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Historical Embodiments of Natural Knowledge

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THE PHILOSOPHER AND THE CHICKEN

On the Dietetics of Disembodied Knowledge

STEVEN SHAPIN

This work, though it deals only with eating and drinking, which are regarded in the eyes of our supernaturalistic mock-culture as the lowest acts, is of the greatest philosophic significance and importance. . . . How former philosophers have broken their heads over the question of the bond between body and soul! Now we know, on scientific grounds, what the masses know from long experience, that eating and drinking hold together body and soul, that the searched-for bond is nutrition.

—Ludwig Feuerbach, review of Jacob Moleschott's
Theory of Nutrition (1850)

■ Introduction ■

A STORY IS TOLD—and much repeated—about Sir Isaac Newton when he was living in London toward the end of his life:

His intimate friend Dr. [William] Stukel[e]y, who had been deputy to Dr. [Edmond] Halley as secretary to the Royal Society, was one day shown into Sir Isaac's dining-room, where his dinner had been for some time served up. Dr. Stukel[e]y waited for a considerable time, and getting impatient, he removed the cover from a chicken, which he ate, replacing the bones under the cover. In a short time Sir Isaac entered the room, and after the usual compliments sat down to his dinner, but on taking off the cover, and seeing nothing but bones, he remarked, "How absent we philosophers are. I really thought that I had not dined."¹

Here is another story, circulating among modern academic philosophers, and it is about another, and much later, Cambridge philosopher. In 1934 Ludwig Wittgenstein came to stay with his friend Maurice Drury at a cottage in rural Ireland, and, as Drury relates,

Thinking my guests would be hungry after their long journey and night crossing, I had prepared a rather elaborate meal: roast chicken followed by

1. Brewster, *Life of Newton*, 341 n. For a representative twentieth-century retelling of the chicken story, see Grove Wilson, *The Human Side of Science*, 198.

suet pudding and treacle. Wittgenstein rather silent during the meal. When we had finished [Wittgenstein said], "Now let it be quite clear that while we are here we are not going to live in this style. We will have a plate of porridge for breakfast, vegetables from the garden for lunch, and a boiled egg in the evening." This was then our routine for the rest of his visit.²

In 1945 his American former student Norman Malcolm visited Wittgenstein in his Whewell Court rooms at Cambridge. Malcolm relates that Wittgenstein

prepared supper for us. The *pièce de résistance* was powdered eggs. Wittgenstein asked whether I cared for them, and knowing how he valued sincerity, I told him that in truth they were dreadful. He did not like this reply. He muttered something to the effect that if they were good enough for him they were good enough for me. Later he related this incident to [Yorick] Smythies, and (according to Smythies) Wittgenstein took my distaste for powdered eggs as a sign that I had become a snob.³

That was wartime. Afterward, when Wittgenstein lived in Dublin, "he would go to Bewley's Café, in Grafton Street for his midday meal—always the same: an omelette and a cup of coffee." What especially pleased Wittgenstein was that he became so well known at the café that he did not have to utter a word to order his food: it just came. "An excellent shop: there must be very good management behind this organization."⁴

My concern here is not to do with a late-Wittgensteinian solution to the problem of chicken-egg priority. Nor is it the moral of these—and a series of strikingly similar—stories that those who love wisdom do not love chicken: there is no reason to suppose that there is some special philosophic foulness that attaches to chicken. Rather, the point made by those telling these stories is publicly to say something of consequence about the special constitution of individuals who give themselves up wholly to the pursuit of truth. These are *stipulations* about the bodies of truth-seekers. The chicken is both real and figurative—made into symbolic capital for the quality of knowledge. It is, so to speak, epistemological chicken. And what these stories stipulate is that the truth-seeker is someone who attains truth by denying the demands of the stomach and, more generally, of the body. That is one way in which it is said that the individuals in question *are* truth-lovers—that is, *philosophers*—and one way available to philosophers to be recognized as such. And, if (as is likely) there is now a distinct

2. Drury, "Conversations with Wittgenstein," 125.

3. Malcolm, *Wittgenstein: A Memoir*, 40.

4. Drury, "Conversations with Wittgenstein," 156.

sense of the bizarre in discussing truth in relation to the stomach, it is that very oddness of association that is my topic of inquiry. Why is it that the belly is conceived to stand at the opposite pole to truth?⁵

These stories—and many like them—are unusually widely distributed and persistent over a broad sweep of Western culture. I find them fascinating and important, and I want to tell a few more of them as I go on. My fascination with these stories proceeds partly from a puzzle I sometimes encounter in conversation with academic colleagues in philosophy and in the history of ideas. They occasionally say that, in contrast with some social historians and sociologists of knowledge, their concern is with "disembodied knowledge," with knowledge *itself*, rather than with its embodied production, maintenance, and reproduction.⁶ Such locutions are standard, well institutionalized in a range of academic practices, and rarely contested. Yet, to tell the truth, I have never seen a "disembodied idea," nor, I suspect, have those who say they study such things. What I and they have seen is embodied people *portraying* their disembodiment and that of the knowledge they produce or the documentary records of such portrayals. These portrayals are the topic in which I am interested here. How are they done? With what cultural materials are they accomplished? To what ends? I start with a prejudice: it is that the portrayal of our culture's most highly esteemed knowers and forms of knowledge as disembodied has been one of the major resources we have had for displaying the truth, objectivity, and potency of knowledge.⁷ These stories, and the cultural practices they describe, constitute that portrayal. They are stories about the meager and the physiologically disciplined bodies of truth-lovers.

My particular interest has been with early modern natural philosophers and the stories attached to their bodies. And I will briefly rehash some familiar stories attaching to Robert Boyle, Henry More, Isaac Newton (again), and Henry Cavendish. But the stories are, indeed, *attached*, since they were associated with

5. Here I should say that stories about truth-lovers' stomachs are only one potential focus for thinking about disembodiment as a topic in practical epistemology. One could imagine an extended study divided into chapters: the face, the eyes, the loins, the skin, the hands, gesture, costume, the body in solitude. (See, for example, the topical organization of Onians, *Origins of European Thought about the Body*.) I concentrate here on the belly partly because of the strength of the opposition between it and the mind, while other chapters in the present volume range more widely over corporeal terrain.

6. This was the same intellectual subject that Nietzsche recognized and opposed: "a 'pure, will-less, painless, timeless subject of knowledge,'" "knowledge-in-itself": "What Is the Meaning of Ascetic Ideals?" in *Genealogy of Morals*, 717–93, quoting 744.

7. For the iconography of intellectuals, see, e.g., Zanker, *The Mask of Socrates*; Fletcher, "Iconographies of Thought"; and Janet Browne's contribution (chapter 7) to this volume. I have treated the related topic of solitude as an epistemological resource in Shapin, "The Mind Is Its Own Place."

other truth-lovers in other, and much earlier, settings. So I want to get to Newton et al. by way of settings from which emerge our earliest knowledge of such stories.⁸ And at the end of this chapter I want to suggest that these stories no longer attach to present-day truth-seekers in quite the same way. The career of such stories, I speculate, tracks the development of modern conceptions of knowledge and the knower in a perspicuous way.

■ *The Ascetic Ideal and Its Classical Tropes* ■

WE ARE DEALING HERE with a *trope*, one of very great antiquity and pervasiveness, a trope that has been consequentially attached in a range of settings to those who are said to be authentic lovers of truth.⁹ Possibly the original of the trope is found in Plato. In the *Phaedrus*, Socrates tells a charming story about the origins of the race of cicadas. Once upon a time, before the Muses were called into being, cicadas were human beings. And when the Muses were created,

some of the people of those days were so thrilled with pleasure that they went on singing, and quite forgot to eat and drink until they actually died without noticing it. From them in due course sprang the race of cicadas, to which the Muses have granted the boon of needing no sustenance right from their birth, but of singing from the very first, without food or drink, until the day of their death.

And when the cicadas die they report to the Muses "how they severally are paid honor among mankind, and by whom." These people—dancers, singers, historians, and the like—are the blessed of the Muses. But of these some are specially blessed: "To the eldest, Calliope [Muse of epic poetry], and to her next sister, Urania [Muse of astronomy], they tell of those who live a life of *philosophy* and so do honor to the music of those twain whose theme is the heavens and all the story of gods and men, and whose song is the noblest of them all."¹⁰

At the very end of his life, Socrates made clear the special affinity between the cicada's way of life and that of the philosopher. Sentenced to death, Socrates argued against those of his friends who would have him flee Athens and avoid the hemlock. In the *Phaedo* Socrates brings Simmias round to the view that of all men the philosopher is one who, rather than fearing death, should embrace it. The argument proceeds by way of the role of the body, its desires and require-

ments, in the philosopher's search for truth. Socrates: "Do we believe that there is such a thing as death?" Simmias: "Most certainly." Socrates: "Is it simply the release of the soul from the body? Is death nothing more or less than this, the separate condition of the body by itself when it is released from the soul, and the separate condition by itself of the soul when released from the body? Is death anything else than this?" Simmias: "No, just that." Socrates: "Well then, my boy, see whether you agree with me. . . . Do you think that it is right for a philosopher to concern himself with the so-called pleasures connected with food and drink?" Simmias: "Certainly not, Socrates."

