

Introduction

Who Is the You That Eats?

The human body is one vast ecosystem. Actually, it is more like an entire planet . . . From the perspective of a microbe, I am a durable, living trellis – inside and out – on which vast numbers of those microbes cling, climb, and grow . . . I am their homeland . . . I am not who I thought I was. And neither are you. We are all a collection of ecosystems for other creatures.¹

When I tell people that I have a research interest in food, it usually doesn't take very long before someone says, "You are what you eat." It is a well-known phrase that means many things. For some, it acts like a health warning: if you eat junk, it won't take too long before you feel like junk yourself. Eat wholesome, nutritious food, however, and you will soon feel yourself to be more alert and alive to the possibilities that are uniquely yours to realize. For others, the phrase refers to your identity as reflected in what you value. If you eat organic, local food, that may mean you are the kind of person for whom environmental concerns are a high priority. Similarly, there are diverse, delectable ethnic traditions in cooking and eating. Insofar as you seek out a particular cuisine, you are likely signaling a desire to identify with the traditions of work and artistry that make the cuisine possible.

At root, "You are what you eat" communicates your connection to a world beyond yourself. When we amend it, as Michael Pollan has, and say, "You are what what you eat eats too," the extent of the connections is magnified, becoming ever more complicated, because now the diets of all the plant and animal creatures that fed the chicken that laid the egg that is served up on your plate, matter too – and, of course, whatever it is that they ate prior

¹ David R. Montgomery and Anne Biklé, *The Hidden Half of Nature: The Microbial Roots of Life and Health* (New York: W. W. Norton & Company, 2016), 126.

that.² In other words, to take a bite is never simply to bite into one thing. Every chomp and chew implicates and places you in a world of bewildering diversity and depth. You need others to be yourself. You can't possibly make sense of yourself and your life apart from them. The proof? Stop eating, and before long, you will become hungry *for others*. Resist others entirely, and you will die. Eating is the daily confirmation that you are never alone. That means you need to attend to the creatures that nurture you, and that join you to forests, fields, waterways, barns, gardens, butterflies, bees, chickens, gardeners, farmers, cooks . . . the list goes on and on.

But who is the “you” that eats? What sort of being is it that must eat in order “to be”? And how does the action of *eating* others – as compared to *seeing* or *touching* others, for instance – challenge us to think differently about the human person? The mode of sense perception you choose makes a difference.

A quick look at the history of Western thought suggests that eating and tasting have not usually been the preferred sensual point of entry for self-discovery and self-examination. This is a bit surprising, especially if we remember that the Latin word for knowing, *sapere*, also means “to taste.” Instead, philosophers and theologians have tended to prefer seeing over tasting as the way to make sense of the world. Metaphors associated with sight are so embedded in our conceptual frameworks – think here of the quest for wisdom as a quest for enlightenment, or spiritual attainment described as a *visio Dei* – that Hannah Arendt is quite right to say that, “from the outset in formal philosophy, thinking has been thought of in terms of *seeing*.”³ It is the mind’s “eye” that “sees” another’s point of view. Though people may from time to time speak of “ruminating” over a thought, we would think it a bit odd to refer to the mind’s “mouth” somehow “tasting” an idea.

To elevate sight as the prototypical philosophical stance, however, has profound, practical implications for the way people understand and position themselves in the world. Seeing is the sense that assumes a safe distance between subject and object. As Hans Jonas put it, “The gain [with sight] is the concept of objectivity, of the thing as it is in itself as distinct from the thing as it affects me, and from this distance arises the whole idea of *theōria*

² Michael Pollan, *In Defense of Food: An Eater's Manifesto* (New York: Penguin Books, 2008), 167.

