and feed, as the feeding of one organism or species can now be formatted as the by-product of providing sustenance to another. They demonstrate edibility and palatability to be an effect and, indeed, legitimation of scaling up other forms of alimentary production. By detailing the biochemical, economic, and technoscientific mediations that have come to constitute “the food of our food” (at least for the carnivores among us), Landecker excavates the “the industrialization of metabolism” itself to suggest how the rise of medicated livestock feed has reformatted the “biochemical milieu” of modern life. Blanchette shows not only that house cats express taste preferences, signaling that felines enjoy some understanding of yumminess, but also that cats' preferences have, for the food industry, come to mean an expanded economic ability to exploit the industrial hog, which in turn means cheaper cuts of pork for wider human consumption. Cat eating and human eating are thus mutually informed in ways that are mediated by endlessly partible pigs.

Drawing on three decades of fieldwork conducted in North Norway, Marianne Elisabeth Lien's chapter explores food's involvement in ongoing practices that enact, stabilize, and negotiate boundaries and thereby take part in the *making and unmaking* of insides and outsides, of people and things, of food and not-food. (Such an approach contrasts with one that would regard food as *transcending* boundaries, as if the insides and outsides of such bounded entities as bodies, species, or social groups had an independent existence from one another.) Lien shows boundary-crossing processes—of slaughtering, cooking, sharing, tasting, ingesting—to be full of ambiguity and often experienced with ambivalence. Such vital uncertainties are revealed by fieldwork that is “less about collecting facts than about paying attention to the moments when the facts falter,” as Lisa Stevenson (2014, 2) describes in her wondrous ethnography of “life beside itself” in the Canadian Arctic.

In this vein, too, Harris Solomon's chapter on critical care in an overcrowded trauma ward in Mumbai, India, stages commensality beside the hospital bed to analyze the ventilator-assisted “feeding” of oxygen. When ventilators, a mediating technology for respiration, must be rationed, who has the right to adjudicate the threshold between life and death—or between

allowing to stay living and giving over to dying? How do families and health-care providers make sense of this moral ecology of feeding breath? Tragically, Solomon's analysis of a singular trauma ward came to have global relevance as the coronavirus pandemic took hold in early 2020, with a second wave overwhelming India in early 2021.

Continuing to think, through feeding, about biomedical understandings of and efforts at a more fundamental means of life support, Emily Yates-Doerr draws attention to the "miraculous conduit" of the human placenta, a threshold organ that materializes metabolic contradictions by being, at once, "harmful and healthy, wanted and repellent, life-giving and deadly, self and other." How, and with what repercussions for personhood, are women held responsible—and how do they hold themselves responsible—for the avolitional act of "feeding" a fetus growing in the womb? (see also Markens, Browner, and Press 1997). By exploring through personal experience how exceeding acceptable sugar levels can transform a woman's pregnancy from a relation of idealized commensality to a more threatening parasitism requiring biomedical management, Yates-Doerr experiments with ethnographic narration to make evident incongruities among body, experience, and subjecthood.

If insides and outsides fold in on one another in many of these chapters, scalar distance between the organismic and the planetary, and even the cosmic, also collapses—an insight that the biodynamic winegrowers about whom Deborah Heath writes in her chapter not only perceive but work to operationalize. Bringing a "gentle empiricism" to a viticultural ecology of production, biodynamic growers follow celestial cues in creating compost and other "preps" (preparations) to feed vineyard soils—or, more directly, to nourish the mycorrhizal interface, a fungal threshold that mediates between soils and plant roots, and beyond. As one biodynamic vintner tells Heath, "Preps aren't about agency. They're like catalysts to communication between soil and the cosmos." We are returned to magical gardens, introduced in the epigraph to this book—although not as Bronislaw Malinowski (1935) viewed those of the Trobriand Islanders. Today, as Heath traces, a growing reckoning with the colonial and racial-capitalist origins of this planet's contemporary environmental crises is inviting dialogue and collaboration between ecological sciences and Indigenous food and soil sovereignty activism, edging a path toward multispecies justice (Celermajer et al. 2021).

A final note. In the spirit of our discussions beginning in Oslo, and in a desire to play in this volume with the forms that thresholds might take, the chapters that follow are connected and augmented by short intercalary exchanges between authors. We approached these lively, dialogical pieces

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as conversational passes, as in a relay, allowing authors to pull out and reflect further on phenomena, ambivalences, and conceptual tensions that weave throughout the chapters, especially those having to do with *processing*, *(in)edibility*, *giving*, *transgression*, and *nourishment*. Their explicitly collaborative method means further to acknowledge—and to celebrate—the reality that no one writes alone. Numerous influences permeate and reformat our thoughts, arguments, and phrasings as scholars; indeed, this introduction has been significantly strengthened by the incorporation of insights and suggested wording from my collaborators.

By offering broader reflections on the contemporary study of food and eating, and on social theory more generally, the connective intercalary passes invite readers to grasp the baton and to pursue new thresholds in food studies.

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NOTES

1. By the same token, eating the foods of “exotic others” is often scripted into what Lisa Heldke (2012) names “culinary imperialism,” revealing how “adventurous,” recreational eating motivated by gustatory pleasure and status enhancement also participates in the conflation of racial and ethnic differences, reproduces colonialist relations of resource extraction, and depoliticizes the material conditions under which so-called ethnic foods developed historically and are cooked and served today.

2. For more detailed and nuanced discussions of how cheese makers negotiate and manipulate numerous material-organic variables in raw-milk cheese manufacture, particularly under conditions of “paucimicrobial” milk, see Rest (2021); and Demeulenaere and Lagrola (2021).

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