Socrates went on to establish that the philosopher is a different sort of person from the ordinary run of humanity: he "frees his soul from association with the body, so far as is possible, to a greater extent than other men." And if the philosopher's disembodiment is the condition for his hope to attain truth during mortal life, so death, which is the final freeing of the soul from the constraints of the body, is not to be shunned but welcomed: "Surely the soul can best reflect when it is free of all distractions such as hearing or sight or pain or pleasure of any kind—that is, when it ignores the body and becomes as far as possible independent, avoiding all physical contacts and associations as much as it can, in its search for reality." In "despising the body and avoiding it, and endeavoring to become independent—the philosopher's soul is ahead of all the rest. . . . If we are ever to have pure knowledge of anything, we must get rid of the body and contemplate things by themselves with the soul by itself." In this way, the practice of philosophy during life was the imitation of death, since both philosophy and death act to free the soul from its bodily prison: "True philosophers make dying their profession."¹¹

The ancient Greek association between the truth-lover's way of life and the denial of the body was widespread and *mutatis mutandis* persistent. Diogenes the Cynic was advertised as a philosopher who cared so little for fleshly and material rewards that, when asked by the great Alexander what thing he might desire of him, he requested only that Alexander should "stand out of my light."¹² Stoic philosophers, content with water and plain bread, able to miss their dinner without complaint or even without noticing, were celebrated for the simplicity of their diet. Epicurus, whose identification of pleasure as the goal of life was much misunderstood, was "thrilled with pleasure in the body, when I live on bread and water," and commanded a friend to "[s]end me some preserved

8. See also chapters in this book by Peter Dear (chapter 2, on Descartes), Robert Iliffe (chapter 4, on Newton), and Simon Schaffer (chapter 3, on English Restoration natural philosophers in general).

9. For the significance of similar tropes in non-Western as well as European cultures, see, e.g., Goody, *Cooking, Cuisine, and Class*, chap. 4.

10. Plato, *Phaedrus*, 259 b–e.

11. Plato, *Phaedo*, 64d–66d, 67e; cf. idem, *Gorgias*, 524–27. For treatment of the pervasive (but "very curious") association between death and philosophy, see Arendt, *Life of the Mind*, 1:79–81.

12. Diogenes Laërtius, *Lives of Eminent Philosophers*, 2:41; cf. Stanley, *History of Philosophy* (1687), 410.

cheese, that when I like I may have a feast."¹³ The Greek seeker after truth was recurrently said to eat only enough to keep life going. To eat more than a bare minimum, or to yearn after delicacies, was to compromise the philosopher's ideal self-sufficiency. The condition for truth was an austere dietetics.

Pythagoras and his followers were famous for their abstemiousness. Legend had it that they routinely performed "an exercise of temperance": "There being prepared and set before them all sorts of delicate food, they looked upon it a good while, and after that their appetites were fully provoked by the sight thereof, they commanded it to be taken off, and given to the servants." Later commentators made much of Pythagorean vegetarianism and the prohibition against eating beans. Both animal flesh and beans produced noxious effluvia that corrupted the body and rendered it impure and unfit for intellectual activity.¹⁴ Accordingly, a frugal diet was not only a display of dedication to knowledge and an emblem of a person who cared little for its pleasures and needs, it might also be understood as a *physiological condition* for putting the body in a fit posture for the intellectual and spiritual quest. (As Ludwig Feuerbach much later punned, "Der Mensch ist, was er iszt.")¹⁵ Broadly Pythagorean sentiments persisted into the later Roman Empire, Plotinus and his pupil Porphyry arguing strenuously for abstemiousness and vegetarianism for all, but especially for those intending to live a philosophical life: "Abstinence from animal food . . . is not simply recommended to all men, but to philosophers." Porphyry's tract commending vegetarianism was written against a philosophical friend who took up flesh-eating on his conversion to Christianity. You are what you eat, and those who consumed flesh fed their animal natures while they poisoned their souls.¹⁶

■ The Ascetic Ideal and Its Christian Tropes ■

AFTER JESUS WANDERED in the desert for forty days and nights, "he hungered" (Matthew 4:1–2; Luke 4:1–2). Satan's first temptation was not power but food: "If thou art the Son of God, command that these stones become bread. But

13. Oates, *Stoic and Epicurean Philosophers*, 48 (for Epicurus); for Stoic dietetics, see Epictetus, *Discourses*, 434, 439, 443; Seneca, *Moral Essays*, 1:128, 151; and see also Nussbaum, *Therapy of Desire*, 112–14, and Brown, *Body and Society*, 27.

14. Stanley, *History of Philosophy*, 493, 506–7, 511, 518 (quoted passage), 564; see also Grmek, *Diseases in the Ancient Greek World*, chap. 9 ("The Harm in Broad Beans"); Dodds, *The Greeks and the Irrational*, 143–54; Camporesi, *The Magic Harvest*, 11, 15.

15. For an introduction to the origins of this pun, see Wartofsky, *Feuerbach*, 413–14, 451 n. 6. The project of giving an account of the "connection between what you eat and how you think" has not been wholly abandoned by modern medical science; see, e.g., Bourre, *Brainfood*, esp. chaps. 2, 8.

16. Iamblichus, *On the Pythagorean Life*, esp. 4–7, 14, 24, 43–44, 47–48 (on Pythagorean dietetics); Porphyry, *On Abstinence from Animal Food* (ca. A.D. 250), e.g., 54–56, 64, 99–100; see also Bynum, *Resurrection of the Body*, 33–41; Osborne, "Ancient Vegetarianism," 218–23.

he answered and said, It is written [quoting Deuteronomy 8:3] Man shall not live by bread alone" (Matthew 4:3–4; Luke 4:3–4); "Is not the life more than the food and the body more than the raiment?" (Matthew 6:25). When the disciples wondered that the Rabbi did not eat, "he said unto them, I have meat to eat that ye know not" (John 4:30–32). For the faithful, Jesus himself was "the bread of life: he that cometh to me shall not hunger, and he that believeth on me shall never thirst" (John 6:35). Paul lectured the Corinthians: "Meats for the belly, and the belly for meats; but God shall bring to nought both it and them" (I Corinthians 6:13).¹⁷

The early Christian idiom for expressing the relationship between the denial of bodily wants and the attainment of spiritual knowledge is probably more familiar than that of Greek Antiquity, and fine recent historical work has yielded new understandings of the ascetic culture produced by the Egyptian monks of the third and fourth centuries. Peter Brown, for example, has corrected dominant modern assumptions about the temptations Christian hermits and anchorites took themselves to the desert to confront and surmount. For Saint Anthony, the desert was "a zone of the non-human," and, for this reason, Brown writes,

the most bitter struggle of the desert ascetic was presented not so much as a struggle with his sexuality as with his belly. It was his triumph in the struggle with hunger that released, in the popular imagination, the most majestic and the most haunting images of a new humanity. . . . The titillating whispers of the "demon of fornication," much though they appear to fascinate modern readers, seemed trivial compared with [the obsession with food].¹⁸

(In the Middle Ages, the skin disease erysipelas was known as Saint Anthony's blush, because, as one legend has it, the anchorite saint blushed every time he was obliged to eat.) The Desert Fathers regarded eating as a matter of both shame and spiritual danger: "The body prospers in the measure in which the soul is weak-

17. See also Bynum, *Holy Feast and Holy Fast*, 3. Forty days and forty nights was also the period of Elijah's fast: I Kings 19:8. For Judaic and early Christian conceptions of food as embodying God's knowledge, see Feeley-Harnik, *The Lord's Table*, 82–91.

18. Brown, *Body and Society*, 218–21. Interviewed about the first volume of his *History of Sexuality*, Michel Foucault "confessed" that "sex is boring," and that it was so for the Greeks and early Christians as well:

[Sex] was not a great issue. Compare, for instance, what they say about the place of food and diet. I think it is very, very interesting to see the move, the very slow move, from the privileging of food which was overwhelming in Greece, to interest in sex. Food was still much more important during the early Christian days than sex. For instance, in the rules for monks, the problem was food, food, food. Then you can see a very slow shift during the Middle Ages when they were in a kind of equilibrium . . . and after the seventeenth century it was sex. (Foucault, "On the Genealogy of Ethics," 229)

ened and the soul prospers in the measure in which the body is weakened."¹⁹ Another legend tells of a friend, concerned for the health of the hermit Abba Macarius, bringing him a bunch of grapes. Macarius was unwilling to indulge himself and sent them to another hermit, who then passed them on to still another, until at last they came back to Macarius, uneaten.²⁰ Here the religious life of the mind appears not just disembodied but specifically disemboweled.