³ Hannah Arendt, *The Life of the Mind* (New York: Harcourt, Brace & Company, 1971), 110. For detailed treatment of how sight and thinking work together in modern philosophers ranging from Descartes to Foucault, see *Modernity and the Hegemony of Vision* (ed. David Michael Levin [Berkeley: University of California Press, 1993]).

and theoretical truth.”⁴ Sight establishes the independence and the freedom of the viewer, for in seeing another, the one seeing does not need to be directly engaged with the object seen. Objectivity presupposes a knower’s personal disengagement, their emotional detachment. Distance, separation, and the freedom not to be affected by another – these are all reasons to elevate sight above a sense like hearing, because to hear another is already to be, at least somewhat, exposed to and at the mercy of the other.

When seeing is taken to be the model for thinking, the practical, perhaps inevitable, result is a conception of persons and others as self-contained entities (or “monads,” to use Leibniz’s term). Looking at another person, it seems obvious that a person’s skin, and the shape and contours it communicates, is the boundary that identifies you as the distinct being that you are. Skin is the hard surface that, like a wall, protects persons from alien intrusion. This thin dermatological membrane is what enables us to differentiate the world outside from the self that is contained within. Skin is like an irregularly shaped envelope that contains the soul, genetic code, or information pattern that enables the story that is you to develop. The true or essential you is on the inside. What you become, and what the rest of us see, is a feature of what gets worked out in the discrete body that contains you.

The idea that you are a self-contained being has profound and far-reaching implications. Consider, for instance, how it underwrites a conception of individual freedom as the imperious ability of persons to move about in the world without restraint, and how it has funded various emancipatory ideals in politics. The goal of a distinctly human life is not only to be autonomous, deriving the laws of behavior (*nomos*) from out of oneself (*autos*). It is to be able to choose for oneself the life one wants, regardless of the place one is in or the beings one is with. Think here of Thomas Hobbes, who (in *Leviathan* I, xiv) took it as a “right of nature,” that each man has the liberty “to use his own power as he will himself for the preservation of his own nature.” By liberty, Hobbes meant the absence of external impediments that might get in the way of “a man’s power to do as he would.” For people to become themselves they must be emancipated from external constraints like nature, tradition, or even (if one subscribes to the transhumanist dream) one’s physical body. They must think of themselves as individuals, self-standing and alone. Though persons may choose to enter

⁴ Hans Jonas, “The Nobility of Sight,” in *The Phenomenon of Life: Toward a Philosophical Biology* (New York: Harper & Row, 1966), 147. Earlier in the essay Jonas speaks of sight as the sense faculty that is without causal relationship between seer and seen: the object “is apprehended in its self-containment from out of my own self-containment” (146).

into relationships with others, these relationships do not define who they are at their core.

Is a characterization of persons as self-contained beings adequate or honest? What happens if we consider persons not via the sense of sight but instead via the sense of touch?

In one of the earliest philosophical treatments on the phenomenon of touch, Aristotle observed in his text *On the Soul* that touching allows us to discriminate among things in the world (as being hot or cold, hard or soft, for instance). The act of touching, in its very practice, enables people to distinguish the one touching and the thing being touched. But touching is never simply something people do *to* others. To touch another is also to be touched *by* them. Through our skin we feel the presence of the other and are changed by the sensation: the touch provokes a response in us. To be a touching being – Aristotle insisted that we are always touching, even when we are asleep – means that we can never think of ourselves as alone or as apart. As Richard Kearney formulates it, “To be tactile is to be exposed to others across gaps, to negotiate sensitivity *between* other embodied beings, to respond to solicitations, to orient oneself.”⁵ The phenomenon of touching teaches us that skin is a material witness to a person that, rather than being closed within a container or confined behind a wall, is *open* to the presence of others, *open* to being affected by others. “While we can close our eyes, ears, nostrils and lips, we are always touching and being touched. To live fully is to be constantly exposed to the elements, to being, to life, to others; it is to be forever attentive and attuned, from head to foot, to pain and pleasure, to happiness and grief, to good and ill.”⁶