The ascetics of Late Antiquity tended to conceive of the human body as an "autarkic" system. In ideal conditions, and, tellingly, before Adam's original sin—it was food, after all, that brought him down—the body was thought capable of running "on its own heat." It needed just enough food to maintain that heat. It was only "the twisted will of fallen men" that gorged the body with surplus food, and it was this dietary surfeit that produced the excess energy manifested in "physical appetite, in anger, and in the sexual urge." The passions, including that of sexuality, were thus in part epiphenomena of dietetics: food before sex. Brown writes that

in reducing the intake to which he had become accustomed, the ascetic slowly remade his body. He turned it into an exactly calibrated instrument. Its drastic physical changes, after years of ascetic discipline, registered with satisfying precision the essential, preliminary stages of the long return of the human person, body and soul together, to an original, natural and uncorrupted state.

In Genesis (1:29) the Lord said that "I have given you every herb . . . and every tree . . . and to you it shall be for meat." From the early Christian era well into the eighteenth century and beyond it was debated whether Adam and Eve were vegetarians and whether they ate only raw foods; whether this was the natural diet of prelapsarian humans; whether the Fall from Grace altered the human constitution so that we now required flesh and cooked foods; and, importantly, whether fallen humans might restore their pure state, and their pristine and powerful intellectual capacities, by a pure and primitive diet.²¹

19. Abba Daniel (ca. 450), in *Desert Fathers, Sayings of the Desert Fathers*, 43–44; cf. Musurillo, "The Problem of Ascetical Fasting." Note the typical gesture here at what Max Weber ("Religious Rejections," 327) called "the Janus-face" of asceticism: the world and the flesh are denied, but in such a way as to attain mastery—if not of this world, then of a greater world.

20. *Desert Fathers, Lives of the Desert Fathers*, 109; Bynum, *Holy Feast and Holy Fast*, 38; Gould, *The Desert Fathers*, 143; Camporesi, *The Anatomy of the Senses*, esp. chap. 4.

21. Brown, *Body and Society*, 223; see also Grimm, "Fasting Women," 231–34. Ancient theories of "innate heat" and its relation to diet are treated in Mendelsohn, *Heat and Life*, chap. 2, and in Temkin, "Nutrition," 85–88. For continuing medical speculation on the natural dietetics of human beings before the Fall and in Antiquity, see, e.g., Cheyne, *Essay of Health and Long Life* (1724), 91–92; Mackenzie, *History of Health* (1760), 17–53; and Smith, *Sure Guide in Sickness and Health* (1776), 78–81. And for the causal influence of dietetics on the sexual appetite, see Bynum, *Holy Feast and*

In the early Christian era, Saint Augustine was perhaps the most influential voice advertising the disciplined body as the condition for spirituality. The Jews feared certain foods, while to the Christian all foods were equally clean or unclean: "It is not the impurity of food I fear but that of uncontrolled desire." God taught Augustine "to take food in the way I take medicines. But while I pass from the discomfort of need to the tranquillity of satisfaction, the very transition contains for me an insidious trap of uncontrolled desire." Moreover, the variety of fleshly pleasures offered by the variety of foods was a snare. Routine consumption of *the same* foods—for Augustine as for Wittgenstein—was a way of ensuring against the "tumult of the flesh" and "bringing the body into captivity."²² That was the human condition: to be human was not only to err but to eat, and, in eating, people inevitably fed those animal wants that had the potential to corrupt the soul.²³ In this way, the Eucharist Host and Communion wine expressed not only particularly Christian worship but also the general human predicament, until such time as bread was replaced by the Bread of Heaven. After the Resurrection, there would be no need to eat in order to prevent decay.²⁴

By contrast, Jewish traditions of asceticism, and ascetic warrants for knowledge, were relatively poorly developed. Immediately after the Old Testament's most eloquent commendation of decorum—"To every thing there is a season"—the aged Solomon wrote that there is nothing better for men "than to rejoice, and to do good so long as they live. And also that every man should eat and drink, and enjoy good in all his labour, is the gift of God. . . . Go thy way, eat thy bread with joy, and drink thy wine with a merry heart; for God hath already accepted thy works" (Ecclesiastes 3:1, 3:12–13, 9:7).²⁵ In the twelfth century, the Spanish-Jewish physician Moses Maimonides worried about the effects, both on pious Gentiles and on his own coreligionists, of the heroic asceticism of Christian "saintly ones." In fact, Maimonides said, such abstinence was best understood as

Holy Fast, 37; Camporesi, *The Anatomy of the Senses*, 67–69; and Rouselle, *Porneia*, 169–78. The dependence of lust on diet remained proverbial into the early modern period; see Erasmus's quotation (*Proverbs or Adages* [1569], 34v) of the adages "Without meate and drinke the lust of the body is colde"; "The beste way to tame carnall lust, is to kepe abstinence of meates and drinkes"; and "A licourouse [licentious] mouth, a licourouse taile."

22. Augustine, *Confessions*, 171, 204–7. Saint Gregory of Nyssa (d. 395) described taste as "the mother of all vice" (quoted in Bynum, *Holy Feast and Holy Fast*, 38). And Camporesi refers (*The Anatomy of the Senses*, 65; cf. 147) to a Christian "anti-cuisine," aiming at "an alienation of taste . . . a cuisine with a minus sign, a protest against the physiological game we are forced to play by the organic cycles of the flesh."

23. In the second century Porphyry (*On Abstinence from Animal Food*, 54) wrote specifically against taking a *variety* of foods, for such diversity only fed the "variety of pleasure . . . and in this respect resembles venereal enjoyments, and the drinking of foreign wines."

24. Bynum, *Resurrection of the Body*, 102; cf. 124–28, 148. For an anthropological interpretation of the Eucharist, see Feeley-Harnik, *The Lord's Table*, esp. 63–70.

25. Cf. Ecclesiastes 5:18, 8:15, 10:19, and Luke 12:19.

a periodic means of "restoring the health of their souls" and as a contingent reaction against "the immorality of the towns-people." The mistake of the ignorant was to think that extreme abstinence was virtuous in itself, "that by this means man would approach nearer to God, as if He hated the human body, and desired its destruction. It never dawned on them, however, that these actions were bad and resulted in moral imperfection of the soul." Aristotelian moderation was identified as the dietetics of both spiritual and civic well-being.²⁶

Nor is it the case that pagan and early Christian ethical and medical authority issued blanket recommendations of severe abstemiousness. From the pre-Socratics through the Hippocratic and Galenic corpus, and the writings of such Stoic philosophers as Epictetus and Seneca, health was seen to flow from observing *moderation*—in exercise, in study, and in diet. Both gluttony and excessive fasting were explicitly identified as recipes for moral and physiological disaster. Let the body serve the rational mind, not the mind the body; in eating, let your aim be to "quench the desires of Nature, not to fill your belly"; "allow thy belly what thou shouldst, not what thou mayest"; "eat to live, not live to eat."²⁷ Such advice, as well as the physiological schema that justified it, proved remarkably stable over a great span of European history. Tweaked, tuned, and idiosyncratically interpreted by individual writers, balance, stability, and moderation remained the dominant dietetic counsel from Antiquity to the modern period.²⁸ The lay wisdom of an early modern proverb had it that "[h]e that is ashamed to eat is ashamed to live." Yet the prudent "middle way" to which free civic actors

26. Maimonides, *Eight Chapters on Ethics*, 60–62; idem, *Medical Aphorisms*, 1:122; 2:41–46; cf. Bynum, *Holy Feast and Holy Fast*, 36 (for Patristic citation of Old Testament examples of holy fasting). In the seventeenth century Spinoza's dietetics substantially fell in with the dominant tradition of Jewish philosophical moderation:

[I]t is the part of a wise man to refresh and recreate himself with moderate and pleasant food and drink. . . . For the human body is composed of very numerous parts, of diverse nature, which continually stand in need of fresh and varied nourishment, so that the whole body may be equally capable of performing all the actions, which follow from the necessity of its own nature; and, consequently, so that the mind may also be equally capable of understanding many things simultaneously. This way of life, then, agrees best with our principles, and also with general practice. (Spinoza, "Ethics," 219–20; cf. 241)

For the comparatively restrained Jewish traditions of self-denial, see Solomon, "Asceticism." A dominant Gentile sentiment is inverted by the Yiddish proverb: "Az der mogn iz leydik iz der moyekh oykh leydik" (When the stomach is empty so is the brain) (cf. note 30 below).

27. E.g., Diogenes Laërtius, *Lives of Eminent Philosophers*, 1:165 (of Socrates: "He would say that the rest of the world lived to eat, while he himself ate to live"); Galen, *On the Passions of the Soul*, 49–51; Seneca, *Moral Essays*, 2:119, 137, 157; Epictetus, *Discourses*, 458–59.