Touching implicates us in a world with others. Rather than being freestanding, or even self-founding, we are who we are only because we live in responsive relation with others. We are not self-contained entities, because to be cut off from the many forms of nurture, influence, help, resistance, and inspiration of others would immediately render us dead. As Tim Ingold describes it, this means that “the skin is not an impermeable boundary but a permeable zone of intermingling and admixture, where traces can reappear as threads and vice versa . . . instead of thinking of organisms as entangled in relations, we should regard every living thing as

⁵ Richard Kearney, “The Wager of Carnal Hermeneutics,” *Carnal Hermeneutics*, ed. Richard Kearney and Brian Treanor (New York: Fordham University Press, 2015), 19.

⁶ *Ibid.*, 24.

itself an entanglement.⁷ Though enabling distinctions between organisms, skin does not, like a wall, keep us separated from others. Being permeable, it is, instead, something like a sieve or mesh through which others pass so that engagements with and nurture from others can occur. Ingold distinguishes organisms *entangled in relationships* from organisms *being their entanglements* because the former suggests an organism that is more or less self-subsisting and then (voluntarily) chooses to enter into relationships. This is a mistake. Life is a meshwork in which an unfathomable number of lines of development interlace and interpenetrate. The idea of self-subsistence is called into question because each organism is *constituted* through its relationships. To “be” is to “be in relationship.”

To witness the inescapability of our entanglement with others, we need travel no further than our belly buttons. Here, on the very skin that is sometimes interpreted to separate us from others, we find the unmistakable testimony of each human body’s intimate involvement with and need of others. Here we discover that before the “I” can claim to rule or take charge of its own life, it has first been a recipient and beneficiary of the nurture of a mother.

Thinking about belly buttons is difficult, because they reveal the tension between being self-enclosed and, at the same time, dependent on others. The philosopher Jean-Luc Nancy says, “Skin that is intact protects life, holding it together, but in order to do this, it has to tie itself together; it has to tie a knot in the cut umbilical cord.”⁸ Described this way, a belly button is like cap on the container body, “the signature or seal of appropriation” (from the Latin *propriatio*, which means “to make one’s own”), that establishes the body as distinct and its own. Belly buttons show that we are formed to be “entirely distinct” because they are caps that seal off the body’s originary dependence upon another. But they are also “scars,” because they remind us of the cutting of an umbilical cord that joined us to a placenta that joined us to our mothers. Belly buttons remind us that our origin is in others.

In her reflection on the umbilical cord, Anne O’Byrne interprets a belly button to be a sign that we are finite, unfinished, and never pristine beings. “Our coming into the world involves being marked by the wound of birth. We share with all humans and almost all mammals the umbilical scar it leaves – our first scar, the mother of all scars.”⁹ Like Nancy, O’Byrne

⁷ Tim Ingold, *Being Alive: Essays on Movement, Knowledge and Description* (London: Routledge, 2011), 87.

⁸ Jean-Luc Nancy, “Rethinking Corpus,” in Kearney and Treanor, *Carnal Hermeneutics*, 77.

⁹ Anne O’Byrne, “Umbilicus: Toward a Hermeneutic of Generational Difference,” in Kearney and Treanor, *Carnal Hermeneutics*, 184.

interprets the belly button to be a reminder of a body that is “wholly mine” and “wholly entwined with another” at the same time. But it is a reminder that is also a scar. Why use the language of “scars”?

The straightforward meaning of a scar testifies to the work of repair that follows from an injury or wound. As such, scars signify a rupture having taken place *and* the process that tries to heal the rupture by sealing the body off. Because scars do not quite recover all the qualities of the tissue that was once there (for instance, scar skin tissue is less resistant to ultraviolet radiation and is incapable of growing hair or sweat glands), the healing that happens is a sign of lasting vulnerability and an ongoing challenge to the dreams of autonomy and autarchy that animate so many projects of the self. “If the fold at the center of us is the memory of our beginning in another body, autonomy was never a given but an achievement. We were brought into the world; we did not come of our own accord; it took action by others to sustain us before we were even aware of self or world.”¹⁰ We each enter a world that is already alive with earlier generations and earlier couplings that birth us into life. Before we could do anything on our own, we were already being fed by another. Belly buttons are the unmistakable sign that the idea of a self-contained, self-standing person is a deception.

The world perceived through touch is a much messier, much more proximate world than the world perceived through sight. It is not a place populated by discrete, self-standing objects but is rather a dynamic, moving field of entanglements in which self-involvement and intimacy are the rule. The intensity of the intimacy I am talking about becomes especially pronounced when we acknowledge that one of the most primordial forms of touching is the tasty action of eating. When you eat another creature, you do not simply make contact with it. You take it “inside” of yourself, digest it, and incorporate it within. With an intimacy that rivals sexual union, the other’s flesh and your flesh “become one flesh.” The other does not stand apart or alongside. Instead, when eaten, the other nurtures you, and thus reenergizes, refreshes, and revitalizes you from within. Eating is the daily confirmation that you have never simply been one. To think with the stomach in mind, and to perceive the world and yourself through your mouth, is to know that no creature is ever alone.

This is why some scientists now argue that the idea of an individual organism needs to be replaced with the idea of a “holobiont” (from the Greek for “whole unit of life”). This uncommon locution has been developed to emphasize the

¹⁰ Ibid., 192.

symbiotic character of life, and to reinforce the idea that no organism is ever self-enclosed. Symbiosis is the idea that organisms live by their intimate contact with others. Without this contact, living beings cease to be. Even more importantly, without this contact they could not even come to be in the first place, because the origins of tissues, organs, and organisms are the result of a process called “symbiogenesis,” in which life forms emerge out of the diversity of life together, even life *inside* each other. Lynn Margulis puts it this way:

Living beings defy neat definition. They fight, they feed, they dance, they mate, they die. At the base of the creativity of all large familiar forms of life, symbiosis generates novelty. It brings together different life-forms, always for a reason. Often, hunger unites the predator with the prey or the mouth with the photosynthetic bacterium or algal victim. Symbiogenesis brings together unlike individuals to make large, more complex entities . . . These become “new individuals” at larger, more inclusive levels of integration. Symbiosis is not a marginal or rare phenomenon. It is natural and common. We abide in a symbiotic world.¹¹

To acknowledge that we live in a symbiotic world is to affirm that *living beings are always already communities of beings*, because each organism *as a holobiont* is “comprised of both host elements and persistent populations of symbionts.”¹²

To use a term like holobiont is to acknowledge that an organism is never simply single or one. The moment you try to isolate or individuate yourself, you cease to be. This is where the language of a host *plus* its symbionts can be a bit misleading, if it is taken to mean that the host exists before its entanglement with others. Not so, says Donna Haraway:

Critters do not precede their relatings . . . I use *holobiont* to mean symbiotic assemblages, at whatever scale of space or time, which are more like knots of diverse intra-active relatings in dynamic complex systems, than like the entities of a biology made up of preexisting bounded units (genes, cells, organisms, etc.) in interactions that can only be conceived as competitive or cooperative.¹³

A host does not come first, pre-made, so to speak, and then relate to others, because for a “host” to exist is already for it to be in symbiotic relationship.

¹¹ Lynn Margulis, *Symbiotic Planet: A New Look at Evolution* (New York: Basic Books, 1998), 9.

¹² Scott F. Gilbert, Jan Sapp, and Alfred I. Tauber, “A Symbiotic View of Life: We Have Never Been Individuals,” *The Quarterly Review of Biology* 87:4 (December 2012), 327–328.

¹³ Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press, 2016), 60.

Symbiosis constitutes the host, which is to say, somewhat paradoxically, that a host has always already been hosted and nurtured by others.