28. Wesley Smith ("Development of Classical Dietetic Theory," 443–44) refers to such counsel, and the dietetic knowledge that underpinned it, as "the common property of the culture." "It is probably because the tradition belonged to everyone that it did not easily take the impress of a special point of view or group and persisted essentially unchanged through the centuries." In classical usage, "dietetics" included the study and regulation of food and drink, but the term more generally signified regimen or the management of ways of living, or, in medical terms of art, the "non-naturals."

were enjoined created at the same time a way of understanding, and celebrating, the special dietetic self-denial of truth-seekers.²⁹ The philosopher *was not as other men*: his discipline of the belly was recognized in the culture both as the condition of spirituality and as a badge by which authentic truth-lovers might be identified. A "lean and hungry look," like a specially ascetic way of life, might visibly mark not only the politically risky person—"He thinks too much: such men are dangerous"—but also the exceptionally virtuous and wise man.³⁰

Heroic abstinence constituted a potential problem as well as a resource for the developing institutions of Christianity. By Late Antiquity a Church that had assumed substantial responsibilities of civic management was in a different position with respect to gestures of otherworldly disengagement from the one that had once stood on the political periphery. While the solitary ascetic continued symbolically to represent piety in its purest and highest form, such examples could not be effectively offered as a pattern for the ordinary conduct of the whole body of the faithful. The clerical hierarchy increasingly worried about the uncontrollability of individual gestures of heroic asceticism and about the potentially subversive alternative claims to religious authority that such gestures might represent. Orthodoxy was now in a position where its canons formally celebrated heroic asceticism while its institutions reserved the right to counsel a temperate course and to monitor the authenticity and interpretation of individual ascetic gestures. When the bishop lived in a mansion and kept a sumptuous table, personal acts of heroic asceticism might plausibly be treated as subversive critique. The temperate and highly ordered dietetics of monasticism was one way of managing the problem: the sixth-century monastic *Rule* of Saint Benedict, for example, provided for victuals (excluding "the flesh of quadrupeds" but including a ration of wine) whose nature and quantity were prudently adapted to the local climate as well as to individual brothers' work routines, constitutions, and momentary states of health.³¹ Another was the careful surveillance of

29. For surveys of the dietetic literature of Early and Late Antiquity, see, e.g., Edelstein, "The Dietetics of Antiquity," esp. 308–16 (for recognition of the special dietetic requirements of the scholar and philosopher); Temkin, *Galenism*, esp. 26, 36–39, 85; Smith, "Development of Classical Dietetic Theory"; and, notably, Foucault, "Dietetics," in *The History of Sexuality*, 2:97–139; also 3:140–41.

30. Caesar wanted "men about me that are fat": *Julius Caesar*, 1.2. And see also Shakespeare's association of thinness, diet, and intelligence: "Fat paunches have lean pates; and dainty bits/Make rich ribs, but bankrupt quite the wits" (*Love's Labour's Lost*, 1.1); and "Methinks sometimes I have no more wit than a Christian or an ordinary man has: but I am a great eater of beef and I believe that does harm to my wit" (*Twelfth Night*, 1.3). The link was proverbial. An early modern English saying pronounced that "The sparing diet is the spirit's feast"; another (attributed to Socrates) judged that "The belly is the head's grave"; an Italian proverb said "Capo grasso, cervello magro"; and Saint Jerome referred to an old Greek adage: "A gross belly does not produce a refined mind": see Tilley, *Dictionary of Proverbs*, e.g., 44, 156, 526.

31. Benedict, *Rule*, 80–81. One rule was to take and to consume what one was given without complaint and even without speech. In another exercise it would be necessary to recover precise his-

the heroically abstinent: was this fasting figure genuine or a fraud? was it quite clear that the faster was not motivated by pride? that such abstinence did not testify to an unreasonable and unwholesome *attention* to the demands of the body? that he or she was not diabolically rather than divinely inspired?³²

When Saint Francis of Assisi was ill with a fever, his friends urged him to take a little solid nourishment, only to have his eventual backsliding made into a further spectacular public display of self-abasement. Stripping himself naked, and putting a cord round his neck, he commanded a colleague to lead him into the piazza, where he addressed the people: "You believe me to be a holy man, and so do others who, on my example, leave the world and join the Order and way of life of the brothers. But I confess to God and to you that in this sickness of mine I ate meat and broth cooked with meat. . . . Here is the glutton who has grown fat on the meat of chickens."³³ It was just this kind of gesture that might be interpreted as proceeding more from pride than piety. In the fourteenth century Saint Catherine of Siena progressed from a diet of bread, water, and raw vegetables (occasionally supplemented by pus from the suppurating ulcers of a cancer victim's breast) to an announcement that she took nourishment only from the Host. Her friends reminded her that Jesus told his disciples to "eat such things as are set before you" (Luke 10:8), and skeptics suspected that she was in fact sustained by Satan. Carefully watched, Catherine nevertheless satisfied her monitors that she could retain no food in her stomach and that "her body heat consumed no energy."³⁴ In the seventeenth century those set to watch over Saint Veronica's fasting observed her periodically to gorge, but this was explained as the work of the devil. Pressure was successfully brought to bear to get her to submit to the regular dietetics of her order, of which she ultimately became abbess.³⁵ So the dietetic moderation to which the civic actor was pervasively enjoined was also, albeit typically on a more ascetic scale, counseled by the Church to its clerics and to the community of believers. The cultures of both civic and sacred institutions possessed ways of understanding, sometimes approving, and sometimes worrying about, the special moral state and the special epistemic claims of the heroically abstinent.

torical distinctions between the practices designated by *abstinence*, *temperance*, *fasting*, and related locutions, though, as Bynum points out (*Holy Feast and Holy Fast*, 37–38) the one term *abstinence* came to refer to practices as diverse as refraining from certain types of foods, taking only one meal a day, eating no cooked foods, and eating nothing at all for a period; see also Rouselle, *Porneia*, 167–69.

32. Georgianna, *The Solitary Self*, 25–37; Kleinberg, *Prophets in Their Own Country*, 19, 135–41; Bowman, "Of Food and the Sacred," esp. 111–14. For Thomas Aquinas's debate with himself over whether extreme abstinence counted as virtue or vice, see *Summa Theologica*, 2:1783–92.

33. Quoted in Kleinberg, *Prophets in Their Own Country*, 135 and n. 14.

34. Bell, *Holy Anorexia*, 25–27; see also Camporesi, "The Consecrated Host."

35. Bell, *Holy Anorexia*, chap. 3.

As the examples of Catherine, Veronica, and many other female saints make plain, the gesture of heroic abstinence was at least as available for holy women as it was for holy men. Caroline Bynum has beautifully described differences (as well as similarities) in medieval male and female gestures of holiness, noting the special significance for women of food and its renunciation. Food was pervasively "a powerful symbol" and was therefore central to interpreting the human condition and its eschatological future, especially in endemic conditions of scarcity: "But food was not merely a powerful symbol. It was a particularly obvious and accessible symbol to women, who were more intimately involved than men in the preparation and distribution of food."³⁶ Women's bodies were, indeed, the source of life and of food, and their acts of giving birth and nursing could be recruited as powerful analogies of Christ's body. Yet male medical writing from Antiquity through the Middle Ages (and beyond) tended to conceive of the female body as colder and wetter than the male body, more liable to corruption, more *organic*. "Although all body," Bynum says, "was feared as teeming, labile, and friable, female body was especially so." Yet, she notes, "women could triumph over organic process." This meant that dominant understandings of women's bodies could count as an obstacle to female gestures of spirituality (and female entitlements to spiritual knowledge), while at the same time they gave grounds for regarding the gestures of the heroically abstinent woman as *especially* powerful.³⁷

■ Temperance and Its Early Modern Meanings ■

FROM ANTIQUITY TO THE early modern period formal medical texts consistently counseled the prudent person to adopt a dietetics of moderation. Yet strands of sixteenth- and seventeenth-century culture contested the meaning of the temperate life, debating how it was that ancient philosophers had lived and how the modern wise person ought to live. The dominant notes in texts written for a genteel readership remained the prudential commendation of a temperate and moderate course of life and an associated condemnation of fashionable excess. The English humanist Sir Thomas Elyot closely followed Galen in listing the qualities of different foods and their effects on persons of varying temperaments. Gross meat made gross bodily juices, and, while the roast beef of Olde Engleland offered suitable victuals for laborers and for others of coarse constitution, "it

36. Bynum, *Holy Feast and Holy Fast*, 24–29 (quoting 29).

37. Bynum, *Resurrection of the Body*, 221, and Smith, "Problem of Female Sanctity," 18–20; see also MacLean, *Renaissance Notion of Woman*, esp. 41–46; Bell, *Holy Anorexia*; Vandereycken and van Deth, *From Fasting Saints to Anorexic Girls*; Grimm, "Fasting Women," 229–30; and Shapin, *A Social History of Truth*, 86–91 (for women's physical and social natures in relation to their effective participation in knowledge making).

maketh grosse bloude, and ingendereth melancoly." (Hare too was proverbially said to be "melancholy meat" but capon was recommended for those whose complexion was that way inclined.) Simply prepared things were best; the simultaneous consumption of a variety of meats was to be avoided; gluttony and drunkenness were worst of all. Abstinence, however, might itself be dangerous, and its practice too must be observed in moderation. After all, both Plato and Galen (Saint Paul was not mentioned here) recommended using "a little wine for thy stomach's sake." Excess in abstinence might be conducive to melancholy.³⁸

The mid-sixteenth-century homespun advice manual *La Vita Sobria* by the centenarian Venetian gentleman Luigi Cornaro became the most widely circulated early modern tract celebrating dietary temperance. Like Elyot, Cornaro denounced the routine gluttony of modern patrician society. He ate in quantity "only what is enough to sustain my life": bread, broth (with perhaps an egg), no fruit, all sorts of fowl, veal (but no beef), some fish—all flesh being taken in moderation. While the temperate life was "pleasing to God," its justification here took a largely secular form: this is the way one ought to live if one desired health and a robust old age. The lives of ancient philosophers—Plato, Isocrates, Cicero, and Galen—were recruited as patterns of dietary restraint, but nothing about this version of temperance made it unfit for those "in service of the State" or for the ordinary civic actor: "I am nothing but a man and not a saint."³⁹

Montaigne's late sixteenth-century skepticism was targeted at dietary as well as at philosophical systems:

My way of life is the same in sickness as in health; the same bed, the same hours, the same food serve me, and the same drink. I make no adjustments at all, save for moderating the amount according to my strength and appetite. Health for me is maintaining my accustomed state without disturbance. It is for habit to give form to our life, just as it pleases.⁴⁰

"[T]here is no way of life so stupid and feeble as that which is conducted by rules and discipline," and one who attempted to eat and drink by the book was no less liable to go wrong than one who sought to regulate belief and action by the book. The "most unsuitable quality for a gentleman" is "bondage" to system. One should not decline to follow local dietary custom because it conflicted with systemic medical principles: "Let such men stick to their kitchens." In di-

38. Elyot, *The Castel of Helth* (1541), 11v, 15v–16r (quoted passage), 20r, 32r–33v, 42r–43r, 53v–54r. For Saint Paul, see 1 Timothy 5:23.

39. Cornaro, *The Temperate Life*, 59–60, 75, 87. Cornaro deplored (112) the fact that so many men then in monastic orders no longer lived the temperate lives originally intended for them and were "for the greater part, unhealthy, melancholy, and dissatisfied."

40. Montaigne, "Of Experience" (comp. 1588), 827.

etary matters, one should conform to rules tested by experience but not be "enslaved" by them. There was indeed a vice of "daintiness," of taking "particular care in what you eat and drink," but that vice might be equally manifest in vigilant temperance or in gormandizing fastidiousness. Over a lifetime, one's sense of pleasure adapted one's stomach to its usual fare, and radical change was always likely to do more harm than good. And even if long life was promised to those who would radically amend their dietary habits, "Is it so great a thing to be alive?"⁴¹

Francis Bacon's posthumously published *History of Life and Death* (1636) worked subtle but consequential changes both on the dietetic culture handed down from Antiquity and on Cornaro's program of systematic temperance. He agreed that the Pythagoreans and the Church Fathers were unusually long-lived and that their abstemious dietetics was substantially responsible for that longevity. And he claimed that "light contemplations" had similarly beneficial effects in prolonging life: "For they detain the spirits on pleasing subjects, and do not permit them to become tumultuous, unquiet, and morose. And hence all contemplators of nature, who had so many and such great wonders to admire, as Democritus, Plato, Parmenides, and Apollonius, were long-lived." By contrast, what he called "subtle, acute, and eager inquisition shortens life; for it fatigues and preys upon the spirits."⁴² Yet Bacon dissented from the ascetic tradition that causally associated dietary abstemiousness with intellectual good: "It is certain also that the brain is as it were under the protection of the stomach, and therefore the things which comfort and fortify the stomach by consent assist the brain, and may be transferred to this place."⁴³ Most important, Bacon adapted traditional injunctions toward dietary moderation, generally preserving the *form* commending the dietary Golden Mean while altering its content and prescriptive meaning. "Frequent fasting," he announced, "was bad for longevity"; and experience showed that great gluttons "are often found the most long-lived": "[W]here extremes are prejudicial, the mean is the best; but where extremes are beneficial, the mean is mostly worthless." Diets that were too spare were to count as extreme, with all the effects on body and mind that flowed from excess. The gentlemanly actor in society was placed in a position where occasional surfeit was a routine and civically prescriptive fact of life, and accommodating oneself

41. *Ibid.*, 830–32, 843.

42. Bacon, "History of Life and Death," 217, 251, 261, 280. For eighteenth-century medical agreement about the longevity of ancient philosophers and its dietetic cause, see Mackenzie, *History of Health*, 243–44.

43. Bacon, "History of Life and Death," 299. Bacon also disagreed (301–2) with dominant religious and philosophical recommendations of dietary simplicity: a variety of dishes was, he said, *better* for digestion, and daintily sauced foods likewise assisted the making of good bodily juice.

to such circumstances was both politically and dietetically prudent: "With regard to the quantity of meat and drink, it occurs to me that a little excess is sometimes good for the irrigation of the body; whence immoderate feasting and deep potations are not to be entirely forbidden."⁴⁴

So early modern culture worked with, and ingeniously reworked, dietetic traditions ultimately inherited from pagan and early Christian literatures. Sixteenth- and seventeenth-century advice was firmly linked to its ancient sources by the recommendation of prudent moderation and temperance for those wishing to live a healthy, happy, and productive life in society, even as the meaning of what it was to observe a temperate dietetics was modified according to differing conceptions of *how* and *where* the good life was to be lived and according to differing conceptions of *who* the philosopher and the prudent person were. When humanist writers urged a relocation of the ideal life of the mind from cloistered to civic settings, dietary advice was part of that attempted cultural transformation. If study and philosophizing were to be legitimate activities within a civic setting, contributing to civic concerns, then the dietetics of the legitimately learned should be substantially similar to that of the prudent civic actor. At the same time, this attempted respecification continued to offer ways of understanding, and even appreciating, the austere dietetics of the otherworldly intellectual.

By the Renaissance and early modern period, Greek and Roman theories of the humors, temperaments, and complexions had been developed into important reflective understandings of what scholars and philosophers "naturally" were like and, in turn, what effects the life of truth-seeking wrought upon their bodies. In the late fifteenth century the neo-Platonist Marsilio Ficino wrote influentially about the melancholy to which learned people were especially prone, by virtue of their natural constitutions (disposing them toward the philosophical life) and by virtue of the effect their habits had upon humoral balance.⁴⁵ In

44. Ibid., 261, 277, 304. This twist in the meaning of dietary moderation helps make sense of the pattern of life that John Aubrey noted (with apparent approval) in Bacon's amanuensis Thomas Hobbes:

I have heard him say that he did believe he had been in excesse in his life, a hundred times; which, considering his great age, did not amount to above once a yeare. When he did drinke, he would drinke to excesse to have the benefit of Vomiting, which he did easily; . . . but he never was, nor could not endure to be, habitually a good fellow, i.e. to drinke every day wine with company, which, though not to drunkenness, spoiles the Braine. (Aubrey, "Hobbes," 155)

Eighteenth-century medical dietetics rounded on Bacon's advocacy of occasional excess; see, e.g., Mackenzie, *History of Health*, 125–26 (cf. 207–12): to be "warmed with wine" does indeed assist conversation, and even philosophizing, but "a chearful glass" is not to be confused with surfeit. It was popularly but falsely attributed to Hippocrates that "getting drunk once or twice every month [w]as conducive to health."

45. Ficino, *Three Books on Life* (1489); also Klibansky, Panofsky, and Saxl, *Saturn and Melancholy*.

the early seventeenth century the Jacobean physician Robert Burton's *The Anatomy of Melancholy* (1628) codified and distributed a picture of scholarly melancholy: you could identify those who unremittingly pursued truth by their bodily "temper," their countenance, their situation and way of life. The philosophical body was different from the civic citizen's body. Dedication to truth was physically inscribed upon it. Bodily form and mode of life were visible as ways of recognizing a philosopher, and these were also ways by which those meaning to *present* themselves as philosophers might effectively do so. These, then, are the cultural traditions against which stories about early modern philosophers should be understood. The stories that attached to seventeenth- and eighteenth-century natural philosophers emerged from traditions attaching them to spiritual intellectuals, with much the same meaning for portraying the status and value of knowledge.

■ The Dietetics of Early Modern Philosophy ■

ARISTOTLE WONDERED WHY men of genius tended toward melancholy, and Seneca asked why God afflicted the wisest men with ill health.⁴⁶ These questions continued to circulate in the seventeenth century and beyond. The natural philosopher Walter Charleton announced that the "finest wits" are rarely committed to "the custody of gross and robust bodies; but for the most part [are lodged] in delicate and tender Constitutions."⁴⁷ Dead White Males, that is, were generally Sick White Males. And in seventeenth-century English natural philosophy Robert Boyle was widely recognized as such a one. Poised between the role of the gentleman and that of the Christian scholar, Boyle (and his friends) reflected upon the state and meaning of his special bodily constitution and way of life. Few contemporary commentators on Boyle omitted to mention, and to draw out the cultural significance of, Boyle's disengagement, abstemiousness, and physical delicacy. For some it represented melancholy, the badge of "a hard student," while others contested his identity as a melancholic on the grounds of its incompatibility with gentlemanly civic obligations. John Evelyn saw Boyle's

46. Aristotle, *Problems*, 953a.10–15; Seneca, *Moral Essays*, 1:29; see also Lepenies, *Melancholy and Society*, 13–16, 31–32; Simon, *Mind and Madness in Ancient Greece*, 228–37.