To appreciate how symbiogenesis works, it helps to attend to the microbial roots of life. The importance of microbes for our thinking about life has only recently come to the fore. When asked for a definition of life, Margulis says *life is bacteria*, because every organism, if not itself a live bacterium, is a descendent of bacteria and their various mergers. “Bacteria initially populated the planet and have never relinquished their hold.”¹⁴ All living things depend on the metabolizing work that bacteria perform. Without bacteria, the various processes of growth and decay – photosynthesis, digesting, and decomposition – would not have come to be. In other words, no bacteria, no eating, no life.

Clearly, earlier scientists could not have known in any detail or clarity that a diverse microbial world even exists, let alone that it matters profoundly for our understanding of life. They simply lacked the technology and the instrumentation to perceive what was there all along. But now that we do perceive, we are finding that organisms are composites of many species living together, and that the relationships between them make it difficult to speak with confidence about an organism’s precise or essential identity. The integration between bacteria and their hosts is so intimate, and their dependence upon each other for life is so essential, that it is often hard to determine where one species begins and another ends.

Because microbes challenge so many of the assumptions that have guided the biological disciplines – most basically, the taxonomies that differentiate creatures into discrete kinds – we should not be surprised that their study is creating considerable controversy and difficulty. To start, we have barely begun to identify the diversity of microbes inhabiting our bodies, let alone the entire planet, nor do we understand the various things microbes do. But according to Margaret McFall-Ngai, a leading researcher in this area and a member of the National Academy of Sciences, “microbes are the center of the universe . . . We now know that they make up the vast diversity of the biosphere, that they live in intimate association with animals, and that animal biology was shaped by interacting with microbes. In my mind, this is the most significant revolution in biology since Darwin.”¹⁵

¹⁴ Lynn Margulis and Dorion Sagan, *What Is Life?* (Berkeley: University of California Press, 1995), 90.

¹⁵ As quoted by Ed Yong in *I Contain Multitudes: The Microbes within Us and a Grand View of Life* (New York: Ecco, 2016), 20.

The microbial revolution challenges the idea of an individual organism on multiple fronts.¹⁶ *Anatomically*, scientists have long held to the belief that an organism is an integrated whole in which the various parts of an organism represent one consistent life form. This view can no longer be maintained when we observe organisms at multiple species levels not only inhabited by but also dependent upon other species occupying their bodies. As just one example, consider the common cow. Cows could not survive without a rumen that hosts a complex ecosystem of gut symbionts (consisting of cellulose-digesting bacteria and anaerobic fungi, among other microbes) that enable it to digest its plant food. A cow is inconceivable apart from its microbial community. *Developmentally*, it had long been assumed that an organism is the same throughout the various stages of its growth from birth until death. This position can no longer be sustained, because in many cases symbionts play a crucial role helping the host organism complete its life cycle. A newborn infant, for instance, though nurtured in a relatively sterile womb, must have its gut colonized by microbes in order for its intestine to develop properly. As it travels through the vaginal opening, the newborn is transformed from an individual into a community as its body ingests millions of microbes that populate the mother's body.¹⁷ *Physiologically*, we are now seeing that in some organisms the divisions of labor among the various parts of an organic body are "outsourced" to different species. The synthesis of amino acids in the mealy bug, for instance, is now understood to require the shared work of two microbes with its host. Without these "foreign" bacteria, the bug could not be "itself." *Genetically*, it has become clear that the one-gene/one-organism model hardly obtains. Microbial symbionts provide "a secondary hereditary system" that enables the host to survive in changing contexts. The genome, in other words, is not fixed.¹⁸

¹⁶ In the following description, I am summarizing the admirably clear account provided by Gilbert, Sapp, and Tauber in "A Symbiotic View of Life."