47. Charleton, *Concerning the Different Wits of Men* (1669), 104–5. I must here set aside the important and related question of the relationship between genius and mental illness. The physiological fragility of the learned continued to be described, explained, and dietetically managed through the eighteenth and nineteenth centuries and into recent times; see, among many examples, Ramazzini, "Of the Diseases of Learned Men," in his *Diseases of Tradesmen* (1700), 61–65; Cheyne, *Essay of Health and Long Life* (1724), xiii–xiv, 33–38, 83–87; idem, *The English Malady* (1733), 38; Mackenzie, *History of Health*, 137–40, 155–62, 187–88, 197, 223; Watson, "Sick Scientists," in idem, *Scientists Are Human* (1938), 29–32; and see also chapters in this volume by Iliffe (4), Warwick (8), and Winter (6).

fragility as a form of refinement and even as a kind of strength: His body was "so delicate that I have frequently compared him to a chrystal, or Venice glass; which, though wrought never so thin and fine, being carefully set up, would outlast the hardier metals of daily use."⁴⁸ The funeral sermon preached over Boyle's corpse by his friend Gilbert Burnet carefully rejected the charge of scholarly melancholy. Boyle was too much the gentleman for that: "To a depth of knowledge, which often makes men morose, . . . Boyle added the softness of humanity and an obliging civility." At the same time, Boyle exercised rigorous stoic bodily control, neglecting all display of "pomp in clothes, lodging and equipage." And, tellingly, over a course of more than thirty years "he neither ate nor drank, to gratify the varieties of appetite, but merely to support nature."⁴⁹ Arguably, everyone listening to that sermon in Saint Martin-in-the-Fields recognized the trope. The meaning of this stipulation proceeded from its resonance with a culturally pervasive sensibility causally associating types of bodies and types of minds.

Boyle's contemporary, the Cambridge philosopher Henry More, devoted much attention to the care of his own body and to the dietetic regulation of other philosophers' bodies. More's Platonism here expressed itself in the view that all individuals have within themselves a "Divine Body, or Celestial Matter" the state of which depended upon the management of dietetics and passions.⁵⁰ The care of the philosopher's special mind involved the special care of his special body: "[T]here is a *sanctity* even of *Body* and *Complexion*, which the sensually-minded do not so much as dream of."⁵¹ More's early eighteenth-century biographer announced that

[h]e was of a singular Constitution both for Soul and Body: His very Temperament was such as fitted him for the greatest Apprehensions and Performances; especially when by his Temperance, and most earnest Devotion he had refin'd and purified it. A rich "Æthereal sort of body for what was inward" (to use here his own Pythagorick phrase) he had even in this Life; that is to say, a mighty Purity and Plenty of the Animal Spirits, which he still kept up lucid and defaecate by that Conduct and Piety with which he govern'd himself.⁵²

48. Evelyn to William Wotton, 30 March 1696, in Evelyn, *Diary and Correspondence*, 3:351; see also Schaffer's chapter 3 in this volume. For the widely distributed late medieval and early modern delusion that one's body was made of glass, see Speak, "An Odd Kind of Melancholy."

49. Burnet, "Character of a Christian Philosopher," 351, 360–62, 366–67; and see Shapin, *A Social History of Truth*, 151–56, 185–87.

50. Ward, *Life of More* (1710), 83.

51. More, "Preface General," in idem, *Collection of Philosophical Writings* (1662), 1:viii. More was here specifically situating his views in the Pythagorean and early Christian traditions of such writers as Plotinus.

52. Ward, *Life of More*, 82–83. Cf. Boethius's sixth-century claim that "The body of a holy man is formed of pure aether": *Consolation of Philosophy*, 99.

Constitutionally endowed with this purity of animal spirits and a warm complexion, More's way of life distilled his natural inclination to the search for truth. He "had always a great care to preserve his Body as a well-strung instrument to his Soul." He said that his body "seem'd built for a Hundred Years, if he did not over-debilitate it with his Studies." A disciplined body was made to serve the philosophical will, for philosophizing was heroic work. By his abstemiousness he had "reduc'd himself . . . to almost Skin and Bones; and was to the last but of a thin and spare Constitution." At the end of his life More said that there were two things he repented: the first was that, although he had the means to afford it, "he had not lived [at Cambridge] as a Fellow-Commoner," and the second was that he had "drunk Wine."⁵³

More's remarkable correspondence with Lady Anne Conway is well known to historians as a rich source for English Cartesianism and theology, but it is also almost uniquely informative about the dietetics of early modern philosophical bodies. Incassantly, More and Conway (as well as her husband and her brother John Finch) exchanged recipes for the diet that would best adjust and manage the bodily heat necessary to high philosophical inquiries, while preventing that heat from flaming over into pathological enthusiasm and "phrensy." This was a task requiring the most painstaking management of the quantity and quality of food and drink and attention to the fine adjustment of consumption in relation to momentary bodily state and the precise nature of intellectual labor. Early modern culture understood thought, emotion, and diet as elements of a reciprocally interacting causal system: just as diet could influence mood and cognition, so the forms and content of intellectual activity could affect humoral balance and dietetic requirements.⁵⁴ "Too much small beere and fruit" damped the body's heat; wine and roasted meats stoked its fire. To know Anne Conway was to know that her complexion was warm and to know the risks and capacities that attached to such a complexion. More counseled Conway "to eat such kinde of meat as begetts the finest and coolest blood, and to abstain from all gross food, which many times is the most savoury, but breeds melancholy blood," while her brother warned her against overdoing a cooling diet: "Take heed of overcooling your

53. Ward, *Life of More*, 84–85, 123–24, 230. Apart from bouts of fasting, More's Cambridge diet was not said to be extraordinary: he sometimes did not refrain from meat during Lent (since that abstinence "quite altered the Tone of his Body"), and "His Drink was for the most part the College Small Beer: Which, in his pleasant way of speaking, he would say sometimes, was 'Seraphical, and the Best Liquor in the World'" (ibid., 122; see also More to Anne Conway, 5 April and 5 August 1662, in Conway, *Letters*, 200, 205).

54. For More's extended treatment of the dietetics of "enthusiasm," its relation to melancholy and philosophizing, and its management, see "Enthusiasmus Triumphatus," in his *Collection of Philosophical Writings*, vol. 1, esp. 14, 37, 47. For contemporary views of enthusiasm and its medical management, see Heyd's important "Be Sober and Reasonable," esp. chaps. 2–3, and see also Iliffe, "That Puzleing Problem," 436–39.

selfe for your temper being naturally hott to take perpetuall cool thinges is to cure not your disease but to disturb your temper."⁵⁵

And here again considerations of gender have epistemic pertinence, as pervasive understandings of the female complexion (colder than the male's) could provide a general basis for explaining women's absence in philosophic enterprises while the same humoral scheme allowed a heightened appreciation of Anne Conway's special individual constitution.⁵⁶ In warmth of complexion and its bearing on the capacity for and nature of philosophical speculation, More and Conway recognized each other (despite male/female difference) as similarly endowed, facing similar predicaments. The advice More gave to his warm woman friend was advice he took for himself. The dietetic counsel conveyed in their letters and (presumably) in their face-to-face conversations *tuned* each other's philosophic thermostats, while Conway worried that her humor might "prove infectious."⁵⁷

Probably the richest seventeenth- and eighteenth-century sources for portrayals of the disembodied philosopher attach to the person of Isaac Newton, and stories of his disengagement and otherworldliness echo into the twentieth century, painting some of our culture's most vivid pictures of the special body whose mind is wholly given over to truth. The legendary and the portable status of these stories is an index of their topicality. George Cheyne's *Natural Method of Curing Diseases* (1742) noted that, in order to "quicken his faculties and fix his attention," Newton "confined himself to a small quantity of bread."⁵⁸ Other contemporaries observed both Newton's abstemiousness and forgetfulness of food—as in the chicken story retold at the outset. He "gave up tobacco" because "he would not be dominated by habits." In London, his niece remarked that Newton "would let his dinners stand two hours": "his gruel, or milk and eggs, that was carried to him warm for supper, he would often eat cold for breakfast."⁵⁹ In Cambridge, an amanuensis related that he often went into Newton's

55. Finch to Conway, 27 April 1652; More to Conway, 28 March 1653 and 3 September 1660, in Conway, *Letters*, 63, 75, 164; see also Conway to her husband, 16 September 1664, in *ibid.*, 230.

56. John Finch speculated that Anne's terrible headaches might arise from "the closeness of the sutures [or pores] in your head which may hinder the perspiring of vapours; but in regard few of your sex have that inconvenience," and instructed her not to cool herself excessively "when you are very hott or sweat in your bed": Finch to Conway, 27 April 1652 and 9 April 1653, in *ibid.*, 63, 79; and for treatment of attempts to cure her headaches see Schaffer, chapter 3 in this volume.