¹⁷ Many animal species could not survive without microbes, which is why birth environments are often seeded with microbe capsules or fluids, and why newborns must lick fellow members or consume their feces or some other microbe-rich equivalent. Consider the development of a koala: "When a baby koala is six months old, it weans off its mother's milk and moves on to eucalyptus leaves. But first, it nuzzles mum's backside. She, in response, releases a fluid called pap, which the joey swallows. Pap is full of bacteria that will allow the koala joey to digest tough eucalyptus leaves, and contains up to 40 times more of these microbes than regular faeces. Without this initial meal, all the joey's later ones would be hard to stomach" (Yong, *I Contain Multitudes*, 149–150).

¹⁸ Ingold argues that "Neo-Darwinism is dead." He does not argue against the theory of evolutionary development, nor does he dispute the existence of DNA, RNA, amino acids, chromosome, or proteins. What he resists is the neo-Darwinian interpretation of these realities. "Evolution . . . does not lie in the mutation, recombination, replication and

History and environmental factors influence the holobiont at the most fundamental, cellular level, such that the host and symbionts become genetically integrated.¹⁹ *Immunologically*, it had long been assumed that a healthy organism's immune system maintains a wall to keep out pathogen intruders. Viruses, bacteria, and fungi are the enemy, the threatening other that, left alone, will compromise the health of the self. Recent studies have shown, however, that a host's immune system is created, at least in part, by its resident biome. A healthy biome, among other things, distinguishes "friendly" microbes from not, and works to protect the body in ways we are only beginning to understand.²⁰ And *evolutionarily*, it has become clear that the idea of individual selection must be replaced by group selection, understanding by this "group" not a collection of the same species members but the holobiont, which is a collection of multiple species. There is no individual organism that adapts and survives, because there was no single, self-contained organism to begin with.²¹ "Our bodies must be understood as

selection of transmissible traits. It is rather a life process. And at the heart of this process is ontogenesis. The failure to account for the ontogenetic emergence of phenotypic form is the Achilles heel of the entire neo-Darwinian paradigm." "The more we know about the genome, the more improbable it seems that it could serve as an anchor for stability. Indeed it is hard to see how the reproducibility of organic form could be attributed to anything as fluid, as liable to getting tied up in knots, as prone to alteration by retro-transposition, and as susceptible to the transfer of bits and pieces back and forth with the organism's multiple and heterogeneous microbial symbionts, as the genome" (Tim Ingold, "Prospect," in *Biosocial Becomings: Integrating Social and Biological Anthropology*, ed. Tim Ingold and Gisli Palsson [Cambridge: Cambridge University Press, 2013], 1, 6, 11).

¹⁹ This means that a fundamental feature of the neo-Darwinian hypothesis, the idea that the development of an organism is reducible to a (stable, preformed) genetic pattern transcribing or working itself out on a body's development, is fundamentally mistaken. It is but a more recent version of an ancient, Aristotelian mistake that presupposes a body to consist of its matter (*hyle*) plus its form (*morphe*), with the form being responsible for the shape and order of the body. The countless microbes within us destabilize whatever we may have thought about the selfsameness of our genes and our form.

²⁰ In her meditation on the practice of vaccination, Eula Biss notes that the health of a body is not achieved by a body sealing itself off from pathogen others. The effort to sustain a body in some kind of self-enclosed purity is a mistake. The pursuit of bodily purity, as when parents attempt to shield their children from critters and germs, or when they work to make their home environments as sterile as possible (through the copious use of antimicrobial soaps and toxic cleaning supplies), actually puts the body at risk. Why? Because health is not a property of an individually secured body. "We are protected not so much by our own skin, but by what is beyond it . . . immunity . . . is a common trust as much as it is a private account. Those of us who draw on collective immunity owe our health to our neighbors . . . Immunity is a shared space – a garden we tend together" (*On Immunity: An Inoculation* [Minneapolis: Graywolf Press, 2014], 25, 163).

²¹ Ingold argues that attending to life in terms of its biosocial becomings results in a fundamental revision of what we understand evolution to be. It is a revision that "requires us to think of humanity not as a fixed and given condition but as a relational achievement.