57. More to Conway, 1 May 1654, 5 June, 4 and 27 December 1660, and 31 December 1663; Conway to More, 28 November 1660, in Conway, *Letters*, 96, 164, 181, 184, 220; see also Ward, *Life of More*, 146.

58. Cheyne, *Natural Method of Curing Diseases*, 81. During periods of intense concentration, Cheyne added, Newton took "a little sack and water, without any regulation, . . . as he found a craving or failure of spirits."

59. Quoted in L. T. More, *Isaac Newton*, 129, 132; see also *ibid.*, 206 and especially Iliffe, chapter 4 in this volume.

rooms and found his food untouched: "Of which, when I have reminded him, he would reply, 'Have I?'" "His cat grew very fat on the food he left standing on his tray." Still another (contested) report testified that Newton, like the Pythagoreans, abstained from meat.⁶⁰

In the 1930s L. T. More collected these and other stories—"which the world has so often heard"—and gave them new life. More wrote about "Sir Isaac's forgetfulness of his food when intent upon his studies"; "He took no exercise, indulged in no amusements, kept no regular hours and was indifferent to his food." And More drew out the significance of Newton's abstemiousness, abstractedness, and solitude for his identity and that of the knowledge he produced: "It is little wonder that his contemporaries have passed on to us the impression that he was not a mortal man, but rather an embodiment of thought, unhampered by human frailties, unmoved by human ambition. . . . Passion had been omitted from his nature."⁶¹ More recently, Richard S. Westfall's depiction of "a solitary scholar" identified Newton's disembodiment as that "of a man possessed" by love of truth, wholly other, not responsive to his body's needs, not *there* in his own body.⁶²

Later in the eighteenth century, Henry Cavendish became a popular attachment for similar stories, and these stories too were prominently told and retold by his biographers, to similar ends. They were struck by the frugality and disengagement of Cavendish's way of life, and this despite his enormous wealth: "A Fellow of the Royal Society reports, 'that if any one dined with Cavendish he invariably gave them a leg of mutton, and nothing else.'" He was so shy of human contact that in his own house he ordered his spare meals by leaving a note for the housekeeper upon a table. George Wilson's mid-nineteenth-century portrayal of Cavendish's body was as telling for the bodily features omitted as for those to which it drew attention: "he did not love; he did not hate; he did not hope; he did not fear. . . . [A]n intellectual head thinking, a pair of wonderfully acute eyes observing, and a pair of very skilful hands experimenting or recording."⁶³

60. More, *Isaac Newton*, 247, 250; Westfall, *Never at Rest*, 103–4 (for the fat cat), 580, 850–51, 866; and see Stukeley, *Memoirs of Newton* (1752), 48, 60–61, 66. Newton's niece contradicted reports of his vegetarianism, and, according to More (*Isaac Newton*, 135), "said that he followed the rule of St. Paul to take and eat what comes from the shambles without asking questions for conscience's sake." Andrew Combe's influential mid-nineteenth-century dietetic text also denied Newton's status as an icon of vegetarianism; there was, Combe said, much evidence (including the gout from which Newton suffered) that "he did not usually confine himself to a vegetable diet": Combe, *Physiology of Digestion* (1842), 149.

61. More, *Isaac Newton*, 131–32, 206–7, 247.

62. Westfall, *Never at Rest*, 103. For important treatment of images of Newton's person and mind in the eighteenth and nineteenth centuries, see Yeo, "Genius, Method, and Morality."

63. Wilson, *Life of Cavendish* (1851), 164 (for mutton), 169–70, 185 (for head, eyes, and hands); see also Berry, *Henry Cavendish*, 15, 22. The late twentieth-century circulation of the Cavendish mutton story is indicated by Oldroyd, "Social and Historical Studies of Science," 751, 756 n. 1.

■ *The Dietetics of Modern Philosophy* ■

I STARTED BY JUXTAPOSING Newton and Wittgenstein, so suggesting—intentionally—that the trope portraying truth-lovers' ascetic bodies persisted into the twentieth century. And so it did. In 1925 the fictional medical scientist Max Gottlieb (maximum God-love) explained to Martin Arrowsmith (in Sinclair Lewis's novel) just why the scientist was not as other men:

To be a scientist [says Dr. Gottlieb]—it is not just a different job, so that a man should choose between being a scientist and being a . . . bond-salesman . . . [I]t makes its victim all different from the good normal man. The normal man, he does not care much what he does except that he should eat and sleep and make love. But the scientist is intensely religious—he is so religious that he will not accept quarter-truths, because they are an insult to his faith.⁶⁴

And in 1949 the iconic scientific intellectual of the twentieth century specified the *constitutional* difference between those who lived for truth and those who lived for the belly:

When I was a fairly precocious young man [Albert Einstein wrote] I became thoroughly impressed with the futility of the hopes and strivings that chase most men restlessly through life. Moreover, I soon discovered the cruelty of that chase, which in those years was much more carefully covered up by hypocrisy and glittering words than is the case today. By the mere existence of his stomach everyone was condemned to participate in that chase. The stomach might well be satisfied by such participation, but not man insofar as he is a thinking and feeling being.⁶⁵

And the stories of bodily abstraction attached to Wittgenstein as one of this century's most celebrated philosophers focus importantly upon his "otherness" in terms instantly recognizable from the classical and early Christian traditions. So some twentieth-century thinkers—like the Desert Fathers and seventeenth-century natural philosophers—*could be* depicted (to use Franz Kafka's striking phrase) as "hunger artists."⁶⁶ Some, but not all, or, I think, even very many.

Some caveats against misunderstanding my interpretation of these stories about disembodied truth-lovers: First, it is obviously *not* the case that these depictions attach uniquely to scientists and philosophers. Insofar as the tropes spec-

64. Lewis, *Arrowsmith*, 267. Gottlieb was here giving voice to a continuing conception of the scientific vocation as a *calling* rather than as a *job*, and it would be valuable to have a study tracking how and when vocation changed its dominant meaning from the former to the latter.

65. Einstein, *Autobiographical Notes*, 3. See also Ezrahi, "Einstein and the Light of Reason," esp. 268–73, for Einstein's representation of the relativistic physicist as lonely saint and magus.

66. Ellmann, *The Hunger Artists*, see esp. 17, 27–32, 63–69.

ify the constitution of truth-lovers, they attach to those who secure whatever body of knowledge is represented in the relevant local culture as a repository of truth and value, whether it be religious, scientific, philosophical, or artistic. It ought therefore to be understood that by focusing upon the bodies of early modern and modern scientific truth-lovers I mean to draw attention to the ways in which pervasive tropes locally attached to specific, highly valued forms of culture.

Second, it is also evidently not the case that the trope of disembodiment is without what might be called a "countertrope." Whenever and wherever the trope of disembodiment works to specify proper knowledge an opportunity is created for its purposeful denial or modification. So in Antiquity some sects of philosophers (for example, the Cynics) played with a carnal presentation, and did so as a way of marking out their philosophical practice from that of the dominant tribes of philosophers.⁶⁷ And, as I shall shortly note, late nineteenth- and twentieth-century philosophical voices importantly analyze, interpret, and reject the very idea of disembodiment as the condition for making and recognizing truth. Here I want to say that the presentation of disembodiment just has the character of a cultural *institution*, against which critical voices stake their position, not that disembodiment is the only way of presenting and warranting truth. The sociable, merry, and moderately gormandizing philosopher of the eighteenth century—a perspicuous instance here is "le bon David" Hume—makes a statement about the nature and placement of philosophic knowledge whose meaning is understood against the background of a dominant ascetic ideal.⁶⁸

Third, I want to acknowledge both the possibility and, within limits, the legitimacy of a "realist" psychological and sociological way of talking about the disengagement and ascetic discipline of intellectuals. It might, for example, be plausibly said that abstraction, solitude, and self-denial simply *are the conditions* for innovation or for producing knowledge of a certain character. Truth-lovers are "just like that"—by temperament, or are made so by their way of life. And in this connection I am well aware of recent psychological and psychiatric causal inquiry into creativity, innovation, genius, and mental health. Such realist claims may be legitimate within their own causal idiom, though their legitimacy within

67. The "carnavalesque" inversion of the "proper" relationship between mind and belly was hinted at by Mikhail Bakhtin (*Rabelais and His World*, 171): "Most of the epithets and comparisons applied by Rabelais to spiritual things have what one might call an edible character. The author boldly states that he writes only while eating and drinking, and adds: 'Is that not the proper time to commit to the page such sublime themes and such profound wisdom?'" Indeed, the prologue to *Gargantua* makes explicit reference to the carnal habits of Diogenes the Cynic.

68. A case could also be made for Galileo as a secularizing seventeenth-century natural philosopher associated with convivial connoisseurship (especially in wines), even though stories about him also picked out his "abstemiousness" and tendencies towards melancholy; see Camporesi, *The Magic Harvest*, 51–59.

that idiom cannot count as a sufficient explanation of why these stories circulate and persist, and one has to be careful not to take at face value the historical anecdotes that provide some of their evidence. For example, manuscript evidence indicates that, at the very same time stories about Newton's abstemiousness circulated so widely, deliveries to his London household for a single week showed "one goose, two turkeys, two rabbits, and one chicken." A contemporary observed that Newton had grown so fat in later life that "[w]hen he rood in his coach, one arm would be out of the coach on one side and the other on the other."⁶⁹ And the officially ascetic monks of the abbey of Saint Riquier in the twelfth century are known to have received yearly from their tenants seventy-five thousand eggs, ten thousand capons, and ten thousand chickens.⁷⁰

However the case may turn out about "real" philosophical bodies and their "real" dietetics, historical engagement with the stories that speak about them, about their meanings and uses, and about the conditions of their circulation, has its own legitimacy and interest. Such stories are culturally significant public *presentations* and *stipulations*. They testify at once to the constitution of knowledgeable bodies and to the status of bodies of knowledge; they represent norms for philosophical knowledge and the philosophical knower. And stories about the normative way of life for the truth-lover could, and did, stably coexist with massive evidence that the ideal might not (always or usually) be realized. That is just the nature of norms in relation to the behavior they both describe and prescribe.

Finally, I want speculatively to explore the possibility that, despite gestures at Einsteinian and Wittgensteinian portrayals, the topic of disembodiment has rapidly been losing its sense and force in late modern culture. While the trope of the absent-minded professor continues with some currency, the very idea that the truth-lover is "not as other people" and, particularly, that he (and now, importantly, she) secures knowledge through denying bodily and material wants seems to many naive or quaintly outmoded. On the one hand, much modern sociology of science was founded on the claim that no special temperament or motives distinguished the scientist from the ordinary run of humanity, while, on the other hand, some of the most popular "realistic" portrayals of the modern scientist (e.g., James Watson's *The Double Helix*) secure their public credibility as realistic through free confession of scientists' concern for fame, power, money, and sex. The very idea that Dr. Grant Swinger, Professor Morris Zapp, or, in-

69. Westfall, *Never at Rest*, 580, 866; More, *Isaac Newton*, 127.

70. Durant, *The Age of Faith*, 786. For images of late medieval monks as gluttons, see, e.g., Bakhtin, *Rabelais and His World*, chaps. 4–5.

deed, the author of this chapter would ever pass up a pot of money, or a nice chicken, in the quest for truth is currently risible.⁷¹

Increasingly, I suggest, heroically self-denying bodies and specially virtuous persons are being replaced as guarantees of truth in our culture, and in their stead we now have notions of "expertise" and of the "rigorous policing" exerted on members by the institutions in which expertise lives. Expertise and vigilance, and the warrants for truth these offer, are, of course, no new things in the twentieth century: the ancients too had the ability to recognize expertise. But they—and, I think, intellectuals through the nineteenth century—had other conceptions of knowledge apart from expertise: conceptions of virtuous and sacred knowledge attached to special persons inhabiting special bodies.⁷² So, in an eggshell, the suggestion is that the career of the ascetic ideal in knowledge follows the same career as the notion of sacred knowledge and its warrants. Late modern culture appears to be conducting a great experiment to see whether we can order our affairs without a sacred conception of knowledge, and, thus, without a notion that those who produce and maintain truth are any differently constituted, or live any differently, than anyone else. That is the sense in which it might be thought that all knowledge has the character of expertise: experts don't know *differently*; they just know *more*. W. B. Yeats said that "the passions, when we know that they cannot find fulfilment, become vision."⁷³ Expertise is not vision.

By the 1880s strands in philosophy itself took a decisive turn against the ascetic ideal, notably in the work of Friedrich Nietzsche and his followers. In *The Gay Science* Nietzsche meant to acquire "a subtler eye for all philosophizing to

71. You'll be hungry by now, so here's my recipe for *Fricassée du poulet épistémologique*: joint one free-range chicken; brown in olive oil; in same pan add chopped garlic and soaked dried ceps (or porcini); add one cup dry vermouth; reduce a little, then slowly braise covered for forty-five minutes; remove chicken to warm plate, then add some soaking water from the mushrooms and a quarter cup of sherry vinegar to the pan; reduce on high heat, pour over chicken, and garnish with chervil or Italian parsley. Serve with "foreign wine." *Bon appetit!*

72. It is in this connection that I want to draw attention to apparently systematic changes in the topical content of intellectual biographies from the period before ca. 1850—ca. 1930 to more recent treatments. Biographical accounts in the earlier period routinely contained sections entitled "Appearance and Manner of Living" or otherwise offered detailed accounts of what intellectuals looked like, how they conducted their personal and social lives, and, indeed, what and how they ate. (For a perspicuous late example, see Stuckenberg's *Life of Kant* [1882], chaps. 4, 6.) And, as I have shown, earlier cultures worked with conceptions of knowledge and the knower in which such details were vitally important. In the space formerly occupied by such conceptions, more modern intellectual biography now confronts a great "problem," that of the narrative and causal relationship between what is "personal" and what is "intellectual." Following Freud, there is a recognized (if controversial) idiom for speaking of the link between the gonads and the mind, but, as the introduction to this volume indicated, the very suggestion that significant stories may be told connecting belly and mind now has the character of a joke.

73. Yeats, "Per Amica," 341.

date." The philosophical tradition against which he revolted inscribed disembodiment at its pathological core:

[E]very ethic with a negative definition of happiness, every metaphysics and physics that knows some finale, some final state of some sort, every predominantly aesthetic or religious craving for some Apart, Beyond, Outside, Above, permits the question whether it was not sickness that inspired the philosopher. . . . [W]hether, taking a large view, philosophy has not been merely an interpretation of the body, and a *misunderstanding of the body*.

The thrust of Nietzsche's criticism of the ascetic ideal was that the pathologies of philosophy "may always be considered first of all as the symptoms of certain bodies."⁷⁴ A healthy philosophy was to proceed from an appreciation of a healthy body. Nietzsche's tactics were well-judged: if one means to subvert existing conceptions of transcendental philosophical knowledge one *should* proceed by way of an attack on the ascetic ideal. What Nietzsche could not know, and what his intellectual heirs still cannot clearly visualize, is the shape of a society that has *wholly* dispensed with those conceptions of knowledge and the knower that lie at the heart of the ascetic ideal.

74. Nietzsche, *The Gay Science*, 34–35; and see Harpham, *The Ascetic Imperative*, chap. 4 (for Nietzschean and Foucauldian topics). For Nietzsche's intense philosophic and personal interest in dietetics, see Chamberlain, "A Spoonful of Dr Liebig's Beef Extract," 15: "No more greasy, stodgy, beer-washed idealistic Christian German food for me! I shall curl up with gut pain, vomit if you don't give me Italian vegetables."

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A MECHANICAL MICROCOSM

Bodily Passions, Good Manners, and Cartesian Mechanism

PETER DEAR

Offencing experts he remarked that they were masters of a science or art which when they needed it they did not know how to employ, adding that there was something presumptuous in their seeking to reduce to infallible mathematical formulas the angry thoughts and impulses of their adversaries.

—Cervantes, *El licenciado vidriera*.¹

■ Introduction ■

THE 1669 EDITION of Sébastien Le Clerc's *Pratique de la geometrie* contains numerous plates designed to augment its instruction to young gentlemen in the mathematical arts. It presents geometry as a practical subject that will assist in such areas as military science and fortification, traditional branches of mixed mathematics in the seventeenth century.² It also invokes swordplay as an illustration of the rootedness of geometrical curves in practical operations. The corresponding plate (fig. 2.1) displays at the foot of the page four men engaged in combat; the upper half is occupied by geometrical diagrams that display the lines and arcs traced out by the properly wielded blade.³

Half a century before, a young French gentleman, already admitted into the culture to which Le Clerc's treatise was to cater, thought to contribute to its refinement by himself writing a manual on fencing. Fencing, like dancing, was one of the basic social accomplishments expected of a nobleman, and as such it demanded a disciplined treatment. This particular manual has been lost, but there

1. Cervantes, *El licenciado vidriera*, 789. I am informed by Dale Pratt of Brigham Young University that such satire of contemporary fencing manuals can also be found in several works by Cervantes's contemporary Francisco de Quevedo, including *La vida del Buscón*, which refers specifically to Luis Pacheco de Narváez, *Grandezas de las espadas* (1600).

2. Useful accounts of mathematical education and its topical scope in French Jesuit colleges—which trained gentlemen such as Descartes—appear in Dainville, "L'enseignement des mathématiques," and idem, *La géographie des humanistes*, chap. 1. Motley, *Becoming a French Aristocrat*, chap. 3, examines the academy in this period and its topical focus on practical mathematical arts and gentlemanly accomplishments.

3. The plate may be found reproduced in Harth, *Ideology and Culture*, 254; Le Clerc's treatise is discussed on 251–57. I have used the 1682 edition, Le Clerc, *Pratique de la geometrie*.